

CABLES FOR A MOVING WORLD

TRATOS[®] PETROCHEMICAL CABLES



THE QUEEN'S AWARDS
FOR ENTERPRISE:
INNOVATION
2019

Tratos cables are made with award winning Tratos-JBA[®] compound. Tratos UK Ltd has won a Queen's Award for Enterprise - Innovation for its technologically advanced Tratos-JBA[®] compound.

TRATOS® PETROCHEMICAL CABLES

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TRATOS® PETROCHEMICAL CABLES

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TRATOS® PETROCHEMICAL CABLES

STANDARDS AND QUALITY SYSTEM

APPLICABLE STANDARDS

Cable manufacture based on

PAS 5308-1	Publicly Available Specification – Control and instrumentation cable Part 1: Specification for polyethylene insulated cables
PAS 5308-2	Publicly Available Specification – Control and instrumentation cables Part 2: Specification for PVC insulated cables
BS EN 50288-1	Multi-element metallic cables used in analogue and digital communication and control. Generic specification
BS EN 50288-7:2005	Multi-element metallic cables used in analogue and digital communication and control. Sectional specification for instrumentation and control cables
BS EN 50290-1-1:2001	Communication cables. General
BS EN 50290-2-1:2005	Communication cables. Common design rules and construction
BS 6004: Electric cables	PVC insulated and PVC sheathed cables for voltages up to and including 300/500 V, for electric power and lighting
BS 5467: Electric cables	Thermosetting insulated, armoured cables for voltages of 600/1000 V and 1900/3300 V
BS 6724: Electric cables	Thermosetting insulated, armoured cables for voltages of 600/1000 V and 1900/3300 V, having low emission of smoke and corrosive gases when affected by fire
IEC 60227-1	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 1: General requirements
IEC 60502-1	Power cables with extruded insulation and their accessories for rated voltages from 1 kV (Um = 1,2 kV) up to 30 kV (Um = 36 kV) - Part 1: Cables for rated voltages of 1 kV (Um = 1,2 kV) and 3 kV (Um = 3,6 kV)
IEC 60502-2	Power cables with extruded insulation and their accessories for rated voltages from 1 kV (Um = 1,2 kV) up to 30 kV (Um = 36 kV) - Part 2: Cables for rated voltages from 6 kV (Um = 7,2 kV) up to 30 kV (Um = 36 kV)
IEC 60584-1	Thermocouples - Part 1: EMF specifications and tolerances
IEC 60584-3	Thermocouples - Part 3: Extension and compensating cables - Tolerances and identification system

Fire performance based upon

IEC 60331-11	Tests for electric cables under fire conditions – Circuit integrity – Part 11: Apparatus – Fire alone at a flame temperature of at least 750 °C
IEC 60331-21	Tests for electric cables under fire conditions – Circuit integrity – Part 21: Procedures and requirements – Cables of rated voltage up to and including 0,6/1,0 kV
IEC 60332-1-2	Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW premixed flame
IEC 60332-3	Tests on electric cables under fire conditions – Test for vertical flame spread of vertically-mounted bunched wires or cables

And when specially requested

IEC 60754-1	Test on gases evolved during combustion of materials from cables – Part 1: Determination of the halogen acid gas content
IEC 60754-2	Test on gases evolved during combustion of materials from cables – Part 2: Determination of acidity (by pH measurement) and conductivity
IEC 61034-1	Measurement of smoke density of cables burning under defined conditions – Part 1: Test apparatus
IEC 61034-2	Measurement of smoke density of cables burning under defined conditions – Part 2: Test procedure and requirements

Applicable Codes of Practice

BS EN 50290-4-1:2014	Communication cables. General considerations for the use of cables. Environmental conditions and safety aspects
BS EN 50290-4-2:2014	Communication cables. General considerations for the use of cables. Guide to use
BS EN 60079-14:2014	Explosive atmospheres. Electrical installations design, selection and erection
IEC 60364-5-51	Electrical installations of buildings - Part 5-51: Selection and erection of electrical equipment - Common rules
IEC 60364-5-52	Low-voltage electrical installations - Part 5-52: Selection and erection of electrical equipment - Wiring systems
IEC/TR 61200-52	Electrical installation guide - Part 52: Selection and erection of electrical equipment - Wiring systems
BS 7671:2008+A3:2015	Requirements for Electrical Installations. IET Wiring Regulations

STANDARDS AND QUALITY SYSTEM

APPLICATION AND INSTALLATION GUIDELINES

Unarmoured for indoor installations Armoured for outdoor installations generally within the harsh demanding environment encountered in the petroleum industry, chemical and petrochemical plants. Used for power, control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants.

PVC insulated cables are widely used throughout the petroleum industry.

PE and XLPE insulated cables are widely used throughout the chemical and petrochemical industry.

PAS 5308 covers cables for installations where higher voltages are used and more demanding installations such as industrial and petrochemical plants.

TECHNICAL INFORMATION

TRATOS IDENTIFICATION CODES

Conductor	A	round aluminium conductor
	F	round flexible conductor
	R	round rigid conductor
	U	round solid conductor
Insulation	T	mica glass tape
	E	polyethylene insulation
	E4	XLPE insulation
	R	PVC insulation
	G4	silicon
Assembly	O	laid-up cores
	X	twisted pairs/triads/quads
Metallic screen	H	aluminium tape screen
	H1	copper tape/wire screen
	H5	aluminium/polyethylene longitudinally bonded tape screen
Armour/metallic sheath	F	steel wires armour
	L	lead alloy sheath
	N	steel tapes armour
	(AR)	PSA (QAM®)
Separation sheath/outer sheath	R	PVC sheath
	R4	polyamide
	M1	LSOH thermoplastic sheath

TRATOS® PETROCHEMICAL CABLES

STANDARDS AND QUALITY SYSTEM

QUALITY SYSTEM

Tratos aim to work closely with customers to find better, more environmentally friendly solutions to their challenges.

We are committed to our vision and strategy to serve all our internal and external customers by providing high quality services and products. Tratos is an established industry leader in the design, manufacture and supply of cables and products and to maintain this leading position we are committed at every level to providing our customers with quality services and products at a competitive price. As a commercial enterprise we are aware of the importance of satisfying our customers and of the financial impact of which nonconformities may have on our profitability. For these reasons we are committed to complying with all customer requirements and specifications both legal and statutory requirements. Our Quality Management System has been audited and approved by two independent, Internationally recognized and accepted authorities: BSI and AENOR-IQNET (E), in accordance to BS EN ISO 9001:2015 covering the production, purchasing of raw materials design and final test including various document types. The Tratos Quality Management system is under frequent regular surveillance by inspectors working for the Certification Authorities.



As a commercial enterprise we are aware of the importance of satisfying our customers and of the financial impact of which nonconformities may have on our profitability. For these reasons we are committed to complying with all customer requirements and specifications both legal and statutory requirements. Our Quality Management System has been audited and approved by two independent, Internationally recognized and accepted authorities: BSI and AENOR-IQNET (E), in accordance to BS EN ISO 9001:2015 covering the production, purchasing of raw materials design and final test including various document types. The Tratos Quality Management system is under frequent regular surveillance by inspectors working for the Certification Authorities.

ENVIRONMENTAL SYSTEM

Our Environmental Management System has been audited and approved by two independent, Internationally recognized and accepted authorities:

BSI and AENOR-IQNET (E), in accordance to BS EN ISO 14001:2015 covering the production, purchasing of raw materials design and final test including various document types. The Tratos Quality Management system is under frequent regular surveillance by inspectors working for the Certification Authorities.



ENERGY MANAGEMENT SYSTEMS

By complying with the BS EN ISO 50001:2018 Tratos follows a systematic approach in achieving continual improvement of energy performance and the Energy Management Systems (EnMS).

The BS EN ISO 50001:2018 is a standard issued by the International Standard Organization (ISO) which outlines the requirements for establishing, implementing, maintaining and improving an energy management system (EnMS).



CIRCULAR ECONOMY

The EU Eco-Management and Audit Scheme (EMAS) is a premium management instrument developed by the European Commission for companies and other organisations to evaluate, report, and improve their environmental performance. EMAS is open to every type of organisation eager to improve its environmental performance. It spans all economic and service sectors and is applicable worldwide.



AWARDS

Tratos cables are made with award winning Tratos-JBA® compound. Tratos UK Ltd has won a **Queen's Award for Enterprise - Innovation** for its technologically advanced Tratos-JBA® compound.



STANDARDS AND QUALITY SYSTEM

HEALTHY & SAFETY SYSTEM

Once its decision to create a board post dedicated to furthering best practice for Health and Safety, international cable manufacturer Tratos is celebrating receipt of ISO 45001.

ISO 45001 sets out the minimum requirements for occupational health and safety management best practice and helps companies achieve the maximum return for employees, operations and customers.



REACH, WEEE & ROHS



Tratos is fully compliant with the **REACH**. This is a European Union regulation concerning the **Registration, Evaluation, Authorisation and restriction of Chemicals**. It came into force on 1st June 2007 and replaced a number of European Directives and Regulations with a single system. REACH applies to substances manufactured or imported into the EU in quantities of 1 tonne or more per year. Generally, it applies to all individual chemical substances on their own, in preparations or in articles. To summarise, REACH makes the cable industry directly responsible for assessing and managing the risks posed by chemicals and providing safety information to their users.



Tratos fully subscribes to The **Waste Electrical and Electronic Equipment Directive (WEEE Directive)**, introduced into UK law in January 2007 by the Waste Electronic and Electrical Equipment Regulations 2006. The WEEE Directive aims to reduce the amount of electrical and electronic equipment being produced and to encourage everyone to reuse, recycle and recover it. The WEEE Directive also aims to improve the environmental performance of businesses that manufacture, supply, use, recycle and recover electrical and electronic equipment. TRATOS has enlisted the services of the UK's leading producer compliance scheme, Valpak, whom manage our recycling obligations and also ensure our compliance to the WEEE Regulations and the Waste Batteries and Accumulators Regulations.



Tratos is fully compliant with the **Restriction of Hazardous Substances (RoHS) Regulations**. These Regulations implement EU Directive 2011/65/EU which bans the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants. Tratos fully understands the requirements of the RoHS Directive and ensures that our products, and their components, comply.

CORPORATE SOCIAL RESPONSIBILITY

Tratos adopts a Code of Ethics which adheres to the United Nations Global Compact on human rights, labour standards, protection of the environment and anti corruption measures.

Under this self regulatory code, Tratos will carry out initiatives in the environmental and social fields with special reference to environmental policies and social policies regarding child labour, compulsory labour, health and security, freedom of association and the right to collective bargaining, discrimination, disciplinary procedures, working hours and wages.

TRATOS® PETROCHEMICAL CABLES

TECHNICAL INFORMATION

PAS 5308-1

Table 1 - Identification of cable pairs other than two-pair cables without individual pair screens (quads)

Pair no.	a-wire	b-wire	Pair no.	a-wire	b-wire
1	Black	Blue	26	White	Yellow
2	Black	Green	27	Red	Yellow
3	Blue	Green	28	Orange	Yellow
4	Black	Brown	29	Black	Grey
5	Blue	Brown	30	Blue	Grey
6	Green	Brown	31	Green	Grey
7	Black	White	32	Brown	Grey
8	Blue	White	33	White	Grey
9	Green	White	34	Red	Grey
10	Brown	White	35	Orange	Grey
11	Black	Red	36	Yellow	Grey
12	Blue	Red	37	Black	Violet
13	Green	Red	38	Blue	Violet
14	Brown	Red	39	Green	Violet
15	White	Red	40	Brown	Violet
16	Black	Orange	41	White	Violet
17	Blue	Orange	42	Red	Violet
18	Green	Orange	43	Orange	Violet
19	Brown	Orange	44	Yellow	Violet
20	White	Orange	45	Grey	Violet
21	Red	Orange	46	Black	Turquoise
22	Black	Yellow	47	Blue	Turquoise
23	Blue	Yellow	48	Green	Turquoise
24	Green	Yellow	49	Brown	Turquoise
25	Brown	Yellow	50	White	Turquoise

Table 2 - Details of conductors and insulation thickness

Nominal c.s.a. mm ²	Conductor class	Maximum DC resistance Ω/km	Insulation thickness		Maximum Core Diameter mm
			nominal mm	minimum mm	
0.50	1	36.8	0.50	0.45	1.90
1.00	1	18.4	0.60	0.50	2.45
0.50	5	39.7	0.60	0.50	2.35
1.50	2	12.3	0.60	0.50	3.00
2.50	2	7.6	0.60	0.50	3.25

Table 3 - Details of conductors and enhanced insulation thickness

Nominal c.s.a. mm ²	Conductor class	Maximum DC resistance Ω/km	Insulation thickness		Maximum Core Diameter mm
			nominal mm	minimum mm	
1.50	2	12.3	0.70	0.60	3.20
2.50	2	7.6	0.70	0.60	3.45

*These values are 2% higher than those in BS EN 60228 to allow for multipair cable construction

TECHNICAL INFORMATION

PAS 5308-1

Table 4 - Maximum mutual capacitance*

Nominal c.s.a. mm ²	Maximum mutual capacitance values		
	Cables without screens	Cables with only collective screen (except 1 and 2 pair)	1 and 2 pair cables collective screen or individual pair screens
0.50	75	75	115
1.00	75	75	115
1.50	85	85	120
2.50	105	105	140

*The maximum mutual capacitance of the pairs or adjacent cores at 1 kHz

Table 5 - Maximum mutual capacitance*

Nominal c.s.a. mm ²	Maximum mutual capacitance values		
	Cables without screens	Cables with only collective screen (except 1 and 2 pair)	1 and 2 pair cables collective screen or individual pair screens
0.50	75	75	115
1.00	75	75	115
1.50	85	85	120
2.50	105	105	140

*These values are 2% higher than those in BS EN 60228 to allow for multipair cable construction

Capacitance unbalance

The maximum pair to pair capacitance unbalance shall be:

- a) For lengths of 250m, 250 pF at 1 kHz or
- b) For lengths other than 250 m (less than 100 m shall be considered as 100 m) 250 pF divided by the length in metres of the cable under test.

Inductance to Resistance Ratio (L/R ratio)

Table 6 - L/R ratio for adjacent cores

Nominal c.s.a. mm ²	Maximum L/R ratio
	μH/Ω
0.50	25
1.00	25
1.50	40
2.50	60

Minimum bending radius

Type 1 cables	6D
Type 2 cables	6D
Type 3 cables	15D

Operating temperature

Minimum temperature for installation	0 °C
Minimum operating temperature after installation	-15 °C
Maximum conductor operating temperature	+65 °C

TRATOS® PETROCHEMICAL CABLES

TECHNICAL INFORMATION

PAS 5308-2

Up to 40 cores

All cores shall be yellow and numbered 1 to 40 with both printed numbers and written word, in black, e.g. core 10 would be yellow and identified by number "10, TEN" in black.

41 to 80 cores

All cores shall be black and numbered 1 to 40 with both printed numbers and written word, in a contrasting colour, e.g. core 50 would be coloured black and identified by number "10, TEN" in yellow or white.

Pair identification

Two-pair cables without individual pair screens (quads) shall be colour coded in clockwise order of rotation: black, blue, green, brown. All other cables up to 50 pairs shall be colour coded in accordance with Table C.1.

Table 7 - Identification of cable pairs other than two-pair cables without individual pair screens (quads)

Pair no.	a-wire	b-wire	Pair no.	a-wire	b-wire
1	White	Blue	26	Red-Blue	Blue
2	White	Orange	27	Red-Blue	Orange
-3	White	Green	28	Red-Blue	Green
4	White	Brown	29	Red-Blue	Brown
5	White	Grey	30	Red-Blue	Grey
6	Red	Blue	31	Blue-Black	Blue
7	Red	Orange	32	Blue-Black	Orange
8	Red	Green	33	Blue-Black	Green
9	Red	Brown	34	Blue-Black	Brown
10	Red	Grey	35	Blue-Black	Grey
11	Black	Blue	36	Yellow-Blue	Blue
12	Black	Orange	37	Yellow-Blue	Orange
13	Black	Green	38	Yellow-Blue	Green
14	Black	Brown	39	Yellow-Blue	Brown
15	Black	Grey	40	Yellow-Blue	Grey
16	Yellow	Blue	41	White-Orange	Blue
17	Yellow	Orange	42	White-Orange	Orange
18	Yellow	Green	43	White-Orange	Green
19	Yellow	Brown	44	White-Orange	Brown
20	Yellow	Grey	45	White-Orange	Grey
21	White-Blue	Blue	46	Orange-Red	Blue
22	White-Blue	Orange	47	Orange-Red	Orange
23	White-Blue	Green	48	Orange-Red	Green
24	White-Blue	Brown	49	Orange-Red	Brown
25	White-Blue	Grey	50	Orange-Red	Grey

NOTE: Except in the case of bi-colour extrusion, the colour indicated first is known as the base colour; and is:

a) the extruded colour

b) the colour with the greater area of exposure on the finished wire.

TECHNICAL INFORMATION

PAS 5308-2

Table 8 - Details of conductors and insulation thickness

Nominal c.s.a. mm ²	Conductor class	Maximum DC resistance		Insulation thickness		Maximum Core Diameter mm
		multicore Ω/km	multipair Ω/km	nominal mm	minimum mm	
0.50	5	39.0	39.7	0.60	0.50	2.35
0.75	5	26.0	26.5	0.60	0.50	2.55
1.50	2	12.1	12.3	0.60	0.50	3.00
2.50	2	7.4	7.6	0.60	0.50	3.25

Mutual capacitance

The mutual capacitance of the pairs or adjacent cores shall not exceed 250 pF/m at a frequency of 1 kHz.

Capacitance between any core and core screen

The capacitance between any core and all other cores connected to any other metal in the cable (e.g. screens and armour) and earth, shall not exceed 450 pF/m at 1 kHz

Table 9 - L/R ratio for adjacent cores

Nominal c.s.a. mm ²	Maximum L/R ratio μH/Ω
0.50	25
1.00	25
1.50	40
2.50	60

Minimum bending radius

Type 1 cables 6D
Type 2 cables 6D

Operating temperature

Minimum temperature for installation 0 °C
Minimum operating temperature after installation -15°C
Maximum conductor operating temperature (Pe) +65°C
Maximum conductor operating temperature (XLPe) +90°C

TRATOS® PETROCHEMICAL CABLES

TECHNICAL INFORMATION

BS EN 50288-7

Table 10 - Details of conductors and insulation thickness

Nominal c.s.a. mm ²	Minimum Radial Thickness		
	voltage grade (V)		
	60 mm	180 mm	300 mm
-	mm	mm	mm
0.22	0.2	0.26	0.44
0.34	0.2	0.26	0.44
0.5	0.2	0.26	0.44
0.75	0.2	0.26	0.44
1.0	0.25	0.35	0.44
1.5	0.3	0.35	0.44
2.5	-	-	0.53

Identification of cabling elements

The colour coding for identification is given in IEC 60189-2 or IEC 60708-1, as appropriate.

Table 11

Cable element	Colour of Insulation a-wire	b-wire
1	white	Blue
2	-	Orange
3	-	Green
4	-	Brown
5	-	Grey
6	red	Blue
7	-	Orange
8	-	Green
9	-	Brown
10	-	Grey

Table 12

Sub-unit number	Colour of bindings
1	Blue
2	Orange
3	Green
4	Brown
5	Grey
6	White
7	Red
8	Black
9	Yellow
10	Violet

TECHNICAL INFORMATION

THERMOCOUPLE EXTENSION AND COMPENSATING CONDUCTOR COMBINATIONS

Table 13

Combination code	Positive	Negative	Nominal e.m.f.
Extension cables			Microvolts 0 °C/100°C
KX	nickel chromium	nickel aluminium	4.10
NX	nickel chromium silicon	nickel silicon	2.77
EX	nickel chromium	copper nickel (constantan)	6.32
JX	iron	copper nickel (constantan)	5.27
TX	copper	copper nickel (constantan)	4.28
Compensating			
KCA	iron	copper nickel alloy	4.10
KCB	copper	copper nickel (constantan)	4.10
RCA	copper	copper low nickel alloy	0.65
RCB	copper	copper nickel mo alloy	0.65
SCA	copper	copper low nickel alloy	0.65
SCB	copper	copper nickel mo alloy	0.65
BC	copper	copper	0.03
NC	copper nickel mg	copper nickel mg	2.77

Table 14

Thermocouple Type	Colour Negative core	Colour Positive core	Sheath colour
T	White	Brown	Brown
E	White	Violet	Violet
J	White	Black	Black
K	White	Green	Green
N	White	Pink	Pink
B	White	Grey	Grey
R/S	White	Orange	Orange

Other colour codes available by request





INSTRUMENTATION CABLES

BASED ON PAS 5308

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

(PE/PVC or XLPE/LSOH)

(F)(R)(U)E(X)OHR(M1) - 300/500 V

Part 1 Type 1 Collective screen

Unarmoured for indoor installations in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Insulation:** polyethene or XLPE
- **Cores twisted into pairs**
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Outer sheath:** PVC or LSOH
- **Marking:** (PAS 5308-1) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- PAS 5308-1 Design guidelines
- IEC 60332-1 Flame retardant
- IEC 60332-3 Flame retardant bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PE/PVC* or XLPE/LS0H) - (F)(R)(U)E(X)OHR(M1) - 300/500 V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over the overall screen	Outer diameter approx	Weight of cable approx	Min bending radius	Capacitance	L/R
mm ²	mm	Ω/km	mm	mm	mm	kg/km	mm	pF/m	μH/Ω
UEXHR									
2x0.5	0.8	36.0	1.8	3.7	5.4	39	65	115	25
2x2x0.5Q	0.8	36.0	1.8	4.4	6.1	56	73	115	25
UEXOHR									
5x2x0.5	0.8	36.0	1.8	9.7	12.0	138	144	75	25
10x2x0.5	0.8	36.0	1.8	12.0	14.5	226	174	75	25
15x2x0.5	0.8	36.0	1.8	14.2	16.7	308	200	75	25
20x2x0.5	0.8	36.0	1.8	16.3	19.0	400	228	75	25
30x2x0.5	0.8	36.0	1.8	19.9	22.6	561	271	75	25
FEXHR									
2x0.5	0.9	39.0	2.1	4.2	5.9	42	71	115	25
2x2x0.5Q	0.9	39.0	2.1	5.0	6.7	59	80	115	25
FEXOHR									
5x2x0.5	0.9	39.0	2.1	11.0	13.3	149	160	75	25
10x2x0.5	0.9	39.0	2.1	13.7	16.2	244	194	75	25
15x2x0.5	0.9	39.0	2.1	16.2	18.9	341	227	75	25
20x2x0.5	0.9	39.0	2.1	18.6	21.2	428	254	75	25
30x2x0.5	0.9	39.0	2.1	22.7	24.6	616	295	75	25
FEXHR									
2x0.75	1.0	26.0	2.3	4.6	6.3	53	76	115	25
2x2x0.75Q	1.0	26.0	2.3	5.5	7.2	81	86	115	25
FEXOHR									
5x2x0.75	1.0	26.0	2.3	12.1	14.6	212	175	75	25
10x2x0.75	1.0	26.0	2.3	15.0	17.7	360	212	75	25
15x2x0.75	1.0	26.0	2.3	17.8	20.4	500	245	75	25
20x2x0.75	1.0	26.0	2.3	20.4	23.5	665	282	75	25
30x2x0.75	1.0	26.0	2.3	24.9	28.4	969	341	75	25
UEXHR									
2x1	1.1	18.4	2.3	4.7	6.4	55	77	115	25
2x2x1Q	1.1	18.4	2.3	5.7	7.4	84	89	115	25
UEXOHR									
5x2x1	1.1	18.4	2.3	12.4	14.9	218	179	75	25
10x2x1	1.1	18.4	2.3	15.5	17.9	362	215	75	25
15x2x1	1.1	18.4	2.3	18.3	20.9	515	251	75	25
20x2x1	1.1	18.4	2.3	21.0	24.0	685	288	75	25
30x2x1	1.1	18.4	2.3	25.7	28.7	971	344	75	25
REXHR									
2x1.5	1.6	12.1	2.8	5.7	7.4	71	89	115	40
2x2x1.5Q	1.6	12.1	2.8	6.8	8.7	118	104	115	40
REXOHR									
5x2x1.5	1.6	12.1	2.8	14.9	17.4	297	209	85	40
10x2x1.5	1.6	12.1	2.8	18.5	21.2	517	254	85	40
15x2x1.5	1.6	12.1	2.8	21.9	24.9	754	299	85	40
20x2x1.5	1.6	12.1	2.8	25.1	28.2	970	338	85	40
30x2x1.5	1.6	12.1	2.8	30.7	34.1	1420	409	85	40

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

(PE/PVC or XLPE/LSOH)

(F)(R)(U)EXHOHR(M1) - 300/500 V

Part 1 Type 1 Individual screen

Unarmoured for indoor installations in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants where higher levels of screening than provided by collective screen is required.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Insulation:** polyethene or XLPE
- **Individual pair screen**
 - a) Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
 - b) Polyester isolating tape(s) numbered for identification
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Outer sheath:** PVC or LSOH
- **Marking:** (PAS 5308-1) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- **PAS 5308-1** Design guidelines
- **IEC 60332-1** Flame retardant
- **IEC 60332-3** Flame retardant bunched cables (if required)
- **IEC 60754** Halogen free properties (only for LSOH)
- **IEC 61034** Low smoke emission (only for LSOH)

(PE/PVC* or XLPE/LS0H) - (F)(R)(U)E(X)OHR(M1) - 300/500 V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over the overall screen	Outer diameter approx	Weight of cable approx	Min bending radius	Capacitance	L/R
mm ²	mm	Ω/km	mm	mm	mm	kg/km	mm	pF/m	μH/Ω
FEXHOHR									
2x2x0.5	0.9	39.0	2.1	7.9	10.2	100	122	115	25
5x2x0.5	0.9	39.0	2.1	11.4	13.9	190	167	115	25
10x2x0.5	0.9	39.0	2.1	14.2	16.9	319	203	115	25
15x2x0.5	0.9	39.0	2.1	16.8	19.8	460	238	115	25
20x2x0.5	0.9	39.0	2.1	19.2	22.3	584	268	115	25
30x2x0.5	0.9	39.0	2.1	23.5	27.0	848	324	115	25
FEXHOHR									
2x2x0.75	1.1	26.0	2.3	8.6	10.9	124	131	115	25
5x2x0.75	1.1	26.0	2.3	12.5	14.9	245	179	115	25
10x2x0.75	1.1	26.0	2.3	15.5	18.2	426	218	115	25
15x2x0.75	1.1	26.0	2.3	18.3	21.4	620	257	115	25
20x2x0.75	1.1	26.0	2.3	21.0	24.5	821	294	115	25
30x2x0.75	1.1	26.0	2.3	25.7	29.8	1212	358	115	25
UEXHOHR									
2x2x1	1.1	18.4	2.3	8.9	11.1	127	133	115	25
5x2x1	1.1	18.4	2.3	12.8	15.3	253	184	115	25
10x2x1	1.1	18.4	2.3	15.9	18.6	438	223	115	25
15x2x1	1.1	18.4	2.3	18.8	21.9	638	263	115	25
20x2x1	1.1	18.4	2.3	21.7	25.2	851	302	115	25
30x2x1	1.1	18.4	2.3	26.5	29.1	1230	349	115	25
REXHOHR									
2x2x1.5	1.6	12.1	2.8	10.5	13.0	170	156	115	40
5x2x1.5	1.6	12.1	2.8	15.2	17.9	342	215	115	40
10x2x1.5	1.6	12.1	2.8	18.9	22.0	612	264	115	40
15x2x1.5	1.6	12.1	2.8	22.3	25.8	886	310	115	40
20x2x1.5	1.6	12.1	2.8	25.7	29.1	1139	349	115	40
30x2x1.5	1.6	12.1	2.8	31.8	33.8	1667	406	115	40

TRATOS[®] PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

(PE/SWA/PVC or XLPE/SWA/LSOH)

(F)(R)(U)EXHEFR(M1) - 300/500 V

Part 1 Type 2 Collective screen

Armoured for indoor or outdoor installations generally within the harsh demanding environment encountered in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Insulation:** polyethene or XLPE
- **Cores twisted into pairs**
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Bedding:** PE Bedding in accordance with BS EN 50290-2-24 or PVC TM51 bedding in accordance with BS EN 50290-2-22
- **Armour:** Single layer galvanised steel wire armour to BS EN 10257-1
- **Outer sheath:** PVC or LSOH
- **Marking:** (PAS 5308-1) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- **PAS 5308-1** Design guidelines
- **IEC 60332-1** Flame retardant
- **IEC 60332-3** Flame retardant bunched cables (if required)
- **IEC 60754** Halogen free properties (only for LSOH)
- **IEC 61034** Low smoke emission (only for LSOH)

(PE/SWA/PVC* or XLPE/SWA/LSOH) (F)(R)(U)EXHEFR(M1) - 300/500 V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over the overall screen mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance pF/m	L/R μH/Ω
UEXHEFR												
2x0.5	0.8	36.0	1.8	3.7	5.4	0.9	7.2	9.8	193	137	115	25
4x0.5	0.8	36.0	1.8	4.4	6.1	0.9	7.9	10.5	228	147	115	25
UEXOHEFR												
15x2x0.5	0.8	36.0	1.8	9.6	12.0	0.9	13.8	16.8	447	235	75	25
10x2x0.5	0.8	36.0	1.8	12.0	14.5	1.3	17.0	20.2	718	283	75	25
15x2x0.5	0.8	36.0	1.8	14.2	16.7	1.3	19.2	22.4	858	314	75	25
20x2x0.5	0.8	36.0	1.8	16.3	19.0	1.6	22.2	25.6	1170	358	75	25
30x2x0.5	0.8	36.0	1.8	19.9	22.6	1.6	25.8	29.4	1494	412	75	25
FEXHEFR												
2x0.5	0.9	39.0	2.1	4.2	5.8	0.9	7.7	10.3	209	144	115	25
4x0.5	0.9	39.0	2.1	5.0	6.7	0.9	8.5	11.1	240	155	115	25
FEXOHEFR												
5x2x0.5	0.9	39.0	2.1	11.0	13.3	1.3	15.8	18.8	582	263	75	25
10x2x0.5	0.9	39.0	2.1	13.7	16.2	1.3	18.7	21.9	780	307	75	25
15x2x0.5	0.9	39.0	2.1	16.2	18.9	1.6	22.1	25.5	1111	357	75	25
20x2x0.5	0.9	39.0	2.1	18.6	21.2	1.6	24.4	28.0	1300	392	75	25
30x2x0.5	0.9	39.0	2.1	22.6	25.6	1.6	28.8	32.6	1629	456	75	25
FEXHEFR												
2x0.75	1.1	26.0	2.3	4.6	6.3	0.9	8.1	10.7	233	150	115	25
4x0.75	1.1	26.0	2.3	5.5	7.2	0.9	9.0	11.8	289	165	115	25
FEXOHEFR												
5x2x0.75	1.1	26.0	2.3	12.1	14.6	1.3	17.1	20.1	714	281	75	25
10x2x0.75	1.1	26.0	2.3	15.0	17.7	1.6	20.9	24.3	1112	340	75	25
15x2x0.75	1.1	26.0	2.3	17.8	20.4	1.6	23.6	27.2	1374	381	75	25
20x2x0.75	1.1	26.0	2.3	20.4	23.5	1.6	26.7	30.3	1651	424	75	25
30x2x0.75	1.1	26.0	2.3	24.9	28.4	2.0	32.4	36.4	2425	510	75	25
UEXHEFR												
2x1	1.1	18.4	2.3	4.7	6.4	0.9	8.2	10.8	236	151	115	25
4x1	1.1	18.4	2.3	5.7	7.4	0.9	9.2	12.0	286	168	115	25
UEXOHEFR												
5x2x1	1.1	18.4	2.3	12.4	14.9	1.3	17.4	20.4	715	286	75	25
10x2x1	1.1	18.4	2.3	15.5	17.9	1.6	21.1	24.5	1113	343	75	25
15x2x1	1.1	18.4	2.3	18.3	20.9	1.6	24.1	27.7	1386	388	75	25
20x2x1	1.1	18.4	2.3	21.0	24.0	1.6	27.2	30.8	1658	431	75	25
30x2x1	1.1	18.4	2.3	25.7	28.7	2.0	32.7	36.7	2395	514	75	25
REXHEFR												
2x1.5	1.6	12.1	2.8	5.7	7.4	0.9	9.2	12.0	277	168	115	40
4x1.5	1.6	12.1	2.8	6.8	9.1	0.9	10.9	13.7	362	192	115	40
REXOHEFR												
5x2x1.5	1.6	12.1	2.8	14.9	17.4	1.3	19.9	23.1	876	323	85	40
10x2x1.5	1.6	12.1	2.8	18.5	21.2	1.6	24.4	28.0	517	392	85	40
15x2x1.5	1.6	12.1	2.8	21.9	24.9	1.6	28.1	31.9	1771	447	85	40
20x2x1.5	1.6	12.1	2.8	25.1	28.2	2.0	32.2	36.2	2364	507	85	40
30x2x1.5	1.6	12.1	2.8	30.7	34.1	2.0	38.1	42.3	3123	592	85	40

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

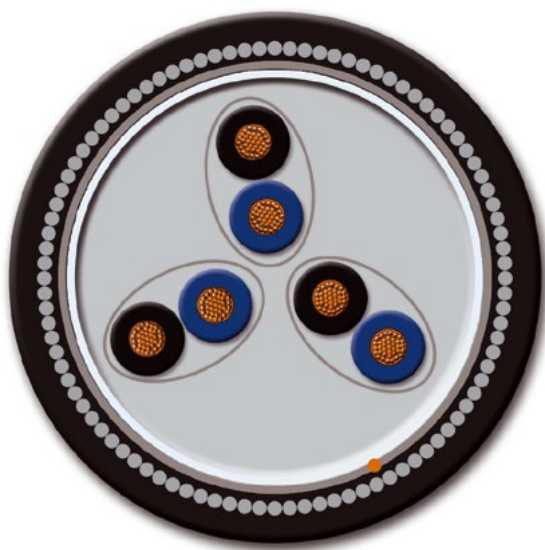
(PE/SWA/PVC or XLPE/SWA/LSOH)

(F)(R)(U)EXHOHEFR(M1) - 300/500 V

Part 1 Type 2 Individual screen

Armoured for indoor or outdoor installations generally within the harsh demanding environment encountered in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants where higher levels of screening than provided by collective screen is required.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Insulation:** polyethene or XLPE
- **Individual pair screen:**
 - a) Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
 - b) Polyester isolating tape(s) numbered for identification
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Bedding:** Type LD black polyethylene to BS EN 50290-2-24 or LSOH to BS EN 50290-2-27
- **Armour:** Single layer galvanised steel wire armour to BS EN 10257-1
- **Outer sheath:** PVC or LSOH
- **Marking:** (PAS 5308-1) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- **PAS 5308-1** Design guidelines
- **IEC 60332-1** Flame retardant
- **IEC 60332-3** Flame retardant bunched cables (if required)
- **IEC 60754** Halogen free properties (only for LSOH)
- **IEC 61034** Low smoke emission (only for LSOH)

(PE/SWA/PVC* or XLPE/SWA/LS0H) (F)(R)(U)EXHOHEFR(M1) - 300/500 V

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

(PE/Pb/SWA/PVC or XLPE/Pb/SWA/LSOH)

(F)(R)(U)EXHRLRFR(M1) - 300/500 V

Part 1 Type 3 Collective screen

Armoured for indoor or outdoor installations generally within the harsh demanding environment encountered in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants where hydrocarbons are present.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Insulation:** polyethene or XLPE
- **Cores twisted into pairs**
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Bedding:** Type LD black polyethylene to BS EN 50290-2-24 or LSOH to BS EN 50290-2-27
- **Chemical barrier:** Lead sheath
- **Bedding:** Type LD black polyethylene to BS EN 50290-2-24 or LSOH to BS EN 50290-2-27
- **Armour:** Single layer galvanised steel wire armour to BS EN 10257-1
- **Outer sheath:** PVC or LSOH
- **Marking:** (PAS 5308-1) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- **PAS 5308-1** Design guidelines
- **IEC 60332-1** Flame retardant
- **IEC 60332-3** Flame retardant bunched cables (if required)
- **IEC 60754** Halogen free properties (only for LSOH)
- **IEC 61034** Low smoke emission (only for LSOH)

(PE/Pb/SWA/PVC* or XLPE/Pb/SWA/LS0H) (F)(R)(U)EXHRLRFR(M1) - 300/500 V

Cross section	Conductor diameter	Max. DC resistance at 20 °C	Diameter over insulation	Diameter over inner sheath	Diameter over lead sheath	Diameter under armour	Diameter of armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Capacitance	L/R
mm ²	mm	Ω/km	mm	mm	mm	mm	mm	mm	mm	kg/km	mm	pF/m	μH/Ω
UEXHRLRFR													
2x0.5	0.8	36.0	1.8	5.3	7.5	9.1	0.9	10.9	13.7	580	219	115	25
2x2x0.5 Q	0.8	36.0	1.8	6.0	8.2	9.8	0.9	11.6	14.4	640	231	115	25
UEXOHLRFR													
5x2x0.5	0.8	36.0	1.8	11.8	14.0	15.6	0.9	17.4	20.6	1140	330	75	25
10x2x0.5	0.8	36.0	1.8	14.4	16.6	18.6	1.3	21.1	24.5	1580	392	75	25
15x2x0.5	0.8	36.0	1.8	16.6	19.0	21.0	1.3	23.5	27.1	1920	434	75	25
20x2x0.5	0.8	36.0	1.8	18.9	21.5	23.5	1.6	26.7	30.3	2460	485	75	25
30x2x0.5	0.8	36.0	1.8	22.5	25.3	27.3	1.6	30.5	34.3	3060	549	75	25
FEXHRLRFR													
2x0.5	0.9	39.0	2.1	5.8	8.0	9.6	0.9	11.4	14.2	620	227	115	25
2x2x0.5 Q	0.9	39.0	2.1	6.6	8.8	10.4	0.9	12.2	15.0	690	240	115	25
FEXOHLRFR													
5x2x0.5	0.9	39.0	2.1	13.2	15.4	17.0	1.3	19.5	22.7	1240	363	75	25
10x2x0.5	0.9	39.0	2.1	16.1	18.5	20.5	1.6	23.7	27.3	170	437	75	25
15x2x0.5	0.9	39.0	2.1	18.8	21.4	23.4	1.6	26.6	30.2	2140	483	75	25
20x2x0.5	0.9	39.0	2.1	21.2	23.8	25.8	1.6	29.0	32.8	2710	525	75	25
30x2x0.5	0.9	39.0	2.1	25.6	28.6	31.0	2.0	35.0	39.2	3430	627	75	25
FEXHRLRFR													
2x0.75	1.1	26.0	2.3	6.2	8.4	10.0	0.9	11.8	14.6	660	234	115	25
2x2x0.75 Q	1.1	26.0	2.3	7.1	9.3	10.9	0.9	12.7	15.7	750	252	115	25
FEXOHLRFR													
5x2x0.75	1.1	26.0	2.3	14.5	16.7	18.7	1.6	21.9	25.3	1540	405	75	25
10x2x0.75	1.1	26.0	2.3	17.4	19.8	21.8	1.6	25.0	28.6	2220	458	75	25
15x2x0.75	1.1	26.0	2.3	20.4	23.0	25.0	1.6	28.2	32.0	2710	512	75	25
20x2x0.75	1.1	26.0	2.3	23.4	26.2	28.6	2.0	32.6	36.6	3160	586	75	25
30x2x0.75	1.1	26.0	2.3	27.9	30.9	33.3	2.0	37.3	41.5	4500	664	75	25
UEXHRLRFR													
2x1	1.1	18.4	2.3	6.3	8.5	10.1	0.9	11.9	14.7	670	236	115	25
2x2x1 Q	1.1	18.4	2.3	7.3	9.5	11.1	0.9	12.9	15.9	770	254	115	25
UEXOHLRFR													
5x2x1	1.1	18.4	2.3	14.8	17.0	19.0	1.6	22.2	25.6	1760	410	75	25
10x2x1	1.1	18.4	2.3	17.9	20.3	22.3	1.6	25.5	29.1	2260	466	75	25
15x2x1	1.1	18.4	2.3	20.9	23.5	25.5	1.6	28.7	32.5	2780	520	75	25
20x2x1	1.1	18.4	2.3	24.0	26.8	29.2	2.0	33.2	37.2	3660	595	75	25
30x2x1	1.1	18.4	2.3	28.7	31.7	34.1	2.0	38.1	42.3	4590	677	75	25
REXHRLRFR													
2x1.5	1.6	12.1	2.8	7.3	9.5	11.1	0.9	12.9	15.9	750	254	115	40
2x2x1.5 Q	1.6	12.1	2.8	8.6	10.8	12.4	1.3	14.9	17.9	890	286	115	40
REXOHLRFR													
5x2x1.5	1.6	12.1	2.8	17.3	19.7	21.7	1.6	24.9	28.3	2050	453	85	40
10x2x1.5	1.6	12.1	2.8	21.1	23.7	25.7	1.6	28.9	32.7	2690	523	85	40
15x2x1.5	1.6	12.1	2.8	24.9	27.7	30.1	2.0	34.1	38.1	3400	610	85	40
20x2x1.5	1.6	12.1	2.8	28.1	31.1	33.5	2.0	37.5	41.7	4380	667	85	40
30x2x1.5	1.6	12.1	2.8	34.1	37.5	40.3	2.5	45.3	49.9	5620	798	85	40

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

(PE/AL-TAPE/SWA/PVC or XLPE/Tratos CB®/SWA/LSOH)

REX0HRH5R4FR - 300/500 V

Part 1 Type 2 Collective screen or Part 1 Type 3 Collective screen

Armoured for indoor or outdoor installations generally within the harsh demanding environment encountered in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants where hydrocarbons are present or a moisture barrier is required.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Insulation:** polyethene or XLPE
- **Cores twisted into pairs**
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Bedding:** polyethylene or LSOH
- **Chemical/moisture barrier:** longitudinal overlapped aluminium metallic foil may be used which is bonded to the inner surface of an extruded plastic sheath.
- **Armour:** Single layer galvanised steel wire armour to BS EN 10257-1
- **Outer sheath:** PVC or LSOH
- **Marking:** (PAS 5308-1) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- **PAS 5308-1** Design guidelines
- **IEC 60332-1** Flame retardant
- **IEC 60332-3** Flame retardant bunched cables (if required)
- **IEC 60754** Halogen free properties (only for LSOH)
- **IEC 61034** Low smoke emission (only for LSOH)

(PE/AL-TAPE/SWA/PVC* or XLPE/Tratos CB®/SWA/LS0H) REXOHRH5R4FR - 300/500 V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over inner sheath	Diameter of armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Capacitance	L/R
mm ²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	pF/m	μH/Ω
RE4OHRH5R4FR											
1x2x0.75	1.08	24.5	2.28	8.99	0.9	10.79	13.5	336.6	189	150	25
RE4XOHRH5R4FR											
2x2x0.75	1.08	24.5	2.28	12.86	0.9	14.66	17.6	511.7	246	150	25
4x2x0.75	1.08	24.5	2.28	14.62	0.9	16.42	19.3	602.4	270	150	25
5x2x0.75	1.08	24.5	2.28	16.61	0.9	18.41	21.3	686.8	298	150	25
6x2x0.75	1.08	24.5	2.28	16.93	0.9	18.73	21.8	733.7	306	150	25
10x2x0.75	1.08	24.5	2.28	19.95	0.9	21.75	24.8	929.3	348	150	25
12x2x0.75	1.08	24.5	2.28	20.66	0.9	22.45	25.6	991.4	358	150	25
15x2x0.75	1.08	24.5	2.28	22.65	1.25	25.15	28.4	1295.4	397	150	25
20x2x0.75	1.08	24.5	2.28	25.49	1.25	27.99	31.2	1533.3	437	150	25
24x2x0.75	1.08	24.5	2.28	27.62	1.25	30.12	33.5	1735.9	469	150	25
RE4OHRH5R4FR											
1x2x1	1.29	18.1	2.49	9.37	0.9	11.17	13.9	354.9	194	150	25
RE4XOHRH5R4FR											
2x2x1	1.29	18.1	2.49	13.65	0.9	15.45	18.4	559.4	257	150	25
4x2x1	1.29	18.1	2.49	15.76	0.9	17.56	20.5	677.2	286	150	25
5x2x1	1.29	18.1	2.49	17.87	0.9	19.67	22.8	778.9	319	150	25
6x2x1	1.29	18.1	2.49	18.02	0.9	19.82	22.9	813.9	321	150	25
10x2x1	1.29	18.1	2.49	21.33	0.9	23.13	26.4	1055.1	370	150	25
12x2x1	1.29	18.1	2.49	22.11	1.25	24.61	27.8	1291.5	389	150	25
15x2x1	1.29	18.1	2.49	24.51	1.25	27.01	30.2	1491.6	423	150	25
20x2x1	1.29	18.1	2.49	27.56	1.25	30.06	33.5	1781.4	468	150	25
24x2x1	1.29	18.1	2.49	29.67	1.25	32.17	35.6	1976.0	498	150	25
RE4OHRH5R4FR											
1x2x1.5	1.59	12.1	2.79	10.11	0.9	11.91	14.8	403.6	207	150	40
RE4XOHRH5R4FR											
2x2x1.5	1.59	12.1	2.79	14.95	0.9	16.75	19.9	647.1	278	150	40
4x2x1.5	1.59	12.1	2.79	17.09	0.9	18.89	22.0	781.8	308	150	40
5x2x1.5	1.59	12.1	2.79	19.69	0.9	21.49	24.6	913.2	344	150	40
6x2x1.5	1.59	12.1	2.79	19.86	0.9	21.66	25.0	971.2	349	150	40
10x2x1.5	1.59	12.1	2.79	23.69	1.25	26.19	29.6	1459.7	414	150	40
12x2x1.5	1.59	12.1	2.79	24.59	1.25	27.09	30.5	1573.5	427	150	40
15x2x1.5	1.59	12.1	2.79	27.02	1.25	29.52	33.1	1806.5	464	150	40
20x2x1.5	1.59	12.1	2.79	30.45	1.25	32.95	36.6	2163.9	512	150	40
24x2x1.5	1.59	12.1	2.79	33.2	1.6	36.4	40.2	2727.4	563	150	40
RE4OHRH5R4FR											
1x2x2.5	1.98	7.41	3.18	10.92	0.9	12.72	15.6	448.5	219	150	60
RE4XOHRH5R4FR											
2x2x2.5	1.98	7.41	3.18	16.56	0.9	18.36	21.5	754.5	300	150	60
4x2x2.5	1.98	7.41	3.18	19.2	1.25	21.7	25.0	1095.5	350	150	60
5x2x2.5	1.98	7.41	3.18	21.93	1.25	24.43	27.9	1283.6	391	150	60
6x2x2.5	1.98	7.41	3.18	22.32	1.25	24.82	28.3	1365.8	396	150	60
10x2x2.5	1.98	7.41	3.18	26.66	1.25	29.16	32.9	1815.8	460	150	60
12x2x2.5	1.98	7.41	3.18	27.68	1.25	30.18	34.1	1983.5	477	150	60
15x2x2.5	1.98	7.41	3.18	30.65	1.6	33.85	38.0	2537.5	531	150	60
20x2x2.5	1.98	7.41	3.18	34.75	1.6	37.95	42.3	3090.5	592	150	60
24x2x2.5	1.98	7.41	3.18	37.62	1.6	40.82	45.3	3509.7	634	150	60

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

(PE/PVC or XLPE/LSOH)

(F)(U)(R)E(X)OHR (M1) - 300/500 V

Part 2 Type 1 Collective screen

Unarmoured for indoor installations in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Insulation:** polyethene or XLPE
- **Cores twisted into pairs**
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Outer sheath:** PVC or LSOH
- **Marking:** (PAS 5308-1) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- **PAS 5308-1** Design guidelines
- **IEC 60332-1** Flame retardant
- **IEC 60332-3** Flame retardant bunched cables (if required)
- **IEC 60754** Halogen free properties (only for LSOH)
- **IEC 61034** Low smoke emission (only for LSOH)

(PE/PVC* or XLPE/LSOH) (F)(U)(R)E(X)OHR (M1) - 300/500 V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over the overall screen	Outer diameter approx	Weight of cable approx	Min bending radius
mm ²	mm	Ω/km	mm	mm	mm	kg/km	mm
UEXHR							
3x0.5	0.8	36.0	1.8	3.9	5.5	40	66
UEXOHR							
2x3x0.5	0.8	36.0	1.8	7.4	9.6	90	115
5x3x0.5	0.8	36.0	1.8	10.3	12.7	170	153
10x3x0.5	0.8	36.0	1.8	13.5	16.1	290	193
15x3x0.5	0.8	36.0	1.8	16.6	19.6	420	235
20x3x0.5	0.8	36.0	1.8	19.0	22.0	540	264
30x3x0.5	0.8	36.0	1.8	23.5	26.9	790	323
FEXHR							
3x0.5	0.9	39.0	2.1	4.4	6.0	50	72
FEXOHR							
2x3x0.5	0.9	39.0	2.1	8.4	10.6	100	127
5x3x0.5	0.9	39.0	2.1	11.7	14.1	190	170
10x3x0.5	0.9	39.0	2.1	15.4	18.0	320	216
15x3x0.5	0.9	39.0	2.1	18.9	21.9	470	262
20x3x0.5	0.9	39.0	2.1	21.6	24.6	600	29
30x3x0.5	0.9	39.0	2.1	26.8	30.2	880	362
FEXHR							
3x0.75	1.1	26.0	2.3	4.9	6.5	60	78
FEXOHR							
2x3x0.75	1.1	26.0	2.3	9.3	11.5	115	138
5x3x0.75	1.1	26.0	2.3	12.9	15.3	220	184
10x3x0.75	1.1	26.0	2.3	16.9	19.5	395	234
15x3x0.75	1.1	26.0	2.3	20.8	23.8	580	285
20x3x0.75	1.1	26.0	2.3	23.8	27.2	765	327
30x3x0.75	1.1	26.0	2.3	29.5	33.5	1135	402
UEXHR							
3x1	1.1	18.4	2.3	5.0	6.6	65	79
UEXOHR							
2x3x1	1.1	18.4	2.3	9.5	11.7	130	141
5x3x1	1.1	18.4	2.3	13.3	15.7	260	188
10x3x1	1.1	18.4	2.3	17.4	20.0	470	240
15x3x1	1.1	18.4	2.3	21.3	24.3	690	292
20x3x1	1.1	18.0	2.3	24.4	27.8	915	334
30x3x1	1.1	18.4	2.3	30.3	34.3	1360	412
REXHR							
3x1.5	1.6	12.1	2.8	6.0	8.2	95	98
REXOHR							
2x3x1.5	1.6	12.1	2.8	11.4	13.8	185	166
5x3x1.5	1.6	12.1	2.8	15.9	18.5	380	222
10x3x1.5	1.6	12.1	2.8	20.8	23.8	700	286
15x3x1.5	1.6	12.1	2.8	25.6	29.0	1030	347
20x3x1.5	1.6	12.1	2.8	29.3	32.7	1330	392
30x3x1.5	1.6	12.1	2.8	36.3	40.3	1990	483

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

(PVC/PVC)

(F)(U)(R)RX(O)HR - 300/500 V

Part 2 Type 1 Collective screen

Unarmoured for indoor installations in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Insulation:** PVC
- **Cores twisted into pairs**
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Outer sheath:** PVC
- **Marking:** (PAS 5308-2) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- **PAS 5308-2** Design guidelines
- **IEC 60332-1** Flame retardant
- **IEC 60332-3** Flame retardant bunched cables (if required)

(PVC/PVC) (F)(U)(R)RX(O)HR - 300/500 V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over the overall screen	Outer diameter approx	Weight of cable approx	Min bending radius
mm ²	mm	Ω/km	mm	mm	mm	kg/km	mm
FRXHR							
2x0.5	0.9	39.0	2.1	4.2	5.9	52	70
2x2x0.5 Q	0.9	39.0	2.1	5.0	6.7	72	80
FRXOHR							
5x2x0.5	0.9	39.0	2.1	11.0	13.3	169	160
10x2x0.5	0.9	39.0	2.1	13.7	16.2	284	195
15x2x0.5	0.9	39.0	2.1	16.2	18.9	401	230
20x2x0.5	0.9	39.0	2.1	18.6	21.2	508	250
30x2x0.5	0.9	39.0	2.1	22.7	25.8	745	310
FRXHR							
2x0.75	1.1	26.0	2.3	4.6	6.3	53	80
2x2x0.75 Q	1.1	26.0	2.3	5.5	7.2	81	90
FRXOHR							
5x2x0.75	1.1	26.0	2.3	12.1	14.6	212	180
10x2x0.75	1.1	26.0	2.3	15.0	17.7	360	210
15x2x0.75	1.1	26.0	2.3	17.8	20.4	500	250
20x2x0.75	1.1	26.0	2.3	20.4	23.5	665	280
30x2x0.75	1.1	26.0	2.3	24.9	28.4	969	340
RRXHR							
2x1.5	1.6	12.1	2.8	5.7	7.6	94	90
2x2x1.5 Q	1.6	12.1	2.8	6.9	9.1	150	110
RRXOHR							
5x2x1.5	1.6	12.1	2.8	14.9	17.4	328	210
10x2x1.5	1.6	12.1	2.8	18.5	21.2	581	255
15x2x1.5	1.6	12.1	2.8	21.9	24.9	850	300
20x2x1.5	1.6	12.1	2.8	25.1	28.2	1097	340
30x2x1.5	1.6	12.1	2.8	30.7	34.1	1612	410

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

(PVC/PVC)

(F)(R)RXHOHR - 300/500 V

Part 2 Type 1 Individual and collective screen

Unarmoured for indoor installations in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Insulation:** PVC
- **Cores twisted into pairs**
- **Individual pair screen**
 - a) Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
 - b) Polyester isolating tape(s) numbered for identification
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Outer sheath:** PVC
- **Marking:** (PAS 5308-2) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- **PAS 5308-2** Design guidelines
- **IEC 60332-1** Flame retardant
- **IEC 60332-3** Flame retardant bunched cables (if required)

(PVC/PVC) (F)(R)RXHOHR - 300/500 V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over the overall screen	Outer diameter approx	Weight of cable approx	Min bending radius
mm ²	mm	Ω/km	mm	mm	mm	kg/km	mm
FRXHOHR							
2x2x0.5	0.9	39.0	2.1	7.9	10.2	108	120
5x2x0.5	0.9	39.0	2.1	11.4	13.9	210	170
10x2x0.5	0.9	39.0	2.1	14.2	16.9	359	200
15x2x0.5	0.9	39.0	2.1	16.8	19.8	519	240
20x2x0.5	0.9	39.0	2.1	19.2	22.3	664	270
30x2x0.5	0.9	39.0	2.1	23.5	27.0	968	320
FRXHOHR							
2x2x0.75	1.1	26.0	2.3	8.6	10.9	124	130
5x2x0.75	1.1	26.0	2.3	12.5	14.9	245	180
10x2x0.75	1.1	26.0	2.3	15.5	18.2	426	220
15x2x0.75	1.1	26.0	2.3	18.3	21.4	620	260
20x2x0.75	1.1	26.0	2.3	21.0	24.5	821	295
30x2x0.75	1.1	26.0	2.3	25.7	29.8	1212	360
RRXHOHR							
2x2x1.5	1.6	12.1	2.8	10.6	13.3	230	160
5x2x1.5	1.6	12.1	2.8	15.2	17.9	373	215
10x2x1.5	1.6	12.1	2.8	18.9	22.0	676	260
15x2x1.5	1.6	12.1	2.8	22.3	25.8	982	310
20x2x1.5	1.6	12.1	2.8	25.7	29.1	1267	350
30x2x1.5	1.6	12.1	2.8	31.4	35.4	1877	430

TRATOS[®] PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

(PVC/SWA/PVC)

(F)(R)RXOHRFR - 300/500 V

Part 2 Type 2 Collective screen

Armoured for indoor or outdoor installations generally within the harsh demanding environment encountered in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Insulation:** PVC
- **Cores twisted into pairs**
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Bedding:** PVC
- **Armour:** Single layer galvanised steel wire armour to BS EN 10257-1
- **Outer sheath:** PVC
- **Marking:** (PAS 5308-2) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- **PAS 5308-2** Design guidelines
- **IEC 60332-1** Flame retardant
- **IEC 60332-3** Flame retardant bunched cables (if required)

(PVC/SWA/PVC) (F)(R)RXOHRFR - 300/500 V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over the overall screen mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm
FRXHRFR										
2x0.5	0.9	39.0	2.1	4.2	5.9	0.9	7.7	10.3	218	144
4x0.5	0.9	39.0	2.1	5.1	6.8	0.9	8.6	11.2	267	157
FRXOHRFR										
5x2x0.5	0.9	39.0	2.1	11.0	13.3	1.3	15.8	18.8	630	263
10x2x0.5	0.9	39.0	2.1	13.7	16.2	1.3	18.7	21.9	840	307
15x2x0.5	0.9	39.0	2.1	16.2	18.9	1.6	22.1	25.5	1196	357
20x2x0.5	0.9	39.0	2.1	18.6	21.2	1.6	24.4	28.0	1406	392
30x2x0.5	0.9	39.0	2.1	23.1	26.2	1.6	29.4	33.2	1882	465
FRXHRFR										
2x0.75	1.1	26.0	2.3	4.6	6.3	0.9	8.1	10.7	233	150
4x0.75	1.1	26.0	2.3	5.5	7.2	0.9	9.0	11.8	289	165
FRXOHRFR										
5x2x0.75	1.1	26.0	2.3	12.1	14.6	1.3	17.1	20.1	714	281
10x2x0.75	1.1	26.0	2.3	15.0	17.7	1.6	20.9	24.3	1112	340
15x2x0.75	1.1	26.0	2.3	17.8	20.4	1.6	23.6	27.2	1374	381
20x2x0.75	1.1	26.0	2.3	20.4	23.5	1.6	26.7	30.3	1651	424
30x2x0.75	1.1	26.0	2.3	24.9	28.4	2.0	32.4	36.4	2425	510
RRXHRFR										
2x1.5	1.6	12.1	2.8	5.7	7.4	0.9	9.2	12.0	299	168
4x1.5	1.6	12.1	2.8	6.8	8.7	0.9	10.5	13.3	370	186
RRXOHRFR										
5x2x1.5	1.6	12.1	2.8	12.3	14.8	1.3	17.3	20.5	826	287
10x2x1.5	1.6	12.1	2.8	18.5	21.2	1.6	24.4	28.0	1478	392
15x2x1.5	1.6	12.1	2.8	21.9	24.9	1.6	28.1	31.9	1899	447
20x2x1.5	1.6	12.1	2.8	25.1	28.2	2.0	32.2	36.2	2525	507
30x2x1.5	1.6	12.1	2.8	30.7	34.1	2.0	38.1	42.3	3358	595

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

(PVC/SWA/PVC)

(F)(R)RXHOHRFR - 300/500 V

Part 2 Type 2 Individual and collective screen

Armoured for indoor or outdoor installations generally within the harsh demanding environment encountered in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission in process plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Insulation:** PVC
- **Cores twisted into pairs**
- **Individual pair screen:**
 - a) Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
 - b) Polyester isolating tape(s) numbered for identification
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Bedding:** PVC
- **Armour:** Single layer galvanised steel wire armour to BS EN 10257-1
- **Outer sheath:** PVC
- **Marking:** (PAS 5308-2) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- **PAS 5308-2** Design guidelines
- **IEC 60332-1** Flame retardant
- **IEC 60332-3** Flame retardant bunched cables (if required)

(PVC/SWA/PVC) (F)(R)RXHOHRFR - 300/500 V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over the overall screen mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm
FRXHOHRFR										
2x2x0.5	0.9	39.0	2.1	7.9	10.2	0.9	12.0	15.0	393	210
5x2x0.5	0.9	39.0	2.1	11.4	13.9	1.3	16.4	19.6	696	274
10x2x0.5	0.9	39.0	2.1	14.2	16.9	1.6	20.1	23.7	1129	332
15x2x0.5	0.9	39.0	2.1	16.8	19.8	1.6	23.0	26.6	1411	372
20x2x0.5	0.9	39.0	2.1	19.2	22.3	1.6	25.5	29.3	1621	410
20x2x0.5	0.9	39.0	2.1	19.2	22.3	1.6	25.5	29.3	1621	410
30x2x0.5	0.9	39.0	2.1	23.5	27.0	2.0	31.0	35.2	2375	493
FRXHOHRFR										
2x2x0.75	1.1	26.0	2.3	8.6	10.9	0.9	12.7	15.7	425	220
5x2x0.75	1.1	26.0	2.3	12.5	14.9	1.3	17.4	20.6	771	288
10x2x0.75	1.1	26.0	2.3	15.5	18.2	1.6	21.4	25.0	1212	350
15x2x0.75	1.1	26.0	2.3	18.3	21.4	1.6	24.6	28.4	1534	398
20x2x0.75	1.1	26.0	2.3	21.0	24.5	2.0	28.5	32.5	2079	455
30x2x0.75	1.1	26.0	2.3	25.7	29.8	2.0	33.8	38.2	2774	535
RRXHOHRFR										
2x2x1.5	1.6	12.1	2.8	10.5	13.0	1.3	15.5	18.7	641	262
5x2x1.5	1.6	12.1	2.8	15.2	17.9	1.6	21.1	24.5	1144	343
10x2x1.5	1.6	12.1	2.8	18.9	22.0	1.6	25.2	29.0	1630	406
15x2x1.5	1.6	12.1	2.8	22.3	25.8	2.0	29.8	33.8	2306	473
20x2x1.5	1.6	12.1	2.8	25.7	29.1	2.0	33.1	37.3	2776	522
30x2x1.5	1.6	12.1	2.8	31.4	35.4	2.0	39.4	44.2	3732	619

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

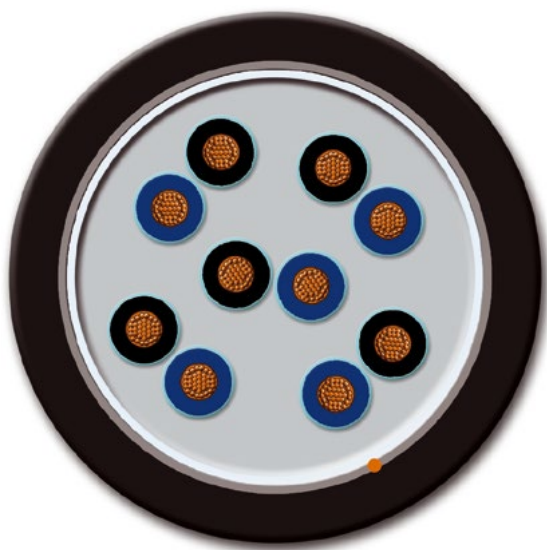
(XLPE/LSOH)

(F)(U)(R)TE4X(O)HM1 - 300/500 V

Based on Part 1 Type 1 Collective screen

Unarmoured fire performance cable for indoor installations in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants. Used where limited circuit integrity in the event of a fire is required.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Fire barrier:** Mica-glass tape
- **Insulation:** XLPE
- **Cores twisted into pairs**
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Outer sheath:** LSOH
- **Marking:** (PAS 5308-1) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- **Based PAS 5308-1** Design guideline
- **IEC 60332-1** Flame retardant
- **IEC 60332-3C** Fire retardant on bunched cables (if required)
- **IEC 60331** Circuit integrity test
- **IEC 60754** Halogen free properties
- **IEC 61034** Low smoke emission

(XLPE/LSOH) (F)(U)(R)TE4X(O)HM1 - 300/500 V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over the overall screen mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm
FRXHOHRFR										
2x2x0.5	0.9	39.0	2.1	7.9	10.2	0.9	12.0	15.0	393	210
5x2x0.5	0.9	39.0	2.1	11.4	13.9	1.3	16.4	19.6	696	274
10x2x0.5	0.9	39.0	2.1	14.2	16.9	1.6	20.1	23.7	1129	332
15x2x0.5	0.9	39.0	2.1	16.8	19.8	1.6	23.0	26.6	1411	372
20x2x0.5	0.9	39.0	2.1	19.2	22.3	1.6	25.5	29.3	1621	410
20x2x0.5	0.9	39.0	2.1	19.2	22.3	1.6	25.5	29.3	1621	410
30x2x0.5	0.9	39.0	2.1	23.5	27.0	2.0	31.0	35.2	2375	493
FRXHOHRFR										
2x2x0.75	1.1	26.0	2.3	8.6	10.9	0.9	12.7	15.7	425	220
5x2x0.75	1.1	26.0	2.3	12.5	14.9	1.3	17.4	20.6	771	288
10x2x0.75	1.1	26.0	2.3	15.5	18.2	1.6	21.4	25.0	1212	350
15x2x0.75	1.1	26.0	2.3	18.3	21.4	1.6	24.6	28.4	1534	398
20x2x0.75	1.1	26.0	2.3	21.0	24.5	2.0	28.5	32.5	2079	455
30x2x0.75	1.1	26.0	2.3	25.7	29.8	2.0	33.8	38.2	2774	535
RRXHOHRFR										
2x2x1.5	1.6	12.1	2.8	10.5	13.0	1.3	15.5	18.7	641	262
5x2x1.5	1.6	12.1	2.8	15.2	17.9	1.6	21.1	24.5	1144	343
10x2x1.5	1.6	12.1	2.8	18.9	22.0	1.6	25.2	29.0	1630	406
15x2x1.5	1.6	12.1	2.8	22.3	25.8	2.0	29.8	33.8	2306	473
20x2x1.5	1.6	12.1	2.8	25.7	29.1	2.0	33.1	37.3	2776	522
30x2x1.5	1.6	12.1	2.8	31.4	35.4	2.0	39.4	44.2	3732	619

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON PAS 5308

(XLPE/SWA/LSOH)

(F)(U)(R)TE4XOHM1FM1 - 300/500 V

Based on Part 1 Type 2 Collective screen

Armoured for indoor or outdoor installations generally within the harsh demanding environment encountered in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Also used for the interconnection of electrical equipment and instruments, particularly in and around process plants. Used where limited circuit integrity in the event of a fire is required.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** Plain annealed copper wire conductors to BS EN 60228 cl.1, cl.2 or cl.5
- **Fire barrier** – mica-glass tape
- **Insulation:** XLPE
- **Cores twisted into pairs**
- **Cabling of pairs:** in concentric layers
- **Tape:** Polyester binder tape
- **Collective screen:** Aluminium/polyester tape, metallic side down, in contact with minimum 0.5mm² tinned copper drain wire
- **Bedding:** LSOH to BS EN 50290-2-27
- **Armour:** Single layer galvanised steel wire armour to BS EN 10257-1
- **Outer sheath:** LSOH
- **Marking:** (PAS 5308-2) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- **Based on PAS 5308-1** Design guideline
- **IEC 60332-1** Flame retardant
- **IEC 60332-3C** Fire retardant on bunched cables (if required)
- **IEC 60331** Circuit integrity test
- **IEC 60754** Halogen free properties
- **IEC 61034** Low smoke emission

(XLPE/SWA/LSOH) (F)(U)(R)TE4XOHM1FM1 - 300/500 V

Cross section mm ²	Conductor diameter mm	Max. DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over the overall screen mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance pF/m	L/R μH/Ω
UTE4XHM1FM1												
2x0.5	0.8	36.0	2.3	4.8	6.4	0.9	8.2	10.8	215	89	115	25
2x2x0.5Q	0.8	36.0	2.3	5.7	7.3	0.9	9.1	11.7	270	102	115	25
UTE4XOHM1FM1												
5x2x0.5	0.8	36.0	2.3	12.4	14.6	0.9	16.4	19.4	670	204	75	25
10x2x0.5	0.8	36.0	2.3	15.4	17.8	1.3	20.3	23.5	960	249	75	25
15x2x0.5	0.8	36.0	2.3	18.2	20.6	1.3	23.1	26.3	1240	288	75	25
20x2x0.5	0.8	36.0	2.3	20.9	23.5	1.6	26.7	30.1	1490	329	75	25
30x2x0.5	0.8	36.0	2.3	25.6	28.2	1.6	31.4	35.0	1860	394	75	25
FTE4XHM1FM1												
2x0.5	0.9	39.0	2.6	5.2	6.8	0.9	8.6	11.2	240	95	115	25
2x2x0.5Q	0.9	39.0	2.6	6.2	7.8	0.9	9.6	12.2	290	110	115	25
FTE4XOHM1FM1												
5x2x0.5	0.9	39.0	2.6	13.6	15.8	1.3	18.3	21.3	620	221	75	25
10x2x0.5	0.9	39.0	2.6	17.0	19.4	1.3	21.9	25.1	1100	271	75	25
15x2x0.5	0.9	39.0	2.6	20.1	22.7	1.6	25.9	29.3	1380	317	75	25
20x2x0.5	0.9	39.0	2.6	23.0	25.6	1.6	28.8	32.4	1620	359	75	25
30x2x0.5	0.9	39.0	2.6	28.1	31.1	1.6	34.3	38.1	2025	435	75	25
FTE4XHM1FM1												
2x0.75	1.1	26.0	3.3	6.6	8.2	0.9	10.0	12.6	255	115	115	25
2x2x0.75Q	1.1	26.0	3.3	8.0	9.6	0.9	11.4	14.2	310	134	115	25
FTE4XOHM1FM1												
5x2x0.75	1.1	26.0	3.3	17.5	19.9	1.3	22.4	25.4	735	278	75	25
10x2x0.75	1.1	26.0	3.3	21.7	24.3	1.6	27.5	30.9	1200	340	75	25
15x2x0.75	1.1	26.0	3.3	25.7	28.3	1.6	31.5	35.1	1520	396	75	25
20x2x0.75	1.1	26.0	3.3	29.5	32.5	1.6	35.7	39.3	1935	454	75	25
30x2x0.75	1.1	26.0	3.3	35.9	39.3	2.0	43.3	47.3	2420	551	75	25
UTE4XHM1FM1												
2x1	1.1	18.4	2.8	5.7	7.3	0.9	9.1	11.7	270	103	115	25
2x2x1Q	1.1	18.4	2.8	6.9	8.5	0.9	10.3	13.1	330	119	115	25
UTE4XOHM1FM1												
5x2x1	1.1	18.4	2.8	15.1	17.5	1.3	20.0	23.0	850	244	75	25
10x2x1	1.1	18.4	2.8	18.8	21.2	1.6	24.4	27.8	1300	297	75	25
15x2x1	1.1	18.4	2.8	22.2	24.8	1.6	28.0	31.6	1660	348	75	25
20x2x1	1.1	18.4	2.8	25.5	28.5	1.6	31.7	35.3	2250	399	75	25
30x2x1	1.1	18.4	2.8	31.2	34.2	2.0	38.2	42.2	2800	479	75	25
RTE4XHM1FM1												
2x1.5	1.6	12.1	3.3	6.8	8.4	0.9	10.2	13.0	320	117	115	40
2x2x1.5Q	1.6	12.1	3.3	8.1	9.9	0.9	11.7	14.5	400	138	115	40
RTE4XOHM1FM1												
5x2x1.5	1.6	12.1	3.3	17.7	20.1	1.3	22.6	25.8	1175	282	85	40
10x2x1.5	1.6	12.1	3.3	22.0	24.6	1.6	27.8	31.4	1640	345	85	40
15x2x1.5	1.6	12.1	3.3	26.1	29.1	1.6	32.3	36.1	2360	407	85	40
20x2x1.5	1.6	12.1	3.3	29.9	32.9	2.0	36.9	40.9	2800	460	85	40
30x2x1.5	1.6	12.1	3.3	36.5	39.9	2.0	43.9	48.1	3500	559	85	40



A large industrial facility, possibly a refinery or chemical plant, is shown at night. The scene is dominated by a tall, red and white striped smokestack on the left. The facility itself is a complex of various structures, including pipes, tanks, and scaffolding, all illuminated by numerous bright lights. The background shows a dark, hazy sky. The entire image has a blue tint.

INSTRUMENTATION CABLES

BASED ON EN 50288

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

(PE/PVC or XLPE/PVC or XLPE/LSOH)

RE4(X)OHR(M1) - 300V or 500 V

Unarmoured multi-element metallic instrumentation cables for indoor use in analogue and digital communication and control.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Insulation:** polyethene or XLPE
- **Pairs:** twisted
- **Identification pairs:** see table 11 & 12 on page 12
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PE/PVC or XLPE/PVC or XLPE/LSOH) RE4(X)OHR(M1) - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RE4OHR								
1x2x0.5	0.96	36.0	2.16	6.2	44	74	75	25
RE4XOHR								
2x2x0.5	0.96	36.0	2.16	10.0	81	120	75	25
4x2x0.5	0.96	36.0	2.16	11.7	121	140	75	25
5x2x0.5	0.96	36.0	2.16	13.7	152	164	75	25
6x2x0.5	0.96	36.0	2.16	13.8	168	166	75	25
10x2x0.5	0.96	36.0	2.16	16.7	254	201	75	25
12x2x0.5	0.96	36.0	2.16	17.4	290	209	75	25
15x2x0.5	0.96	36.0	2.16	19.3	349	232	75	25
20x2x0.5	0.96	36.0	2.16	22.0	454	264	75	25
24x2x0.5	0.96	36.0	2.16	23.8	530	286	75	25

(PE/PVC or XLPE/PVC or XLPE/LS0H) RE4(X)OHR(M1) - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RE4OHR								
1x2x0.75	1.08	24.5	2.28	6.4	48	77	75	25
RE4XOHR								
2x2x0.75	1.08	24.5	2.28	10.4	89	125	75	25
4x2x0.75	1.08	24.5	2.28	12.2	136	146	75	25
5x2x0.75	1.08	24.5	2.28	14.3	171	172	75	25
6x2x0.75	1.08	24.5	2.28	14.5	191	174	75	25
10x2x0.75	1.08	24.5	2.28	17.5	291	210	75	25
12x2x0.75	1.08	24.5	2.28	18.2	338	219	75	25
15x2x0.75	1.08	24.5	2.28	20.4	412	245	75	25
20x2x0.75	1.08	24.5	2.28	23.1	525	277	75	25
24x2x0.75	1.08	24.5	2.28	25.2	626	302	75	25
RE4OHR								
1x2x1	1.29	18.1	2.49	6.9	57	83	75	25
RE4XOHR								
2x2x1	1.29	18.1	2.49	11.2	105	134	75	25
4x2x1	1.29	18.1	2.49	13.3	171	160	75	25
5x2x1	1.29	18.1	2.49	15.5	208	185	75	25
6x2x1	1.29	18.1	2.49	15.6	234	187	75	25
10x2x1	1.29	18.1	2.49	18.9	361	227	75	25
12x2x1	1.29	18.1	2.49	19.9	425	239	75	25
15x2x1	1.29	18.1	2.49	22.1	516	265	75	25
20x2x1	1.29	18.1	2.49	25.2	672	302	75	25
24x2x1	1.29	18.1	2.49	27.3	789	327	75	25
RE4OHR								
1x2x1.5	1.59	12.1	2.79	7.7	74	92	85	40
RE4XOHR								
2x2x1.5	1.59	12.1	2.79	12.5	138	150	85	40
4x2x1.5	1.59	12.1	2.79	14.8	229	178	85	40
5x2x1.5	1.59	12.1	2.79	17.2	280	207	85	40
6x2x1.5	1.59	12.1	2.79	17.4	317	209	85	40
10x2x1.5	1.59	12.1	2.79	21.3	502	255	85	40
12x2x1.5	1.59	12.1	2.79	22.2	581	266	85	40
15x2x1.5	1.59	12.1	2.79	24.8	718	298	85	40
20x2x1.5	1.59	12.1	2.79	28.3	937	339	85	40
24x2x1.5	1.59	12.1	2.79	30.6	1102	367	85	40

(PE/PVC or XLPE/PVC or XLPE/LS0H) RE4(X)OHR(M1) - 500V

RE4OHR								
1x2x2.5	1.98	7.41	3.18	8.4	95	101	105	60
RE4XOHR								
2x2x2.5	1.98	7.41	3.18	14.1	186	169	105	60
4x2x2.5	1.98	7.41	3.18	16.8	315	201	105	60
5x2x2.5	1.98	7.41	3.18	19.5	386	234	105	60
6x2x2.5	1.98	7.41	3.18	19.9	449	239	105	60
10x2x2.5	1.98	7.41	3.18	24.2	712	291	105	60
12x2x2.5	1.98	7.41	3.18	25.3	827	303	105	60
15x2x2.5	1.98	7.41	3.18	28.3	1022	339	105	60
20x2x2.5	1.98	7.41	3.18	32.2	1334	386	105	60
24x2x2.5	1.98	7.41	3.18	35.2	1604	423	105	60

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

(PE/PVC or XLPE/PVC or XLPE/LSOH)

RE4(X)HOHR(M1) - 300V or 500 V

Unarmoured multi-element metallic instrumentation cables for indoor use in analogue and digital communication and control in and around process plants where higher levels of screening than provided by collective screen is required.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Insulation:** polyethene or XLPE
- **Pairs:** twisted
- **Identification pairs:** see table 11 & 12 on page 12
- **Individual screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PE/PVC or XLPE/PVC or XLPE/LSOH) RE4(X)HOHR(M1) - 300V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Outer diameter approx	Weight of cable approx	Min bending radius	Capacitance	L/R
mm ²	mm	Ω/km	mm	mm	kg/km	mm	kA	μH/Ω
RE4OHR								
1x2x0.5	0.96	36.0	2.16	6.2	44	74	115	25
RE4XHOHR								
2x2x0.5	0.96	36.0	2.16	10.5	98	125	115	25
4x2x0.5	0.96	36.0	2.16	12.4	159	149	115	25
5x2x0.5	0.96	36.0	2.16	14.4	193	173	115	25
6x2x0.5	0.96	36.0	2.16	14.5	217	174	115	25
12x2x0.5	0.96	36.0	2.16	18.5	394	222	115	25
10x2x0.5	0.96	36.0	2.16	17.6	334	211	115	25
15x2x0.5	0.96	36.0	2.16	20.5	477	246	115	25
20x2x0.5	0.96	36.0	2.16	23.4	622	280	115	25

* Refers only to XLPE/PVC construction

(PE/PVC or XLPE/PVC or XLPE/LSOH) RE4(X)HOHR(M1) - 300 V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RE4OHR								
1x2x0.75	1.08	24.5	2.28	6.4	48.1	77	115	25
RE4XHOHR								
2x2x0.75	1.08	24.5	2.28	10.9	106	131	115	25
4x2x0.75	1.08	24.5	2.28	13.0	174	155	115	25
5x2x0.75	1.08	24.5	2.28	15.0	212	180	115	25
6x2x0.75	1.08	24.5	2.28	15.4	246	184	115	25
10x2x0.75	1.08	24.5	2.28	18.6	379	223	115	25
12x2x0.75	1.08	24.5	2.28	19.3	437	232	115	25
15x2x0.75	1.08	24.5	2.28	21.6	541	260	115	25
20x2x0.75	1.08	24.5	2.28	24.4	693	293	115	25
24x2x0.75	1.08	24.5	2.28	26.7	826	320	115	25
RE4OHR								
1x2x1	1.29	18.1	2.49	6.9	57	83	115	25
RE4XHOHR								
2x2x1	1.29	18.1	2.49	11.9	131	142	115	25
4x2x1	1.29	18.1	2.49	13.9	209	167	115	25
5x2x1	1.29	18.1	2.49	16.3	262	196	115	25
6x2x1	1.29	18.1	2.49	16.5	297	198	115	25
10x2x1	1.29	18.1	2.49	19.9	461	239	115	25
12x2x1	1.29	18.1	2.49	21.0	544	252	115	25
15x2x1	1.29	18.1	2.49	23.3	661	279	115	25
20x2x1	1.29	18.1	2.49	26.5	864	318	115	25
24x2x1	1.29	18.1	2.49	28.9	1030	347	115	25
RE4OHR								
1x2x1.5	1.59	12.1	2.79	7.7	74	92	120	40
RE4XHOHR								
2x2x1.5	1.59	12.1	2.79	12.9	158	155	120	40
4x2x1.5	1.59	12.1	2.79	15.4	267	185	120	40
5x2x1.5	1.59	12.1	2.79	18.1	335	217	120	40
6x2x1.5	1.59	12.1	2.79	18.3	381	220	120	40
10x2x1.5	1.59	12.1	2.79	22.3	604	268	120	40
12x2x1.5	1.59	12.1	2.79	23.3	700	279	120	40
15x2x1.5	1.59	12.1	2.79	26.0	866	312	120	40
20x2x1.5	1.59	12.1	2.79	29.6	1130	355	120	40
24x2x1.5	1.59	12.1	2.79	32.3	1346	387	120	40

(PE/PVC or XLPE/PVC or XLPE/LSOH) RE4(X)HOHR(M1) - 500 V

RE4OHR								
1x2x2.5	1.98	7.41	3.18	8.4	95	101	140	60
RE4XHOHR								
2x2x2.5	1.98	7.41	3.18	14.8	213	177	140	60
4x2x2.5	1.98	7.41	3.18	17.5	363	210	140	60
5x2x2.5	1.98	7.41	3.18	20.4	445	245	140	60
6x2x2.5	1.98	7.41	3.18	20.8	518	249	140	60
10x2x2.5	1.98	7.41	3.18	25.3	821	303	140	60
12x2x2.5	1.98	7.41	3.18	26.4	955	316	140	60
15x2x2.5	1.98	7.41	3.18	29.7	1193	356	140	60
20x2x2.5	1.98	7.41	3.18	33.7	1556	404	140	60
24x2x2.5	1.98	7.41	3.18	36.7	1852	440	140	60

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

(PE/SWA/PVC or XLPE/SWA/LSOH or XLPE/SWA/PVC)

RE4(X)OHR(M4)FR(M1) - 300V or 500 V

Armoured multi-element metallic instrumentation cables for indoor or outdoor use in analogue and digital communication and control.
Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Insulation:** polyethene or XLPE
- **Pairs:** twisted
- **Identification pairs:** see table 11 & 12 on page 12
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Inner sheath:** PVC or LSOH
- **Armour:** galvanized steel wire
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PE/SWA/PVC or XLPE/SWA/LSOH or XLPE/SWA/PVC) RE4(X)OHR(M4)FR(M1) - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RE4OHRFR											
1x2x0.5	0.96	36.0	2.16	6.2	0.9	8.0	10.7	229	149	75	25
RE4XOHRFR											
2x2x0.5	0.96	36.0	2.16	10.0	0.9	11.8	14.5	374	202	75	25
4x2x0.5	0.96	36.0	2.16	11.7	0.9	13.5	16.3	458	229	75	25
5x2x0.5	0.96	36.0	2.16	13.7	0.9	15.5	18.4	534	258	75	25
6x2x0.5	0.96	36.0	2.16	13.8	0.9	15.6	18.5	553	259	75	25
10x2x0.5	0.96	36.0	2.16	16.7	0.9	18.5	21.6	728	303	75	25
12x2x0.5	0.96	36.0	2.16	17.4	0.9	19.2	22.3	781	312	75	25
15x2x0.5	0.96	36.0	2.16	19.3	0.9	21.1	24.2	893	339	75	25
20x2x0.5	0.96	36.0	2.16	22.0	0.9	23.8	27.1	1082	380	75	25
24x2x0.5	0.96	36.0	2.16	23.8	1.25	26.3	29.5	1380	413	75	25

(PE/SWA/PVC or XLPE/SWA/LSOH or XLPE/SWA/PVC) RE4(X)OHR(M4)FR(M1) - 300V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over inner sheath	Diameter of armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Capacitance	L/R
mm ²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	kA	μH/Ω
RE4OHRFR											
1x2x0.75	1.08	24.5	2.28	6.4	0.9	8.2	10.9	241	153	75	25
RE4XOHRFR											
2x2x0.75	1.08	24.5	2.28	10.4	0.9	12.2	14.9	399	209	75	25
4x2x0.75	1.08	24.5	2.28	12.2	0.9	14.0	16.9	483	236	75	25
5x2x0.75	1.08	24.5	2.28	14.3	0.9	16.1	19.0	571	267	75	25
6x2x0.75	1.08	24.5	2.28	14.5	0.9	16.3	19.2	594	268	75	25
10x2x0.75	1.08	24.5	2.28	17.5	0.9	19.3	22.4	785	314	75	25
12x2x0.75	1.08	24.5	2.28	18.2	0.9	20.0	23.1	845	324	75	25
15x2x0.75	1.08	24.5	2.28	20.4	0.9	22.2	25.3	986	355	75	25
20x2x0.75	1.08	24.5	2.28	23.1	1.25	25.6	28.8	1347	403	75	25
24x2x0.75	1.08	24.5	2.28	25.2	1.25	27.7	30.9	1524	433	75	25
RE4OHRFR											
1x2x1	1.29	18.1	2.49	6.9	0.9	8.7	11.3	260	159	75	25
RE4XOHRFR											
2x2x1	1.29	18.1	2.49	11.2	0.9	13.0	15.9	443	222	75	25
4x2x1	1.29	18.1	2.49	13.3	0.9	15.1	18.0	552	252	75	25
5x2x1	1.29	18.1	2.49	15.5	0.9	17.3	20.2	641	282	75	25
6x2x1	1.29	18.1	2.49	15.6	0.9	17.4	20.3	670	284	75	25
10x2x1	1.29	18.1	2.49	18.9	0.9	20.7	23.8	897	333	75	25
12x2x1	1.29	18.1	2.49	19.9	0.9	21.7	24.8	988	347	75	25
15x2x1	1.29	18.1	2.49	22.1	1.25	24.6	27.8	1308	389	75	25
20x2x1	1.29	18.1	2.49	25.2	1.25	27.7	30.9	1572	432	75	25
24x2x1	1.29	18.1	2.49	27.3	1.25	29.8	33.2	1780	464	75	25
RE4OHRFR											
1x2x1.5	1.59	12.1	2.79	7.7	0.9	9.5	12.1	299	170	85	40
RE4XOHRFR											
2x2x1.5	1.59	12.1	2.79	12.5	0.9	14.3	17.2	516	240	85	40
4x2x1.5	1.59	12.1	2.79	14.8	0.9	16.6	19.7	664	276	85	40
5x2x1.5	1.59	12.1	2.79	17.2	0.9	19.0	22.1	769	310	85	40
6x2x1.5	1.59	12.1	2.79	17.4	0.9	19.2	22.3	816	312	85	40
10x2x1.5	1.59	12.1	2.79	21.3	1.25	23.8	27.0	1268	378	85	40
12x2x1.5	1.59	12.1	2.79	22.2	1.25	24.7	28.1	1389	393	85	40
15x2x1.5	1.59	12.1	2.79	24.8	1.25	27.3	30.7	1621	430	85	40
20x2x1.5	1.59	12.1	2.79	28.3	1.25	30.8	34.4	1980	481	85	40
24x2x1.5	1.59	12.1	2.79	30.6	1.25	33.1	36.7	2239	514	85	40

(PE/SWA/PVC or XLPE/SWA/LSOH or XLPE/SWA/PVC) RE4(X)OHR(M4)FR(M1) - 500V

RE4OHRFR											
1x2x2.5	1.98	7.41	3.18	8.5	0.9	10.3	13.1	345	184	105	60
RE4XOHRFR											
2x2x2.5	1.98	7.41	3.18	14.1	0.9	15.9	19.0	624	266	105	60
4x2x2.5	1.98	7.41	3.18	16.8	0.9	18.6	21.9	817	306	105	60
5x2x2.5	1.98	7.41	3.18	19.5	1.25	22.0	25.2	1094	353	105	60
6x2x2.5	1.98	7.41	3.18	19.9	1.25	22.4	25.8	1186	361	105	60
10x2x2.5	1.98	7.41	3.18	24.2	1.25	26.7	30.3	1615	425	105	60
12x2x2.5	1.98	7.41	3.18	25.3	1.25	27.8	31.4	1762	439	105	60
15x2x2.5	1.98	7.41	3.18	28.3	1.6	31.5	35.3	2296	494	105	60
20x2x2.5	1.98	7.41	3.18	32.2	1.6	35.4	39.4	2798	551	105	60
24x2x2.5	1.98	7.41	3.18	35.2	1.6	38.4	42.6	3221	597	105	60

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

(PE/SWA/PVC or XLPE/SWA/LSOH or XLPE/SWA/PVC)
RE4(X)HOHR(M1)FR(M1) - 300V or 500 V

Armoured multi-element metallic instrumentation cables for indoor or outdoor use in analogue and digital communication and control where higher levels of screening than provided by collective screen is required.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Insulation:** polyethylene or XLPE
- **Pairs:** twisted
- **Identification pairs:** see table 11 & 12 on page 12
- **Individual screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Inner sheath:** PVC or LSOH
- **Armour:** galvanized steel wire
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PE/SWA/PVC or XLPE/SWA/LSOH or XLPE/SWA/PVC) RE4(X)HOHR(M4)FR(M1) - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RE4OHRFR											
1x2x0.5	0.96	36.0	2.16	6.2	0.9	8.0	10.7	229	149	115	25
RE4XHOHRFR											
2x2x0.5	0.96	36.0	2.16	10.5	0.9	12.3	15.1	416	212	115	25
4x2x0.5	0.96	36.0	2.16	12.5	0.9	14.3	17.1	514	240	115	25
5x2x0.5	0.96	36.0	2.16	14.4	0.9	16.2	19.1	594	267	115	25
6x2x0.5	0.96	36.0	2.16	14.6	0.9	16.4	19.2	626	269	115	25
10x2x0.5	0.96	36.0	2.16	17.6	0.9	19.4	22.5	835	314	115	25
12x2x0.5	0.96	36.0	2.16	18.6	0.9	20.4	23.4	914	327	115	25
15x2x0.5	0.96	36.0	2.16	20.6	1.25	23.1	26.2	1220	367	115	25

(PE/SWA/PVC or XLPE/SWA/LSOH or XLPE/SWA/PVC) RE4(X)HOHR(M4)FR(M1) - 300V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over inner sheath	Diameter of armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Capacitance	L/R
mm ²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	kA	μH/Ω
20x2x0.5	0.96	36.0	2.16	23.4	1.25	25.9	29.3	1472	410	115	25
24x2x0.5	0.96	36.0	2.16	25.6	1.25	28.1	31.4	1668	439	115	25
RE4OHRFR											
1x2x0.75	1.08	24.5	2.28	6.4	0.9	8.2	10.9	241	153	115	25
RE4XHOHRFR											
2x2x0.75	1.08	24.5	2.28	10.9	0.9	12.7	15.6	435	218	115	25
4x2x0.75	1.08	24.5	2.28	13.0	0.9	14.8	17.6	546	247	115	25
5x2x0.75	1.08	24.5	2.28	15.0	0.9	16.8	19.7	630	276	115	25
6x2x0.75	1.08	24.5	2.28	15.4	0.9	17.2	20.3	684	284	115	25
10x2x0.75	1.08	24.5	2.28	18.6	0.9	20.4	23.7	917	331	115	25
12x2x0.75	1.08	24.5	2.28	19.3	0.9	21.1	24.4	994	342	115	25
15x2x0.75	1.08	24.5	2.28	21.7	1.25	24.2	27.3	1318	383	115	25
20x2x0.75	1.08	24.5	2.28	24.5	1.25	27.0	30.3	1577	425	115	25
24x2x0.75	1.08	24.5	2.28	26.7	1.25	29.2	32.6	1799	456	115	25
RE4OHRFR											
1x2x1	1.29	18.1	2.49	6.9	0.9	8.7	11.3	260	159	115	25
RE4XHOHRFR											
2x2x1	1.29	18.1	2.49	12.0	0.9	13.8	16.5	496	231	115	25
4x2x1	1.29	18.1	2.49	14.0	0.9	15.8	18.6	609	260	115	25
5x2x1	1.29	18.1	2.49	16.5	0.9	18.3	21.2	732	297	115	25
6x2x1	1.29	18.1	2.49	16.6	0.9	18.4	21.4	771	299	115	25
10x2x1	1.29	18.1	2.49	20.1	1.25	22.6	25.6	1192	359	115	25
12x2x1	1.29	18.1	2.49	21.2	1.25	23.7	26.7	1306	373	115	25
15x2x1	1.29	18.1	2.49	23.5	1.25	26.0	29.2	1516	409	115	25
20x2x1	1.29	18.1	2.49	26.8	1.25	29.3	32.4	1840	454	115	25
24x2x1	1.29	18.1	2.49	29.2	1.25	31.7	35.0	2106	490	115	25
RE4OHRFR											
1x2x1.5	1.59	12.1	2.79	7.7	0.9	9.5	12.1	299	170	120	40
RE4XHOHRFR											
2x2x1.5	1.59	12.1	2.79	13.0	0.9	14.8	17.8	562	250	120	40
4x2x1.5	1.59	12.1	2.79	15.5	0.9	17.3	20.3	721	284	120	40
5x2x1.5	1.59	12.1	2.79	18.2	0.9	20.0	23.0	852	322	120	40
6x2x1.5	1.59	12.1	2.79	18.4	1.25	20.9	24.0	1056	336	120	40
10x2x1.5	1.59	12.1	2.79	22.4	1.25	24.9	28.2	1427	395	120	40
12x2x1.5	1.59	12.1	2.79	23.3	1.25	25.8	29.2	1554	408	120	40
15x2x1.5	1.59	12.1	2.79	26.1	1.25	28.6	32.1	1832	450	120	40
20x2x1.5	1.59	12.1	2.79	29.7	1.6	32.9	36.6	2472	512	120	40
24x2x1.5	1.59	12.1	2.79	32.4	1.6	35.6	39.5	2812	552	120	40

(PE/SWA/PVC or XLPE/SWA/LSOH or XLPE/SWA/PVC) RE4(X)HOHR(M4)FR(M1) - 500V

RE4OHRFR											
1x2x2.5	1.98	7.41	3.18	8.4	0.9	10.2	13.1	345	184	140	60
RE4XHOHRFR											
2x2x2.5	1.98	7.41	3.18	14.8	0.9	16.6	19.7	679	275	140	60
4x2x2.5	1.98	7.41	3.18	17.6	1.25	20.1	23.2	1021	325	140	60
5x2x2.5	1.98	7.41	3.18	20.5	1.25	23.0	26.3	1198	368	140	60
6x2x2.5	1.98	7.41	3.18	20.9	1.25	23.4	26.7	1289	374	140	60
10x2x2.5	1.98	7.41	3.18	25.4	1.6	28.6	32.3	1974	452	140	60
12x2x2.5	1.98	7.41	3.18	26.5	1.6	29.7	33.4	2154	467	140	60
15x2x2.5	1.98	7.41	3.18	29.9	1.6	33.0	36.9	2558	516	140	60
20x2x2.5	1.98	7.41	3.18	33.8	1.6	37.0	41.1	3118	575	140	60
24x2x2.5	1.98	7.41	3.18	36.8	2	40.8	45.3	3896	634	140	60

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

**(PE/Pb/SWA/PVC or XLPE/Pb/SWA/PVC or XLPE/Pb/SWA/LSOH)
RE4(X)OHLRFR(M1) - 300V or 500 V**

Armoured multi-element metallic instrumentation cables for indoor or outdoor use in analogue and digital communication and control in and around process plants where hydrocarbons are present.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Insulation:** polyethene or XLPE
- **Pairs:** twisted
- **Identification pairs:** see table 11 & 12 on page 12
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Bedding:** PVC or LSOH
- **Lead sheath**
- **Inner sheath:** PVC or LSOH
- **Armour:** galvanized steel wire
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PE/Pb/SWA/PVC or XLPE/Pb/SWA/PVC or XLPE/Pb/SWA/LSOH) RE4(X)OHLRFR(M1) - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RE4OHLRFR											
1x2x0.5	0.96	36.0	2.16	9.9	0.9	11.7	14.6	566	233	75	25
RE4XOHLRFR											
2x2x0.5	0.96	36.0	2.16	13.8	0.9	15.6	18.6	889	297	75	25
4x2x0.5	0.96	36.0	2.16	15.5	0.9	17.3	20.4	1033	327	75	25
5x2x0.5	0.96	36.0	2.16	17.6	0.9	19.4	22.5	1186	360	75	25
6x2x0.5	0.96	36.0	2.16	17.9	0.9	19.7	22.8	1274	365	75	25
10x2x0.5	0.96	36.0	2.16	20.8	1.25	23.3	26.5	1716	424	75	25
12x2x0.5	0.96	36.0	2.16	21.5	1.25	24	27.2	1807	435	75	25
15x2x0.5	0.96	36.0	2.16	23.6	1.25	26.1	29.3	2094	469	75	25

(PE/Pb/SWA/PVC or XLPE/Pb/SWA/PVC or XLPE/Pb/SWA/LS0H) RE4(X)OHRLRFR(M1) - 300V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over inner sheath	Diameter of armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Capacitance	L/R
mm ²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	kA	μH/Ω
20x2x0.5	0.96	36.0	2.16	26.3	1.25	28.8	32.2	2424	515	75	25
24x2x0.5	0.96	36.0	2.16	28.3	1.25	30.8	34.2	2739	548	75	25
RE4OHRLRFR											
1x2x0.75	1.08	24.5	2.28	10.1	0.9	11.9	14.8	585	237	75	25
RE4XOHRLRFR											
2x2x0.75	1.08	24.5	2.28	14.3	0.9	16.1	19.2	934	307	75	25
4x2x0.75	1.08	24.5	2.28	16.0	0.9	17.8	21.0	1083	336	75	25
5x2x0.75	1.08	24.5	2.28	18.4	0.9	20.2	23.3	1312	373	75	25
6x2x0.75	1.08	24.5	2.28	18.5	0.9	20.3	23.5	1346	376	75	25
10x2x0.75	1.08	24.5	2.28	21.8	1.25	24.3	27.5	1887	440	75	25
12x2x0.75	1.08	24.5	2.28	22.5	1.25	25.0	28.2	1989	452	75	25
15x2x0.75	1.08	24.5	2.28	24.7	1.25	27.2	30.6	2255	490	75	25
20x2x0.75	1.08	24.5	2.28	27.5	1.25	30.0	33.5	2680	536	75	25
24x2x0.75	1.08	24.5	2.28	29.7	1.25	32.2	35.8	2966	573	75	25
RE4OHRLRFR											
1x2x1	1.29	18.1	2.49	10.8	0.9	12.6	15.4	659	247	75	25
RE4XOHRLRFR											
2x2x1	1.29	18.1	2.49	15.0	0.9	16.8	20.0	1000	320	75	25
4x2x1	1.29	18.1	2.49	17.4	0.9	19.2	22.3	1252	357	75	25
5x2x1	1.29	18.1	2.49	19.5	0.9	21.3	24.5	1429	391	75	25
6x2x1	1.29	18.1	2.49	19.7	0.9	21.5	24.8	1475	397	75	25
10x2x1	1.29	18.1	2.49	23.1	1.25	25.6	29.1	2088	465	75	25
12x2x1	1.29	18.1	2.49	24.1	1.25	26.6	30.1	2228	481	75	25
15x2x1	1.29	18.1	2.49	26.5	1.25	29.0	32.5	2583	520	75	25
20x2x1	1.29	18.1	2.49	29.6	1.25	32.1	35.8	3012	572	75	25
24x2x1	1.29	18.1	2.49	31.9	1.25	34.4	38.1	3426	609	75	25
RE4OHRLRFR											
1x2x1.5	1.59	12.1	2.79	11.5	0.9	13.3	16.2	722	260	85	40
RE4XOHRLRFR											
2x2x1.5	1.59	12.1	2.79	16.5	0.9	18.3	21.5	1182	343	85	40
4x2x1.5	1.59	12.1	2.79	18.9	0.9	20.7	24.0	1428	385	85	40
5x2x1.5	1.59	12.1	2.79	21.5	1.25	24.0	27.2	1865	436	85	40
6x2x1.5	1.59	12.1	2.79	21.7	1.25	24.2	27.6	1926	442	85	40
10x2x1.5	1.59	12.1	2.79	25.7	1.25	28.2	31.9	2518	510	85	40
12x2x1.5	1.59	12.1	2.79	26.6	1.25	29.1	32.8	2679	524	85	40
15x2x1.5	1.59	12.1	2.79	29.5	1.25	32.0	35.6	3141	570	85	40
20x2x1.5	1.59	12.1	2.79	33.1	1.6	36.3	40.2	4041	642	85	40
24x2x1.5	1.59	12.1	2.79	35.9	1.6	39.1	43.1	4510	690	85	40

(PE/Pb/SWA/PVC or XLPE/Pb/SWA/PVC or XLPE/Pb/SWA/LS0H) RE4(X)OHRLRFR(M1) - 500V

RE4OHRLRFR											
1x2x2.5	1.98	7.41	3.18	12.3	0.9	14.1	17.2	804	275	105	60
RE4XOHRLRFR											
2x2x2.5	1.98	7.41	3.18	18.4	1.25	20.9	24.1	1561	385	105	60
4x2x2.5	1.98	7.41	3.18	21.0	1.25	23.5	27.0	1889	432	105	60
5x2x2.5	1.98	7.41	3.18	24.0	1.25	26.5	29.9	2244	479	105	60
6x2x2.5	1.98	7.41	3.18	24.4	1.25	26.	30.5	2358	488	105	60
10x2x2.5	1.98	7.41	3.18	29.5	1.6	32.7	36.7	3477	588	105	60
12x2x2.5	1.98	7.41	3.18	30.5	1.6	33.7	37.8	3695	604	105	60
15x2x2.5	1.98	7.41	3.18	33.7	1.6	36.9	41.2	4335	659	105	60
20x2x2.5	1.98	7.41	3.18	37.8	1.6	41.0	45.5	5204	727	105	60
24x2x2.5	1.98	7.41	3.18	41.5	2	45.5	50.1	6386	802	105	60

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

(PE/TratosCB®/SWA/PVC or XLPE/TratosCB®/SWA/PVC or XLPE/TratosCB®/SWA/LS0H) RE4(X)OHRH5R4FR(M1) - 300V or 500 V

Armoured multi-element metallic instrumentation cables for indoor or outdoor use in analogue and digital communication and control in and around process plants where hydrocarbons are present without using Lead.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Insulation:** polyethylene or XLPE
- **Pairs:** twisted
- **Identification pairs:** see table 11 & 12 on page 12
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Chemical moisture barrier:** longitudinally applied Al tape bonded with extruded chemical resistant polymeric layer
- **Armour:** galvanized steel wire
- **Outer sheath:** PVC or LS0H
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LS0H)
- IEC 61034 Low smoke emission (only for LS0H)

(PE/TratosCB®/SWA/PVC or XLPE/TratosCB®/SWA/PVC or XLPE/TratosCB®/SWA/LS0H)

RE4(X)OHRH5R4FR(M1) - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RE4OHRH5R4FR											
1x2x0.5	0.96	36.0	2.16	8.7	0.9	10.5	13.3	324	186	150	25
RE4XOHRH5R4FR											
2x2x0.5	0.96	36.0	2.16	12.4	0.9	14.2	17.1	491	240	150	25
4x2x0.5	0.96	36.0	2.16	14.1	0.9	15.9	18.8	569	263	150	25
5x2x0.5	0.96	36.0	2.16	15.9	0.9	17.7	20.6	646	289	150	25
6x2x0.5	0.96	36.0	2.16	16.2	0.9	18.0	21.0	679	293	150	25
10x2x0.5	0.96	36.0	2.16	18.9	0.9	20.7	23.8	853	334	150	25
12x2x0.5	0.96	36.0	2.16	19.8	0.9	21.6	24.7	926	346	150	25
15x2x0.5	0.96	36.0	2.16	21.7	0.9	23.5	26.8	1057	376	150	25

(PE/TratosCB®/SWA/PVC or XLPE/TratosCB®/SWA/PVC or XLPE/TratosCB®/SWA/LS0H) RE4(X) OHRH5R4FR(M1)-300V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over inner sheath	Diameter of armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Capacitance	L/R
mm ²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	kA	μH/Ω
20x2x0.5	0.96	36.0	2.16	24.4	1.25	26.9	30.1	1413	422	150	25
24x2x0.5	0.96	36.0	2.16	26.2	1.25	28.7	32.2	1585	450	150	25
RE4OHRH5R4FR											
1x2x1	1.29	18.1	2.49	9.3	0.9	11.1	13.9	355	194	150	25
RE4XOHRH5R4FR											
2x2x0.75	1.08	24.5	2.28	12.8	0.9	14.6	17.6	512	246	150	25
4x2x0.75	1.08	24.5	2.28	14.6	0.9	16.4	19.3	602	270	150	25
5x2x0.75	1.08	24.5	2.28	16.6	0.9	18.4	21.3	687	298	150	25
6x2x0.75	1.08	24.5	2.28	16.9	0.9	18.7	21.8	734	306	150	25
10x2x0.75	1.08	24.5	2.28	19.9	0.9	21.7	24.8	929	348	150	25
12x2x0.75	1.08	24.5	2.28	20.6	0.9	22.4	25.6	991	358	150	25
15x2x0.75	1.08	24.5	2.28	22.6	1.25	25.1	28.4	1295	397	150	25
20x2x0.75	1.08	24.5	2.28	25.4	1.25	27.9	31.2	1533	437	150	25
24x2x0.75	1.08	24.5	2.28	27.6	1.25	30.1	33.5	1736	469	150	25
RE4OHRH5R4FR											
1x2x1	1.29	18.1	2.49	9.3	0.9	11.1	13.9	355	194	150	25
RE4XOHRH5R4FR											
2x2x1	1.29	18.1	2.49	13.6	0.9	15.4	18.4	559	257	150	25
4x2x1	1.29	18.1	2.49	15.7	0.9	17.5	20.5	677	286	150	25
5x2x1	1.29	18.1	2.49	17.8	0.9	19.6	22.8	779	319	150	25
6x2x1	1.29	18.1	2.49	18.0	0.9	19.8	22.9	814	321	150	25
10x2x1	1.29	18.1	2.49	21.3	0.9	23.1	26.4	1055	370	150	25
12x2x1	1.29	18.1	2.49	22.1	1.25	24.6	27.8	1291	389	150	25
15x2x1	1.29	18.1	2.49	24.5	1.25	27.0	30.2	1492	423	150	25
20x2x1	1.29	18.1	2.49	27.5	1.25	30.0	33.5	1781	468	150	25
24x2x1	1.29	18.1	2.49	29.6	1.25	32.1	35.6	1976	498	150	25
RE4OHRH5R4FR											
1x2x1.5	1.59	12.1	2.79	10.1	0.9	11.9	14.8	404	207	150	40
RE4XOHRH5R4FR											
2x2x1.5	1.59	12.1	2.79	14.9	0.9	16.7	19.9	647	278	150	40
4x2x1.5	1.59	12.1	2.79	17.0	0.9	18.8	22.0	782	308	150	40
5x2x1.5	1.59	12.1	2.79	19.6	0.9	21.4	24.6	913	344	150	40
6x2x1.5	1.59	12.1	2.79	19.8	0.9	21.6	25.0	971	349	150	40
10x2x1.5	1.59	12.1	2.79	23.6	1.25	26.1	29.6	1460	414	150	40
12x2x1.5	1.59	12.1	2.79	24.5	1.25	27.0	30.5	1573	427	150	40
15x2x1.5	1.59	12.1	2.79	27.0	1.25	29.5	33.1	1806	464	150	40
20x2x1.5	1.59	12.1	2.79	30.4	1.25	32.9	36.6	2164	512	150	40
24x2x1.5	1.59	12.1	2.79	33.2	1.6	36.4	40.2	2727	563	150	40

(PE/TratosCB®/SWA/PVC or XLPE/TratosCB®/SWA/PVC or XLPE/TratosCB®/SWA/LS0H) RE4(X)OHRH5R4FR(M1)-500V

RE4OHRH5R4FR											
1x2x2.5	1.98	7.41	3.18	10.9	0.9	12.7	15.6	448	219	150	60
RE4XOHRH5R4FR											
2x2x2.5	1.98	7.41	3.18	16.5	0.9	18.3	21.5	754	300	150	60
4x2x2.5	1.98	7.41	3.18	19.2	1.25	21.7	25.0	1095	350	150	60
5x2x2.5	1.98	7.41	3.18	21.9	1.25	24.4	27.9	1284	391	150	60
6x2x2.5	1.98	7.41	3.18	22.3	1.25	24.8	28.3	1366	396	150	60
10x2x2.5	1.98	7.41	3.18	26.6	1.25	29.1	32.9	1816	460	150	60
12x2x2.5	1.98	7.41	3.18	27.6	1.25	30.1	34.1	1983	477	150	60
15x2x2.5	1.98	7.41	3.18	30.6	1.6	33.8	38.0	2537	531	150	60
20x2x2.5	1.98	7.41	3.18	34.7	1.6	37.9	42.3	3090	592	150	60
24x2x2.5	1.98	7.41	3.18	37.6	1.6	40.8	45.3	3510	634	150	60

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

(XLPE/LSOH)

RTE4(X)OHM1 - 300V or 500 V

Unarmoured fire performance multi-element metallic instrumentation cable for indoor installations in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission. Used where limited circuit integrity in the event of a fire is required.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
 - **Fire barrier:** mica/glass tape
 - **Insulation:** polyethylene or XLPE
 - **Pairs:** twisted
 - **Identification pairs:** see table 11 & 12 on page 12
 - **Assembly:** concentric layers
 - **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
 - **Outer sheath:** PVC or LSOH
- Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60331 Fire resistant
- IEC 60754 Halogen free properties
- IEC 61034 Low smoke emission

(XLPE/LSOH) RTE4(X)OHM1 - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RTE4OHM1								
1x2x0.5	0.96	36.0	2.80	7.5	57	90	150	25
RTE4XOHM1								
2x2x0.5	0.96	36.0	2.80	12.3	105	148	150	25
4x2x0.5	0.96	36.0	2.80	14.7	165	176	150	25
5x2x0.5	0.96	36.0	2.80	17.1	200	205	150	25
6x2x0.5	0.96	36.0	2.80	17.5	230	210	150	25
10x2x0.5	0.96	36.0	2.80	21.2	346	254	150	25
12x2x0.5	0.96	36.0	2.80	22.1	394	265	150	25
15x2x0.5	0.96	36.0	2.80	24.5	473	294	150	25
20x2x0.5	0.96	36.0	2.80	28.0	614	336	150	25
24x2x0.5	0.96	36.0	2.80	30.5	730	366	150	25

(XLPE/LS0H) RTE4(X)OHM1 - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RTE4OHM1								
1x2x0.75	1.08	24.5	2.90	7.8	64	94	150	25
RTE4XOHM1								
2x2x0.75	1.08	24.5	2.90	12.8	118	154	150	25
4x2x0.75	1.08	24.5	2.90	15.1	179	181	150	25
5x2x0.75	1.08	24.5	2.90	17.5	218	210	150	25
6x2x0.75	1.08	24.5	2.90	17.9	251	215	150	25
10x2x0.75	1.08	24.5	2.90	21.7	380	260	150	25
12x2x0.75	1.08	24.5	2.90	22.6	434	271	150	25
15x2x0.75	1.08	24.5	2.90	25.3	535	304	150	25
20x2x0.75	1.08	24.5	2.90	28.7	680	344	150	25
24x2x0.75	1.08	24.5	2.90	31.3	809	376	150	25
RTE4OHM1								
1x2x1	1.29	18.1	3.10	8.3	73	99	150	25
RTE4XOHM1								
2x2x1	1.29	18.1	3.10	13.6	136	163	150	25
4x2x1	1.29	18.1	3.10	16.0	211	192	150	25
5x2x1	1.29	18.1	3.10	18.9	266	226	150	25
6x2x1	1.29	18.1	3.10	19.0	297	228	150	25
10x2x1	1.29	18.1	3.10	23.1	455	277	150	25
12x2x1	1.29	18.1	3.10	24.3	534	291	150	25
15x2x1	1.29	18.1	3.10	27.0	646	324	150	25
20x2x1	1.29	18.1	3.10	30.8	839	369	150	25
24x2x1	1.29	18.1	3.10	33.6	999	403	150	25
RTE4OHM1								
1x2x1.5	1.59	12.1	3.40	8.9	87	106	150	40
RTE4XOHM1								
2x2x1.5	1.59	12.1	3.40	14.7	165	176	150	40
4x2x1.5	1.59	12.1	3.40	17.5	272	210	150	40
5x2x1.5	1.59	12.1	3.40	20.6	342	248	150	40
6x2x1.5	1.59	12.1	3.40	20.8	386	250	150	40
10x2x1.5	1.59	12.1	3.40	25.4	606	305	150	40
12x2x1.5	1.59	12.1	3.40	26.5	699	318	150	40
20x2x1.5	1.59	12.1	3.40	33.8	1121	406	150	40
15x2x1.5	1.59	12.1	3.40	29.7	862	356	150	40
24x2x1.5	1.59	12.1	3.40	36.9	1333	443	150	40

(XLPE/LS0H) RTE4(X)OHM1 - 500V

RTE4OHM1								
1x2x2.5	1.98	7.41	3.80	9.9	114	118	150	60
RTE4XOHM1								
2x2x2.5	1.98	7.41	3.80	16.5	224	198	150	60
4x2x2.5	1.98	7.41	3.80	19.5	363	234	150	60
5x2x2.5	1.98	7.41	3.80	22.9	455	275	150	60
6x2x2.5	1.98	7.41	3.80	23.3	527	280	150	60
10x2x2.5	1.98	7.41	3.80	28.4	829	341	150	60
12x2x2.5	1.98	7.41	3.80	29.7	959	356	150	60
15x2x2.5	1.98	7.41	3.80	33.2	1183	398	150	60
20x2x2.5	1.98	7.41	3.80	38.0	1558	456	150	60
24x2x2.5	1.98	7.41	3.80	41.4	1850	496	150	60

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

(SIL/PVC or SIL/LSOH)

RG4(X)OHM1 - 300V or 500 V

Unarmoured silicone rubber insulated multi-element metallic instrumentation cable for indoor installations in the petroleum industry, chemical and petrochemical plants. Used for control and instrumentation as well as for data & voice transmission.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Insulation:** silicone
- **Pairs:** twisted
- **Identification pairs:** see table 11 & 12 on page 12
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60331 Fire resistant
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(SIL/PVC or SIL/LSOH) RG4(X)OHM1 - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RG4OHM1-FR								
1x2x0.5	0.96	36.0	2.16	6.2	55	74	250	25
RG4XOHM1-FR								
2x2x0.5	0.96	36.0	2.16	10.0	116	120	250	25
4x2x0.5	0.96	36.0	2.16	11.7	157	140	250	25
5x2x0.5	0.96	36.0	2.16	13.7	192	164	250	25
6x2x0.5	0.96	36.0	2.16	13.8	213	166	250	25
10x2x0.5	0.96	36.0	2.16	16.7	319	201	250	25
12x2x0.5	0.96	36.0	2.16	17.4	363	209	250	25
15x2x0.5	0.96	36.0	2.16	19.3	439	232	250	25
20x2x0.5	0.96	36.0	2.16	22.0	569	264	250	25
24x2x0.5	0.96	36.0	2.16	23.8	666	286	250	25

(SIL/PVC or SIL/LSOH) RG4(X)OHM1 - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RG4OHM1-FR								
1x2x0.75	1.08	24.5	2.28	6.4	60	77	250	25
RG4XOHM1-FR								
2x2x0.75	1.08	24.5	2.28	10.4	128	125	250	25
4x2x0.75	1.08	24.5	2.28	12.2	175	146	250	25
5x2x0.75	1.08	24.5	2.28	14.3	215	172	250	25
6x2x0.75	1.08	24.5	2.28	14.5	240	174	250	25
10x2x0.75	1.08	24.5	2.28	17.5	362	210	250	25
12x2x0.75	1.08	24.5	2.28	18.2	413	219	250	25
15x2x0.75	1.08	24.5	2.28	20.4	511	245	250	25
20x2x0.75	1.08	24.5	2.28	23.1	651	277	250	25
24x2x0.75	1.08	24.5	2.28	25.2	775	302	250	25
RG4OHM1-FR								
1x2x1	1.29	18.1	2.49	6.9	71	83	250	25
RG4XOHM1-FR								
2x2x1	1.29	18.1	2.49	11.2	151	134	250	25
4x2x1	1.29	18.1	2.49	13.3	217	160	250	25
5x2x1	1.29	18.1	2.49	15.5	259	185	250	25
6x2x1	1.29	18.1	2.49	15.6	291	187	250	25
10x2x1	1.29	18.1	2.49	18.9	443	227	250	25
12x2x1	1.29	18.1	2.49	19.9	518	239	250	25
15x2x1	1.29	18.1	2.49	22.1	630	265	250	25
20x2x1	1.29	18.1	2.49	25.2	819	302	250	25
24x2x1	1.29	18.1	2.49	27.3	961	327	250	25
RG4OHM1-FR								
1x2x1.5	1.59	12.1	2.79	7.7	91	92	250	40
RG4XOHM1-FR								
2x2x1.5	1.59	12.1	2.79	12.5	195	150	250	40
4x2x1.5	1.59	12.1	2.79	14.8	286	178	250	40
5x2x1.5	1.59	12.1	2.79	17.2	345	207	250	40
6x2x1.5	1.59	12.1	2.79	17.4	387	209	250	40
10x2x1.5	1.59	12.1	2.79	21.3	603	255	250	40
12x2x1.5	1.59	12.1	2.79	22.2	694	266	250	40
15x2x1.5	1.59	12.1	2.79	24.8	858	298	250	40
20x2x1.5	1.59	12.1	2.79	28.3	1116	339	250	40
24x2x1.5	1.59	12.1	2.79	30.6	1312	367	250	40

(SIL/PVC or SIL/LSOH) RG4(X)OHM1 - 500V

RG4OHM1-FR								
1x2x2.5	1.98	7.41	3.18	8.4	116	101	250	60
RG4XOHM1-FR								
2x2x2.5	1.98	7.41	3.18	14.1	259	169	250	60
4x2x2.5	1.98	7.41	3.18	16.8	387	201	250	60
5x2x2.5	1.98	7.41	3.18	19.5	465	234	250	60
6x2x2.5	1.98	7.41	3.18	19.9	538	239	250	60
10x2x2.5	1.98	7.41	3.18	24.2	839	291	250	60
12x2x2.5	1.98	7.41	3.18	25.3	968	303	250	60
15x2x2.5	1.98	7.41	3.18	28.3	1197	339	250	60
20x2x2.5	1.98	7.41	3.18	32.2	1558	386	250	60
24x2x2.5	1.98	7.41	3.18	35.2	1870	423	250	60

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

(XLPE/SWA/LSOH)

RTE4(X)OHM1FM1 - 300V or 500 V

Armoured fire performance multi-element metallic instrumentation cable for indoor and outdoor installations in the petroleum industry, chemical and petrochemical plants. Used where limited circuit integrity in the event of a fire is required.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Fire barrier:** mica/glass tape
- **Insulation:** polyethylene or XLPE
- **Pairs:** twisted
- **Identification** see table 11 & 12 on page 12
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Armour:** galvanized steel wire
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60331 Fire resistant
- IEC 60754 Halogen free properties
- IEC 61034 Low smoke emission

(XLPE/SWA/LSOH) RTE4(X)OHM1FM1 - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RTE4OHM1FM1											
1x2x0.5	0.96	36.0	2.80	7.4	0.9	9.2	12.0	276	167	150	25
RTE4XOHM1FM1											
2x2x0.5	0.96	36.0	2.80	12.3	0.9	14.1	17.0	480	238	150	25
4x2x0.5	0.96	36.0	2.80	14.7	0.9	16.5	19.4	582	272	150	25
5x2x0.5	0.96	36.0	2.80	17.1	0.9	18.9	21.8	675	305	150	25
6x2x0.5	0.96	36.0	2.80	17.4	0.9	19.2	22.4	727	313	150	25
10x2x0.5	0.96	36.0	2.80	21.1	0.9	22.9	26.1	942	365	150	25
12x2x0.5	0.96	36.0	2.80	22.0	0.9	23.8	27.2	1027	380	150	25
15x2x0.5	0.96	36.0	2.80	24.5	1.25	27.0	30.2	1352	423	150	25
20x2x0.5	0.96	36.0	2.80	27.9	1.25	30.4	33.9	1629	474	150	25
24x2x0.5	0.96	36.0	2.80	30.5	1.25	33.0	36.4	1828	510	150	25

(XLPE/SWA/LSOH) RTE4(X)OHM1FM1 - 300V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over inner sheath	Diameter of armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Capacitance	L/R
mm ²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	kA	μH/Ω
RTE4OHM1FM1											
1x2x0.75	1.08	24.5	2.90	7.84	0.9	9.6	12.3	292	172	150	25
RTE4XOHM1FM1											
2x2x0.75	1.08	24.5	2.90	12.8	0.9	14.6	17.5	504	245	150	25
4x2x0.75	1.08	24.5	2.90	15.0	0.9	16.8	19.8	606	277	150	25
5x2x0.75	1.08	24.5	2.90	17.5	0.9	19.3	22.2	703	311	150	25
6x2x0.75	1.08	24.5	2.90	17.9	0.9	19.7	22.8	758	319	150	25
10x2x0.75	1.08	24.5	2.90	21.6	0.9	23.4	26.8	1000	375	150	25
12x2x0.75	1.08	24.5	2.90	22.6	1.25	25.1	28.3	1240	396	150	25
15x2x0.75	1.08	24.5	2.90	25.3	1.25	27.8	31.0	1434	435	150	25
20x2x0.75	1.08	24.5	2.90	28.6	1.25	31.1	34.6	1715	484	150	25
24x2x0.75	1.08	24.5	2.90	31.3	1.25	33.8	37.4	1957	524	150	25
RTE4OHM1FM1											
1x2x1	1.29	18.1	3.10	8.28	0.9	10.0	12.7	316	178	150	25
RTE4XOHM1FM1											
2x2x1	1.29	18.1	3.10	13.5	0.9	15.3	18.3	549	256	150	25
4x2x1	1.29	18.1	3.10	15.9	0.9	17.7	20.7	665	290	150	25
5x2x1	1.29	18.1	3.10	18.8	0.9	20.6	23.7	798	332	150	25
6x2x1	1.29	18.1	3.10	19.0	0.9	20.8	23.9	839	335	150	25
10x2x1	1.29	18.1	3.10	23.0	1.25	25.5	28.8	1279	403	150	25
12x2x1	1.29	18.1	3.10	24.2	1.25	26.7	30.0	1400	419	150	25
15x2x1	1.29	18.1	3.10	26.9	1.25	29.4	32.9	1622	460	150	25
20x2x1	1.29	18.1	3.10	30.7	1.25	33.2	36.9	1971	516	150	25
24x2x1	1.29	18.1	3.10	33.5	1.25	36.0	39.7	2230	555	150	25
RTE4OHM1FM1											
1x2x1.5	1.59	12.1	3.40	8.85	0.9	10.6	13.3	346	187	150	40
RTE4XOHM1FM1											
2x2x1.5	1.59	12.1	3.40	14.6	0.9	16.4	19.6	622	274	150	40
4x2x1.5	1.59	12.1	3.40	17.5	0.9	19.3	22.4	782	314	150	40
5x2x1.5	1.59	12.1	3.40	20.6	0.9	22.4	25.5	927	357	150	40
6x2x1.5	1.59	12.1	3.40	20.8	1.25	23.3	26.5	1140	371	150	40
10x2x1.5	1.59	12.1	3.40	25.4	1.25	27.9	31.3	1535	439	150	40
12x2x1.5	1.59	12.1	3.40	26.5	1.25	29.0	32.4	1660	454	150	40
15x2x1.5	1.59	12.1	3.40	29.7	1.25	32.2	35.8	1954	501	150	40
20x2x1.5	1.59	12.1	3.40	33.8	1.6	37.0	40.8	2631	572	150	40
24x2x1.5	1.59	12.1	3.40	36.8	1.6	40.0	44.1	2999	617	150	40

(XLPE/SWA/LSOH) RTE4(X)OHM1FM1 - 500 V

RTE4OHM1FM1											
1x2x2.5	1.98	7.41	3.80	9.8	0.9	11.6	14.5	406	203	150	60
RTE4XOHM1FM1											
2x2x2.5	1.98	7.41	3.80	16.5	0.9	18.3	21.4	741	300	150	60
4x2x2.5	1.98	7.41	3.80	19.4	1.25	21.9	25.3	1090	354	150	60
5x2x2.5	1.98	7.41	3.80	22.9	1.25	25.4	28.8	1297	403	150	60
6x2x2.5	1.98	7.41	3.80	23.3	1.25	25.8	29.2	1388	409	150	60
10x2x2.5	1.98	7.41	3.80	28.4	1.6	31.6	35.4	2103	496	150	60
12x2x2.5	1.98	7.41	3.80	29.6	1.6	32.8	36.7	2281	513	150	60
15x2x2.5	1.98	7.41	3.80	33.1	1.6	36.3	40.4	2691	565	150	60
20x2x2.5	1.98	7.41	3.80	37.9	1.6	41.1	45.4	3291	635	150	60
24x2x2.5	1.98	7.41	3.80	41.3	2	45.3	49.8	4118	697	150	60

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

(SIL/SWA/PVC or SIL/SWA/LSOH)

RG4(X)OHM1FM1 - 300V or 500 V

Armoured silicone rubber insulated multi-element metallic instrumentation cable for indoor and outdoor installations in the petroleum industry, chemical and petrochemical plants.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Insulation:** silicon
- **Pairs:** twisted
- **Identification pairs:** see table 11 & 12 on page 12
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Inner sheath:** PVC or LSOH
- **Armour:** galvanized steel wire
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60331 Fire resistant
- IEC 60754 Halogen free properties
- IEC 61034 Low smoke emission

(SIL/SWA/PVC or SIL/SWA/LSOH) RG4(X)OHM1FM1 - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm	Capacitance kA	L/R μH/Ω
RG4OHM1FM1-FR											
1x2x0.5	0.96	36.0	2.16	6.2	0.9	8	10.7	234	149	250	25
RG4XOHM1FM1-FR											
2x2x0.5	0.96	36.0	2.16	9.9	0.9	11.7	14.5	381	202	250	25
4x2x0.5	0.96	36.0	2.16	11.6	0.9	13.4	16.3	472	229	250	25
5x2x0.5	0.96	36.0	2.16	13.7	0.9	15.5	18.4	551	257	250	25
6x2x0.5	0.96	36.0	2.16	13.8	0.9	15.6	18.5	574	259	250	25
10x2x0.5	0.96	36.0	2.16	16.7	0.9	18.5	21.6	761	302	250	25
12x2x0.5	0.96	36.0	2.16	17.4	0.9	19.2	22.3	820	312	250	25
15x2x0.5	0.96	36.0	2.16	19.3	0.9	21.1	24.2	941	339	250	25
20x2x0.5	0.96	36.0	2.16	22.0	0.9	23.8	27.1	1146	379	250	25
24x2x0.5	0.96	36.0	2.16	23.8	1.25	26.3	29.5	1457	413	250	25

* Refers only to SIL/LSOH/SWA/LSOH construction

(SIL/SWA/PVC or SIL/SWA/LSOH) RG4(X)OHM1FM1 - 300V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over inner sheath	Diameter of armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Capacitance	L/R
mm ²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	kA	μH/Ω
RG4OHM1FM1-FR											
1x2x0.5	0.96	36.0	2.16	6.2	0.9	8	10.7	234	149	250	
RG4XOHM1FM1-FR											
2x2x0.75	1.08	24.5	2.28	10.4	0.9	12.2	14.9	406	208	250	25
4x2x0.75	1.08	24.5	2.28	12.1	0.9	13.9	16.9	499	236	250	25
5x2x0.75	1.08	24.5	2.28	14.3	0.9	16.1	19.0	589	266	250	25
6x2x0.75	1.08	24.5	2.28	14.4	0.9	16.2	19.2	617	268	250	25
10x2x0.75	1.08	24.5	2.28	17.5	0.9	19.3	22.4	820	313	250	25
12x2x0.75	1.08	24.5	2.28	18.2	0.9	20.0	23.1	887	324	250	25
15x2x0.75	1.08	24.5	2.28	20.4	0.9	22.2	25.3	1037	354	250	25
20x2x0.75	1.08	24.5	2.28	23.0	1.25	25.5	28.8	1416	403	250	25
24x2x0.75	1.08	24.5	2.28	25.2	1.25	27.7	30.9	1606	433	250	25
RG4OHM1FM1-FR											
1x2x1	1.29	18.1	2.49	6.9	0.9	8.7	11.3	265	158	250	25
RG4XOHM1FM1-FR											
2x2x1	1.29	18.1	2.49	11.1	0.9	12.9	15.9	452	222	250	25
4x2x1	1.29	18.1	2.49	13.3	0.9	15.1	18.0	569	252	250	25
5x2x1	1.29	18.1	2.49	15.4	0.9	17.2	20.1	662	282	250	25
6x2x1	1.29	18.1	2.49	15.6	0.9	17.4	20.3	695	284	250	25
10x2x1	1.29	18.1	2.49	18.8	0.9	20.6	23.8	937	333	250	25
12x2x1	1.29	18.1	2.49	19.8	0.9	21.6	24.8	1035	347	250	25
15x2x1	1.29	18.1	2.49	22.0	1.25	24.5	27.8	1368	389	250	25
20x2x1	1.29	18.1	2.49	25.1	1.25	27.6	30.9	1650	432	250	25
24x2x1	1.29	18.1	2.49	27.2	1.25	29.7	33.2	1879	464	250	25
RG4OHM1FM1-FR											
1x2x1.5	1.59	12.1	2.79	7.67	0.9	9.4	12.1	305	170	250	40
RG4XOHM1FM1-FR											
2x2x1.5	1.59	12.1	2.79	12.4	0.9	14.2	17.2	526	240	250	40
4x2x1.5	1.59	12.1	2.79	14.8	0.9	16.6	19.7	683	276	250	40
5x2x1.5	1.59	12.1	2.79	17.2	0.9	19.0	22.1	794	310	250	40
6x2x1.5	1.59	12.1	2.79	17.4	0.9	19.2	22.3	844	312	250	40
10x2x1.5	1.59	12.1	2.79	21.2	1.25	23.7	27.0	1315	378	250	40
12x2x1.5	1.59	12.1	2.79	22.1	1.25	24.6	28.1	1446	393	250	40
15x2x1.5	1.59	12.1	2.79	24.8	1.25	27.3	30.7	1691	430	250	40
20x2x1.5	1.59	12.1	2.79	28.2	1.25	30.7	34.4	2072	481	250	40
24x2x1.5	1.59	12.1	2.79	30.6	1.25	33.1	36.7	2349	514	250	40

(SIL/SWA/PVC or SIL/SWA/LSOH) RG4(X)OHM1FM1 - 500V

RG4OHM1FM1-FR											
1x2x2.5	1.98	7.41	3.18	8.4	0.9	10.2	13.1	352	183	250	60
RG4XOHM1FM1-FR											
2x2x2.5	1.98	7.41	3.18	14.1	0.9	15.9	19.0	635	266	250	60
4x2x2.5	1.98	7.41	3.18	16.7	0.9	18.5	21.9	840	306	250	60
5x2x2.5	1.98	7.41	3.18	19.5	1.25	22.0	25.2	1124	353	250	60
6x2x2.5	1.98	7.41	3.18	19.9	1.25	22.4	25.8	1222	361	250	60
10x2x2.5	1.98	7.41	3.18	24.2	1.25	26.7	30.3	1672	425	250	60
12x2x2.5	1.98	7.41	3.18	25.2	1.25	27.7	31.4	1830	439	250	60
15x2x2.5	1.98	7.41	3.18	28.2	1.6	31.4	35.3	2380	494	250	60
20x2x2.5	1.98	7.41	3.18	32.1	1.6	35.3	39.4	2909	551	250	60
24x2x2.5	1.98	7.41	3.18	35.2	1.6	38.4	42.6	3353	597	250	60

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

(PE/PVC or XLPE/PVC or XLPE/LSOH)

RE4(X)OHR(M1) - 300V or 500 V

Unarmoured multi-element metallic instrumentation cables for indoor use in analogue and digital communication and control.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Insulation:** polyethylene or XLPE
- **Triples:** twisted
- **Identification triples:** see table 11 & 12 on page 12
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PE/PVC or XLPE/PVC or XLPE/LSOH) RE4(X)OHR(M1) - 300V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Outer diameter approx	Weight of cable approx	Min bending radius
mm ²	mm	Ω/km	mm	mm	kg/km	mm
RE4OHR						
1x3x0.5	0.96	36.0	2.16	6.5	54	78
RE4XOHR						
2x3x0.5	0.96	36.0	2.16	10.9	101	131
6x3x0.5	0.96	36.0	2.16	15.7	226	189
10x3x0.5	0.96	36.0	2.16	18.6	345	223
12x3x0.5	0.96	36.0	2.16	20.2	402	242
15x3x0.5	0.96	36.0	2.16	22.4	497	269
20x3x0.5	0.96	36.0	2.16	25.5	636	306
24x3x0.5	0.96	36.0	2.16	27.9	760	335

(PE/PVC or XLPE/PVC or XLPE/LS0H) RE4(X)OHR(M1) - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm
RE4OHR						
1x3x0.75	1.08	24.5	2.28	6.8	60	82
RE4XOHR						
1x3x0.75	1.08	24.5	2.28	6.8	60	82
6x3x0.75	1.08	24.5	2.28	16.5	259	198
10x3x0.75	1.08	24.5	2.28	19.5	399	234
12x3x0.75	1.08	24.5	2.28	21.3	476	256
15x3x0.75	1.08	24.5	2.28	23.5	576	282
20x3x0.75	1.08	24.5	2.28	27.0	753	324
24x3x0.75	1.08	24.5	2.28	29.3	885	352
RE4OHR						
1x3x1	1.29	18.1	2.49	7.4	74	89
RE4XOHR						
2x3x1	1.29	18.1	2.49	12.4	142	149
6x3x1	1.29	18.1	2.49	18.0	330	216
10x3x1	1.29	18.1	2.49	21.2	510	255
12x3x1	1.29	18.1	2.49	23.1	598	277
15x3x1	1.29	18.1	2.49	25.7	739	308
20x3x1	1.29	18.1	2.49	29.4	967	353
24x3x1	1.29	18.1	2.49	32.2	1154	386
RE4OHR						
1x3x1.5	1.59	12.1	2.79	8.1	94	97
RE4XOHR						
2x3x1.5	1.59	12.1	2.79	13.7	180	164
6x3x1.5	1.59	12.1	2.79	20.1	450	241
10x3x1.5	1.59	12.1	2.79	23.7	701	284
12x3x1.5	1.59	12.1	2.79	25.9	836	311
15x3x1.5	1.59	12.1	2.79	28.8	1033	346
20x3x1.5	1.59	12.1	2.79	33.0	1352	396
24x3x1.5	1.59	12.1	2.79	36.1	1612	433

(PE/PVC or XLPE/PVC or XLPE/LS0H) RE4(X)OHR(M1) - 500 V

RE4OHR						
1x3x2.5	1.98	7.41	3.18	9.1	127	109
RE4XOHR						
2x3x2.5	1.98	7.41	3.18	15.7	254	188
6x3x2.5	1.98	7.41	3.18	22.9	639	275
10x3x2.5	1.98	7.41	3.18	27.2	1013	326
12x3x2.5	1.98	7.41	3.18	29.5	1192	354
15x3x2.5	1.98	7.41	3.18	33.0	1488	396
20x3x2.5	1.98	7.41	3.18	37.7	1949	452
24x3x2.5	1.98	7.41	3.18	41.2	2322	494

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

(XLPE/LSOH)

RTE4(X)OHM1 - 300V or 500 V

Unarmoured fire performance multi-element metallic instrumentation cable for indoor installations in the petroleum industry, chemical and petrochemical plants.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Fire barrier:** mica/glass tape
- **Insulation:** polyethylene or XLPE
- **Triples:** twisted
- **Identification triples:** see table 11 & 12 on page 12
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(XLPE/LSOH) RTE4(X)OHM1 - 300V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Outer diameter approx	Weight of cable approx	Min bending radius
mm ²	mm	Ω/km	mm	mm	kg/km	mm
RTE4OHM1						
1x3x0.5	0.96	36.0	2.80	8.1	73	97
RTE4XOHM1						
2x3x0.5	0.96	36.0	2.80	13.7	138	165
6x3x0.5	0.96	36.0	2.80	19.9	308	239
10x3x0.5	0.96	36.0	2.80	23.6	467	283
12x3x0.5	0.96	36.0	2.80	25.8	556	310
15x3x0.5	0.96	36.0	2.80	28.5	670	342
20x3x0.5	0.96	36.0	2.80	32.7	872	393
24x3x0.5	0.96	36.0	2.80	35.8	1039	430

(XLPE/LSOH) RTE4(X)OHM1 - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm
RTE4OHM1						
1x3x0.75	1.08	24.5	2.90	8.3	79	99
RTE4XOHM1						
2x3x0.75	1.08	24.5	2.90	14.0	149	168
6x3x0.75	1.08	24.5	2.90	20.4	339	245
10x3x0.75	1.08	24.5	2.90	24.4	529	292
12x3x0.75	1.08	24.5	2.90	26.5	616	318
15x3x0.75	1.08	24.5	2.90	29.5	758	353
20x3x0.75	1.08	24.5	2.90	33.5	970	402
24x3x0.75	1.08	24.5	2.90	36.7	1156	441
RTE4OHM1						
1x3x1	1.29	18.1	3.10	8.7	90	105
RTE4XOHM1						
2x3x1	1.29	18.1	3.10	14.9	174	179
6x3x1	1.29	18.1	3.10	21.9	416	263
10x3x1	1.29	18.1	3.10	25.9	638	311
12x3x1	1.29	18.1	3.10	28.2	746	338
15x3x1	1.29	18.1	3.10	31.4	921	377
20x3x1	1.29	18.1	3.10	36.0	1202	432
24x3x1	1.29	18.1	3.10	39.4	1432	472
RTE4OHM1						
1x3x1.5	1.59	12.	3.40	9.4	111	113
RTE4XOHM1						
2x3x1.5	1.59	12.1	3.40	16.3	223	196
6x3x1.5	1.59	12.1	3.40	24.0	543	288
10x3x1.5	1.59	12.1	3.40	28.6	853	343
12x3x1.5	1.59	12.1	3.40	31.0	1000	372
15x3x1.5	1.59	12.1	3.40	34.5	1232	414
20x3x1.5	1.59	12.1	3.40	39.5	1610	474
24x3x1.5	1.59	12.1	3.40	43.2	1916	519

(XLPE/LSOH) RTE4(X)OHM1 - 500V

RTE4OHM1						
1x3x2.5	1.98	7.41	3.80	10.4	147	125
RTE4XOHM1						
2x3x2.5	1.98	7.41	3.80	18.1	294	217
6x3x2.5	1.98	7.41	3.80	26.9	744	322
10x3x2.5	1.98	7.41	3.80	31.9	1171	383
12x3x2.5	1.98	7.41	3.80	34.7	1375	416
15x3x2.5	1.98	7.41	3.80	38.7	1716	465
20x3x2.5	1.98	7.41	3.80	44.3	2240	531
24x3x2.5	1.98	7.41	3.80	48.6	2687	583

TRATOS® PETROCHEMICAL CABLES

INSTRUMENTATION CABLES BASED ON EN 50288-7

(SIL/PVC or SIL/LSOH)

RG4(X)OHM1 - 300V or 500 V

Unarmoured silicone rubber insulated multi-element metallic instrumentation cable for indoor installations in the petroleum industry, chemical and petrochemical plants.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Insulation:** silicon
- **Triples:** twisted
- **Identification triples:** see table 11 & 12 on page 12
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60331 Fire resistant
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(SIL/PVC or SIL/LSOH) RG4(X)OHM1 - 300V

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Outer diameter approx	Weight of cable approx	Min bending radius
mm ²	mm	Ω/km	mm	mm	kg/km	mm
RG4OHM1-FR						
1x3x0.5	0.96	36.0	2.16	6.5	64.8	78
RG4XOHM1-FR						
2x3x0.5	0.96	36.0	2.16	10.9	143.8	131
6x3x0.5	0.96	36.0	2.16	15.7	284.8	189
10x3x0.5	0.96	36.0	2.16	18.6	430.6	223
12x3x0.5	0.96	36.0	2.16	20.2	501.2	242
15x3x0.5	0.96	36.0	2.16	22.4	617.1	269
20x3x0.5	0.96	36.0	2.16	25.5	790.8	306
24x3x0.5	0.96	36.0	2.16	27.9	943.1	335

(SIL/PVC or SIL/LS0H) RG4(X)OHM1 - 300V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm
RG4OHM1-FR						
1x3x0.75	1.08	24.5	2.28	6.8	72.5	82
RG4XOHM1-FR						
2x3x0.75	1.08	24.5	2.28	11.4	159.9	136
6x3x0.75	1.08	24.5	2.28	16.5	323.2	198
10x3x0.75	1.08	24.5	2.28	19.5	492.0	234
12x3x0.75	1.08	24.5	2.28	21.3	584.1	256
15x3x0.75	1.08	24.5	2.28	23.5	707.5	282
20x3x0.75	1.08	24.5	2.28	27.0	922.4	324
24x3x0.75	1.08	24.5	2.28	29.3	1085.4	352
RG4OHM1-FR						
1x3x1	1.29	18.1	2.49	7.4	88.8	89
RG4XOHM1-FR						
2x3x1	1.29	18.1	2.49	12.4	197.3	149
6x3x1	1.29	18.1	2.49	18.0	404.7	216
10x3x1	1.29	18.1	2.49	21.2	618.8	255
12x3x1	1.29	18.1	2.49	23.1	723.4	277
15x3x1	1.29	18.1	2.49	25.7	891.6	308
20x3x1	1.29	18.1	2.49	29.4	1163.5	353
24x3x1	1.29	18.1	2.49	32.2	1386.8	386
RG4OHM1-FR						
1x3x1.5	1.59	12.1	2.79	8.1	111.3	97
RG4XOHM1-FR						
2x3x1.5	1.59	12.1	2.79	13.7	249.2	164
6x3x1.5	1.59	12.1	2.79	20.1	540.4	241
10x3x1.5	1.59	12.1	2.79	23.7	832.9	284
12x3x1.5	1.59	12.1	2.79	25.9	988.7	311
15x3x1.5	1.59	12.1	2.79	28.8	1218.2	346
20x3x1.5	1.59	12.1	2.79	33.0	1590.4	396
24x3x1.5	1.59	12.1	2.79	36.1	1894.9	433

(SIL/PVC or SIL/LS0H) RG4(X)OHM1 - 500V

RG4OHM1-FR						
1x3x2.5	1.98	7.41	3.18	9.1	149.1	109
RG4XOHM1-FR						
2x3x2.5	1.98	7.41	3.18	15.7	342.2	188
6x3x2.5	1.98	7.41	3.18	22.9	753.3	275
10x3x2.5	1.98	7.41	3.18	27.2	1179.0	326
12x3x2.5	1.98	7.41	3.18	29.5	1383.7	354
15x3x2.5	1.98	7.41	3.18	33.0	1721.0	396
20x3x2.5	1.98	7.41	3.18	25.6	1656.7	308
24x3x2.5	1.98	7.41	3.18	27.9	1972.7	335





THERMOCOUPLE CABLES

BASED ON PAS 5308

TRATOS® PETROCHEMICAL CABLES

THERMOCOUPLE CABLES BASED ON PAS 5308

(PE/PVC or XLPE/LSOH)
METAL - UEXHOHR - 300/500V

Unarmoured cable for indoor installations in the petroleum industry, chemical and petrochemical plants. Used as extension and compensating cable in thermocouple temperature measuring circuits in and around process plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** solid alloy conductor
- **Insulation:** polyethene or XLPE
- **Pairs:** twisted
- **Identification pairs:** numbered pairs and colour code according to ANSI MC 96.1 or IEC 60584
- **Individual screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Outer sheath:** PVC or LSOH
- **Marking:** (PAS 5308-1) + (Thermocouple type) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- PAS 5308-1 Design guidelines
- IEC 60332-1 Flame retardant
- IEC 60332-3C Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PE/PVC or XLPE/LS0H) METAL - UEXHOHR - 300/500V

Cross section	Diameter of conductor	Diameter over insulation	Diameter over lay up	Outer diameter approx	Weight of cable approx	Min bending radius
AWG	mm	mm	mm	mm	kg/km	mm
UEXHOHR						
2x2x20	0.8	2.0	7.7	10.0	90	120
4x2x20	0.8	2.0	9.3	11.0	140	132
6x2x20	0.8	2.0	11.3	13.0	200	156
8x2x20	0.8	2.0	12.2	14.0	250	168
10x2x20	0.8	2.0	13.9	16.0	300	192
12x2x20	0.8	2.0	14.5	17.0	350	204
16x2x20	0.8	2.0	16.8	19.0	440	228
20x2x20	0.8	2.0	18.8	21.0	550	252
24x2x20	0.8	2.0	20.6	23.0	650	276
UEXHOHR						
2x2x18	1.0	2.2	8.5	11.0	120	132
4x2x18	1.0	2.2	10.3	12.0	190	144
6x2x18	1.0	2.2	12.4	14.0	260	168
8x2x18	1.0	2.2	13.4	16.0	320	192
10x2x18	1.0	2.2	15.2	18.0	390	216
12x2x18	1.0	2.2	16.0	19.0	450	228
16x2x18	1.0	2.2	18.5	22.0	600	264
20x2x18	1.0	2.2	20.7	24.0	720	288
24x2x18	1.0	2.2	22.6	27.0	870	324
UEXHOHR						
2x2x16	1.3	2.5	9.3	12.0	150	144
4x2x16	1.3	2.5	11.3	15.0	240	180
6x2x16	1.3	2.5	13.7	17.0	330	204
8x2x16	1.3	2.5	14.8	18.0	410	216
10x2x16	1.3	2.5	16.8	20.0	500	240
12x2x16	1.3	2.5	17.6	21.0	600	252
16x2x16	1.3	2.5	20.4	24.0	770	288
20x2x16	1.3	2.5	22.8	27.0	960	324
24x2x16	1.3	2.5	25.0	29.0	1120	348

TRATOS® PETROCHEMICAL CABLES

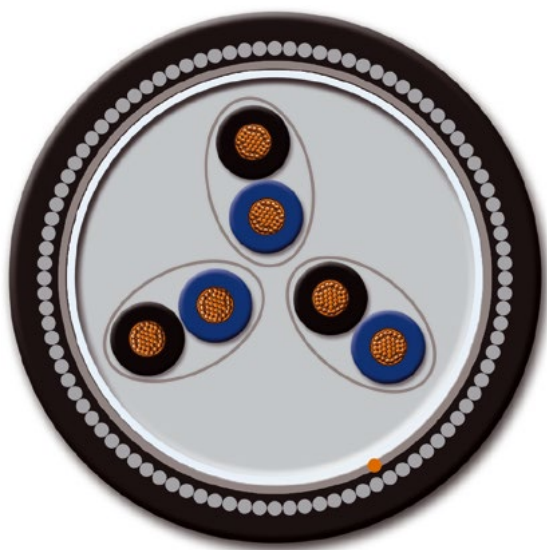
THERMOCOUPLE CABLES BASED ON PAS 5308

(PE/SWA/PVC or XLPE/SWA/LSOH)

METAL - UEXHOHRFR(M1) - 300/500V

Armoured cable for indoor or outdoor installations in the petroleum industry, chemical and petrochemical plants. Used as extension and compensating cable in thermocouple temperature measuring circuits in and around process plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** solid alloy conductor
- **Insulation:** polyethene or XLPE
- **Pairs:** twisted
- **Identification pairs:** numbered pairs and colour code according to ANSI MC 96.1 or IEC 60584
- **Individual screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Bedding:** PVC or LSOH
- **Armour:** galvanized steel wire
- **Outer sheath:** PVC or LSOH
- **Marking:** (PAS 5308-1) + (Thermocouple type) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

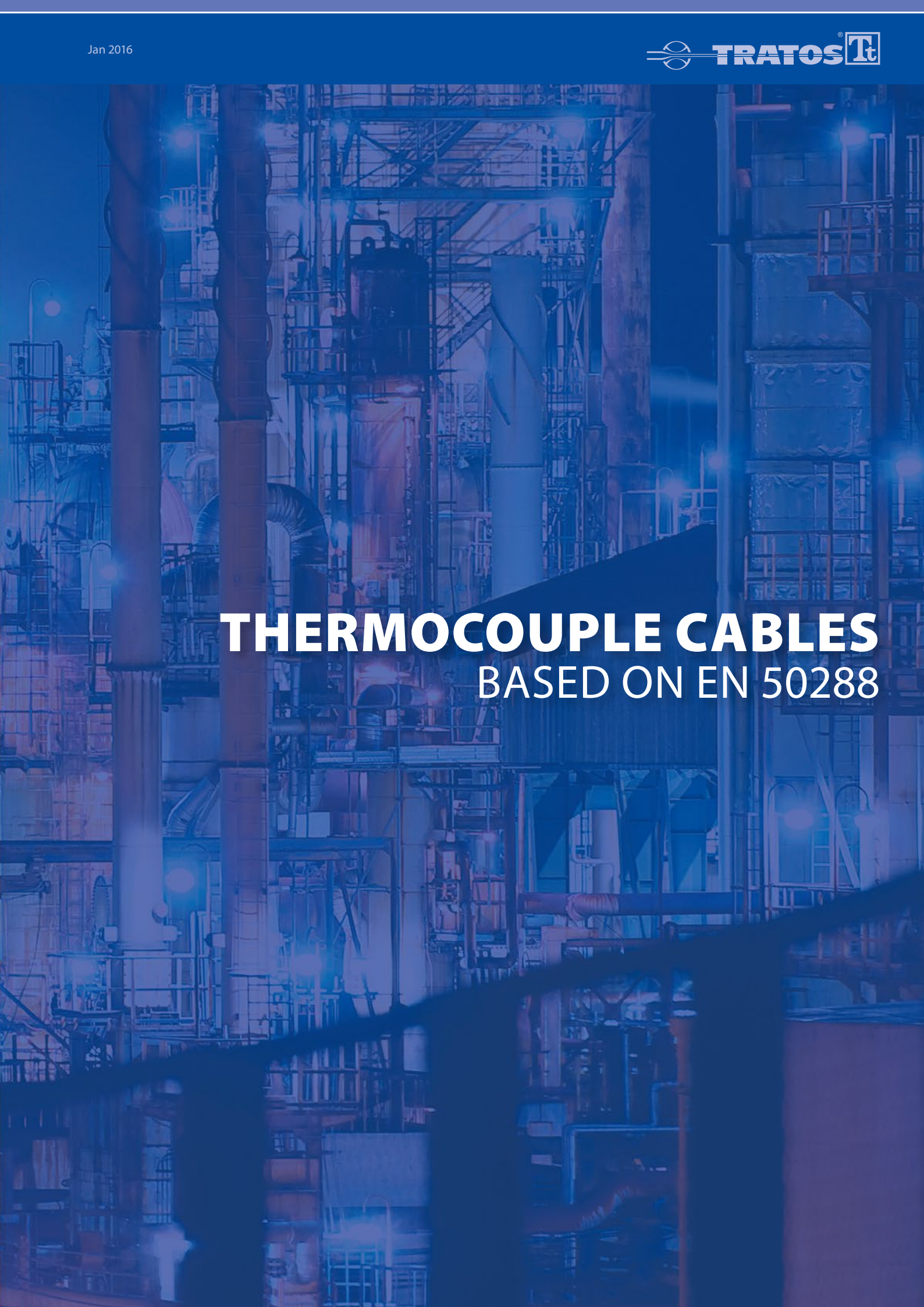
STANDARDS

- PAS 5308-1 Design guidelines
- IEC 60332-1 Flame retardant
- IEC 60332-3C Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PE/SWA/PVC or XLPE/SWA/LSOH) METAL - UEXHOHRFR(M1) - 300/500V

Cross section	Conductor diameter	Diameter over insulation	Diameter over lay up	Diameter over separation sheath	Diameter over armour wires	Diameter over armour	Outer Diameter approx	Weight of cable approx	Min bending radius
AWG	mm	mm	mm	mm	mm	mm	mm	kg/km	mm
UEXHOHRFR									
2x2x20	0.8	2.0	7.7	9.5	0.9	11.3	13.9	350	195
4x2x20	0.8	2.0	9.3	11.0	0.9	12.8	15.4	440	216
6x2x20	0.8	2.0	11.3	13.0	1.3	15.5	18.5	640	259
8x2x20	0.8	2.0	12.2	14.0	1.3	16.5	19.5	720	273
10x2x20	0.8	2.0	13.9	15.5	1.3	18.0	21.2	810	297
12x2x20	0.8	2.0	14.5	16.2	1.3	18.7	21.9	890	307
16x2x20	0.8	2.0	16.8	18.2	1.6	21.4	24.8	1200	347
20x2x20	0.8	2.0	18.8	20.5	1.6	23.7	27.3	1400	382
24x2x20	0.8	2.0	20.6	22.0	1.6	25.2	28.8	1550	403
UEXHOHRFR									
2x2x18	1.0	2.2	8.5	10.8	0.9	12.6	15.2	410	213
4x2x18	1.0	2.2	10.3	12.8	1.3	15.3	18.3	630	256
6x2x18	1.0	2.2	12.4	15.2	1.3	17.7	20.9	770	293
8x2x18	1.0	2.2	13.4	16.2	1.3	18.7	21.9	870	307
10x2x18	1.0	2.2	15.2	18.0	1.6	21.2	24.6	1130	344
12x2x18	1.0	2.2	16.0	18.8	1.6	22.0	21.9	1220	195
16x2x18	1.0	2.2	18.5	21.7	1.6	24.9	24.8	1480	195
20x2x18	1.0	2.2	20.7	24.0	1.6	27.2	27.3	1700	195
24x2x18	1.0	2.2	22.6	26.3	1.6	29.5	33.5	1950	469
UEXHOHRFR									
2x2x16	1.3	2.5	9.3	12.0	0.9	13.8	16.6	460	232
4x2x16	1.3	2.5	11.3	14.2	1.3	16.7	19.7	720	276
6x2x16	1.3	2.5	13.7	16.6	1.3	19.1	22.3	890	312
8x2x16	1.3	2.5	14.8	17.7	1.6	20.9	19.5	1130	195
10x2x16	1.3	2.5	16.8	19.8	1.6	23.0	26.6	1310	372
12x2x16	1.3	2.5	17.6	21.0	1.6	24.2	27.8	1450	389
16x2x16	1.3	2.5	20.4	23.8	1.6	27.0	30.8	1750	431
20x2x16	1.3	2.5	22.8	26.7	1.6	29.9	33.9	2030	475
24x2x16	1.3	2.5	25.0	28.8	2.0	32.8	36.8	2530	515





THERMOCOUPLE CABLES

BASED ON EN 50288

TRATOS® PETROCHEMICAL CABLES

THERMOCOUPLE CABLES BASED ON EN 50288-7

(PE/PVC or XLPE/LSOH)

UE(X)HOHR(M1) - 300/500V

Unarmoured cable for indoor installations in the petroleum industry, chemical and petrochemical plants. Used as extension and compensating cable in thermocouple temperature measuring circuits in and around process plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** solid alloy
- **Insulation:** polyethylene or XLPE
- **Pairs:** twisted
- **Identification pairs:** according to ANSI MC 96.1 or IEC 60584
- **Individual screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PE/PVC or XLPE/LS0H) UE(X)HOHR(M1) - 300/500V

Cross section	Conductor diameter	Outer Diameter approx	Weight of cable approx	Min bending radius
mm ²	mm	mm	kg/km	mm
UEOHR				
1x2x20	0.81	5.1	51	61
UEXHOHR				
2x2x20	0.81	7.7	100	93
4x2x20	0.81	8.9	150	107
6x2x20	0.81	10.6	220	128
8x2x20	0.81	11.9	260	143
10x2x20	0.81	13.6	320	163
12x2x20	0.81	14.0	360	168
16x2x20	0.81	15.6	480	187
20x2x20	0.81	17.4	580	209
24x2x20	0.81	19.4	690	233
UEOHR				
1x2x18	1.02	5.8	63	69
UEXHOHR				
2x2x18	1.02	8.9	140	106
4x2x18	1.02	10.3	200	124
6x2x18	1.02	12.4	280	148
8x2x18	1.02	13.9	350	167
10x2x18	1.02	15.9	430	190
12x2x18	1.02	16.4	490	197
16x2x18	1.02	18.3	630	220
20x2x18	1.02	20.5	790	246
24x2x18	1.02	22.8	930	274
UEOHR				
1x2x16	1.29	6.8	60	82
UEXHOHR				
2x2x16	1.29	10.7	180	129
4x2x16	1.29	12.6	270	151
6x2x16	1.29	15.1	360	182
8x2x16	1.29	17.1	460	205
10x2x16	1.29	19.5	560	235
12x2x16	1.29	20.3	640	243
16x2x16	1.29	22.6	860	272
20x2x16	1.29	25.4	1040	305
24x2x16	1.29	28.4	1250	341

TRATOS® PETROCHEMICAL CABLES

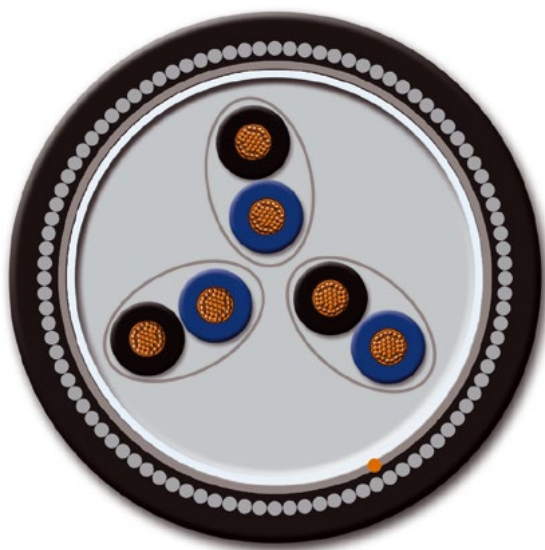
THERMOCOUPLE CABLES BASED ON EN 50288-7

(PE/SWA/PVC or XLPE/SWA/LSOH)

UE(X)HOHRFR(M1) - 300/500V

Armoured cable for indoor or outdoor installations in the petroleum industry, chemical and petrochemical plants. Used as extension and compensating cable in thermocouple temperature measuring circuits in and around process plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** solid alloy
- **Insulation:** polyethylene or XLPE
- **Pairs:** twisted
- **Identification pairs:** according to ANSI MC 96.1 or IEC 60584
- **Individual screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Outer sheath:** PVC or LSOH
- **Armour:** galvanized steel wire
- **Marking:** (EN 50288-7) + (Voltage grade) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PE/SWA/PVC or XLPE/SWA/LSOH) UE(X)HOHRFR(M1) - 300/500V

Cross section mm ²	Conductor diameter mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm
UEOHRFR							
1x2x20	0.81	5.1	0.90	6.92	9.5	217	133
UEXHOHRFR							
2x2x20	0.81	7.7	0.90	9.52	12.3	369	172
4x2x20	0.81	8.9	0.90	10.74	13.5	451	190
6x2x20	0.81	10.6	0.90	12.44	15.3	666	215
8x2x20	0.81	11.9	0.90	13.75	16.7	739	234
10x2x20	0.81	13.6	0.90	15.36	18.4	841	258
12x2x20	0.81	14.0	0.90	15.82	18.9	901	265
16x2x20	0.81	15.6	1.25	18.10	21.3	1302	298
20x2x20	0.81	17.4	1.25	19.94	23.3	1482	326
24x2x20	0.81	19.4	1.25	21.89	25.3	1647	354
UEOHRFR							
1x2x18	1.02	5.8	1.25	8.26	10.9	252	153
UEXHOHRFR							
2x2x18	1.02	8.9	1.25	11.37	14.2	423	199
4x2x18	1.02	10.3	1.25	12.84	15.8	652	221
6x2x18	1.02	12.4	1.25	14.86	17.9	787	251
8x2x18	1.02	13.9	1.25	16.44	19.6	876	274
10x2x18	1.02	15.9	1.25	18.36	21.6	1230	302
12x2x18	1.02	16.4	1.25	18.92	22.2	1327	310
16x2x18	1.02	18.3	1.25	20.81	24.2	1572	338
20x2x18	1.02	20.5	1.25	23.01	26.5	1852	371
24x2x18	1.02	22.8	1.25	25.35	29.0	2074	406
UEOHRFR							
1x2x16	1.29	6.8	1.25	9.30	12.0	283	168
UEXHOHRFR							
2x2x16	1.29	10.7	1.25	13.21	16.2	473	226
4x2x16	1.29	12.6	1.25	15.07	18.1	742	254
6x2x16	1.29	15.1	1.25	17.63	20.8	911	291
8x2x16	1.29	17.1	1.25	19.62	22.9	1189	321
10x2x16	1.29	19.5	1.25	22.05	25.5	1452	357
12x2x16	1.29	20.3	1.25	22.75	26.2	1496	367
16x2x16	1.29	22.6	1.25	25.14	28.7	1915	402
20x2x16	1.29	25.4	1.60	28.62	32.4	2092	454
24x2x16	1.29	28.4	1.60	31.58	35.5	2663	498



A large industrial facility, possibly a refinery or chemical plant, is shown at dusk or dawn. The sky is a mix of blue and purple hues. Several tall distillation columns and complex piping systems are visible, with some lights glowing from within the structures.

CONTROL CABLES

BASED ON PAS 5308

TRATOS[®] PETROCHEMICAL CABLES

CONTROL CABLES BASED ON PAS 5308

(PVC/PVC or XLPE/LS0H)
(F)(R)ROHR(M1) - 300/500V

Unarmoured control cable for indoor installations in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 1 or 2 or 5
- **Insulation:** PVC or XLPE
- **Identification cores:** see table 7 on page 10
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Outer sheath:** PVC or LS0H
- **Marking:** (PAS 5308-1) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- PAS 5308-1 Design guidelines
- IEC 60332-1 Flame retardant
- IEC 60332-3C Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LS0H)
- IEC 61034 Low smoke emission (only for LS0H)

(PVC/PVC or XLPE/LSOH) (F)(R)ROHR(M1) - 300/500V

Cross section	Diameter of conductor	Diameter over insulation	Diameter over lay up	Outer diameter approx	Weight of cable approx	Min bending radius
AWG	mm	mm	mm	mm	kg/km	mm
FROHR						
2x0.5	0.9	39.00	2.1	5.9	46	71
3x0.5	0.9	39.00	2.1	6.2	56	74
4x0.5	0.9	39.00	2.1	6.7	67	80
6x0.5	0.9	39.00	2.1	8.1	100	97
10x0.5	0.9	39.00	2.1	10.6	152	127
20x0.5	0.9	39.00	2.1	13.5	276	162
FROHR						
2x0.75	1.1	26.00	2.3	6.3	53	76
3x0.75	1.1	26.00	2.3	6.6	66	79
4x0.75	1.1	26.00	2.3	7.2	81	86
6x0.75	1.1	26.00	2.3	8.8	123	106
10x0.75	1.1	26.00	2.3	11.4	186	137
20x0.75	1.1	26.00	2.3	14.6	341	175
RROHR						
2x1.5	1.6	12.10	2.8	7.3	77	88
3x1.5	1.6	12.10	2.8	8.0	105	96
4x1.5	1.6	12.10	2.8	8.7	130	104
6x1.5	1.6	12.10	2.8	10.7	204	128
10x1.5	1.6	12.10	2.8	13.7	303	164
20x1.5	1.6	12.10	2.8	17.6	569	211

TRATOS[®] PETROCHEMICAL CABLES

CONTROL CABLES BASED ON PAS 5308

(PVC/SWA/PVC or XLPE/SWA/LS0H)

(F)(R)OHRFR(M1) - 300/500V

Armoured power cable for indoor or outdoor installations in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 1 or 2 or 5 of BS EN 60228
- **Insulation:** PVC or XLPE
- **Identification cores:** see table 7 on page 10
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Bedding:** PVC or LS0H
- **Armour:** galvanized steel wire
- **Outer sheath:** PVC or LS0H
- **Marking:** (PAS 5308-1) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- PAS 5308-1 Design guidelines
- IEC 60332-1 Flame retardant
- IEC 60332-3C Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LS0H)
- IEC 61034 Low smoke emission (only for LS0H)

(PVC/SWA/PVC or XLPE/SWA/LSOH) (F)(R)OHRFR(M1) - 600/1000V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm
FROHRFR									
2x0.5	0.9	39.00	2.1	5.9	0.9	7.7	10.3	217	144
3x0.5	0.9	39.00	2.1	6.2	0.9	8.0	10.6	235	148
4x0.5	0.9	39.00	2.1	6.7	0.9	8.5	11.1	255	155
6x0.5	0.9	39.00	2.1	8.1	0.9	9.9	12.7	330	178
10x0.5	0.9	39.00	2.1	10.6	0.9	12.4	15.4	446	216
20x0.5	0.9	39.00	2.1	13.5	1.3	16.0	19.2	759	269
FROHRFR									
2x0.75	1.1	26.00	2.3	6.3	0.9	8.1	10.7	233	150
3x0.75	1.1	26.00	2.3	6.6	0.9	8.4	11.0	254	154
4x0.75	1.1	26.00	2.3	7.2	0.9	9.0	11.8	289	165
6x0.75	1.1	26.00	2.3	8.8	0.9	10.6	13.4	369	188
10x0.75	1.1	26.00	2.3	11.4	0.9	13.2	16.2	502	227
20x0.75	1.1	26.00	2.3	14.6	1.3	17.1	20.3	854	284
RROHRFR									
2x1.5	1.6	12.10	2.8	7.3	0.9	9.1	11.9	286	167
3x1.5	1.6	12.10	2.8	8.0	0.9	9.8	12.6	329	176
4x1.5	1.6	12.10	2.8	8.7	0.9	10.5	13.3	369	186
6x1.5	1.6	12.10	2.8	10.7	0.9	12.5	15.3	496	214
10x1.5	1.6	12.10	2.8	13.7	1.3	16.2	19.4	788	272
20x1.5	1.6	12.10	2.8	17.6	1.6	20.8	24.2	1320	339





CONTROL CABLES

BASED ON EN 50288

TRATOS® PETROCHEMICAL CABLES

CONTROL CABLES BASED ON EN 50288-7

(PVC/PVC or XLPE/LSOH)

RE40HM1(R) - 300/500V

Unarmoured multi-element metallic control cables for indoor installations in the petroleum industry, chemical and petrochemical plants.
Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Insulation:** PVC or XLPE
- **Identification cores:** black numbered
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- BS EN 60288
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PVC/PVC or XLPE/LSOH) RE4OHM1(R) - 300/500V

Cross section	Diameter of conductor	Diameter over insulation	Diameter over lay up	Outer diameter approx	Weight of cable approx	Min bending radius
AWG	mm	mm	mm	mm	kg/km	mm
RE4OHM1*						
2x0.5	0.96	36.0	2.16	6.6	57	80
3x0.5	0.96	36.0	2.16	7.0	66	84
4x0.5	0.96	36.0	2.16	7.6	76	91
7x0.5	0.96	36.0	2.16	9.2	114	110
12x0.5	0.96	36.0	2.16	11.9	173	142
24x0.5	0.96	36.0	2.16	16.4	308	197
2x0.75	1.08	24.5	2.28	6.9	62	82
3x0.75	1.08	24.5	2.28	7.2	72	87
4x0.75	1.08	24.5	2.28	8.1	89	97
7x0.75	1.08	24.5	2.28	9.5	128	114
12x0.75	1.08	24.5	2.28	12.6	201	151
24x0.75	1.08	24.5	2.28	17.3	361	208
2x1.5	1.29	18.1	2.49	8.1	92	97
3x1.5	1.29	18.1	2.49	8.5	110	102
4x1.5	1.29	18.1	2.49	9.3	134	112
7x1.5	1.29	18.1	2.49	11.2	205	135
12x1.5	1.29	18.1	2.49	14.9	329	178
24x1.5	1.29	18.1	2.49	20.6	605	247

TRATOS[®] PETROCHEMICAL CABLES

CONTROL CABLES BASED ON EN 50288-7

(PVC/SWA/PVC or XLPE/SWA/LSOH)

RE4HM1FM1(R) - 300/500V

Armoured multi-element metallic control cables for indoor and outdoor installations in the petroleum industry, chemical and petrochemical plants.

Important Note: These cables are not intended for direct connection to mains electricity supply or other low impedance sources.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2
- **Insulation:** PVC or XLPE
- **Identification cores:** black numbered
- **Assembly:** concentric layers
- **Overall screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5mm² polyester tape 0.023 mm
- **Inner sheath:** PVC or LSOH
- **Armour:** galvanized steel wire comply with EN 10244 cl. D
- **Outer sheath:** PVC or LSOH
- **Marking:** (EN 50288-7) + (300/500 V) + (TRATOS) + (Year of Manufacture) + (Batch Number) + (Metre Mark)

STANDARDS

- EN 50288-7 Design guidelines
- EN 50290-2 Specification for insulation and sheath material
- BS EN 60288
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(PVC/SWA/PVC or XLPE/SWA/LSOH) RE4HM1FM1(R) - 300/500V

Cross section mm ²	Conductor diameter mm	Maximum DC resistance at 20 °C Ω/km	Diameter over insulation mm	Diameter over inner sheath mm	Diameter of armour wires mm	Diameter over armour mm	Outer diameter approx mm	Weight of cable approx kg/km	Min bending radius mm
RE4OHM1FM1*									
2x0.5	0.96	36.0	2.16	6.6	0.9	8.4	10.5	229	146
3x0.5	0.96	36.0	2.16	6.9	0.9	8.7	10.8	249	151
4x0.5	0.96	36.0	2.16	7.5	0.9	9.3	11.4	268	160
7x0.5	0.96	36.0	2.16	9.1	0.9	10.9	13.0	344	182
12x0.5	0.96	36.0	2.16	11.8	0.9	13.6	15.9	466	223
24x0.5	0.96	36.0	2.16	16.4	0.9	18.2	20.7	713	290
2x0.75	1.08	24.5	2.28	6.8	0.9	8.6	10.7	240	150
3x0.75	1.08	24.5	2.28	7.2	0.9	9.0	11.1	257	155
4x0.75	1.08	24.5	2.28	8.0	0.9	9.8	11.9	293	167
7x0.75	1.08	24.5	2.28	9.5	0.9	11.3	13.4	366	187
12x0.75	1.08	24.5	2.28	12.5	0.9	14.3	16.6	508	233
24x0.75	1.08	24.5	2.28	17.3	0.9	19.1	21.6	787	303
2x1.5	1.29	18.1	2.49	8.0	0.9	9.8	11.9	296	167
3x1.5	1.29	18.1	2.49	8.5	0.9	10.3	12.4	322	173
4x1.5	1.29	18.1	2.49	9.3	0.9	11.1	13.4	371	187
7x1.5	1.29	18.1	2.49	11.2	0.9	13.0	15.3	484	214
12x1.5	1.29	18.1	2.49	14.8	0.9	16.6	19.2	698	268
24x1.5	1.29	18.1	2.49	20.6	1.25	23.1	25.9	1286	363



A photograph of an industrial facility, likely a refinery or chemical plant, at dusk. The scene is dominated by large, cylindrical storage tanks with domed roofs. A tall, slender distillation column stands prominently in the background. The sky is a mix of deep blue and purple hues, with some clouds. In the foreground, there are various pipes, walkways, and smaller structures. The overall atmosphere is industrial and serene.

POWER CABLES

LOW VOLTAGE & EARTHING CABLES

TRATOS® PETROCHEMICAL CABLES

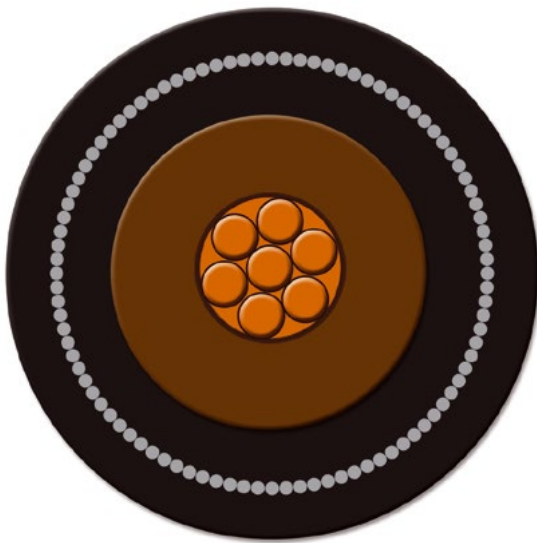
EARTHING CABLES

(PVC)

N07V-K - 0,45/0,75 kV

Single core unsheathed cable for fixed protected installations for voltages up to 1000V or up to 750 V d.c. to earth, in the petroleum industry, chemical and petrochemical plants. Flexible, fine wire, conductor to aid installation.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular flexible, according to cl. 5 of BS EN 60228
- **Insulation:** PVC compound
- **Marking:** (Year of manufacture) + (serial number) + (Tratos cable type) + [(number of cores) × (cross-section)] + (rated voltage)

STANDARDS

- CENELEC HD 21 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60227/03 Design and tests guidelines

(PVC) N07V-K - 0,45/0,75 kV

Cross section	Conductor diameter	Diameter over inner sheath	Diameter of armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius
mm ²	mm	mm	mm	mm	mm	kg/km	mm
N07V-K							
0.45/0.75	1	1.3	19.5	3.2	14	13	12
0.45/0.75	1.5	1.5	13.3	3.5	19	14	16
0.45/0.75	2.5	1.9	7.98	4.2	30	17	21
0.45/0.75	4	2.5	4.95	4.8	45	19	28
0.45/0.75	6	3.0	3.30	6.3	63	25	36
0.45/0.75	10	3.9	1.91	7.6	100	30	50
0.45/0.75	16	5.0	1.21	8.8	160	35	68
0.45/0.75	25	6.5	0.780	11.0	260	45	89
0.45/0.75	35	7.6	0.554	12.5	350	50	110
0.45/0.75	50	9.3	0.386	14.5	490	60	134
0.45/0.75	70	11.0	0.272	17.0	670	70	171
0.45/0.75	95	12.5	0.206	19.0	890	80	207
0.45/0.75	120	15.4	0.161	21.0	1200	85	239
0.45/0.75	150	16.5	0.129	23.5	1400	95	275
0.45/0.75	185	18.3	0.106	26.0	1800	100	314
0.45/0.75	240	21.5	0.0801	29.5	2400	120	369

TRATOS[®] PETROCHEMICAL CABLES

POWER CABLES

(XLPE/PVC or XLPE/LSOH)

RE4M1(R) 0,6/1 kV - single core

Single core sheathed cable for fixed installations for voltages up to 1000V or up to 750 V d.c. to earth, in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Insulation:** XLPE compound
- **Sheath:** PVC or LSOH
- **Marking:** (ELECTRIC CABLE) + (600/1000 V) + (IEC 60502-1) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-1 Design and tests guidelines
- BS EN 60228 Conductors
- IEC 60332-1 Flame retardant
- IEC 60332-3 C Fire retardant on bunched cables(if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(XLPE/PVC or XLPE/LS0H) RE4M1(R) 0,6/1 kV - single core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short-circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE4M1/RE4R											
0.6/1	1x1.5	1.6	12.1	3.0	5.8	50	70	0.14	0.3	25	35
0.6/1	1x2.5	2.0	7.41	3.4	6.2	60	75	0.13	0.4	33	46
0.6/1	1x4	2.6	4.61	4.0	6.8	80	80	0.12	0.6	44	59
0.6/1	1x6	3.1	3.08	4.5	7.3	110	90	0.11	0.9	56	74
0.6/1	1x10	3.8	1.83	5.2	8.1	150	100	0.11	1.5	77	97
0.6/1	1x16	4.7	1.15	6.1	9.1	210	110	0.10	2.4	101	125
0.6/1	1x25	6.0	0.727	7.8	10.7	310	130	0.10	3.7	137	161
0.6/1	1x35	7.0	0.524	8.8	11.8	400	140	0.09	5.2	167	192
0.6/1	1x50	8.1	0.387	10.1	13	520	155	0.09	7.4	205	227
0.6/1	1x70	9.8	0.268	12.0	14.9	720	180	0.09	10.2	261	278
0.6/1	1x95	11.4	0.193	13.6	16.7	980	200	0.08	13.9	323	333
0.6/1	1x120	12.9	0.153	15.4	18.5	1220	220	0.08	17.5	378	379
0.6/1	1x150	14.3	0.124	17.2	20.5	1490	245	0.08	21.8	435	424
0.6/1	1x185	15.7	0.0991	19.0	22.3	1840	270	0.08	26.9	504	478
0.6/1	1x240	18.4	0.0754	21.9	25.5	2380	305	0.08	34.8	603	553
0.6/1	1x300	20.5	0.0601	24.2	27.9	3000	335	0.08	43.4	698	623
0.6/1	1x400	22.9	0.0470	27.0	31.0	3800	370	0.08	57.8	811	703
0.6/1	1x500	26.2	0.0366	30.7	34.8	4870	420	0.08	72.2	947	794
0.6/1	1x630	29.9	0.0283	34.8	39.4	6300	465	0.08	90.9	1095	889

(*) trefoil formation

TRATOS[®] PETROCHEMICAL CABLES

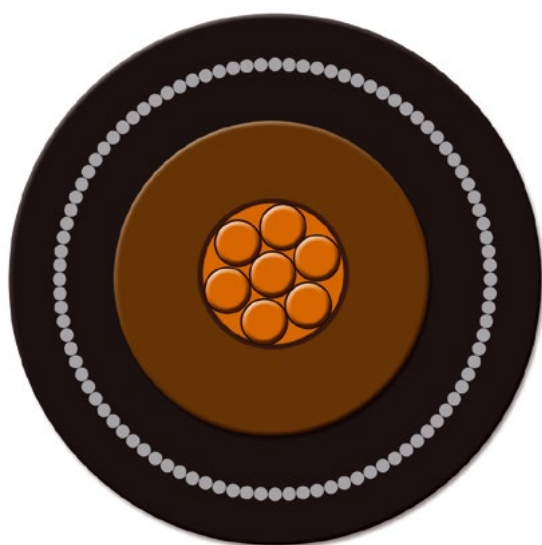
POWER CABLES

(XLPE/AWA/PVC or XLPE/AWA/LSOH)

RE4M1FM1(R) 0,6/1 kV - single core

Single core, non-magnetic, armoured power cable for indoor and outdoor installations in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of IEC 60228
- **Insulation:** XLPE compound according to IEC 60502
- **Bedding:** non hygroscopic compound or LSOH non hygroscopic compound
- **Armour:** aluminium wires
- **Sheath:** PVC or LSOH
- **Marking:** (ELECTRIC CABLE) + (600/1000 V) + (IEC 60502-1) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-1 Design and tests guidelines
- BS EN 60228 Conductors
- IEC 60332-1 Flame retardant
- IEC 60332-3 C Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(XLPE/AWA/PVC or XLPE/AWA/LSOH) RE4M1FM1(R) 0,6/1 kV - single core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over extruded inner covering/taping	Diameter over armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short-circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE4FM1/RE4FR														
0.6/1	1x50	8.1	0.387	10.1	12.1	2.0	16.1	19.7	850	275	0.12	7.4	230	233
0.6/1	1x70	9.8	0.268	12.0	14.0	2.0	18.0	21.6	1080	305	0.11	10.2	288	284
0.6/1	1x95	11.4	0.193	13.6	15.6	2.0	19.6	23.2	1360	325	0.10	13.9	350	338
0.6/1	1x120	12.9	0.153	15.4	17.4	2.0	21.4	25.0	1630	350	0.10	17.5	404	382
0.6/1	1x150	14.1	0.124	17.2	19.2	2.0	23.2	26.8	1940	375	0.10	21.8	457	424
0.6/1	1x185	15.7	0.0991	19.0	21.0	2.0	25.0	28.6	2320	400	0.10	26.9	521	474
0.6/1	1x240	18.4	0.0754	21.9	23.9	2.0	27.9	31.7	2920	445	0.09	34.8	611	542
0.6/1	1x300	20.5	0.0601	24.2	26.2	2.0	30.2	34.2	3580	480	0.09	43.4	692	600
0.6/1	1x400	22.8	0.0470	27.0	29.4	2.0	33.4	37.6	4490	530	0.09	57.8	785	665
0.6/1	1x500	26.2	0.0366	30.7	33.1	2.0	37.1	41.5	5630	580	0.09	72.2	889	732
0.6/1	1x630	29.9	0.0283	34.8	37.2	2.0	41.2	45.8	7140	640	0.09	90.9	994	796

(*) trefoil formation

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/PVC or XLPE/LSOH)

RE4M1(R) 0,6/1 kV - multi-core

Multi-core sheathed cable for fixed installations for voltages up to 1000V or up to 750 V d.c. to earth, in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Insulation:** XLPE compound according to IEC 60502
- **Fillers:** non hygroscopic compound or LSOH non hygroscopic compound
- **Sheath:** PVC or LSOH
- **Marking:** (ELECTRIC CABLE)+(600/1000 V)+ (IEC 60502-1) + (TRATOS) + (batch number)+(number of cores)+(size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-1 Design and tests guidelines
- BS EN 60228 Conductors
- IEC 60332-1 Flame retardant
- IEC 60332-3 C Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(XLPE/PVC or XLPE/LSOH) RE4M1(R) 0,6/1 kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over extruded inner covering/	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short - circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE4OM1/RE4OR												
0.6/1	2x1.5	1.6	12.1	3.0	-	9.6	130	115	0.10	0.3	28	37
0.6/1	2x2.5	2.0	7.41	3.4	-	10.4	160	125	0.09	0.4	37	49
0.6/1	2x4	2.6	4.61	4.0	-	11.5	210	140	0.09	0.6	49	64
0.6/1	2x6	3.1	3.08	4.5	-	12.6	270	150	0.08	0.9	63	80
0.6/1	2x10	3.8	1.83	5.2	11.4	15.1	420	180	0.08	1.5	86	106
0.6/1	2x16	4.7	1.15	6.1	13.3	17.0	580	205	0.08	2.4	113	137
0.6/1	2x25	6.0	0.727	7.8	16.5	20.2	860	245	0.08	3.7	152	177
0.6/1	2x35	7.0	0.524	8.8	18.6	22.3	1110	270	0.07	5.2	186	213

(XLPE/PVC or XLPE/LS0H) RE4M1(R) 0,6/1 kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over extruded inner covering/	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short - circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE4OM1/RE4OR												
0.6/1	2x50	8.1	0.387	10.1	21.1	24.8	1440	300	0.07	7.4	226	253
0.6/1	2x70	9.8	0.268	12.0	24.9	28.6	1970	345	0.07	10.2	287	312
0.6/1	2x95	11.4	0.193	13.6	28.1	32.2	2640	385	0.07	13.9	354	374
0.6/1	2x120	12.9	0.153	15.4	32.2	36.6	3370	440	0.07	17.5	410	424
0.6/1	2x150	14.3	0.124	17.2	35.9	40.4	4120	485	0.07	21.8	468	475
0.6/1	2x185	15.7	0.0991	19.0	39.6	44.3	5060	530	0.07	26.9	538	536
RE4OM1/RE4OR												
0.6/1	3x1.5	1.6	12.1	3.0	-	10.1	150	120	0.10	0.3	23	31
0.6/1	3x2.5	2.0	7.41	3.4	-	10.9	190	130	0.09	0.4	31	41
0.6/1	3x4	2.6	4.61	4.0	-	12.1	250	145	0.09	0.6	41	53
0.6/1	3x6	3.1	3.08	4.5	-	13.3	330	160	0.08	0.9	53	67
0.6/1	3x10	3.8	1.83	5.2	12.2	15.9	510	190	0.08	1.5	72	88
0.6/1	3x16	4.7	1.15	6.1	14.2	17.9	720	215	0.08	2.4	96	114
0.6/1	3x25	6.0	0.727	7.8	17.8	21.5	1080	260	0.08	3.7	129	149
0.6/1	3x35	7.0	0.524	8.8	20.0	23.7	1400	285	0.07	5.2	158	179
0.6/1	3x50	8.1	0.387	10.1	22.7	26.4	1830	315	0.07	7.4	193	212
0.6/1	3x70	9.8	0.268	12.0	26.8	30.7	2550	370	0.07	10.2	245	261
0.6/1	3x95	11.4	0.193	13.6	30.2	34.3	3430	410	0.07	13.9	302	314
0.6/1	3x120	12.9	0.153	15.4	34.7	39.0	4360	470	0.07	17.5	351	355
0.6/1	3x150	14.3	0.124	17.2	38.6	43.3	5350	520	0.07	21.8	399	397
0.6/1	3x185	15.7	0.0991	19.0	42.6	47.5	6600	570	0.07	26.9	460	449
RE4OM1/RE4OR												
0.6/1	4x1.5	1.6	12.1	3.0	-	10.9	180	130	0.11	0.3	23	31
0.6/1	4x2.5	2.0	7.41	3.4	-	11.8	220	140	0.10	0.4	31	41
0.6/1	4x4	2.6	4.61	4.0	-	13.1	300	160	0.09	0.6	41	53
0.6/1	4x6	3.1	3.08	4.5	-	14.4	400	175	0.09	0.9	53	67
0.6/1	4x10	3.8	1.83	5.2	13.5	17.2	630	205	0.09	1.5	72	88
0.6/1	4x16	4.7	1.15	6.1	15.8	19.5	890	235	0.08	2.4	96	114
0.6/1	4x25	6.0	0.727	7.8	19.8	23.5	1340	280	0.08	3.7	129	149
0.6/1	4x35	7.0	0.524	8.8	22.3	26.0	1760	310	0.08	5.2	158	179
0.6/1	4x50	8.1	0.387	10.1	25.3	29.2	2330	350	0.08	7.4	193	212
0.6/1	4x70	9.8	0.268	12.0	29.9	34.0	3250	410	0.08	10.2	245	261
0.6/1	4x95	11.4	0.193	13.6	34.4	38.7	4430	465	0.08	13.9	302	314
0.6/1	4x120	12.9	0.153	15.4	38.7	43.4	5580	520	0.08	17.5	351	355
0.6/1	4x150	14.3	0.124	17.2	43.0	47.9	6820	575	0.08	21.8	399	397
0.6/1	4x185	15.7	0.0991	19.0	47.5	53.0	8480	635	0.08	26.9	460	449
RE4OM1/RE4OR												
0.6/1	3x35/25	7.0	0.524	7.8	21.7	25.4	1650	305	0.08	5.2	158	179
0.6/1	3x50/25	8.1	0.387	7.8	24.1	27.8	2060	335	0.08	7.4	193	212
0.6/1	3x70/35	9.8	0.268	8.8	28.3	32.2	2860	385	0.08	10.2	245	261
0.6/1	3x95/70	11.4	0.193	10.1	32.6	36.9	3920	445	0.08	13.9	302	314
0.6/1	3x120/70	12.9	0.153	12.0	36.9	41.4	4980	495	0.08	17.5	351	355
0.6/1	3x150/95	14.3	0.124	13.6	41.2	46.1	6210	555	0.08	21.8	399	397
0.6/1	3x185/95	15.7	0.0991	13.6	44.7	49.8	7420	600	0.08	26.9	460	449
0.6/1	3x240/150	18.4	0.0754	17.2	52.5	58.2	9960	700	0.08	34.8	546	520
0.6/1	3x300/150	20.5	0.0601	17.2	56.8	62.9	12040	755	0.08	43.4	626	584

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/SWA/PVC or XLPE/SWA/LS0H)

RE4OM1(R)FM1(R) 0,6/1 kV - multi-core

Multi-core armoured and sheathed cable for fixed installations for voltages up to 1000V or up to 750 V d.c. to earth, in the petroleum industry, chemical and petrochemical plants, indoor or outdoor locations.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Insulation:** XLPE compound according to IEC 60502
- **Inner covering:** non hygroscopic compound or LS0H non hygroscopic compound
- **Armour:** galvanized steel wire
- **Sheath:** PVC or LS0H
- **Marking:** (ELECTRIC CABLE)+(600/1000 V)+ (IEC 60502-1) + (TRATOS) + (batch number)+(number of cores)+(size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-1 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant
- IEC 60332-3 C Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LS0H)
- IEC 61034 Low smoke emission (only for LS0H)

(XLPE/SWA/PVC or XLPE/SWA/LS0H) RE4OM1(R)FM1(R) 0,6/1 kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over extruded inner covering/taping	Diameter over armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short-circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE4OFM1/RE4OFR														
0.6/1	2x1.5	1.6	12.1	3.0	8.1	0.8	9.7	13.3	330	185	0.1	0.3	29	36
0.6/1	2x2.5	2.0	7.41	3.4	8.8	0.8	10.4	14.0	370	195	0.09	0.4	38	47
0.6/1	2x4	2.6	4.61	4.0	9.9	0.8	11.5	15.1	440	210	0.09	0.6	50	62
0.6/1	2x6	3.1	3.08	4.5	11.0	0.8	12.6	16.2	530	225	0.08	0.9	64	78
0.6/1	2x10	3.8	1.83	5.2	12.4	1.3	14.9	18.5	800	260	0.08	1.5	88	105
0.6/1	2x16	4.7	1.15	6.1	14.3	1.3	16.8	20.4	1010	285	0.08	2.4	116	136
0.6/1	2x25	6.0	0.727	7.8	17.5	1.6	20.7	24.3	1510	340	0.08	3.7	157	177
0.6/1	2x35	7.0	0.524	8.8	19.6	1.6	22.8	26.4	1820	370	0.07	5.2	191	212

(XLPE/SWA/PVC or XLPE/SWA/LS0H) RE4OM1(R)FM1(R) 0,6/1 kV - multi-core

Voltage	Cross section	Conductor Diam.	Max. DC resistance at 20 °C	Diam. over insulation	Diam. over extruded inner covering/taping	Diam. over armour wires	Diam. over armour	Outer Diam. approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short-circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
0.6/1	2x50	8.1	0.387	10.1	22.1	1.6	25.3	28.9	2230	405	0.07	7.4	231	252
0.6/1	2x70	9.8	0.268	12.0	25.9	1.6	29.1	33.1	2930	465	0.07	10.2	291	308
0.6/1	2x95	11.4	0.193	13.6	29.5	2.0	33.5	37.7	3990	530	0.07	13.9	358	369
0.6/1	2x120	12.9	0.153	15.4	33.1	2.0	37.1	41.5	4810	580	0.07	17.5	414	419
0.6/1	2x150	14.3	0.124	17.2	36.7	2.0	40.7	45.3	5690	635	0.07	21.8	469	468
0.6/1	2x185	15.7	0.0991	19.0	40.8	2.5	45.8	50.8	7300	710	0.07	26.9	538	526
RE4OFM1/RE4OFR														
0.6/1	3x1.5	1.6	12.1	3.0	8.5	0.8	10.1	13.7	360	190	0.1	0.3	23	31
0.6/1	3x2.5	2.0	7.41	3.4	9.4	0.8	11.0	14.6	410	205	0.09	0.4	31	41
0.6/1	3x4	2.6	4.61	4.0	10.5	0.8	12.1	15.7	500	220	0.09	0.6	41	53
0.6/1	3x6	3.1	3.08	4.5	11.7	0.8	13.3	16.9	600	235	0.08	0.9	53	67
0.6/1	3x10	3.8	1.83	5.2	13.2	1.3	15.7	19.3	910	270	0.08	1.5	72	88
0.6/1	3x16	4.7	1.15	6.1	15.2	1.3	17.7	21.3	1170	300	0.08	2.4	96	114
0.6/1	3x25	6.0	0.727	7.8	18.8	1.6	22.0	25.6	1760	360	0.08	3.7	129	149
0.6/1	3x35	7.0	0.524	8.8	21.0	1.6	24.2	27.8	2160	390	0.07	5.2	158	179
0.6/1	3x50	8.1	0.387	10.1	23.7	1.6	26.9	30.7	2700	430	0.07	7.4	193	212
0.6/1	3x70	9.8	0.268	12.0	28.2	2.0	32.2	36.2	3850	505	0.07	10.2	245	259
0.6/1	3x95	11.4	0.193	13.6	31.6	2.0	35.6	40.0	4880	560	0.07	13.9	302	310
0.6/1	3x120	12.9	0.153	15.4	35.5	2.0	39.5	44.1	5900	620	0.07	17.5	351	353
0.6/1	3x150	14.3	0.124	17.2	39.8	2.5	44.8	49.8	7550	695	0.07	21.8	399	392
0.6/1	3x185	15.7	0.0991	19.0	43.8	2.5	48.8	54.0	9010	755	0.07	26.9	460	440
RE4OFM1/RE4OFR														
0.6/1	4x1.5	1.6	12.1	3.0	9.3	0.8	10.9	14.5	400	205	0.11	0.3	23	31
0.6/1	4x2.5	2.0	7.41	3.4	10.2	0.8	11.8	15.4	460	215	0.1	0.4	31	41
0.6/1	4x4	2.6	4.61	4.0	11.6	0.8	13.2	16.8	570	235	0.1	0.6	41	53
0.6/1	4x6	3.1	3.08	4.5	12.9	1.3	15.4	19.0	830	265	0.09	0.9	53	67
0.6/1	4x10	3.8	1.83	5.2	14.5	1.3	17.0	20.6	1060	290	0.09	1.5	72	88
0.6/1	4x16	4.7	1.15	6.1	16.8	1.6	20.0	23.6	1510	330	0.08	2.4	96	114
0.6/1	4x25	6.0	0.727	7.8	20.8	1.6	24.0	27.6	2080	385	0.08	3.7	129	149
0.6/1	4x35	7.0	0.524	8.8	23.3	1.6	26.5	30.3	2610	425	0.08	5.2	158	179
0.6/1	4x50	8.1	0.387	10.1	26.3	1.6	29.5	33.5	3270	470	0.08	7.4	193	212
0.6/1	4x70	9.8	0.268	12.0	31.3	2.0	35.3	39.7	4680	555	0.08	10.2	245	259
0.6/1	4x95	11.4	0.193	13.6	35.2	2.0	39.2	43.8	5970	615	0.08	13.9	302	310
0.6/1	4x120	12.9	0.153	15.4	39.9	2.5	44.9	49.9	7770	700	0.08	17.5	351	353
0.6/1	4x150	14.3	0.124	17.2	44.2	2.5	49.2	54.4	9240	760	0.08	21.8	399	392
0.6/1	4x185	15.7	0.0991	19.0	48.7	2.5	53.7	59.3	11090	830	0.08	26.9	460	440
RE4OFM1/RE4OFR														
0.6/1	3x35/25	7.0	0.524	7.8	22.7	1.6	25.9	29.5	2460	410	0.08	5.2	158	179
0.6/1	3x50/25	8.1	0.387	7.8	25.1	1.6	28.3	32.1	2960	450	0.08	7.4	193	212
0.6/1	3x70/35	9.8	0.268	8.8	29.7	2.0	33.7	37.9	4220	530	0.08	10.2	245	259
0.6/1	3x95/70	11.4	0.193	10.1	33.4	2.0	37.4	41.8	5350	585	0.08	13.9	302	310
0.6/1	3x120/70	12.9	0.153	12.0	37.7	2.0	41.7	46.5	6610	650	0.08	17.5	351	353
0.6/1	3x150/95	14.3	0.124	13.6	42.4	2.5	47.4	52.4	8510	735	0.08	21.8	399	392
0.6/1	3x185/95	15.7	0.0991	13.6	45.9	2.5	50.9	56.3	9920	790	0.08	26.9	460	440
0.6/1	3x240/150	18.4	0.0754	17.2	53.7	2.5	58.7	64.5	12840	905	0.08	34.8	539	505
0.6/1	3x300/150	20.5	0.0601	17.2	58.0	2.5	63.0	69.0	15110	965	0.08	43.4	618	567

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/Pb/PVC)

RE4LR 0,6/1 kV - single core

Single core lead sheathed power cable for indoor and outdoor installations in the petroleum industry, chemical and petrochemical plant in and around process plants where hydrocarbons are present.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Insulation:** XLPE compound according to IEC 60502
- **Metallic sheath:** lead alloy
- **Sheath:** PVC
- **Marking:** (ELECTRIC CABLE)+(600/1000 V)+ (IEC 60502-1) + (TRATOS) + (batch number)+(number of cores)+(size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-1 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant

(XLPE/Pb/PVC) RE4LR 0,6/1 kV - single core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter under lead sheath	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short-circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE4LR											
0.6/1	1x50	8.1	0.387	10.1	15.5	1454	248	0.100	7.4	220	232
0.6/1	1x70	9.8	0.268	12.0	17.6	1925	282	0.096	10.2	279	283
0.6/1	1x95	11.4	0.193	13.6	19.2	2482	307	0.092	13.9	342	338
0.6/1	1x120	12.9	0.153	15.4	21.1	3026	338	0.090	17.5	398	383
0.6/1	1x150	14.2	0.124	17.1	23.2	3701	371	0.090	21.8	457	429
0.6/1	1x185	15.8	0.0991	19.1	25.4	4566	406	0.089	26.9	529	485
0.6/1	1x240	18.2	0.0754	21.7	28.2	5780	451	0.087	34.8	628	560
0.6/1	1x300	20.5	0.0601	24.2	31.1	9461	498	0.085	43.4	722	640
0.6/1	1x400	22.9	0.0470	27.0	34.3	11940	549	0.085	>50	839	709
0.6/1	1x500	26.2	0.0366	30.7	38.6	15232	618	0.083	>50	970	796
0.6/1	1x630	29.9	0.0283	34.8	43.1	14577	690	0.082	>50	1113	887

(*) trefoil formation

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/Pb/PVC)

RE40LR 0,6/1 kV - multi-core

Multi-core lead sheathed power cable for indoor and outdoor installations in the petroleum industry, chemical and petrochemical plant in and around process plants where hydrocarbons are present.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Insulation:** XLPE compound according to IEC 60502
- **Fillers:** non hygroscopic compound
- **Metallic sheath:** lead alloy
- **Sheath:** PVC
- **Marking:** (ELECTRIC CABLE)+(600/1000 V)+ (IEC 60502-1) + (TRATOS) + (batch number)+(number of cores)+(size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-1 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant

(XLPE/Pb/PVC) RE40LR 0,6/1 kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter under lead sheath	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short - circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE40LR												
0.6/1	2x1.5	1.6	12.1	3.1	8.1	14.2	604	228	0.10	0.3	30	37
0.6/1	2x2.5	2.0	7.41	3.4	8.9	15.0	672	240	0.09	0.4	39	48
0.6/1	2x4	2.5	4.61	4.0	10	16.1	772	257	0.09	0.6	51	63
0.6/1	2x6	3.1	3.08	4.5	11.1	17.2	881	275	0.08	0.9	65	79
0.6/1	2x10	3.8	1.83	5.2	13.5	19.5	1147	313	0.08	1.5	89	104
0.6/1	2x16	4.7	1.15	6.2	15.4	21.4	1397	343	0.08	2.4	118	136
0.6/1	2x25	6.0	0.727	7.8	18.7	24.7	1834	396	0.08	3.7	158	176
0.6/1	2x35	7.0	0.524	8.9	20.8	26.8	2184	429	0.07	5.2	193	212
0.6/1	2x50	8.1	0.387	10.1	23.3	29.5	2726	473	0.07	7.4	233	252
0.6/1	2x70	9.8	0.268	12.0	27.1	33.7	3582	540	0.07	10.2	293	309
0.6/1	2x95	11.4	0.193	13.6	30.3	37.5	4548	600	0.07	13.9	362	372
0.6/1	2x120	12.9	0.153	15.4	34.3	41.9	5644	671	0.07	17.5	417	421

(XLPE/Pb/PVC) RE4OLR 0,6/1 kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter under lead sheath	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short - circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
0.6/1	2x150	14.2	0.124	17.1	37.8	45.8	6757	733	0.07	21.8	474	472
0.6/1	2x185	15.8	0.0991	19.1	42.2	50.6	8229	810	0.07	26.9	545	531
RE4OLR												
0.6/1	3x1.5	1.6	12.1	3.1	8.6	14.7	646	235	0.10	0.3	25	31
0.6/1	3x2.5	2.0	7.41	3.4	9.5	15.5	724	248	0.09	0.4	33	41
0.6/1	3x4	2.5	4.61	4.0	10.6	16.7	842	267	0.09	0.6	43	53
0.6/1	3x6	3.1	3.08	4.5	11.8	17.9	971	286	0.08	0.9	55	66
0.6/1	3x10	3.8	1.83	5.2	14.3	20.3	1275	325	0.08	1.5	75	88
0.6/1	3x16	4.7	1.15	6.2	16.3	22.4	1581	358	0.08	2.4	99	114
0.6/1	3x25	6.0	0.727	7.8	19.9	25.9	2107	415	0.08	3.7	134	148
0.6/1	3x35	7.0	0.524	8.9	22.2	28.4	2632	454	0.07	5.2	164	178
0.6/1	3x50	8.1	0.387	10.1	24.8	31.5	3321	504	0.07	7.4	198	211
0.6/1	3x70	9.8	0.268	12.0	28.9	36.0	4378	576	0.07	10.2	251	260
0.6/1	3x95	11.4	0.193	13.6	32.4	39.8	5587	637	0.07	13.9	307	310
0.6/1	3x120	12.9	0.153	15.4	36.7	44.7	6949	715	0.07	17.5	354	351
0.6/1	3x150	14.2	0.124	17.1	40.9	49.3	8401	788	0.07	21.8	402	391
0.6/1	3x185	15.8	0.0991	19.1	45.2	54.2	10186	867	0.07	26.9	460	440
RE4OLR												
0.6/1	4x1.5	1.6	12.1	3.1	9.4	15.5	709	247	0.11	0.3	25	31
0.6/1	4x2.5	2.0	7.41	3.4	10.4	16.4	802	262	0.10	0.4	33	41
0.6/1	4x4	2.5	4.61	4.0	11.7	17.7	945	283	0.09	0.6	43	53
0.6/1	4x6	3.1	3.08	4.5	13	19.0	1100	304	0.09	0.9	55	66
0.6/1	4x10	3.8	1.83	5.2	15.6	21.7	1455	347	0.09	1.5	75	88
0.6/1	4x16	4.7	1.15	6.2	17.9	24.0	1831	383	0.08	2.4	99	114
0.6/1	4x25	6.0	0.727	7.8	21.9	28.2	2560	450	0.08	3.7	134	148
0.6/1	4x35	7.0	0.524	8.9	24.4	30.7	3110	491	0.08	5.2	164	178
0.6/1	4x50	8.1	0.387	10.1	27.4	34.5	4071	552	0.08	7.4	198	211
0.6/1	4x70	9.8	0.268	12.0	32	39.5	5386	632	0.08	10.2	251	260
0.6/1	4x95	11.4	0.193	13.6	36.5	44.6	7017	713	0.08	13.9	307	310
0.6/1	4x120	12.9	0.153	15.4	41.1	49.5	8637	791	0.08	17.5	354	351
0.6/1	4x150	14.2	0.124	17.1	45.3	54.3	10385	868	0.08	21.8	402	391
0.6/1	4x185	15.8	0.0991	19.1	50.1	59.9	12782	958	0.08	26.9	460	440
RE4OLR												
0.6/1	3x35/25	7.0	0.524	8.9	23.9	30.1	2971	482	0.08	5.2	164	178
0.6/1	3x50/25	8.1	0.387	10.1	26.3	32.9	3632	526	0.08	7.4	198	211
0.6/1	3x70/35	9.8	0.268	12.0	30.4	37.7	4795	603	0.08	10.2	251	260
0.6/1	3x95/70	11.4	0.193	13.6	34.7	42.3	6234	677	0.08	13.9	307	310
0.6/1	3x120/70	12.9	0.153	15.4	39	46.9	7713	751	0.08	17.5	354	351
0.6/1	3x150/95	14.2	0.124	17.1	43.5	52.3	9639	836	0.08	21.8	402	391
0.6/1	3x185/95	15.8	0.0991	19.1	47.3	56.5	11345	904	0.08	26.9	460	440
0.6/1	3x240/150	18.2	0.0754	21.7	53.2	62.9	14195	1007	0.08	34.8	541	506
0.6/1	3x300/150	20.5	0.0601	24.2	58.7	69.3	17417	1108	0.08	43.4	615	565

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/Pb/AWA/PVC) RE4LRFR 0,6/1 kV - single core

Single core, non-magnetic armoured, lead sheathed power cable for indoor and outdoor installations in the petroleum industry, chemical and petrochemical plant in and around process plants where hydrocarbons are present.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of IEC 60228
- **Insulation:** XLPE compound according to IEC 60502
- **Metallic sheath:** Lead alloy
- **Separation sheath:** PVC
- **Armour:** aluminium wires
- **Sheath:** PVC
- **Marking:** (ELECTRIC CABLE)+(600/1000 V)+ (IEC 60502-1) + (TRATOS) + (batch number)+(number of cores)+(size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-1 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant

(XLPE/Pb/AWA/PVC) RE4LRFR 0,6/1 kV - single core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over extruded inner sheath	Diameter over armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short - circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE4LRFR														
0.6/1	1x50	8.1	0.387	10.1	14.4	2.0	18.4	22.4	1783	359	0.26	7.4	241	234
0.6/1	1x70	9.8	0.268	12.0	16.3	2.0	20.3	24.3	2282	389	0.26	10.2	299	284
0.6/1	1x95	11.4	0.193	13.6	17.9	2.0	21.9	25.9	2864	415	0.25	13.9	362	336
0.6/1	1x120	12.9	0.153	15.4	19.6	2.0	23.6	27.6	3425	442	0.25	17.5	415	379
0.6/1	1x150	14.1	0.124	17.2	21.6	2.0	25.6	29.8	4137	476	0.25	21.8	470	420
0.6/1	1x185	15.7	0.0991	19.0	23.8	2.0	27.8	32.2	5050	515	0.25	26.9	534	468
0.6/1	1x240	18.4	0.0754	21.9	26.5	2.0	30.5	35.0	6313	560	0.24	34.8	621	532
0.6/1	1x300	20.5	0.0601	24.2	29.2	2.0	33.2	37.8	10043	605	0.24	43.4	700	587
0.6/1	1x400	22.8	0.0470	27.0	32.4	2.0	36.4	41.5	12615	664	0.24	>50	787	645
0.6/1	1x500	26.2	0.0366	30.7	36.4	2.5	41.5	46.8	16130	749	0.24	>50	865	686
0.6/1	1x630	29.9	0.0283	34.8	40.8	2.5	45.9	51.6	15594	825	0.23	>50	956	738

(*) trefoil formation

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/Pb/SWA/PVC) RE4OLRFR 0,6/1 kV - multi-core

Multi-core, armoured, lead sheathed power cable for indoor and outdoor installations in the petroleum industry, chemical and petrochemical plant in and around process plants where hydrocarbons are present.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Insulation:** XLPE compound according to IEC 60502
- **Fillers:** non hygroscopic compound
- **Metallic sheath:** lead alloy
- **Separation sheath:** PVC
- **Armour:** galvanized steel wires
- **Sheath:** PVC
- **Marking:** (ELECTRIC CABLE)+(600/1000 V)+ (IEC 60502-1) + (TRATOS) + (batch number)+(number of cores)+(size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-1 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant

(XLPE/Pb/SWA/PVC) RE4OLRFR 0,6/1 kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over extruded inner sheath	Diameter over armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short-circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE4OLRFR														
0.6/1	2x1.5	1.6	12.1	3.1	12.4	1.25	14.9	18.0	986	287	0.10	0.3	30	37
0.6/1	2x2.5	2.0	7.41	3.4	13.2	1.25	15.7	18.7	1075	300	0.09	0.4	39	48
0.6/1	2x4	2.5	4.61	4.0	14.2	1.25	16.7	19.8	1199	317	0.09	0.6	51	63
0.6/1	2x6	3.1	3.08	4.5	15.3	1.25	17.8	20.9	1341	334	0.08	0.9	65	79
0.6/1	2x10	3.8	1.83	5.2	17.7	1.6	20.9	24.0	1802	383	0.08	1.5	89	104
0.6/1	2x16	4.7	1.15	6.2	19.6	1.6	22.8	25.9	2107	414	0.08	2.4	118	136
0.6/1	2x25	6.0	0.727	7.8	22.9	1.6	26.1	29.2	2652	467	0.08	3.7	158	176
0.6/1	2x35	7.0	0.524	8.9	25	1.6	28.2	31.4	3087	503	0.07	5.2	193	212
0.6/1	2x50	8.1	0.387	10.1	27.9	2.0	31.9	35.3	3986	565	0.07	7.4	233	252
0.6/1	2x70	9.8	0.268	12.0	31.9	2.0	35.9	39.7	5029	634	0.07	10.2	293	309
0.6/1	2x95	11.4	0.193	13.6	35.5	2.0	39.5	43.4	6140	694	0.07	13.9	362	372
0.6/1	2x120	12.9	0.153	15.4	39.9	2.5	44.9	49.0	7862	784	0.07	17.5	417	421
0.6/1	2x150	14.2	0.124	17.1	43.6	2.5	48.6	53.1	9176	849	0.07	21.8	474	472
0.6/1	2x185	15.8	0.0991	19.1	48.4	2.5	53.4	58.0	10938	928	0.07	26.9	545	531

(XLPE/Pb/SWA/PVC) RE4OLRFR 0,6/1 kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over extruded inner sheath	Diameter over armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short - circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE4OLRFR														
0.6/1	3x1.5	1.6	12.1	3.1	12.9	1.25	15.4	18.4	1039	295	0.10	0.3	25	31
0.6/1	3x2.5	2.0	7.41	3.4	13.7	1.25	16.2	19.3	1140	308	0.09	0.4	33	41
0.6/1	3x4	2.5	4.61	4.0	14.9	1.25	17.4	20.4	1281	327	0.09	0.6	43	53
0.6/1	3x6	3.1	3.08	4.5	16	1.25	18.5	21.6	1443	345	0.08	0.9	55	66
0.6/1	3x10	3.8	1.83	5.2	18.5	1.6	21.7	24.8	1966	396	0.08	1.5	75	88
0.6/1	3x16	4.7	1.15	6.2	20.6	1.6	23.8	26.8	2326	429	0.08	2.4	99	114
0.6/1	3x25	6.0	0.727	7.8	24.1	1.6	27.3	30.6	2990	489	0.08	3.7	134	148
0.6/1	3x35	7.0	0.524	8.9	26.6	1.6	29.8	33.0	3589	528	0.07	5.2	164	178
0.6/1	3x50	8.1	0.387	10.1	29.7	2.0	33.7	37.2	4666	596	0.07	7.4	198	211
0.6/1	3x70	9.8	0.268	12.0	34.1	2.0	38.1	41.9	5912	670	0.07	10.2	251	260
0.6/1	3x95	11.4	0.193	13.6	37.9	2.5	42.9	47.1	7732	753	0.07	13.9	307	310
0.6/1	3x120	12.9	0.153	15.4	42.5	2.5	47.5	51.8	9300	828	0.07	17.5	354	351
0.6/1	3x150	14.2	0.124	17.1	47	2.5	52.0	56.7	11021	907	0.07	21.8	402	391
0.6/1	3x185	15.8	0.0991	19.1	51.7	2.5	56.7	61.6	13074	985	0.07	26.9	460	440
RE4OLRFR														
0.6/1	4x1.5	1.6	12.1	3.1	13.7	1.25	16.2	19.2	1124	307	0.11	0.3	25	31
0.6/1	4x2.5	2.0	7.41	3.4	14.6	1.25	17.1	20.2	1240	322	0.10	0.4	33	41
0.6/1	4x4	2.5	4.61	4.0	15.9	1.25	18.4	21.5	1417	343	0.10	0.6	43	53
0.6/1	4x6	3.1	3.08	4.5	17.2	1.6	20.4	23.5	1737	375	0.09	0.9	55	66
0.6/1	4x10	3.8	1.83	5.2	19.9	1.6	23.1	26.1	2182	418	0.09	1.5	75	88
0.6/1	4x16	4.7	1.15	6.2	22.2	1.6	25.4	28.4	2629	455	0.08	2.4	99	114
0.6/1	4x25	6.0	0.727	7.8	26.4	1.6	29.6	32.8	3516	524	0.08	3.7	134	148
0.6/1	4x35	7.0	0.524	8.9	29.1	2.0	33.1	36.6	4441	586	0.08	5.2	164	178
0.6/1	4x50	8.1	0.387	10.1	32.6	2.0	36.6	40.4	5547	647	0.08	7.4	198	211
0.6/1	4x70	9.8	0.268	12.0	37.4	2.0	41.4	45.4	7063	726	0.08	10.2	251	260
0.6/1	4x95	11.4	0.193	13.6	42.3	2.5	47.3	51.6	9367	825	0.08	13.9	307	310
0.6/1	4x120	12.9	0.153	15.4	47.3	2.5	52.3	56.9	11299	910	0.08	17.5	354	351
0.6/1	4x150	14.2	0.124	17.1	51.9	2.5	56.9	61.8	13299	989	0.08	21.8	402	391
0.6/1	4x185	15.8	0.0991	19.1	57.3	2.5	62.3	67.4	15969	1079	0.08	26.9	460	440
RE4OLRFR														
0.6/1	3x35/25	7.0	0.524	8.9	28.5	2.0	32.5	35.9	4259	574	0.08	5.2	164	178
0.6/1	3x50/25	8.1	0.387	10.1	31.1	2.0	35.1	38.7	5033	619	0.08	7.4	198	211
0.6/1	3x70/35	9.8	0.268	12.0	35.6	2.0	39.6	43.5	6387	697	0.08	10.2	251	260
0.6/1	3x95/70	11.4	0.193	13.6	40.3	2.5	45.3	49.6	8514	793	0.08	13.9	307	310
0.6/1	3x120/70	12.9	0.153	15.4	44.9	2.5	49.9	54.4	10239	870	0.08	17.5	354	351
0.6/1	3x150/95	14.2	0.124	17.1	50	2.5	55.0	59.9	12460	958	0.08	21.8	402	391
0.6/1	3x185/95	15.8	0.0991	19.1	54.1	2.5	59.1	64.1	14353	1025	0.08	26.9	460	440
0.6/1	3x240/150	18.2	0.0754	21.7	60.3	2.5	65.3	70.6	17551	1130	0.08	34.8	541	506
0.6/1	3x300/150	20.5	0.0601	24.2	66.6	3.15	72.9	78.7	22612	1260	0.08	43.4	615	565

TRATOS[®] PETROCHEMICAL CABLES

POWER CABLES

(XLPE/TratosCB[®]/PVC) RE4H5R4R 0,6/1 kV - single-core

Single core cable for installation in and around process plants where hydrocarbons are present without using Lead.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of IEC 60228
- **Insulation:** XLPE compound
- **Chemical moisture barrier:** longitudinally applied Al tape bonded with extruded chemical resistant polymeric layer
- **Sheath:** PVC
- **Marking:** (ELECTRIC CABLE)+(600/1000 V)+ (IEC 60502-1) + (TRATOS) + (batch number)+(number of cores)+(size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-1 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant

(XLPE/TratosCB®/PVC) RE4H5R4R 0,6/1 kV - single-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter TratosCB®	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short-circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE4H5R4R											
0.6/1	1x50	8.1	0.387	10.1	15.6	1042	218	0.12	7.4	214	223
0.6/1	1x70	9.8	0.268	12	17.7	1440	247	0.11	10.2	271	273
0.6/1	1x95	11.4	0.193	13.6	19.3	1936	270	0.10	13.9	332	327
0.6/1	1x120	12.9	0.153	15.4	21.2	2414	296	0.10	17.5	387	372
0.6/1	1x150	14.1	0.124	17.2	23.1	2954	324	0.10	21.8	444	417
0.6/1	1x185	15.7	0.0991	19	25.1	3655	352	0.10	26.9	512	471
0.6/1	1x240	18.4	0.0754	21.9	27.9	4750	390	0.09	34.8	609	546
0.6/1	1x300	20.5	0.0601	24.2	30.6	8224	428	0.09	43.4	702	614
0.6/1	1x400	22.8	0.0470	27	33.6	10455	470	0.09	>50	812	694
0.6/1	1x500	26.2	0.0366	30.7	37.6	13427	527	0.09	>50	941	781
0.6/1	1x630	29.9	0.0283	34.8	42.0	12400	588	0.09	>50	1082	874

(*) trefoil formation

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/TratosCB®/PVC) RE4OH5R4R 0,6/1 kV - multi-core

Multi-core cable for installation in and around process plants where hydrocarbons are present without using Lead.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of IEC 60228
- **Insulation:** XLPE compound
- **Fillers:** non hygroscopic compound
- **Chemical moisture barrier:** longitudinally applied Al tape bonded with extruded chemical resistant polymeric layer
- **Sheath:** PVC
- **Marking:** (ELECTRIC CABLE)+(600/1000 V)+ (IEC 60502-1) + (TRATOS) + (batch number)+(number of cores)+(size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-1 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant

(XLPE/TratosCB®/PVC) RE4OH5R4R 0,6/1 kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter under TratosCB®	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short - circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm²	mm	Ω/km	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE4OH5R4R												
0.6/1	2x1.5	1.6	12.1	3.0	8.1	14.4	267	202	0.10	0.3	28	36
0.6/1	2x2.5	2.0	7.41	3.4	8.9	15.2	303	212	0.09	0.4	37	47
0.6/1	2x4	2.6	4.61	4.0	10.0	16.3	364	228	0.09	0.6	48	61
0.6/1	2x6	3.1	3.08	4.5	11.1	17.3	432	243	0.08	0.9	62	77
0.6/1	2x10	3.8	1.83	5.2	12.5	18.7	544	262	0.08	1.5	85	102
0.6/1	2x16	4.7	1.15	6.1	14.2	20.6	711	288	0.08	2.4	113	133
0.6/1	2x25	6.0	0.727	7.8	17.7	23.9	1001	334	0.08	3.7	151	173
0.6/1	2x35	7.0	0.524	8.8	19.7	26.0	1255	363	0.07	5.2	185	208
0.6/1	2x50	8.1	0.387	10.1	22.3	28.5	1590	398	0.07	7.4	223	247
0.6/1	2x70	9.8	0.268	12	26.5	32.4	2146	454	0.07	10.2	281	303
0.6/1	2x95	11.4	0.193	13.6	29.3	35.8	2800	501	0.07	13.9	347	366
0.6/1	2x120	12.9	0.153	15.4	33.0	39.7	3469	555	0.07	17.5	400	414
0.6/1	2x150	14.3	0.124	17.2	36.6	43.6	4225	610	0.07	21.8	455	464
0.6/1	2x185	15.7	0.0991	19.0	40.4	47.9	5205	671	0.07	26.9	523	522

(XLPE/TratosCB®/PVC) RE4OH5R4R 0,6/1 kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter under TratosCB®	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short - circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm²	mm	Ω/km	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE4OH5R4R												
0.6/1	3x1.5	1.6	12.1	3.0	8.5	14.9	290	208	0.10	0.3	24	30
0.6/1	3x2.5	2.0	7.41	3.4	9.3	15.7	337	220	0.09	0.4	31	40
0.6/1	3x4	2.6	4.61	4.0	10.6	16.8	408	236	0.09	0.6	41	52
0.6/1	3x6	3.1	3.08	4.5	11.7	18.0	494	252	0.08	0.9	52	64
0.6/1	3x10	3.8	1.83	5.2	13.2	19.5	641	273	0.08	1.5	72	86
0.6/1	3x16	4.7	1.15	6.1	15.2	21.5	857	301	0.08	2.4	95	112
0.6/1	3x25	6.0	0.727	7.8	18.8	25.1	1230	351	0.08	3.7	128	145
0.6/1	3x35	7.0	0.524	8.8	21.0	27.3	1565	383	0.07	5.2	157	175
0.6/1	3x50	8.1	0.387	10.1	24.0	30.2	2023	423	0.07	7.4	190	207
0.6/1	3x70	9.8	0.268	12	28.1	34.5	2750	483	0.07	10.2	240	255
0.6/1	3x95	11.4	0.193	13.6	31.6	38.3	3648	536	0.07	13.9	294	305
0.6/1	3x120	12.9	0.153	15.4	35.5	42.2	4511	591	0.07	17.5	339	345
0.6/1	3x150	14.3	0.124	17.2	39.4	46.6	5524	652	0.07	21.8	385	384
0.6/1	3x185	15.7	0.0991	19	43.2	51.1	6804	715	0.07	26.9	441	432
RE4OH5R4R												
0.6/1	4x1.5	1.6	12.1	3.0	9.3	15.7	324	220	0.11	0.3	24	30
0.6/1	4x2.5	2.0	7.41	3.4	10.2	16.6	379	232	0.10	0.4	31	40
0.6/1	4x4	2.6	4.61	4.0	11.7	17.9	473	250	0.10	0.6	41	52
0.6/1	4x6	3.1	3.08	4.5	12.9	19.2	578	269	0.09	0.9	52	64
0.6/1	4x10	3.8	1.83	5.2	14.6	20.8	765	292	0.09	1.5	72	86
0.6/1	4x16	4.7	1.15	6.1	16.8	23.1	1041	324	0.08	2.4	95	112
0.6/1	4x25	6.0	0.727	7.8	20.9	27.1	1510	379	0.08	3.7	128	145
0.6/1	4x35	7.0	0.524	8.8	23.3	29.6	1942	415	0.08	5.2	157	175
0.6/1	4x50	8.1	0.387	10.1	26.6	33.0	2535	462	0.08	7.4	190	207
0.6/1	4x70	9.8	0.268	12.0	31.2	38.0	3481	531	0.08	10.2	240	255
0.6/1	4x95	11.4	0.193	13.6	35.1	42.0	4616	588	0.08	13.9	294	305
0.6/1	4x120	12.9	0.153	15.4	39.5	46.8	5774	655	0.08	17.5	339	345
0.6/1	4x150	14.3	0.124	17.2	43.8	51.2	7027	717	0.08	21.8	385	384
0.6/1	4x185	15.7	0.0991	19.0	48.2	56.4	8669	789	0.08	26.9	441	432
RE4OH5R4R												
0.6/1	3x35/25	7.0	0.524	7.8	22.9	29.1	1831	407	0.08	5.2	157	175
0.6/1	3x50/25	8.1	0.387	7.8	25.2	31.7	2275	443	0.08	7.4	190	207
0.6/1	3x70/35	9.8	0.268	8.8	29.4	36.0	3083	504	0.08	10.2	240	255
0.6/1	3x95/70	11.4	0.193	10.1	33.1	40.2	4114	563	0.08	13.9	294	305
0.6/1	3x120/70	12.9	0.153	12.0	37.6	44.7	5178	625	0.08	17.5	339	345
0.6/1	3x150/95	14.3	0.124	13.6	41.7	49.2	6421	689	0.08	21.8	385	384
0.6/1	3x185/95	15.7	0.0991	13.6	45.5	53.4	7683	747	0.08	26.9	441	432
0.6/1	3x240/150	18.4	0.0754	17.2	51.8	60.0	9929	840	0.08	34.8	519	497
0.6/1	3x300/150	20.5	0.0601	17.2	57.3	65.7	12218	920	0.08	43.4	590	555

TRATOS[®] PETROCHEMICAL CABLES

POWER CABLES BASED ON IEC 60502-1

(XLPE/PVC or XLPE/LSOH)

RE40R(M1) - 0,6/1 kV

Unarmoured power cable for indoor installations in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Insulation:** XLPE compound according to IEC 60502
- **Identification cores:** black numbered
- **Assembly:** concentric layers
- **Penetrant sheath:** PVC or LSOH
- **Marking:** (ELECTRIC CABLE) + (600/1000 V) + (IEC 60502-1) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-1 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant
- IEC 60332-3 C Fire retardant on bunched cables(if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(XLPE/PVC or XLPE/LS0H) RE40R(M1) - 0,6/1 kV

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short-circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE40R/RE40M1											
0.6/1	7x1.5	1.6	12.1	3.0	12.6	250	150	0.10	0.25	17	22
0.6/1	10x1.5	1.6	12.1	3.0	15.6	340	185	0.10	0.3	16	20
0.6/1	12x1.5	1.6	12.1	3.0	16.1	380	195	0.10	0.3	15	18
0.6/1	14x1.5	1.6	12.1	3.0	16.8	430	200	0.10	0.3	14	17
0.6/1	16x1.5	1.6	12.1	3.0	17.7	480	210	0.10	0.3	13	16
0.6/1	19x1.5	1.6	12.1	3.0	18.6	550	225	0.10	0.3	12	15
0.6/1	24x1.5	1.6	12.1	3.0	21.6	660	260	0.10	0.3	12	13
0.6/1	27x1.5	1.6	12.1	3.0	22.0	730	265	0.10	0.3	11	12
0.6/1	30x1.5	1.6	12.1	3.0	22.8	790	275	0.10	0.3	10	11
RE40R/RE40M1											
0.6/1	33x1.5	1.6	12.1	3.0	23.7	880	285	0.10	0.3	9.0	10
0.6/1	37x1.5	1.6	12.1	3.0	24.6	970	295	0.10	0.3	8.0	9
RE40R/RE40M1											
0.6/1	7x2.5	2.0	7.41	3.4	13.8	330	165	0.094	0.41	23	29
0.6/1	10x2.5	2.0	7.41	3.4	17.2	440	205	0.09	0.4	21	26
0.6/1	12x2.5	2.0	7.41	3.4	17.7	500	210	0.09	0.4	20	24
0.6/1	14x2.5	2.0	7.41	3.4	18.6	570	225	0.09	0.4	18	22
0.6/1	16x2.5	2.0	7.41	3.4	19.5	640	235	0.09	0.4	18	21
0.6/1	19x2.5	2.0	7.41	3.4	20.5	740	245	0.09	0.4	17	19
0.6/1	24x2.5	2.0	7.41	3.4	23.9	900	285	0.09	0.4	16	18
0.6/1	27x2.5	2.0	7.41	3.4	24.4	990	295	0.09	0.4	15	17
0.6/1	30x2.5	2.0	7.41	3.4	25.3	1080	305	0.09	0.4	14	16
0.6/1	33x2.5	2.0	7.41	3.4	26.3	1200	315	0.09	0.4	13	15
0.6/1	37x2.5	2.0	7.41	3.4	27.3	1320	330	0.09	0.4	12	14

(*) two adjacent cores

TRATOS[®] PETROCHEMICAL CABLES

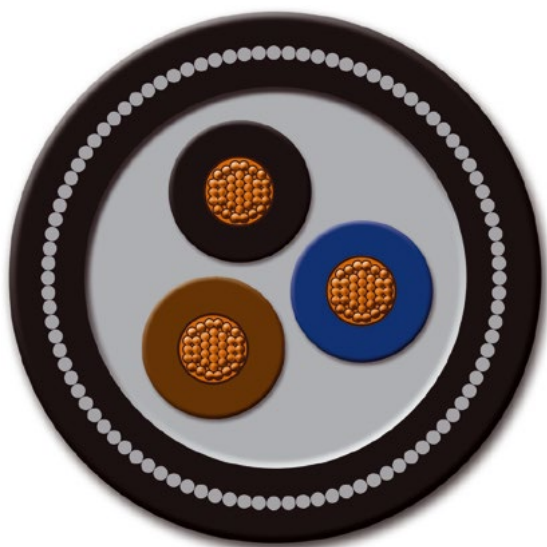
POWER CABLES BASED ON IEC 60502-1

(XLPE/SWA/PVC or XLPE/SWA/LS0H)

RE40RFR(M1) - 0,6/1 kV

Armoured power cable for indoor or outdoor installations in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Insulation:** XLPE compound according to IEC 60502
- **Identification cores:** black numbered
- **Assembly:** concentric layers
- **Fillers:** non hygroscopic compound or LS0H non hygroscopic compound
- **Armour:** galvanized steel wire
- **Sheath:** PVC or LS0H
- **Marking:** (ELECTRIC CABLE) + (600/1000 V) + (IEC 60502-1) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-1 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant
- IEC 60332-3 C Fire retardant on bunched cables(if required)
- IEC 60754 Halogen free properties (only for LS0H)
- IEC 61034 Low smoke emission (only for LS0H)

(XLPE/SWA/PVC or XLPE/SWA/LSOH) RE40RFR(M1) - 0,6/1 kV

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Diameter over extruded inner covering/taping	Diameter over armour wires	Diameter over armour	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short - circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm²	mm	Ω/km	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RE40RFR/RE40FM1														
0.6/1	7x1.5	1.6	12.1	3.0	11.0	0.8	12.6	16.2	490	225	0.10	0.3	17	22
0.6/1	10x1.5	1.6	12.1	3.0	14.0	1.25	16.5	20.1	770	280	0.10	0.3	16	20
0.6/1	12x1.5	1.6	12.1	3.0	14.5	1.25	17.0	20.6	830	290	0.10	0.3	15	18
0.6/1	14x1.5	1.6	12.1	3.0	15.2	1.25	17.7	21.3	890	300	0.10	0.3	14	17
0.6/1	16x1.5	1.6	12.1	3.0	16.1	1.25	18.6	22.2	970	310	0.10	0.3	13	16
0.6/1	19x1.5	1.6	12.1	3.0	17.0	1.25	19.5	23.1	1050	325	0.10	0.3	12	15
0.6/1	24x1.5	1.6	12.1	3.0	20.0	1.6	23.2	26.8	1400	375	0.10	0.3	12	13
0.6/1	27x1.5	1.6	12.1	3.0	20.4	1.6	23.6	27.2	1480	380	0.10	0.3	11	12
0.6/1	30x1.5	1.6	12.1	3.0	21.2	1.6	24.4	28.0	1560	390	0.10	0.3	10	11
0.6/1	33x1.5	1.6	12.1	3.0	22.1	1.6	25.3	28.9	1690	405	0.10	0.3	9	10
0.6/1	37x1.5	1.6	12.1	3.0	23.0	1.6	26.2	29.8	1790	415	0.10	0.3	8	9
0.6/1	7x2.5	2.0	7.41	3.4	12.2	1.25	14.7	18.3	710	255	0.094	0.4	23	29
0.6/1	10x2.5	2.0	7.41	3.4	15.6	1.25	18.1	21.7	910	305	0.09	0.4	21	26
0.6/1	12x2.5	2.0	7.41	3.4	16.1	1.25	18.6	22.2	990	310	0.09	0.4	20	24
0.6/1	14x2.5	2.0	7.41	3.4	17.0	1.25	19.5	23.1	1070	325	0.09	0.4	18	22
0.6/1	16x2.5	2.0	7.41	3.4	17.9	1.6	21.1	24.7	1320	345	0.09	0.4	18	21
0.6/1	19x2.5	2.0	7.41	3.4	18.9	1.6	22.1	25.7	1430	360	0.09	0.4	17	19
0.6/1	24x2.5	2.0	7.41	3.4	22.3	1.6	25.5	29.1	1710	405	0.09	0.4	16	18
0.6/1	27x2.5	2.0	7.41	3.4	22.8	1.6	26.0	29.6	1820	415	0.09	0.4	15	17
0.6/1	30x2.5	2.0	7.41	3.4	23.7	1.6	26.9	30.7	1960	430	0.09	0.4	14	16
0.6/1	33x2.5	2.0	7.41	3.4	24.7	1.6	27.9	31.7	2100	445	0.09	0.4	13	15
0.6/1	37x2.5	2.0	7.41	3.4	25.7	1.6	28.9	32.7	2250	460	0.09	0.4	12	14

(*) two adjacent cores

TRATOS[®] PETROCHEMICAL CABLES

POWER CABLES BASED ON IEC 60502-1

(XLPE/LSOH)
RTE40M1 - 0,6/1 kV

Unarmoured fire performance power cable for indoor installations in the petroleum industry, chemical and petrochemical plants. Used where limited circuit integrity in the event of a fire is required.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2 of BS EN 60228
- **Fire barrier:** mica/glass tape
- **Insulation:** XLPE according to IEC 60502
- **Identification cores:** black numbered
- **Assembly:** concentric layers
- **Identification cores:** black numbered
- **Assembly:** concentric layers
- **Outer sheath:** LSOH
- **Marking:** (ELECTRIC CABLE) + (600/1000 V) + (IEC 60502-1) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502 Design guidelines
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60331 Fire resistant test
- IEC 60754 Halogen free properties
- IEC 61034 Low smoke emission

(XLPE/LS0H) RTE4OM1 - 0,6/1 kV

Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation	Nominal thickness of outer sheath	Outer diameter approx	Diameter over armour	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short-circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
mm ²	mm	Ω/km	mm	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RTE4OM1-FR												
2x1.5	1.6	12.1	0.7	3.5	1.8	10.7	120	128	0.11	0.3	28	37
3x1.5	1.6	12.1	0.7	3.5	1.8	11.2	150	134	0.11	0.3	23	31
4x1.5	1.6	12.1	0.7	3.5	1.8	12.2	180	146	0.11	0.3	23	31
5x1.5	1.6	12.1	0.7	3.5	1.8	13.2	210	158	0.11	0.3	23	29
7x1.5	1.6	12.1	0.7	3.5	1.8	14.2	260	170	0.11	0.3	17	22
10x1.5	1.6	12.1	0.7	3.5	1.8	17.8	360	214	0.11	0.3	16	20
12x1.5	1.6	12.1	0.7	3.5	1.8	18.3	410	220	0.11	0.3	15	18
14x1.5	1.6	12.1	0.7	3.5	1.8	19.2	460	230	0.11	0.3	14	17
16x1.5	1.6	12.1	0.7	3.5	1.8	20.2	510	242	0.11	0.3	13	16
19x1.5	1.6	12.1	0.7	3.5	1.8	21.2	590	254	0.11	0.3	12	15
RTE4OM1-FR												
24x1.5	1.6	12.1	0.7	3.5	1.8	24.8	730	298	0.11	0.3	12	13
27x1.5	1.6	12.1	0.7	3.5	1.8	25.3	803	304	0.11	0.3	11	12
30x1.5	1.6	12.1	0.7	3.5	1.8	26.2	880	314	0.11	0.3	10	11
33x1.5	1.6	12.1	0.7	3.5	1.8	27.3	950	328	0.11	0.3	9	10
37x1.5	1.6	12.1	0.7	3.5	1.8	28.5	1060	342	0.11	0.3	8	9
RTE4OM1-FR												
2x2.5	2.0	7.41	0.7	3.8	1.8	11.2	140	135	0.10	0.4	37	49
3x2.5	2.0	7.41	0.7	3.8	1.8	11.8	180	142	0.10	0.4	31	41
4x2.5	2.0	7.41	0.7	3.8	1.8	12.8	220	154	0.10	0.4	31	41
5x2.5	2.0	7.41	0.7	3.8	1.8	14.0	250	168	0.10	0.4	31	37
7x2.5	2.0	7.41	0.7	3.8	1.8	15.1	330	181	0.10	0.4	23	29
10x2.5	2.0	7.41	0.7	3.8	1.8	18.9	450	227	0.10	0.4	21	26
12x2.5	2.0	7.41	0.7	3.8	1.8	19.5	520	233	0.10	0.4	20	24
14x2.5	2.0	7.41	0.7	3.8	1.8	20.4	590	245	0.10	0.4	18	22
16x2.5	2.0	7.41	0.7	3.8	1.8	21.6	660	259	0.10	0.4	18	21
19x2.5	2.0	7.41	0.7	3.8	1.8	22.7	760	272	0.10	0.4	17	19
24x2.5	2.0	7.41	0.7	3.8	1.8	26.5	950	318	0.10	0.4	16	18
27x2.5	2.0	7.41	0.7	3.8	1.8	27.1	1040	325	0.10	0.4	15	17
30x2.5	2.0	7.41	0.7	3.8	1.8	28.1	1150	337	0.10	0.4	14	16
33x2.5	2.0	7.41	0.7	3.8	1.9	29.4	1260	353	0.10	0.4	13	15
37x2.5	2.0	7.41	0.7	3.8	1.9	30.5	1300	366	0.10	0.4	12	14

(*) two adjacent cores

TRATOS® PETROCHEMICAL CABLES

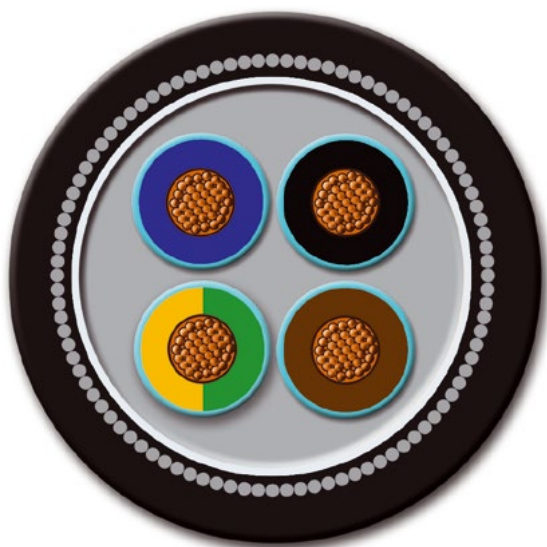
POWER CABLES BASED ON IEC 60502-1

(XLPE/SWA/LSOH)

RTE40M1FM1 - 0,6/1 kV

Unarmoured fire performance power cable for indoor installations in the petroleum industry, chemical and petrochemical plants. Used where limited circuit integrity in the event of a fire is required.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** annealed copper wires according to cl. 2 of BS EN 60228
- **Fire barrier:** mica/glass tape
- **Insulation:** XLPE according to IEC 60502
- **Identification cores:** black numbered
- **Assembly:** concentric layers
- **Separation sheath:** LSOH
- **Armour:** galvanized steel wire
- **Outer sheath:** LSOH
- **Marking:** (ELECTRIC CABLE) + (600/1000 V) + (IEC 60502-1) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502 Design guidelines
- IEC 60332-1 Flame retardant
- IEC 60332-3A Fire retardant on bunched cables (if required)
- IEC 60331 Fire resistant test
- IEC 60754 Halogen free properties
- IEC 61034 Low smoke emission

(XLPE/SWA/LSOH) RTE4OM1FM1 - 0,6/1 kV

Cross section	Conductor Diam.	Max. DC resistance at 20 °C	Nominal insulation thickness	Diam. over insulation	Inner sheath thickness	Diam. over inner sheath	Diam. over armour wires	Diam. over armour	Nominal thickness of outer-sheath	Outer Diam. approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Conductor short-circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm. res. 1 Km/W; depth of laying 0.8 m)
mm ²	mm	Ω/km	mm	mm	mm	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	kA/sec	A	A
RTE4OFM1-FR																
2x1.5	1.6	12.1	0.7	3.5	1.0	9.0	0.8	10.6	1.8	14.2	350	199	0.11	0.3	28	37
3x1.5	1.6	12.1	0.7	3.5	1.0	9.6	0.8	11.2	1.8	14.8	380	207	0.11	0.3	23	31
4x1.5	1.6	12.1	0.7	3.5	1.0	10.5	0.8	12.1	1.8	15.7	510	220	0.11	0.3	23	31
5x1.5	1.6	12.1	0.7	3.5	1.0	11.6	1.3	14.1	1.8	17.7	590	247	0.11	0.3	23	31
7x1.5	1.6	12.1	0.7	3.5	1.0	12.6	1.3	15.1	1.8	18.7	680	261	0.11	0.3	17	22
10x1.5	1.6	12.1	0.7	3.5	1.0	16.1	1.6	19.3	1.8	22.9	1000	320	0.11	0.3	16	20
12x1.5	1.6	12.1	0.7	3.5	1.0	16.6	1.6	19.8	1.8	23.4	1080	328	0.11	0.3	15	18
14x1.5	1.6	12.1	0.7	3.5	1.0	17.5	1.6	20.7	1.8	24.3	1150	341	0.11	0.3	14	17
RTE4OFM1-FR																
16x1.5	1.6	12.1	0.7	3.5	1.0	18.5	1.6	21.7	1.8	25.3	1250	355	0.11	0.3	13	16
19x1.5	1.6	12.1	0.7	3.5	1.0	19.6	1.6	22.8	1.8	26.4	1360	370	0.11	0.3	12	15
24x1.5	1.6	12.1	0.7	3.5	1.0	23.1	1.6	26.3	1.9	30.1	1630	422	0.11	0.3	12	13
27x1.5	1.6	12.1	0.7	3.5	1.0	23.6	1.6	26.8	1.9	30.6	1720	429	0.11	0.3	11	12
30x1.5	1.6	12.1	0.7	3.5	1.0	24.6	1.6	27.8	2.0	31.8	1830	445	0.11	0.3	10	11
33x1.5	1.6	12.1	0.7	3.5	1.0	25.6	2.0	29.6	2.0	33.6	2180	470	0.11	0.3	9	10
37x1.5	1.6	12.1	0.7	3.5	1.0	26.6	2.0	30.6	2.0	34.6	2350	485	0.11	0.3	8	9
RTE4OFM1-FR																
2x2.5	2.0	7.41	0.7	3.8	1.0	9.6	0.8	11.2	1.8	14.8	380	208	0.10	0.4	37	49
3x2.5	2.0	7.41	0.7	3.8	1.0	10.2	0.8	11.8	1.8	15.4	520	216	0.10	0.4	31	41
4x2.5	2.0	7.41	0.7	3.8	1.0	11.2	1.3	13.7	1.8	17.3	600	242	0.10	0.4	31	41
5x2.5	2.0	7.41	0.7	3.8	1.0	12.4	1.3	14.9	1.8	18.5	670	259	0.10	0.4	31	37
7x2.5	2.0	7.41	0.7	3.8	1.0	13.5	1.3	16.0	1.8	19.6	780	274	0.10	0.4	23	29
10x2.5	2.0	7.41	0.7	3.8	1.0	17.3	1.6	20.5	1.8	24.1	1140	337	0.10	0.4	21	26
12x2.5	2.0	7.41	0.7	3.8	1.0	17.9	1.6	21.1	1.8	24.7	1230	345	0.10	0.4	20	24
14x2.5	2.0	7.41	0.7	3.8	1.0	18.8	1.6	22.0	1.8	25.6	1310	359	0.10	0.4	18	22
16x2.5	2.0	7.41	0.7	3.8	1.0	20.0	1.6	23.2	1.8	26.8	1430	375	0.10	0.4	18	21
19x2.5	2.0	7.41	0.7	3.8	1.0	21.1	1.6	24.3	1.8	27.9	1580	391	0.10	0.4	17	19
24x2.5	2.0	7.41	0.7	3.8	1.0	24.9	1.6	28.1	2.0	32.1	1920	450	0.10	0.4	16	18
27x2.5	2.0	7.41	0.7	3.8	1.0	25.5	2.0	29.5	2.0	33.5	2250	469	0.10	0.4	15	17
30x2.5	2.0	7.41	0.7	3.8	1.0	26.5	2.0	30.5	2.0	34.5	2400	483	0.10	0.4	14	16
33x2.5	2.0	7.41	0.7	3.8	1.2	28.0	2.0	32.0	2.1	36.2	2600	507	0.10	0.4	13	15
37x2.5	2.0	7.41	0.7	3.8	1.2	29.1	2.0	33.1	2.1	37.3	2750	523	0.10	0.4	12	14

(*) two adjacent cores





POWER CABLES MEDIUM VOLTAGE CABLES

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/CuT/PVC or XLPE/CuT/LSOH)

RE4H1R(M1) from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Single core, triple extruded insulation, sheathed cable for fixed installations for use in Medium Voltage circuits at voltages up to 18/30 (36) kV, in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** are copper circular stranded, according to cl. 2 of IEC 60228
- **Semiconducting layer:** extruded compound
- **Insulation:** XLPE compound according to IEC 60502
- **Semiconducting layer:** extruded compound
- **Metallic screen:** copper tapes
- **Sheath:** PVC or LSOH
- **Marking:** (ELECTRIC CABLE) + (Voltage Rating) + (IEC 60502-2) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-2 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant
- IEC 60332-3 C Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(XLPE/CuT/PVC or XLPE/CuT/LSOH) RE4H1R(M1) from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation approx	Diameter over screen approx	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Phase Capacitance approx	Conductor short - circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C. depth 1 m. gtr Km/W)
kV	mm²	mm	Ω/km	mm	mm	mm	kg/km	mm	Ω/km	µF/km	kA/sec	A	A
RE4H1R/RE4H1M1													
3.6/6	1x35	7.0	0.524	13.2	14.4	18.0	620	250	0.12	0.28	5.2	187	188
3.6/6	1x50	8.1	0.387	14.4	15.6	19.2	750	270	0.11	0.31	7.4	225	222
3.6/6	1x70	9.8	0.268	15.9	17.1	20.7	970	290	0.11	0.35	10.3	281	272
3.6/6	1x95	11.4	0.193	17.6	18.8	22.4	1240	320	0.10	0.40	13.9	344	326
3.6/6	1x120	12.9	0.153	19.1	20.3	23.9	1470	340	0.10	0.44	17.5	398	370
3.6/6	1x150	14.3	0.124	20.5	21.7	25.3	1780	360	0.10	0.47	21.9	454	415
3.6/6	1x185	15.7	0.0991	22.0	23.2	26.8	2130	380	0.09	0.52	26.9	522	469
3.6/6	1x240	18.4	0.0754	24.8	26.0	29.8	2730	520	0.09	0.57	34.8	621	542
3.6/6	1x300	20.5	0.0601	27.8	28.9	32.9	3390	460	0.09	0.59	43.5	717	611
3.6/6	1x400	22.9	0.0470	30.6	31.7	35.9	4260	500	0.09	0.61	>50	830	691
3.6/6	1x500	26.2	0.0366	34.2	35.3	39.7	5390	560	0.09	0.65	>50	963	780
3.6/6	1x630	29.9	0.0283	38.5	39.7	44.3	6880	620	0.08	0.74	>50	1113	877

(XLPE/CuT/PVC or XLPE/CuT/LSOH) RE4H1R(M1) from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation approx	Diameter over screen approx	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Phase Capacitance approx	Conductor short - circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C. depth 1 m. gtr Km/W)
kV	mm ²	mm	Ω/km	mm	mm	mm	kg/km	mm	Ω/km	μF/km	kA/sec	A	A
RE4H1R/RE4H1M1													
6/10	1x35	7.0	0.524	14	16.2	19.8	680	280	0.13	0.20	5.2	190	188
6/10	1x50	8.1	0.387	16.2	17.4	21.0	810	300	0.12	0.25	7.4	229	222
6/10	1x70	9.8	0.268	17.7	18.9	22.5	1040	320	0.11	0.28	10.3	285	272
6/10	1x95	11.4	0.193	19.4	20.6	24.2	1320	340	0.11	0.31	13.9	349	326
6/10	1x120	12.9	0.153	20.9	22.1	25.7	1570	360	0.10	0.34	17.5	404	370
6/10	1x150	14.3	0.124	22.3	23.5	27.1	1850	380	0.10	0.37	21.9	460	416
6/10	1x185	15.7	0.0991	23.8	25.0	28.8	2230	410	0.10	0.40	26.9	526	468
6/10	1x240	18.4	0.0754	26.4	27.6	31.6	2830	450	0.09	0.45	34.8	627	542
6/10	1x300	20.5	0.0601	29.0	30.1	34.1	3460	480	0.09	0.5	43.5	721	611
6/10	1x400	22.9	0.0470	31.4	32.5	36.7	4310	520	0.09	0.55	>50	833	692
6/10	1x500	26.2	0.0366	34.6	35.7	40.1	5420	560	0.09	0.61	>50	964	781
6/10	1x630	29.9	0.0283	38.9	40.1	44.7	6910	630	0.09	0.7	>50	1114	878
RE4H1R/RE4H1M1													
8.7/15	1x35	7.0	0.524	17.2	18.4	22.0	760	310	0.13	0.18	5.2	194	189
8.7/15	1x50	8.1	0.387	18.4	19.6	23.2	900	330	0.13	0.20	7.4	233	223
8.7/15	1x70	9.8	0.268	19.9	21.1	24.7	1130	350	0.12	0.22	10.3	290	272
8.7/15	1x95	11.4	0.193	21.6	22.8	26.4	1410	370	0.11	0.25	13.9	354	326
8.7/15	1x120	12.9	0.153	23.1	24.2	28.0	1690	390	0.11	0.27	17.5	408	370
8.7/15	1x150	14.3	0.124	24.5	25.6	29.4	1970	410	0.10	0.29	21.9	464	415
8.7/15	1x185	15.7	0.0991	26.0	27.2	31.2	2360	440	0.10	0.32	26.9	532	468
8.7/15	1x240	18.4	0.0754	28.6	29.8	33.8	2950	470	0.10	0.36	34.8	632	543
8.7/15	1x300	20.5	0.0601	31.2	32.3	36.5	3610	510	0.10	0.40	43.5	727	612
8.7/15	1x400	22.9	0.0470	33.6	34.7	39.1	4470	550	0.09	0.43	>50	839	693
8.7/15	1x500	26.2	0.0366	36.8	37.9	42.5	5590	600	0.09	0.48	>50	971	783
8.7/15	1x630	29.9	0.0283	41.1	42.3	47.1	7100	660	0.09	0.55	>50	1121	882
RE4H1R/RE4H1M1													
12/20	1x35	7.0	0.524	19.2	20.4	24.0	840	340	0.14	0.16	5.2	197	189
12/20	1x50	8.1	0.387	20.4	21.6	25.2	980	350	0.13	0.17	7.4	236	223
12/20	1x70	9.8	0.268	21.9	23.1	26.7	1130	370	0.12	0.19	10.3	293	272
12/20	1x95	11.4	0.193	23.6	24.8	28.6	1520	400	0.12	0.22	13.9	357	326
12/20	1x120	12.9	0.153	25.1	26.2	30.0	1790	420	0.11	0.24	17.5	412	370
12/20	1x150	14.3	0.124	26.5	27.6	31.6	2090	440	0.11	0.25	21.9	468	415
12/20	1x185	15.7	0.0991	28.0	29.2	33.2	2460	470	0.11	0.27	26.9	536	468
12/20	1x240	18.4	0.0754	30.6	31.8	36.0	3080	500	0.10	0.30	34.8	637	543
12/20	1x300	20.5	0.0601	33.2	34.3	38.7	3750	540	0.10	0.34	43.5	731	612
12/20	1x400	22.9	0.0470	35.6	36.7	41.3	4620	580	0.10	0.37	>50	844	693
12/20	1x500	26.2	0.0366	38.8	39.9	44.7	5760	630	0.09	0.41	>50	976	785
12/20	1x630	29.9	0.0283	43.1	44.3	49.3	7280	690	0.09	0.46	>50	1127	885
RE4H1R/RE4H1M1													
18/30	1x50	8.1	0.387	25.4	26.5	30.3	1230	420	0.14	0.14	7.4	241	223
18/30	1x70	9.8	0.268	26.9	28.1	32.1	1500	450	0.13	0.15	10.3	299	272
18/30	1x95	11.4	0.193	28.8	29.8	34.0	1820	480	0.13	0.17	13.9	364	325
18/30	1x120	12.9	0.153	30.1	31.2	35.4	2100	500	0.12	0.18	17.5	419	370
18/30	1x150	14.3	0.124	31.5	32.6	36.8	2390	520	0.12	0.19	21.9	475	415
18/30	1x185	15.7	0.0991	33.0	34.2	38.6	2800	540	0.12	0.21	26.9	544	468
18/30	1x240	18.4	0.0754	35.6	36.8	41.4	3450	580	0.11	0.23	34.8	644	543
18/30	1x300	20.5	0.0601	38.2	39.3	43.9	4120	620	0.11	0.25	43.5	739	613
18/30	1x400	22.9	0.0470	40.6	41.7	46.7	5030	650	0.10	0.27	>50	852	695
18/30	1x500	26.2	0.0366	43.8	44.9	49.9	6170	700	0.10	0.30	>50	985	788
18/30	1x630	29.9	0.0283	48.1	49.3	54.7	7760	770	0.10	0.34	>50	1136	889

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/CuT/PVC or XLPE/CuT/LSOH)

RE4H10R(M1) from 3,6/6 (7,2) kV to 18/30 (36) kV - multi-core

Multi-core, triple extruded insulation, sheathed cable for fixed installations for use in Medium Voltage circuits at voltages up to 18/30 (36) kV, in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of IEC 60228
- **Semiconducting layer:** extruded compound
- **Insulation:** XLPE compound
- **Semiconducting layer:** extruded compound
- **Metallic screen:** copper tapes
- **Fillers:** non hygroscopic compound or LSOH non hygroscopic compound
- **Sheath:** PVC or LSOH
- **Marking:** (ELECTRIC CABLE) + (Voltage Rating) + (IEC 60502-2) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-2 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant
- IEC 60332-3 C Fire retardant on bunched cables(if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(XLPE/CuT/PVC or XLPE/CuT/LSOH) RE4H10R(M1) from 3,6/6 (7,2) kV to 18/30 (36) kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation approx	Diameter over screen approx	Diameter over extruded inner covering	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Phase Capacitance approx	Conductor short - circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C. depth 1 m. gtr Km/W)
kV	mm²	mm	Ω/km	mm	mm	mm	mm	kg/km	mm	Ω/km	μF/km	kA/sec	A	A
RE4H10R/RE4H10M1														
3.6/6	3x35	7.0	0.524	13.2	14.4	32.7	37.0	2430	520	0.11	0.28	5.0	180	183
3.6/6	3x50	8.1	0.387	14.4	15.6	35.2	39.7	2950	560	0.10	0.31	7.2	216	216
3.6/6	3x70	9.8	0.268	15.9	17.1	38.5	43.2	3750	610	0.09	0.35	10.0	268	263
3.6/6	3x95	11.4	0.193	17.6	18.8	42.2	47.3	4790	660	0.09	0.4	13.6	327	314
3.6/6	3x120	12.9	0.153	19.1	20.3	45.3	50.8	5750	710	0.09	0.44	17.2	376	356
3.6/6	3x150	14.3	0.124	20.5	21.7	48.3	54.0	6760	760	0.09	0.47	21.5	427	399
3.6/6	3x185	15.7	0.0991	22.0	23.2	51.6	57.5	8060	810	0.08	0.52	26.5	488	450
3.6/6	3x240	18.4	0.0754	24.8	26.0	58.0	64.3	10320	900	0.08	0.57	34.4	571	517
3.6/6	3x300	20.5	0.0601	27.8	28.9	64.3	71.0	12780	1000	0.08	0.59	43.0	654	581
3.6/6	3x400	22.9	0.0470	30.6	31.7	70.4	77.5	15880	1090	0.08	0.61	>50.0	751	657

(XLPE/CuT/PVC or XLPE/CuT/LSOH) RE4H10R(M1) from 3,6/6 (7,2) kV to 18/30 (36) kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation approx	Diameter over screen approx	Diameter over extruded inner covering	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Phase Capacitance approx	Conductor short - circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C. depth 1 m. gtr Km/W)
kV	mm ²	mm	Ω/km	mm	mm		mm	kg/km	mm	Ω/km	μF/km	kA/sec	A	A
RE4H10R/RE4H10M1														
6/10	3x35	7.0	0.524	14.0	16.2	36.6	41.3	2790	580	0.11	0.2	5	183	183
6/10	3x50	8.1	0.387	16.2	17.4	39.0	44.0	3330	620	0.11	0.25	7.2	219	216
6/10	3x70	9.8	0.268	17.7	18.9	42.4	47.5	4180	670	0.10	0.28	10	272	263
6/10	3x95	11.4	0.193	19.4	20.6	46.0	51.5	5250	720	0.10	0.31	13.6	330	314
6/10	3x120	12.9	0.153	20.9	22.1	49.2	54.9	6220	770	0.09	0.34	17.2	380	357
6/10	3x150	14.3	0.124	22.3	23.5	52.6	58.5	7320	820	0.09	0.37	21.5	430	398
6/10	3x185	15.7	0.0991	23.8	25.0	55.8	61.9	8630	870	0.09	0.4	26.5	487	447
6/10	3x240	18.4	0.0754	26.4	27.6	61.4	67.9	10840	950	0.09	0.45	34.4	575	517
6/10	3x300	20.5	0.0601	29.0	30.1	66.9	73.8	13210	1030	0.08	0.5	43.0	656	581
6/10	3x400	22.9	0.0470	31.4	32.5	72.5	79.8	16290	1120	0.08	0.55	>50.0	749	655
RE4H10R/RE4H10M1														
8.7/15	3x35	7.0	0.524	17.2	18.4	41.3	46.4	3290	650	0.12	0.18	5.0	186	183
8.7/15	3x50	8.2	0.387	18.4	19.6	43.8	49.3	3880	690	0.11	0.2	7.2	222	215
8.7/15	3x70	9.7	0.268	19.9	21.1	47.1	52.8	4760	740	0.11	0.22	10.0	275	263
8.7/15	3x95	11.4	0.193	21.6	22.8	50.8	56.7	5850	790	0.10	0.25	13.6	334	314
8.7/15	3x120	12.9	0.153	23.1	24.2	54.2	60.3	6900	850	0.10	0.27	17.2	380	354
8.7/15	3x150	14.3	0.124	24.5	25.6	57.2	63.5	7970	890	0.10	0.29	21.5	430	396
8.7/15	3x185	15.8	0.0991	26.0	27.2	60.6	67.1	9350	940	0.09	0.32	26.5	491	447
8.7/15	3x240	18.4	0.0754	28.6	29.8	66.2	73.1	11610	1020	0.09	0.36	34.4	578	517
8.7/15	3x300	20.6	0.0601	31.2	32.3	71.7	78.8	14010	1100	0.09	0.4	43.0	660	582
8.7/15	3x400	23.0	0.0470	33.6	34.7	77.2	84.9	17200	1190	0.09	0.43	>50.0	753	656
RE4H10R/RE4H10M1														
12/20	3x35	7	0.524	19.2	20.4	45.6	51.1	3790	720	0.13	0.16	5.0	188	183
12/20	3x50	8.2	0.387	20.4	21.6	48.1	53.8	4380	750	0.12	0.17	7.2	224	215
12/20	3x70	9.7	0.268	21.9	23.1	51.4	57.3	5300	800	0.11	0.19	10.0	277	263
12/20	3x95	11.4	0.193	23.6	24.8	55.4	61.5	6470	860	0.11	0.22	13.6	333	312
12/20	3x120	12.9	0.153	25.1	26.2	58.5	64.8	7510	910	0.10	0.24	17.2	383	354
12/20	3x150	14.3	0.124	26.5	27.6	61.5	68.0	8610	950	0.10	0.25	21.5	433	396
12/20	3x185	15.8	0.0991	28.0	29.2	64.9	71.8	10050	1000	0.10	0.27	26.5	493	447
12/20	3x240	18.4	0.0754	30.6	31.8	70.5	77.6	12330	1090	0.09	0.3	34.4	581	517
12/20	3x300	20.6	0.0601	33.2	34.3	76.4	83.9	14920	1170	0.09	0.34	43.0	660	581
12/20	3x400	23.0	0.0470	35.6	36.7	81.5	89.4	18030	1250	0.09	0.37	>50.0	756	657
RE4H10R/RE4H10M1														
18/30	3x50	8.1	0.387	25.4	26.5	59.2	65.7	5920	920	0.13	0.14	7.2	225	213
18/30	3x70	9.8	0.268	26.9	28.1	62.5	69.2	6920	970	0.13	0.15	10	279	260
18/30	3x95	11.4	0.193	28.8	29.8	66.2	73.1	8140	1020	0.12	0.17	13.6	337	311
18/30	3x120	12.9	0.153	30.1	31.2	69.3	76.4	9260	1070	0.12	0.18	17.2	387	353
18/30	3x150	14.3	0.124	31.5	32.6	72.7	80.0	10530	1120	0.11	0.19	21.5	436	395
18/30	3x185	15.7	0.0991	33.0	34.2	76.0	83.5	12020	1170	0.11	0.21	26.5	497	446
18/30	3x240	18.4	0.0754	35.6	36.8	81.6	89.5	14490	1250	0.10	0.23	34.4	583	516
18/30	3x300	20.5	0.0601	38.2	39.3	87.1	95.4	17130	1340	0.10	0.25	43	664	581

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/CuT/AWA/PVC or XLPE/CuT/AWA/LSOH) RE4H1R(M1)FR(M1) from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Single core, triple extruded insulation, non-magnetic armoured, sheathed cable for fixed installations for use in Medium Voltage circuits at voltages up to 18/30 (36) kV, in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Semiconducting layer:** extruded compound
- **Insulation:** XLPE compound according to IEC 60502
- **Semiconducting layer:** extruded compound
- **Metallic screen:** copper tapes
- **Separation sheath:** PVC or LSOH
- **Armour:** aluminium wires
- **Sheath:** PVC or LSOH
- **Marking:** (ELECTRIC CABLE) + (Voltage Rating) + (IEC 60502-2) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-2 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant
- IEC 60332-3 C Fire retardant on bunched cables(if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(XLPE/CuT/AWA/PVC or XLPE/CuT/AWA/LSOH)

RE4H1R(M1)FR(M1) from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Voltage	Cross section	Conductor diam.	Max. DC resistance at 20 °C	Diam. over insulation approx	Diam. over screen approx	Diam. over separation sheath	Diam. of armour wires	Diam. over armour	Outer diam. approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (%)	Phase Capacitance approx	Conductor short - circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C. depth 1 m. gtr Km/W)
kV	mm ²	mm	Ω/km	mm	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	μF/km	kA/sec	A	A
RE4H1RFR/ RE4H1M1FM1																
3.6/6	1x50	8.1	0.387	14.4	15.6	17.7	2.0	21.7	25.4	1140	360	0.13	0.31	7.2	239	223
3.6/6	1x70	9.8	0.268	15.9	17.1	19.4	2.0	23.4	27.7	1380	390	0.13	0.35	10.0	295	271
3.6/6	1x95	11.4	0.193	17.6	18.8	21.0	2.0	25.0	28.8	1700	400	0.12	0.4	13.6	358	322
3.6/6	1x120	12.9	0.153	19.1	20.3	22.5	2.0	26.5	30.4	1970	430	0.11	0.44	17.2	410	363
3.6/6	1x150	14.3	0.124	20.5	21.7	23.9	2.0	27.9	32.0	2280	450	0.11	0.47	21.5	461	403
3.6/6	1x185	15.7	0.0991	22.0	23.2	25.4	2.0	29.4	33.4	2660	470	0.11	0.52	26.5	523	450
3.6/6	1x240	18.4	0.0754	24.8	26.0	28.4	2.0	32.4	37.2	3410	520	0.10	0.57	34.4	610	511
3.6/6	1x300	20.5	0.0601	27.8	28.9	31.3	2.0	35.3	40.3	4130	570	0.10	0.59	43.0	688	565
3.6/6	1x400	22.9	0.0470	30.6	31.7	34.1	2.0	38.1	43.3	5060	610	0.10	0.61	>50.0	777	625

(XLPE/CuT/AWA/PVC or XLPE/CuT/AWA/LSOH) RE4H1R(M1)FR(M1) from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Voltage	Cross section	Conductor diam.	Max. DC resistance at 20 °C	Diam. over insulation approx	Diam. over screen approx	Diam. over separation sheath	Diam. of armour wires	Diam. over armour	Outer diam. approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Phase Capacitance approx	Conductor short-circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C. depth 1 m. gtr Km/W)
kV	mm ²	mm	Ω/km	mm	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	μF/km	kA/sec	A	A
3.6/6	1x500	26.2	0.0366	34.2	35.3	37.9	2.5	42.9	48.5	6480	680	0.10	0.65	>50.0	854	666
3.6/6	1X630	29.9	0.0283	38.5	39.7	42.5	2.5	47.5	52.7	7900	740	0.10	0.74	>50.0	948	720
RE4H1RFR/ RE4H1M1FM1																
6/10	1x50	8.1	0.387	16.2	17.4	19.6	2.0	23.6	27.3	1230	380	0.14	0.25	7.2	241	223
6/10	1x70	9.8	0.268	17.7	18.9	21.3	2.0	25.3	29.2	1500	410	0.13	0.28	10.0	298	271
6/10	1x95	11.4	0.193	19.4	20.6	23.0	2.0	27.0	31.0	1820	430	0.12	0.31	13.6	360	321
6/10	1x120	12.9	0.153	20.9	22.1	24.5	2.0	28.5	32.5	2100	460	0.12	0.34	17.2	412	362
6/10	1x150	14.3	0.124	22.3	23.5	25.9	2.0	29.9	34.7	2490	490	0.12	0.37	21.5	464	402
6/10	1x185	15.7	0.0991	23.8	25.0	27.4	2.0	31.4	36.2	2880	510	0.11	0.4	26.5	525	449
6/10	1x240	18.4	0.0754	26.4	27.6	30.0	2.0	34.0	39.0	3540	550	0.11	0.45	34.4	612	511
6/10	1x300	20.5	0.0601	29.0	30.1	32.5	2.0	36.5	41.5	4230	580	0.10	0.5	43.0	690	565
6/10	1x400	22.9	0.0470	31.4	32.5	34.9	2.0	38.9	44.3	5150	620	0.10	0.55	>50.0	777	624
6/10	1x500	26.2	0.0366	34.6	35.7	38.3	2.5	43.3	48.9	6510	690	0.10	0.61	>50.0	856	667
6/10	1x630	29.9	0.0283	38.9	40.1	42.9	2.5	47.9	53	7950	740	0.10	0.7	>50.0	950	721
RE4H1RFR/ RE4H1M1FM1																
8.7/15	1x50	8.1	0.387	18.4	19.6	21.9	2.0	25.9	29.7	1380	420	0.14	0.2	7.2	243	223
8.7/15	1x70	9.8	0.268	19.9	21.1	23.5	2.0	27.5	31.6	1650	440	0.13	0.22	10.0	300	270
8.7/15	1x95	11.4	0.193	21.6	22.8	25.2	2.0	29.2	33.8	2020	470	0.13	0.25	13.6	362	321
8.7/15	1x120	12.9	0.153	23.1	24.2	26.6	2.0	30.6	35.4	2320	500	0.12	0.27	17.2	414	361
8.7/15	1x150	14.3	0.124	24.5	25.6	28.0	2.0	32.0	36.8	2640	520	0.12	0.29	21.5	466	402
8.7/15	1x185	15.7	0.0991	26.0	27.2	29.6	2.0	33.6	38.6	3070	540	0.12	0.32	26.5	527	447
8.7/15	1x240	18.4	0.0754	28.6	29.8	32.2	2.0	36.2	41.4	3730	580	0.11	0.36	34.4	614	510
8.7/15	1x300	20.5	0.0601	31.2	32.3	34.7	2.0	38.7	43.9	4420	620	0.11	0.4	43.0	692	564
8.7/15	1x400	22.9	0.0470	33.6	34.7	37.3	2.5	42.3	47.9	5530	670	0.11	0.43	>50.0	767	609
8.7/15	1x500	26.2	0.0366	36.8	37.9	40.5	2.5	45.5	51.3	6750	720	0.10	0.48	>50.0	858	665
8.7/15	1x630	29.9	0.0283	41.1	42.3	45.1	2.5	50.1	55.5	8180	780	0.10	0.55	>50.0	952	720
RE4H1RFR/ RE4H1M1FM1																
12/20	1x50	8.1	0.387	20.4	21.6	23.8	2.0	27.8	31.9	1510	450	0.15	0.17	7.2	244	222
12/20	1x70	9.8	0.268	21.9	23.1	25.5	2.0	29.5	33.6	1770	470	0.14	0.19	10.0	301	270
12/20	1x95	11.4	0.193	23.6	24.8	27.2	2.0	31.2	36.0	2170	500	0.13	0.22	13.6	364	320
12/20	1x120	12.9	0.153	25.1	26.2	28.6	2.0	32.6	37.4	2470	520	0.13	0.24	17.2	416	361
12/20	1x150	14.3	0.124	26.5	27.6	30.0	2.0	34.0	39.0	2800	550	0.12	0.25	21.5	468	401
12/20	1x185	15.7	0.0991	28.0	29.2	31.6	2.0	35.6	40.6	3210	570	0.12	0.27	26.5	529	447
12/20	1x240	18.4	0.0754	30.6	31.8	34.2	2.0	38.2	43.4	3890	610	0.11	0.3	34.4	616	509
12/20	1x300	20.5	0.0601	33.2	34.3	36.9	2.5	41.9	47.3	4770	660	0.11	0.34	43.0	686	553
12/20	1x400	22.9	0.0470	35.6	36.7	39.3	2.5	44.3	49.9	5710	700	0.11	0.37	>50.0	770	609
12/20	1x500	26.2	0.0366	38.8	39.9	42.7	2.5	47.7	53.5	6960	750	0.10	0.41	>50.0	860	665
12/20	1x630	29.9	0.0283	43.1	44.3	47.1	2.5	52.1	57.7	8410	810	0.10	0.46	>50.0	954	720
RE4H1RFR/ RE4H1M1FM1																
18/30	1x50	8.1	0.387	25.4	26.5	28.9	2.0	32.9	37.9	1950	530	0.16	0.14	7.2	247	221
18/30	1x70	9.8	0.268	26.9	28.1	30.5	2.0	34.5	39.5	2220	550	0.15	0.15	10.0	304	269
18/30	1x95	11.4	0.193	28.8	29.8	32.2	2.0	36.2	41.4	2580	580	0.14	0.17	13.6	367	319
18/30	1x120	12.9	0.153	30.1	31.2	33.6	2.0	37.6	42.8	2890	600	0.14	0.18	17.2	419	359
18/30	1x150	14.3	0.124	31.5	32.6	35.2	2.5	40.2	45.6	3410	640	0.13	0.19	21.5	469	396
18/30	1x185	15.7	0.0991	33.0	34.2	36.8	2.5	41.8	47.4	3850	660	0.13	0.21	26.5	529	440
18/30	1x240	18.4	0.0754	35.6	36.8	39.4	2.5	44.4	50.0	4540	700	0.12	0.23	34.4	614	500
18/30	1x300	20.5	0.0601	38.2	39.3	42.1	2.5	47.1	52.9	5320	740	0.12	0.25	43.0	688	551
18/30	1x400	22.9	0.0470	40.6	41.7	44.5	2.5	49.5	55.5	6280	780	0.12	0.27	>50.0	772	606
18/30	1x500	26.2	0.0366	43.8	44.9	47.9	2.5	52.9	59.1	7560	830	0.11	0.3	>50.0	863	663
18/30	1x630	29.9	0.0283	48.1	49.3	52.3	2.5	57.3	63.1	9000	880	0.11	0.34	>50.0	959	719

(*) trefoil formation

TRATOS[®] PETROCHEMICAL CABLES

POWER CABLES

(XLPE/CuT/SWA/PVC or XLPE/CuT/SWA/LSOH) RE4H10(M1)RFR(M1) from 3,6/6 (7,2) kV to 18/30 (36) kV - multi-core

Multi-core, triple extruded insulation, armoured and sheathed cable for fixed installations for use in Medium Voltage circuits at voltages up to 18/30 (36) kV, in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Semiconducting layer:** extruded compound
- **Insulation:** XLPE compound according to IEC 60502
- **Semiconducting layer:** extruded compound
- **Metallic screen:** copper tapes
- **Fillers:** non hygroscopic compound or LSOH non hygroscopic compound
- **Separation sheath:** PVC or LSOH
- **Armour:** galvanized steel wires
- **Sheath:** PVC or LSOH
- **Marking:** (ELECTRIC CABLE) + (Voltage Rating) + (IEC 60502-2) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-2 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant
- IEC 60332-3 C Fire retardant on bunched cables (if required)
- IEC 60754 Halogen free properties (only for LSOH)
- IEC 61034 Low smoke emission (only for LSOH)

(XLPE/CuT/SWA/PVC or XLPE/CuT/SWA/LSOH) RE4H1O(M1)RFR(M1) from 3,6/6 (7,2) kV to 18/30 (36) kV - multi-core

Voltage	Cross section	Conductor diam.	Max. DC resistance at 20 °C	Diam. over insulation approx	Diam. over screen approx	Diam. over separation sheath	Diam. of armour wires	Diam. over armour	Outer diam. approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Phase Capacitance approx	Conductor short-circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C, depth 1 m, gtr Km/W)
kV	mm ²	mm	Ω/km	mm	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	μF/km	kA/sec	A	A
RE4H1ORFR/ RE4H1OF1M1																
3.6/6	3x35	7.0	0.524	13.2	14.4	35.1	2.0	39.1	44.0	4210	620	0.11	0.28	5.0	182	180
3.6/6	3x50	8.1	0.387	14.4	15.6	37.8	2.5	42.8	48.1	5300	670	0.1	0.31	7.2	218	213
3.6/6	3x70	9.8	0.268	15.9	17.1	41.3	2.5	46.3	51.8	6330	730	0.09	0.35	10.0	269	259
3.6/6	3x95	11.4	0.193	17.6	18.8	45.0	2.5	50	55.7	7590	780	0.09	0.4	13.6	326	308
3.6/6	3x120	12.9	0.153	19.1	20.3	48.3	2.5	53.3	59.2	8710	830	0.09	0.44	17.2	374	349
3.6/6	3x150	14.3	0.124	20.5	21.7	51.3	2.5	56.3	62.4	9920	880	0.09	0.47	21.5	423	390
3.6/6	3x185	15.7	0.0991	22.0	23.2	54.8	2.5	59.8	66.1	11450	930	0.08	0.52	26.5	479	437
3.6/6	3x240	18.4	0.0754	24.8	26.0	61.4	2.5	66.4	72.8	13620	1020	0.08	0.57	34.4	557	499
3.6/6	3x300	20.5	0.0601	27.8	28.9	67.7	3.2	74.0	81.0	17400	1130	0.08	0.59	43.0	629	552
RE4H1ORFR/ RE4H1OF1M1																
6/10	3x35	7.0	0.524	14.0	16.2	39.2	2.5	44.2	49.5	5220	700	0.11	0.2	5.0	185	181
6/10	3x50	8.1	0.387	16.2	17.4	41.8	2.5	46.8	52.3	5940	730	0.11	0.25	7.2	220	213
6/10	3x70	9.8	0.268	17.7	18.9	45.2	2.5	50.2	55.9	6980	780	0.1	0.28	10.0	272	259
6/10	3x95	11.4	0.193	19.4	20.6	49.0	2.5	54	60.1	8290	840	0.1	0.31	13.6	329	308
6/10	3x120	12.9	0.153	20.9	22.1	52.4	2.5	57.4	63.7	9490	890	0.09	0.34	17.2	376	348
6/10	3x150	14.3	0.124	22.3	23.5	55.8	2.5	60.8	67.3	10790	940	0.09	0.37	21.5	423	388
6/10	3x185	15.7	0.0991	23.8	25.0	59	2.5	64.0	70.4	11900	960	0.09	0.40	26.5	476	433
6/10	3x240	18.4	0.0754	26.4	27.6	65	3.2	71.3	78.1	15300	1100	0.09	0.45	34.4	556	495
RE4H1ORFR/ RE4H1OF1M1																
8.7/15	3x35	7.0	0.524	17.2	18.4	44.1	2.5	49.1	54.8	6040	770	0.12	0.18	5.0	187	180
8.7/15	3x50	8.2	0.387	18.4	19.6	46.8	2.5	51.8	57.7	6780	810	0.11	0.20	7.2	222	212
8.7/15	3x70	9.7	0.268	19.9	21.1	50.1	2.5	55.1	61.2	7870	860	0.11	0.22	10.0	274	259
8.7/15	3x95	11.4	0.193	21.6	22.8	54.0	2.5	59.0	65.3	9190	920	0.1	0.25	13.6	331	308
8.7/15	3x120	12.9	0.153	23.1	24.2	57.6	2.5	62.6	68.8	10100	960	0.1	0.27	17.2	375	346
8.7/15	3x150	14.3	0.124	24.5	25.6	60.6	2.5	65.6	72.0	11340	1010	0.1	0.29	21.5	424	387
8.7/15	3x185	15.8	0.0991	26.0	27.2	64.0	3.2	70.3	77.0	13790	1080	0.09	0.32	26.5	480	432
RE4H1ORFR/ RE4H1OF1M1																
12/20	3x35	7.0	0.524	19.2	20.4	48.6	2.5	53.6	59.5	6790	830	0.13	0.16	5.0	188	180
12/20	3x50	8.2	0.387	20.4	21.6	51.3	2.5	56.3	62.4	7570	870	0.12	0.17	7.2	224	212
12/20	3x70	9.7	0.268	21.9	23.1	54.6	2.5	59.6	66.1	8720	930	0.11	0.19	10.0	276	258
12/20	3x95	11.4	0.193	23.6	24.8	58.7	2.5	63.7	70.1	9790	980	0.11	0.22	13.6	330	306
12/20	3x120	12.9	0.153	25.1	26.2	61.9	3.2	68.2	74.8	11830	1050	0.1	0.24	17.2	378	346
12/20	3x150	14.3	0.124	26.5	27.6	65.1	3.2	71.4	78.2	13170	1100	0.1	0.25	21.5	426	385
12/20	3x185	15.8	0.0991	28.0	29.2	68.4	3.2	74.7	82.0	14900	1150	0.1	0.27	26.5	481	431
RE4H1ORFR/ RE4H1OF1M1																
18/30	3X50	8.1	0.387	25.4	26.5	62.5	3.2	68.8	75.6	10290	1060	0.13	0.14	7.2	224	210
18/30	3X70	9.8	0.268	26.9	28.1	66.2	3.2	72.5	79.5	11600	1110	0.13	0.15	10.0	276	256

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/CuW/PSA/PE)

RE4H1(E)E from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Single core, triple extruded insulation, non-metallic mechanical protection, sheathed cable for fixed installations for use in Medium Voltage circuits at voltages up to 18/30 (36) kV, in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Semiconducting layer:** extruded compound
- **Insulation:** XLPE compound according to IEC 60502
- **Semiconducting layer:** extruded compound
- **Metallic screen:** copper tapes
- **Fillers:** non hygroscopic compound
- **Mechanical protective layer:** PSA QAM®
- **Sheath:** HDPE
- **Marking:** (ELECTRIC CABLE) + (Voltage Rating) + (IEC 60502-2) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-2 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant

(XLPE/CuW/PSA/PE) RE4H1(E)E from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Voltage	Cross section	Conductor diam.	Max. DC resistance at 20 °C	Diam. over insulation approx	Diam. over screen approx	Diam. over separation sheath	Diam. of armour wires	Diam. over armour	Outer diam. approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Phase Capacitance approx	Conductor short - circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C. depth 1 m. gtr Km/W)
kV	mm²	mm	Ω/km	mm	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	μF/km	kA/sec	A	A
RE4H1(AR)E																
3.6/6	1x70	9.8	0.268	15.9	17.1	18.9	2.0	22.9	26.2	1091	314	0.12	0.35	10.0	277	261
3.6/6	1x95	11.4	0.193	17.6	18.8	20.4	2.0	24.4	27.7	1358	332	0.11	0.40	13.6	338	312
3.6/6	1x120	12.9	0.153	19.1	20.3	21.8	2.0	25.8	29.3	1619	352	0.11	0.44	17.2	389	355
3.6/6	1x150	14.2	0.124	20.5	21.7	23.2	2.0	27.2	30.7	1895	368	0.11	0.47	21.5	442	398
3.6/6	1x185	15.8	0.0991	22.0	23.2	24.8	2.0	28.8	32.4	2271	389	0.10	0.52	26.5	507	446
3.6/6	1x240	18.2	0.0754	24.8	26.0	27.4	2.0	31.4	35.2	2866	423	0.10	0.57	34.4	602	516
3.6/6	1x300	20.5	0.0601	27.8	28.9	30.4	2.0	34.4	38.2	3520	459	0.10	0.59	43.0	693	582
3.6/6	1x400	22.9	0.0470	30.6	31.7	33.2	2.0	37.2	41.4	4386	497	0.10	0.61	>50.0	794	655
3.6/6	1x500	26.2	0.0366	34.2	35.3	36.8	2.5	41.8	46.3	5564	555	0.09	0.65	>50.0	922	741
3.6/6	1X630	29.9	0.0283	38.5	39.7	41.2	2.5	46.2	50.8	7074	609	0.09	0.74	>50.0	1066	832

(XLPE/CuW/PSA/PE) RE4H1(E)E from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Voltage	Cross section	Conductor diam.	Max. DC resistance at 20 °C	Diam. over insulation approx	Diam. over screen approx	Diam. over separation sheath	Diam. of armour wires	Diam. over armour	Outer diam. approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Phase Capacitance approx	Conductor short-circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C. depth 1 m. gtr Km/W)
kV	mm ²	mm	Ω/km	mm	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	μF/km	kA/sec	A	A
RE4H1(AR)E																
6/10	1x50	8.1	0.387	16.2	17.4	18.9	2.0	22.9	26.2	935	314	0.13	0.25	7.2	226	213
6/10	1x70	9.8	0.268	17.7	18.9	20.5	2.0	24.5	27.8	1152	333	0.12	0.28	10.0	281	261
6/10	1x95	11.4	0.193	19.4	20.6	22.0	2.0	26.0	29.5	1445	354	0.12	0.31	13.6	343	312
6/10	1x120	12.9	0.153	20.9	22.1	23.5	2.0	27.5	31.0	1699	372	0.11	0.34	17.2	392	355
6/10	1x150	14.2	0.124	22.3	23.5	24.9	2.0	28.9	32.6	1990	391	0.11	0.37	21.5	447	398
6/10	1x185	15.8	0.0991	23.8	25.0	26.5	2.0	30.5	34.2	2361	410	0.11	0.40	26.5	510	445
6/10	1x240	18.2	0.0754	26.4	27.6	28.9	2.0	32.9	36.8	2953	441	0.10	0.45	34.4	607	516
6/10	1x300	20.5	0.0601	29.0	30.1	31.6	2.0	35.6	39.6	3607	475	0.10	0.50	43.0	696	582
6/10	1x400	22.9	0.0470	31.4	32.5	34.0	2.0	38.0	42.2	4441	507	0.10	0.55	>50.0	796	659
6/10	1x500	26.2	0.0366	34.6	35.7	37.3	2.5	42.3	46.7	5593	560	0.09	0.61	>50.0	923	741
6/10	1x630	29.9	0.0283	38.9	40.1	41.6	2.5	46.6	51.2	7111	614	0.09	0.70	>50.0	1067	833
RE4H1(AR)E																
8.7/15	1x50	8.1	0.387	18.4	19.6	20.8	2.0	24.8	28.3	1024	339	0.14	0.20	7.2	231	213
8.7/15	1x70	9.8	0.268	19.9	21.1	22.5	2.0	26.5	30.0	1256	360	0.13	0.22	10.0	286	261
8.7/15	1x95	11.4	0.193	21.6	22.8	24.1	2.0	28.1	31.8	1554	381	0.12	0.25	13.6	348	312
8.7/15	1x120	12.9	0.153	23.1	24.2	25.6	2.0	29.6	33.3	1813	399	0.12	0.27	17.2	398	355
8.7/15	1x150	14.2	0.124	24.5	25.6	27.0	2.0	31.0	34.8	2112	418	0.11	0.29	21.5	452	398
8.7/15	1x185	15.8	0.0991	26.0	27.2	28.6	2.0	32.6	36.4	2489	437	0.11	0.32	26.5	517	446
8.7/15	1x240	18.2	0.0754	28.6	29.8	31.0	2.0	35.0	39.0	3092	468	0.11	0.36	34.4	613	517
8.7/15	1x300	20.5	0.0601	31.2	32.3	33.6	2.0	37.6	41.9	3760	502	0.10	0.40	43.0	702	583
8.7/15	1x400	22.9	0.0470	33.6	34.7	36.1	2.5	41.1	45.5	4649	546	0.10	0.43	>50.0	803	657
8.7/15	1x500	26.2	0.0366	36.8	37.9	39.3	2.5	44.3	48.9	5765	587	0.10	0.48	>50.0	930	742
8.7/15	1x630	29.9	0.0283	41.1	42.3	43.7	2.5	48.7	53.5	7302	642	0.10	0.55	>50.0	1074	836
RE4H1(AR)E																
12/20	1x50	8.1	0.387	20.4	21.6	22.7	2.0	26.7	30.2	1109	362	0.14	0.17	7.2	234	213
12/20	1x70	9.8	0.268	21.9	23.1	24.4	2.0	28.4	32.1	1358	385	0.13	0.19	10.0	289	261
12/20	1x95	11.4	0.193	23.6	24.8	26.0	2.0	30.0	33.7	1650	404	0.13	0.22	13.6	352	312
12/20	1x120	12.9	0.153	25.1	26.2	27.5	2.0	31.5	35.3	1928	424	0.12	0.24	17.2	402	355
12/20	1x150	14.2	0.124	26.5	27.6	28.8	2.0	32.8	36.7	2216	440	0.12	0.25	21.5	457	397
12/20	1x185	15.8	0.0991	28.0	29.2	30.5	2.0	34.5	38.5	2617	462	0.11	0.27	26.5	521	446
12/20	1x240	18.2	0.0754	30.6	31.8	32.9	2.0	36.9	41.1	3226	493	0.11	0.30	34.4	617	517
12/20	1x300	20.5	0.0601	33.2	34.3	35.5	2.0	39.5	43.8	3884	525	0.11	0.34	43.0	707	583
12/20	1x400	22.9	0.0470	35.6	36.7	38.0	2.5	43.0	47.4	4783	569	0.10	0.37	>50.0	807	658
12/20	1x500	26.2	0.0366	38.8	39.9	41.2	2.5	46.2	51.0	5933	612	0.10	0.41	>50.0	935	744
12/20	1x630	29.9	0.0283	43.1	44.3	45.6	2.5	50.6	55.6	7482	667	0.10	0.46	>50.0	1080	838
RE4H1(AR)E																
18/30	1x50	8.1	0.387	25.4	26.5	27.4	2.0	31.4	35.3	1371	423	0.15	0.14	7.2	240	213
18/30	1x70	9.8	0.268	26.9	28.1	29.1	2.0	33.1	37.2	1640	446	0.14	0.15	10.0	295	261
18/30	1x95	11.4	0.193	28.8	29.8	30.7	2.0	34.7	38.8	1944	465	0.14	0.17	13.6	359	312
18/30	1x120	12.9	0.153	30.1	31.2	32.2	2.0	36.2	40.4	2242	485	0.13	0.18	17.2	409	355
18/30	1x150	14.2	0.124	31.5	32.6	33.6	2.0	37.6	41.8	2535	501	0.13	0.19	21.5	464	397
18/30	1x185	15.8	0.0991	33.0	34.2	35.2	2.5	40.2	44.6	2999	535	0.12	0.21	26.5	529	446
18/30	1x240	18.2	0.0754	35.6	36.8	37.6	2.5	42.6	47.0	3617	564	0.12	0.23	34.4	624	520
18/30	1x300	20.5	0.0601	38.2	39.3	40.3	2.5	45.3	49.9	4313	598	0.11	0.25	43.0	714	584
18/30	1x400	22.9	0.0470	40.6	41.7	42.7	2.5	47.7	52.5	5185	630	0.11	0.27	>50.0	816	659
18/30	1x500	26.2	0.0366	43.8	44.9	46.0	2.5	51.0	55.9	6344	671	0.11	0.30	>50.0	943	747
18/30	1x630	29.9	0.0283	48.1	49.3	50.3	2.5	55.3	60.5	7914	726	0.10	0.34	>50.0	1089	843

(*) trefoil formation

TRATOS® PETROCHEMICAL CABLES

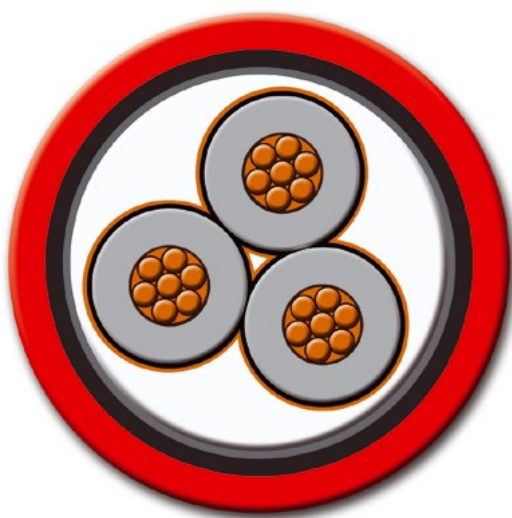
POWER CABLES

(XLPE/CuW/PSA/PE)

RE4H10(E)E from 3,6/6 (7,2) kV to 18/30 (36) kV - multi-core

Multi-core, triple extruded insulation, non-metallic mechanical protection, sheathed cable for fixed installations for use in Medium Voltage circuits at voltages up to 18/30 (36) kV, in the petroleum industry, chemical and petrochemical plants.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Semiconducting layer:** extruded compound
- **Insulation:** XLPE compound according to IEC 60502
- **Semiconducting layer:** extruded compound
- **Metallic screen:** copper tapes
- **Fillers:** non hygroscopic compound
- **Mechanical protective layer:** PSA QAM®
- **Sheath:** HDPE
- **Marking:** (ELECTRIC CABLE) + (Voltage Rating) + (IEC 60502-2) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-2 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant

(XLPE/CuW/PSA/PE) RE4H1O(E)E from 3,6/6 (7,2) kV to 18/30 (36) kV - multi-core

Voltage	Cross section	Conductor diam.	Max. DC resistance at 20 °C	Diam. over insulation approx	Diam. over screen approx	Diam. over separation sheath	Diam. of armour wires	Diam. over armour	Outer diam. approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Phase Capacitance approx	Conductor short-circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C. depth 1 m. gtr Km/W)
kV	mm ²	mm	Ω/km	mm	mm	mm	mm	mm	mm	kg/km	mm	Ω/km	μF/km	kA/sec	A	A
RE4H1O(AR)E																
3.6/6	3x35	7.0	0.524	13.2	14.4	32.0	2.0	36	40.1	2492	481	0.11	0.28	5.0	165	172
3.6/6	3x50	8.1	0.387	14.4	15.6	34.2	2.0	38.2	42.5	2987	510	0.10	0.31	7.2	196	201
3.6/6	3x70	9.8	0.268	15.9	17.1	37.9	2.5	42.9	47.3	3854	568	0.09	0.35	10.0	245	246
3.6/6	3x95	11.4	0.193	17.6	18.8	41.3	2.5	46.3	51.1	4873	614	0.09	0.40	13.6	298	294
3.6/6	3x120	12.9	0.153	19.1	20.3	44.6	2.5	49.6	54.5	5807	654	0.09	0.44	17.2	344	333
3.6/6	3x150	14.3	0.124	20.5	21.7	47.5	2.5	52.5	57.6	6800	692	0.09	0.47	21.5	391	374
3.6/6	3x185	15.7	0.0991	22.0	23.2	50.9	3.0	56.9	62.3	8166	747	0.08	0.52	26.5	447	421
3.6/6	3x240	18.4	0.0754	24.8	26.0	56.5	3.0	62.5	68.2	10285	818	0.08	0.57	34.4	527	486
3.6/6	3x300	20.5	0.0601	27.8	28.9	63.0	3.0	69.0	75.1	12733	901	0.08	0.59	43	602	545
RE4H1O(AR)E																
6/10	3x35	7.0	0.524	14.0	16.2	35.7	2.5	40.7	45.1	2895	541	0.11	0.20	5.0	167	171
6/10	3x50	8.1	0.387	16.2	17.4	37.9	2.5	42.9	47.5	3405	570	0.11	0.25	7.2	199	201
6/10	3x70	9.8	0.268	17.7	18.9	41.6	2.5	46.6	51.3	4263	616	0.10	0.28	10.0	248	246
6/10	3x95	11.4	0.193	19.4	20.6	45.0	2.5	50.0	55.0	5288	660	0.10	0.31	13.6	301	294
6/10	3x120	12.9	0.153	20.9	22.1	48.2	2.5	53.2	58.4	6249	701	0.09	0.34	17.2	347	333
6/10	3x150	14.3	0.124	22.3	23.5	51.1	3.0	57.1	62.5	7329	750	0.09	0.37	21.5	394	373
6/10	3x185	15.7	0.0991	23.8	25.0	54.6	3.0	60.6	66.1	8650	793	0.09	0.40	26.5	449	420
6/10	3x240	18.4	0.0754	26.4	27.6	59.7	3.0	65.7	71.7	10770	860	0.09	0.45	34.4	529	486
RE4H1O(AR)E																
8.7/15	3x35	7.0	0.524	17.2	18.4	40.1	2.5	45.1	49.9	3359	599	0.12	0.18	5.0	169	170
8.7/15	3x50	8.2	0.387	18.4	19.6	46.0	3.63	47.4	52.3	3900	628	0.11	0.20	7.2	202	201
8.7/15	3x70	9.7	0.268	19.9	21.1	49.5	2.5	51.0	56.2	4798	674	0.11	0.22	10.0	252	246
8.7/15	3x95	11.4	0.193	21.6	22.8	52.7	2.5	54.5	59.8	5856	718	0.10	0.25	13.6	305	294
8.7/15	3x120	12.9	0.153	23.1	24.2	55.6	3.0	58.7	64.3	6919	771	0.10	0.27	17.2	350	333
8.7/15	3x150	14.3	0.124	24.5	25.6	59.0	3.0	61.6	67.3	7952	808	0.10	0.29	21.5	396	372
8.7/15	3x185	15.8	0.0991	26.0	27.2	64.2	3.0	65.0	71.0	9324	852	0.09	0.32	26.5	531	421
RE4H1O(AR)E																
12/20	3x35	7.0	0.52	19.2	20.4	44.2	2.5	49.2	54.2	3810	650	0.13	0.16	5.0	172	170
12/20	3x50	8.2	0.39	20.4	21.6	46.4	2.5	51.4	56.6	4374	679	0.12	0.17	7.2	204	201
12/20	3x70	9.7	0.27	21.9	23.1	50.1	3.0	56.1	61.5	5364	737	0.11	0.19	10.0	253	246
12/20	3x95	11.4	0.19	23.6	24.8	53.6	3.0	59.6	65.1	6460	781	0.11	0.22	13.6	308	294
12/20	3x120	12.9	0.15	25.1	26.2	56.8	3.0	62.8	68.5	7471	822	0.10	0.24	17.2	353	332
12/20	3x150	14.3	0.12	26.5	27.6	59.7	3.0	65.7	71.6	8548	859	0.10	0.25	21.5	399	372
12/20	3x185	15.8	0.10	28.0	29.2	63.1	3.0	69.1	75.4	9984	905	0.10	0.27	26.5	454	419
RE4H1O(AR)E																
18/30	3X50	8.1	0.39	25.4	26.5	56.6	3.0	62.6	68.5	5814	822	0.13	0.14	7.2	207	200
18/30	3X70	9.8	0.27	26.9	28.1	60.3	3.0	66.3	72.4	6826	868	0.13	0.15	10.0	257	244

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/Pb/PVC)

RE4LR from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Single core, triple extruded insulation, lead sheathed power cable for indoor and outdoor installations in the petroleum industry, chemical and petrochemical plant in and around process plants where hydrocarbons are present.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Semiconducting layer:** extruded compound
- **Insulation:** XLPE compound according to IEC 60502
- **Semiconducting layer:** extruded compound
- **Metallic sheath:** lead alloy
- **Sheath:** PVC
- **Marking:** (ELECTRIC CABLE) + (Voltage Rating) + (IEC 60502-2) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-2 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant

(XLPE/Pb/PVC) RE4LR from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation approx	Diameter over screen approx	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Phase capacitance approx	Conductor short - circuit current	Current rating in air at 30 °C	Current rating in ground at 20 °C (gr. therm.res. 1 Km/W; depth of laying 0.8 m)
kV	mm ²	mm	Ω/km	mm	mm	mm	kg/km	mm	Ω/km	μF/km	kA/sec	A	A
RE4LR													
6/10	1x35	7.0	0.524	14.0	16.2	21.5	1385	344	0.13	0.20	5.0	194	189
6/10	1x50	8.1	0.387	16.2	17.4	22.6	1566	361	0.12	0.25	7.2	232	224
6/10	1x70	9.8	0.268	17.7	18.9	24.7	1943	394	0.12	0.28	10.0	292	274
6/10	1x95	11.4	0.193	19.4	20.6	26.3	2290	420	0.11	0.31	13.6	357	328
6/10	1x120	12.9	0.153	20.9	22.1	28.2	2713	450	0.11	0.34	17.2	413	373
6/10	1x150	14.3	0.124	22.3	23.5	29.5	3053	472	0.10	0.37	21.5	470	419
6/10	1x185	15.7	0.0991	23.8	25.0	31.5	3607	504	0.10	0.40	26.5	539	471
6/10	1x240	18.4	0.0754	26.4	27.6	34.1	4322	545	0.10	0.45	34.4	635	541
6/10	1x300	20.5	0.0601	29.0	30.1	36.9	5203	591	0.10	0.5	43.0	732	610
6/10	1x400	22.9	0.0470	31.4	32.5	40.0	6309	639	0.09	0.55	>50.0	846	684
6/10	1x500	26.2	0.0366	34.6	35.7	43.6	7736	697	0.09	0.61	>50.0	971	772
6/10	1x630	29.9	0.0283	38.9	40.1	48.1	9509	770	0.09	0.70	>50.0	1112	859
RE4LR													
12/20	1x35	7.0	0.524	19.2	20.4	25.9	1795	414	0.14	0.16	5.0	201	189
12/20	1x50	8.1	0.387	20.4	21.6	27.3	2084	437	0.13	0.17	7.2	241	224
12/20	1x70	9.8	0.268	21.9	23.1	29.0	2398	464	0.13	0.19	10.0	300	274
12/20	1x95	11.4	0.193	23.6	24.8	31.0	2872	496	0.12	0.22	13.6	366	329
12/20	1x120	12.9	0.153	25.1	26.2	32.5	3214	520	0.12	0.24	17.2	423	373
12/20	1x150	14.3	0.124	26.5	27.6	34.0	3583	545	0.11	0.25	21.5	481	418
12/20	1x185	15.7	0.0991	28.0	29.2	35.8	4155	573	0.11	0.27	26.5	551	472
12/20	1x240	18.4	0.0754	30.6	31.8	38.4	4893	615	0.10	0.30	34.4	645	542
12/20	1x300	20.5	0.0601	33.2	34.3	41.5	5836	664	0.10	0.34	43.0	743	611
12/20	1x400	22.9	0.0470	35.6	36.7	44.3	6965	709	0.10	0.37	>50.0	857	686
12/20	1x500	26.2	0.0366	38.8	39.9	47.9	8442	767	0.10	0.41	>50.0	983	776
12/20	1x630	29.9	0.0283	43.1	44.3	52.7	10428	843	0.09	0.46	>50.0	1125	865

(*) trefoil formation

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/CuT/Pb/PVC)

RE4H1HOLR from 3,6/6 (7,2) kV to 18/30 (36) kV - multi-core

Multi-core, triple extruded insulation, lead sheathed power cable for indoor and outdoor installations in the petroleum industry, chemical and petrochemical plant in and around process plants where hydrocarbons are present.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Semiconducting layer:** extruded compound
- **Insulation:** XLPE compound according to IEC 60502
- **Semiconducting layer:** extruded compound
- **Metallic screen:** copper tapes
- **Fillers:** non hygroscopic compound
- **Metallic sheath:** lead alloy
- **Sheath:** PVC
- **Marking:** (ELECTRIC CABLE) + (Voltage Rating) + (IEC 60502-2) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-2 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant

(XLPE/CuT/Pb/PVC) RE4H1HOLR from 3,6/6 (7,2) kV to 18/30 (36) kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation approx	Diameter over screen approx	Diameter over extruded inner covering	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Phase capacitance approx	Conductor short-circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C, depth 1 m, gtr Km/W)
kV	mm ²	mm	Ω/km	mm	mm	mm	mm	kg/km	mm	Ω/km	μF/km	kA/sec	A	A
RE4H1OLR														
6/10	3x35	7.0	0.524	14.0	16.2	36.6	46.0	5439	737	0.11	0.20	5.0	184	181
6/10	3x50	8.1	0.387	16.2	17.4	39.0	48.7	6264	779	0.11	0.25	7.2	218	212
6/10	3x70	9.8	0.268	17.7	18.9	42.4	52.7	7534	844	0.10	0.28	10.0	271	259
6/10	3x95	11.4	0.193	19.4	20.6	46.0	56.7	9018	908	0.10	0.31	13.6	327	308
6/10	3x120	12.9	0.153	20.9	22.1	49.2	60.4	10421	966	0.09	0.34	17.2	374	348
6/10	3x150	14.3	0.124	22.3	23.5	52.6	63.7	11873	1019	0.09	0.37	21.5	423	389
6/10	3x185	15.7	0.0991	23.8	25.0	55.8	67.5	13694	1080	0.09	0.40	26.5	482	439
6/10	3x240	18.4	0.00754	26.4	27.6	61.4	73.2	16503	1172	0.09	0.45	34.4	563	501
6/10	3x300	20.5	0.0601	29.0	30.1	66.9	80.1	19821	1282	0.08	0.50	43.0	635	557
6/10	3x400	22.9	0.0470	31.4	32.5	72.5	86.4	23839	1382	0.08	0.55	>50.0	717	620
RE4H1OLR														
12/20	3x35	7.0	0.524	19.2	20.4	45.6	55.9	7472	895	0.13	0.16	5.0	187	180
12/20	3x50	8.2	0.387	20.4	21.6	48.1	58.6	8409	937	0.12	0.17	7.2	222	212
12/20	3x70	9.7	0.268	21.9	23.1	51.4	62.6	9823	1002	0.11	0.19	10.0	275	258
12/20	3x95	11.4	0.193	23.6	24.8	55.4	66.5	11418	1064	0.11	0.22	13.6	331	307
12/20	3x120	12.9	0.153	25.1	26.2	58.5	69.9	12703	1118	0.10	0.24	17.2	379	347
12/20	3x150	14.3	0.124	26.5	27.6	61.5	73.2	14267	1171	0.10	0.25	21.5	426	386
12/20	3x185	15.8	0.0991	28.0	29.2	64.9	77.8	16452	1244	0.10	0.27	26.5	485	436
12/20	3x240	18.4	0.00754	30.6	31.8	70.5	83.7	19722	1340	0.09	0.30	34.4	564	498
12/20	3x300	20.6	0.0601	33.2	34.3	76.4	90.4	23202	1447	0.09	0.34	43.0	635	557
12/20	3x400	23.0	0.0470	35.6	36.7	81.5	96.5	27420	1544	0.09	0.37	>50.0	717	620

TRATOS® PETROCHEMICAL CABLES

POWER CABLES

(XLPE/TratosCB®/PVC)

RE4H5R4R from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Single core, triple extruded insulation, power cable for indoor and outdoor installations in the petroleum industry, chemical and petrochemical plant in and around process plants where hydrocarbons are present without using Lead.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Semiconducting layer:** extruded compound
- **Insulation:** XLPE compound according to IEC 60502
- **Semiconducting layer:** extruded compound
- **Chemical moisture barrier:** longitudinally applied Al tape bonded with extruded chemical resistant polymeric layer
- **Sheath:** PVC
- **Marking:** (ELECTRIC CABLE) + (Voltage Rating) + (IEC 60502-2) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-2 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant

(XLPE/TratosCB®/PVC) RE4H5R4R from 3,6/6 (7,2) kV to 18/30 (36) kV - single core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diameter over insulation approx	Diameter over screen approx	Outer diameter approx	Weight of cable approx	Phase reactance at 50 Hz approx (*)	Phase capacitance approx	Conductor short-circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C. depth 1 m. gtr Km/W)
kV	mm ²	mm	Ω/km	mm	mm	mm	kg/km	Ω/km	μF/km	kA/sec	A	A
RE4H5R4R												
6/10	1x35	7.0	0.524	14.0	16.2	21.5	691	0.13	0.20	5.0	189	186
6/10	1x50	8.1	0.387	16.2	17.4	22.5	829	0.12	0.25	7.2	226	219
6/10	1x70	9.8	0.268	17.7	18.9	24.4	1059	0.12	0.28	10	284	269
6/10	1x95	11.4	0.193	19.4	20.6	26.0	1334	0.11	0.31	13.6	347	321
6/10	1x120	12.9	0.153	20.9	22.1	27.7	1601	0.11	0.34	17.2	401	366
6/10	1x150	14.3	0.124	22.3	23.5	29.0	1875	0.10	0.37	21.5	457	410
6/10	1x185	15.7	0.0991	23.8	25.0	30.8	2254	0.10	0.40	26.5	524	462
6/10	1x240	18.4	0.0754	26.4	27.6	33.4	2842	0.10	0.45	34.4	623	532
6/10	1x300	20.5	0.0601	29.0	30.1	36.2	3479	0.09	0.50	43.0	714	600
6/10	1x400	22.9	0.0470	31.4	32.5	39.1	4322	0.09	0.55	>50.0	824	679
6/10	1x500	26.2	0.0366	34.6	35.7	42.5	5415	0.09	0.61	>50.0	951	766
6/10	1x630	29.9	0.0283	38.9	40.1	47.0	6915	0.09	0.70	>50.0	1091	855
RE4H5R4R												
12/20	1x35	7.0	0.524	19.2	20.4	25.6	857	0.14	0.16	5.0	196	186
12/20	1x50	8.1	0.387	20.4	21.6	26.9	1014	0.13	0.17	7.2	234	219
12/20	1x70	9.8	0.268	21.9	23.1	28.6	1245	0.13	0.19	10	292	269
12/20	1x95	11.4	0.193	23.6	24.8	30.3	1543	0.12	0.22	13.6	356	322
12/20	1x120	12.9	0.153	25.1	26.2	31.8	1806	0.12	0.24	17.2	411	366
12/20	1x150	14.3	0.124	26.5	27.6	33.4	2105	0.11	0.25	21.5	467	409
12/20	1x185	15.7	0.0991	28.0	29.2	35.0	2479	0.11	0.27	26.5	535	463
12/20	1x240	18.4	0.0754	30.6	31.8	37.7	3096	0.10	0.30	34.4	633	533
12/20	1x300	20.5	0.0601	33.2	34.3	40.6	3758	0.10	0.34	43.0	725	601
12/20	1x400	22.9	0.0470	35.6	36.7	43.2	4600	0.10	0.37	>50.0	835	681
12/20	1x500	26.2	0.0366	38.8	39.9	46.7	5718	0.09	0.41	>50.0	963	768
12/20	1x630	29.9	0.0283	43.1	44.3	51.2	7248	0.09	0.46	>50.0	1104	860

(*) trefoil formation

TRATOS[®] PETROCHEMICAL CABLES

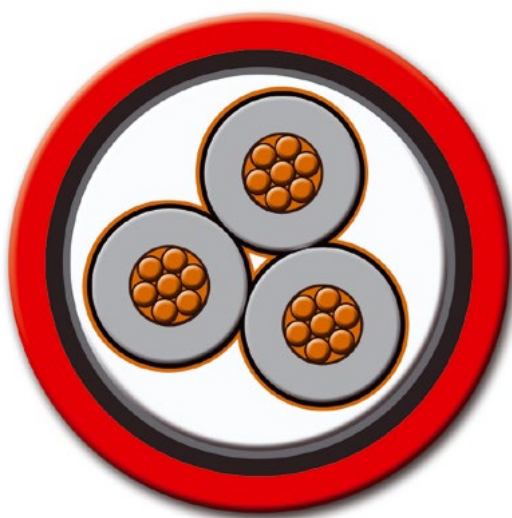
POWER CABLES

(XLPE/CuT/TratosCB[®]/PVC)

RE4H10H5R4R from 3,6/6 (7,2) kV to 18/30 (36) kV - multi-core

Multi-core, triple extruded insulation, power cable for indoor and outdoor installations in the petroleum industry, chemical and petrochemical plant in and around process plants where hydrocarbons are present without using Lead.

FEATURES AND PERFORMANCES



CONSTRUCTION

- **Conductor:** bare copper circular stranded, according to cl. 2 of BS EN 60228
- **Semiconducting layer:** extruded compound
- **Insulation:** XLPE compound according to IEC 60502
- **Semiconducting layer:** extruded compound
- **Metallic screen:** copper tapes
- **Fillers:** penetrating non hygroscopic compound
- **Chemical moisture barrier:** longitudinally applied Al tape bonded with extruded chemical resistant polymeric layer
- **Sheath:** PVC
- **Marking:** (ELECTRIC CABLE) + (Voltage Rating) + (IEC 60502-2) + (TRATOS) + (batch number) + (number of cores) + (size of conductor) + (Metre mark)

STANDARDS

- IEC 60502-2 Design and tests guidelines
- IEC 60228 Conductors
- IEC 60332-1 Flame retardant

(XLPE/CuT/TratosCB®/PVC) RE4H10H5R4R from 3,6/6 (7,2) kV to 18/30 (36) kV - multi-core

Voltage	Cross section	Conductor diameter	Maximum DC resistance at 20 °C	Diam. over insulation approx	Diam. over screen approx	Diam. over extruded inner covering	Outer diameter approx	Weight of cable approx	Min bending radius	Phase reactance at 50 Hz approx (*)	Phase capacitance approx	Conductor short - circuit current	Max current carrying capacity in air 30 °C (single core in trefoil format)	Max current carrying capacity in ground (T 20 °C, depth 1 m, gtr Km/W)
kV	mm ²	mm	Ω/km	mm	mm	mm	mm	kg/km	mm	Ω/km	μF/km	kA/sec	A	A
RE4H10H5R4R														
6/10	3x35	7.0	0.524	14.0	16.2	36.6	43.4	2796	610	0.11	0.20	5.0	190	181
6/10	3x50	8.1	0.387	16.2	17.4	39.0	45.8	3304	640	0.11	0.25	7.2	213	212
6/10	3x70	9.8	0.268	17.7	18.9	42.4	49.6	4133	700	0.10	0.28	10.0	265	259
6/10	3x95	11.4	0.193	19.4	20.6	46.0	53.3	5137	750	0.10	0.31	13.6	320	308
6/10	3x120	12.9	0.153	20.9	22.1	49.2	57.3	6157	800	0.09	0.34	17.2	366	348
6/10	3x150	14.3	0.124	22.3	23.5	52.6	60.4	7156	850	0.09	0.37	21.5	414	389
6/10	3x185	15.7	0.0991	23.8	25	55.8	64.0	8449	900	0.09	0.40	26.5	473	435
6/10	3x240	18.4	0.0754	26.4	27.6	61.4	69.4	10500	970	0.09	0.45	34.4	552	501
6/10	3x300	20.5	0.0601	29.0	30.1	66.9	75.6	12838	1060	0.08	0.50	43.0	630	560
6/10	3x400	22.9	0.0470	31.4	32.5	72.5	81.3	15692	1140	0.08	0.55	>50.0	717	628
RE4H10H5R4R														
12/20	3x35	7.0	0.524	19.2	20.4	45.6	52.5	3660	720	0.13	0.16	5.0	183	180
12/20	3x50	8.2	0.387	20.4	21.6	48.1	55.3	4268	750	0.12	0.17	7.2	217	212
12/20	3x70	9.7	0.268	21.9	23.1	51.4	59.2	5166	800	0.11	0.19	10	269	258
12/20	3x95	11.4	0.193	23.6	24.8	55.4	63.0	6263	860	0.11	0.22	13.6	324	307
12/20	3x120	12.9	0.153	25.1	26.2	58.5	66.4	7250	910	0.10	0.24	17.2	371	347
12/20	3x150	14.3	0.124	26.5	27.6	61.5	69.5	8304	950	0.10	0.25	21.5	417	386
12/20	3x185	15.8	0.0991	28.0	29.2	64.9	73.3	9710	1000	0.10	0.27	26.5	476	432
12/20	3x240	18.4	0.0754	30.6	31.8	70.5	78.8	11882	1090	0.09	0.30	34.4	553	498
12/20	3x300	20.6	0.0601	33.2	34.3	76.4	84.7	14252	1170	0.09	0.34	43.0	630	560
12/20	3x400	23.0	0.0470	35.6	36.7	81.5	90.5	17229	1250	0.09	0.37	>50.0	717	628



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