ÜNTEL

Quality Through Experience

INSTRUMENTATION CABLES

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Instrumentation Cables for Petrochem and Onshore Plants

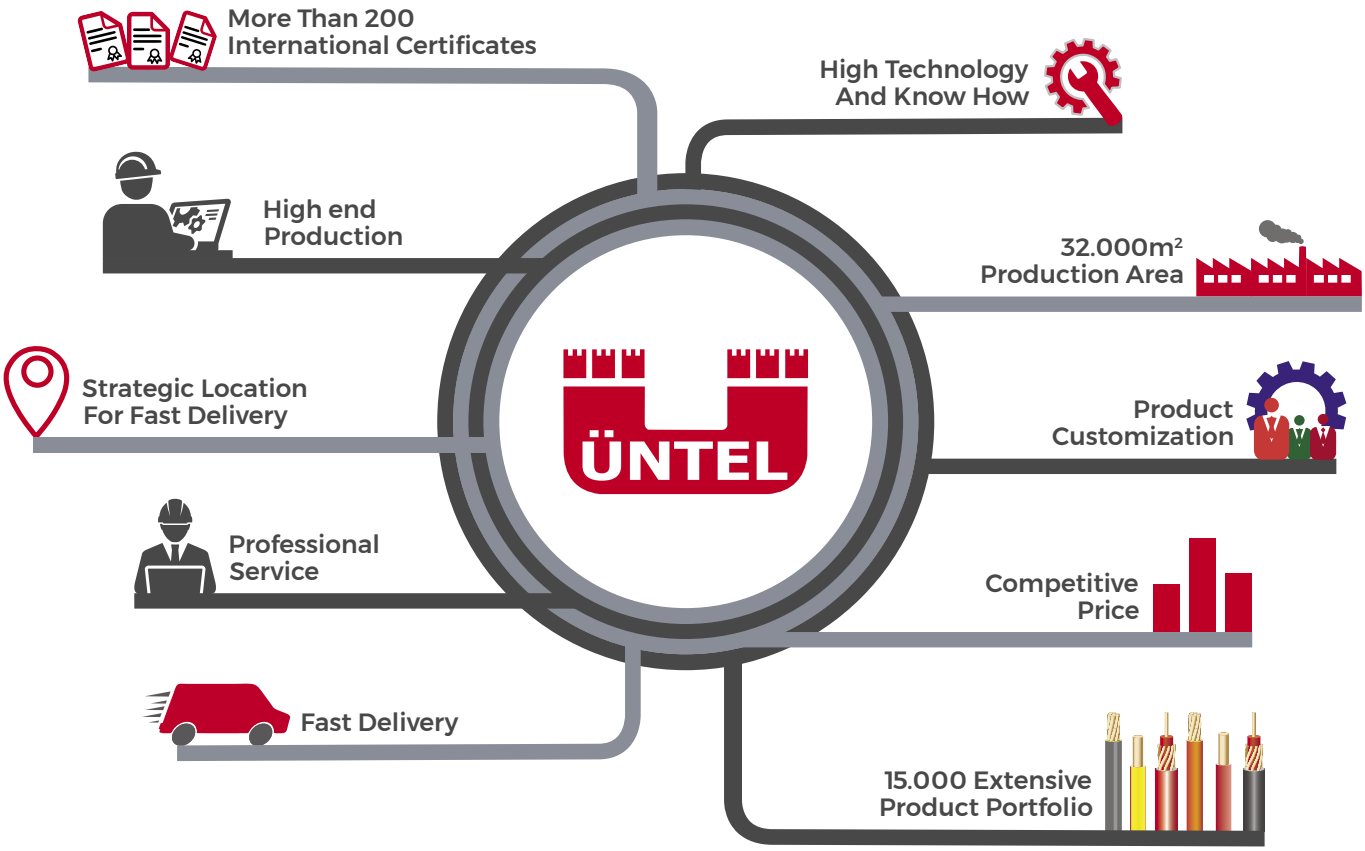
ÜNTEL

Quality Through Experience

ALMOST 50 YEARS IN PRODUCTION

ALMOST 50 YEARS IN PRODUCTION

Exporting Over 70 Countries on 6 Continents




Industrial Cables


Marine Cables


Mining Cables


Offshore Cables


Railway Cables


Airport Runway Cables


Defense Cables


Crane Cables

ABOUT US

ÜNTEL KABLO, one of leading cable manufacturers in the world was established in 1972, Turkey. With almost 50 years of experience, continuously develops and optimize her product range with the help of advanced technology and well trained staff.

Product range consists over 15.000 different types of cables, covers both rubber and thermoplastic cables up to Medium Voltage (MV) range. ÜNTEL's power and instrumentation cables supplies energy for industries which requires experience like marine, offshore, mines and tunnels, airports, railways and have been used in industrial ways such as heavy-duty rubber drum reeling cables, welding cables, control cables and fire resistant cables. ÜNTEL is also able to produce tailor made products for special purposes. Today these products are exported over 70 countries on six continents.

By the end of 2009, ÜNTEL finalized the investment of a new high-tech plant near Istanbul. Now continues her operations on 43.000 m2 land space with 32.000 m2 closed area. By having 3.000 tons copper drawing and 4.000 tons different type of compound processing capacity, ÜNTEL produces 30.000 tones of cable per year. By means of new factory building, state of the art machines and unique ERP system investments ÜNTEL aimed absolute customer satisfaction.

Üntel's laboratories which are approved by organisations that specify the standars are equipped with advanced technology test and measurement devices. Within the scope of Quality System Certificates there is a quality management system presents in Üntel according to ISO, IQnet and TSE quality standarts.. Around 200 different types of cables are certified by global organisations like VDE, KEMA, ABS, UL, BV, DNV-GL, RINA and TSE.

Üntel Kablo evaluate customer needs and expectations in a sectoral wiev and provide effective solutions with hundred percent customer satisfaction and qualified production philisopy. Üntel's biggest value is well trained and experienced staff and believe that exceptional quality comes through this experience.

INSTRUMENTATION CABLES

INSTRUMENTATION CABLES

Üntel Kablo is one of the leading manufacturer of instrumentation cables in Europe with decades of approved production quality

Instrumentation cables are designed to transmit signal without interference and used for mainly in measurement, control and supervision in process instruments, equipment, various communication and data acquisition systems, computer systems, digital control & measurement systems and also convey low energy electrical signals used for monitoring or controlling electrical power systems and their associated processes.

Our instrumentation cables are being produced to perform well in heavy industries like Power Plants, Factories, Oil & Gas, Onshore and Offshore, Chemical, Petrochemical, Cement, Iron & Steel industries

Üntel Kablo's instrumentation cables comply with the international standards like IEC 60502-1/2, EN 50288-7 and PAS 5308. Üntel manufactures also according to customer's specifications and specific cable features by design principles that developed throughout years of experience.

We always prefer to use high quality compounds and materials insure safety and durability of our instrumentation cable such as for insulation (PVC, PE, XLPE), inner and outer sheathing (PVC, PE, LSZH), armouring (galvanized steel wire and tape), screening (al-pet tapes), fire barrier (mica tape), chemical protection (Aluminium Tape/ High Density Polyethylene/Polyamide)

Nowadays due to environmental regulations Lead Sheath (used mainly for protection against aggressive petrochemicals) is replaced by new developed multi-layer sheathing consisting of AL/HDPE/PA layers. The multi-layer sheath cables produced by ÜNTEL have smaller diameter and lighter than the lead sheath cables and offers the advantage of easy handling and installation compare to Lead Sheath.

Since the compliance to standards, quality, safety, availability and reliability are vital and very important in plant engineering and heavy industries, all of the cables that leaving Üntel factory produced and tested according to related cable standards, project specifications and requirements that ensures the continuity of the industry without unexpected breakdowns

Continuously investing on Research & Development, being in the market with almost 50 years of experience, producing wide variety of cables with high tech equipment and having well trained staff enables Üntel to support its customer's requirements and needs by supplying the best quality products.

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RE-Y(St)Y-fl

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PVC compound to EN50290-2-21 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs.
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Multi core / Multi triple / Multi quad
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yw 105°C version
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	100					
Mutual Capacitance	max.	nF/km	250					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	6,0	47
2x2x0,5	8,8	81
4x2x0,5	10,3	126
5x2x0,5	11,2	148
6x2x0,5	12,1	170
8x2x0,5	13,7	218
10x2x0,5	15,6	269
12x2x0,5	16,1	305
16x2x0,5	17,8	382
20x2x0,5	20,0	471
24x2x0,5	22,2	562
1x2x0,75	6,7	58
2x2x0,75	10,0	105
4x2x0,75	11,5	160
5x2x0,75	12,7	195
6x2x0,75	13,8	226
8x2x0,75	15,6	289
10x2x0,75	17,6	349
12x2x0,75	18,4	408
16x2x0,75	20,3	514
20x2x0,75	22,8	634
24x2x0,75	25,4	757
1x2x1	6,9	63
2x2x1	10,3	116
4x2x1	11,9	180
5x2x1	13,1	220
6x2x1	14,3	255
8x2x1	16,2	329
10x2x1	18,4	406
12x2x1	19,0	465
16x2x1	21,3	601
20x2x1	23,9	740
24x2x1	26,6	884

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	7,5	76
2x2x1,3	10,9	134
4x2x1,3	12,9	221
5x2x1,3	14,0	263
6x2x1,3	15,4	313
8x2x1,3	17,3	396
10x2x1,3	19,7	491
12x2x1,3	20,4	565
16x2x1,3	22,8	731
20x2x1,3	25,6	903
24x2x1,3	28,5	1079
1x2x1,5	7,7	81
2x2x1,5	11,3	144
4x2x1,5	13,3	239
5x2x1,5	14,5	285
6x2x1,5	15,9	339
8x2x1,5	18,1	439
10x2x1,5	20,4	533
12x2x1,5	21,3	625
16x2x1,5	23,8	809
20x2x1,5	26,7	998
24x2x1,5	29,7	1191
1x2x2,5	8,9	110
2x2x2,5	13,4	206
4x2x2,5	15,9	350
5x2x2,5	17,3	420
6x2x2,5	19,1	501
8x2x2,5	21,7	650
10x2x2,5	24,7	805
12x2x2,5	25,6	933
16x2x2,5	28,6	1211
20x2x2,5	32,3	1513
24x2x2,5	36,0	1806

RE-Y(St)Y-fl PIMF

Individually Screened
Unarmoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PVC compound to EN50290-2-21 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yw 105°C version
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	100					
Mutual Capacitance	max.	nF/km	250					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x0,5	10,1	102
4x2x0,5	11,7	156
5x2x0,5	13,0	190
6x2x0,5	14,1	220
8x2x0,5	16,0	284
10x2x0,5	18,2	351
12x2x0,5	18,8	400
16x2x0,5	21,1	516
20x2x0,5	23,7	636
24x2x0,5	26,4	759
2x2x0,75	11,2	122
4x2x0,75	13,2	197
5x2x0,75	14,4	234
6x2x0,75	16,0	279
8x2x0,75	18,1	360
10x2x0,75	20,6	445
12x2x0,75	21,3	509
16x2x0,75	24,0	567
20x2x0,75	26,8	809
24x2x0,75	30,0	966
2x2x1	11,6	133
4x2x1	13,7	218
5x2x1	15,0	260
6x2x1	16,5	310
8x2x1	18,7	400
10x2x1	21,4	532
12x2x1	22,1	569
16x2x1	24,7	735
20x2x1	27,8	907
24x2x1	31,0	1084

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x1,3	12,5	158
4x2x1,3	14,5	254
5x2x1,3	16,1	311
6x2x1,3	17,6	363
8x2x1,3	20,0	470
10x2x1,3	23,0	584
12x2x1,3	23,8	683
16x2x1,3	26,7	884
20x2x1,3	30,0	1090
24x2x1,3	33,4	1302
2x2x1,5	13,0	168
4x2x1,5	15,2	279
5x2x1,5	16,6	334
6x2x1,5	18,3	398
8x2x1,5	20,8	515
10x2x1,5	23,8	638
12x2x1,5	24,6	735
16x2x1,5	27,5	951
20x2x1,5	30,9	1175
24x2x1,5	34,7	1420
2x2x2,5	15,3	234
4x2x2,5	18,1	395
5x2x2,5	19,8	475
6x2x2,5	21,8	566
8x2x2,5	24,8	734
10x2x2,5	28,4	911
12x2x2,5	29,6	1069
16x2x2,5	33,1	1385
20x2x2,5	37,4	1728
24x2x2,5	41,7	2062

RE-Y(St)Y-fl TIMF

Individually Screened
Unarmoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PVC compound to EN50290-2-21 Black / White / Red twisted triads with numbered cores
Binder Tape	Polyester foil on each twisted triad
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded triples
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yw 105°C version
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	100					
Mutual Capacitance	max.	nF/km	250					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x0,5	11,0	123
4x3x0,5	13,0	201
5x3x0,5	14,2	240
6x3x0,5	15,6	285
8x3x0,5	17,5	360
10x3x0,5	20,1	447
12x3x0,5	20,9	523
16x3x0,5	23,4	675
20x3x0,5	26,3	832
24x3x0,5	29,3	994
2x3x0,75	12,1	150
4x3x0,75	14,4	251
5x3x0,75	15,9	307
6x3x0,75	17,3	358
8x3x0,75	19,7	464
10x3x0,75	22,5	575
12x3x0,75	23,5	674
16x3x0,75	26,3	871
20x3x0,75	29,5	1075
24x3x0,75	32,9	1284
2x3x1	12,7	172
4x3x1	14,8	280
5x3x1	16,4	344
6x3x1	18,1	410
8x3x1	20,3	521
10x3x1	23,5	659
12x3x1	24,3	761
16x3x1	27,2	986
20x3x1	30,5	1217
24x3x1	34,2	1471

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x1,3	13,5	200
4x3x1,3	15,9	338
5x3x1,3	17,4	407
6x3x1,3	19,2	486
8x3x1,3	21,8	631
10x3x1,3	25,0	784
12x3x1,3	26,0	921
16x3x1,3	29,1	1195
20x3x1,3	32,7	1477
24x3x1,3	36,5	1764
2x3x1,5	14,0	214
4x3x1,5	16,6	366
5x3x1,5	18,4	450
6x3x1,5	20,1	526
8x3x1,5	22,8	684
10x3x1,5	26,3	962
12x3x1,5	27,2	1000
16x3x1,5	30,5	1300
20x3x1,5	34,4	1621
24x3x1,5	38,4	1936
2x3x2,5	16,7	304
4x3x2,5	19,8	528
5x3x2,5	21,9	650
6x3x2,5	24,1	775
8x3x2,5	27,4	1010
10x3x2,5	31,6	1267
12x3x2,5	32,7	1473
16x3x2,5	36,8	1935
20x3x2,5	41,3	2391
24x3x2,5	46,3	2877

RE-Y(St)YSWAY-fl

Collectively Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PVC compound to EN50290-2-21 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	PVC compound to EN50290-2-22
Armour	Round galvanised steel wires EN 10257-1
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yw 105°C version
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version
- Multi core / Multi triple / Multi quad

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	100					
Mutual Capacitance	max.	nF/km	250					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	10,9	230
2x2x0,5	13,4	318
4x2x0,5	14,9	390
5x2x0,5	15,8	436
6x2x0,5	16,7	480
8x2x0,5	18,3	558
10x2x0,5	20,7	753
12x2x0,5	21,4	812
16x2x0,5	23,1	940
20x2x0,5	25,3	1092
24x2x0,5	27,3	1224
1x2x0,75	11,5	255
2x2x0,75	14,6	365
4x2x0,75	16,1	455
5x2x0,75	17,1	506
6x2x0,75	18,4	567
8x2x0,75	20,7	773
10x2x0,75	22,9	905
12x2x0,75	23,5	970
16x2x0,75	25,6	1137
20x2x0,75	27,9	1320
24x2x0,75	30,5	1510
1x2x1	11,7	266
2x2x1	14,9	383
4x2x1	16,5	485
5x2x1	17,7	547
6x2x1	18,9	610
8x2x1	21,5	846
10x2x1	23,5	967
12x2x1	24,1	1040
16x2x1	26,4	1238
20x2x1	29,0	1454
24x2x1	32,2	1838

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	12,1	284
2x2x1,3	15,5	416
4x2x1,3	17,5	546
5x2x1,3	18,6	610
6x2x1,3	19,8	680
8x2x1,3	22,6	940
10x2x1,3	24,8	1088
12x2x1,3	25,7	1200
16x2x1,3	27,9	1417
20x2x1,3	30,7	1670
24x2x1,3	34,7	2155
1x2x1,5	12,3	295
2x2x1,5	15,9	430
4x2x1,5	17,9	572
5x2x1,5	19,1	646
6x2x1,5	21,0	834
8x2x1,5	23,2	988
10x2x1,5	25,7	1167
12x2x1,5	26,4	1263
16x2x1,5	28,9	1512
20x2x1,5	32,3	1953
24x2x1,5	35,7	2292
1x2x2,5	13,5	347
2x2x2,5	18,0	540
4x2x2,5	21,0	845
5x2x2,5	22,6	964
6x2x2,5	24,2	1085
8x2x2,5	26,8	1300
10x2x2,5	29,8	1533
12x2x2,5	30,7	1696
16x2x2,5	34,8	2288
20x2x2,5	38,3	2696
24x2x2,5	42,0	3110

RE-Y(St)YSWAY-fl PIMF

Individually Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PVC compound to EN50290-2-21 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	PVC compound to EN50290-2-22
Armour	Round galvanised steel wires to EN 10257-1
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yw 105°C version
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	100					
Mutual Capacitance	max.	nF/km	250					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x0,5	14,7	367
4x2x0,5	16,3	458
5x2x0,5	17,5	522
6x2x0,5	18,7	575
8x2x0,5	21,3	798
10x2x0,5	23,3	920
12x2x0,5	23,9	982
16x2x0,5	26,2	1163
20x2x0,5	28,6	1336
24x2x0,5	32,0	1725
2x2x0,75	15,8	415
4x2x0,75	17,8	536
5x2x0,75	19,0	596
6x2x0,75	21,0	782
8x2x0,75	23,2	918
10x2x0,75	25,7	1080
12x2x0,75	26,4	1158
16x2x0,75	29,0	1382
20x2x0,75	32,6	1795
24x2x0,75	35,9	2084
2x2x1	16,2	434
4x2x1	18,3	565
5x2x1	19,5	635
6x2x1	21,8	837
8x2x1	23,8	980
10x2x1	26,5	1145
12x2x1	27,2	1243
16x2x1	29,8	1476
20x2x1	33,6	1930
24x2x1	37,2	2260

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x1,3	16,9	468
4x2x1,3	19,1	620
5x2x1,3	21,4	826
6x2x1,3	22,9	927
8x2x1,3	25,3	1100
10x2x1,3	28,0	1282
12x2x1,3	28,9	1396
16x2x1,3	32,3	1853
20x2x1,3	35,9	2208
24x2x1,3	39,4	2543
2x2x1,5	17,5	500
4x2x1,5	19,6	648
5x2x1,5	21,9	870
6x2x1,5	23,4	967
8x2x1,5	25,9	1150
10x2x1,5	28,9	1353
12x2x1,5	29,7	1475
16x2x1,5	33,3	1957
20x2x1,5	37,1	2350
24x2x1,5	40,7	3170
2x2x2,5	19,7	610
4x2x2,5	23,2	953
5x2x2,5	25,1	1095
6x2x2,5	26,9	1228
8x2x2,5	29,9	1486
10x2x2,5	34,6	2000
12x2x2,5	35,6	2185
16x2x2,5	39,1	2608
20x2x2,5	44,2	3404
24x2x2,5	48,9	3964

RE-Y(St)YSWAY-fl TIMF

Individually Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PVC compound to EN50290-2-21 Black / White / Red twisted triads with numbered cores
Binder Tape	Polyester foil on each twisted triad
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	PVC compound to EN50290-2-22
Armour	Round galvanised steel wires to EN 10257-1
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yw 105°C version
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	100					
Mutual Capacitance	max.	nF/km	250					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x0,5	15,6	410
4x3x0,5	17,6	530
5x3x0,5	18,8	600
6x3x0,5	20,7	780
8x3x0,5	22,8	824
10x3x0,5	25,4	1080
12x3x0,5	26,0	1160
16x3x0,5	28,3	1374
20x3x0,5	31,2	1610
24x3x0,5	35,3	2092
2x3x0,75	16,7	465
4x3x0,75	19,0	613
5x3x0,75	21,0	810
6x3x0,75	22,6	910
8x3x0,75	24,8	1070
10x3x0,75	27,6	1260
12x3x0,75	28,4	1374
16x3x0,75	31,2	1650
20x3x0,75	35,5	2175
24x3x0,75	38,9	2506
2x3x1	17,1	488
4x3x1	19,4	655
5x3x1	21,7	870
6x3x1	23,2	968
8x3x1	25,6	1155
10x3x1	28,4	1360
12x3x1	29,4	1500
16x3x1	33,0	1990
20x3x1	36,7	2375
24x3x1	40,2	2736

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x1,3	18,1	540
4x3x1,3	21,0	842
5x3x1,3	22,7	960
6x3x1,3	24,3	1080
8x3x1,3	26,9	1295
10x3x1,3	30,1	1538
12x3x1,3	31,0	1686
16x3x1,3	35,1	2294
20x3x1,3	38,7	2698
24x3x1,3	42,5	3110
2x3x1,5	18,6	568
4x3x1,5	21,9	904
5x3x1,5	23,5	1020
6x3x1,5	25,4	1160
8x3x1,5	27,9	1383
10x3x1,5	31,2	1640
12x3x1,5	33,0	2004
16x3x1,5	36,7	2456
20x3x1,5	40,4	2890
24x3x1,5	45,2	3645
2x3x2,5	22,0	842
4x3x2,5	25,1	1150
5x3x2,5	27,0	1323
6x3x2,5	29,2	1502
8x3x2,5	33,2	2015
10x3x2,5	37,6	2448
12x3x2,5	38,7	2695
16x3x2,5	43,4	3560
20x3x2,5	48,5	4268
24x3x2,5	53,3	4948

RE-2Y(St)Y-fl

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PE-Polyethylene compound to EN50290-2-23 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs.
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Multi core / Multi triple / Multi quad
- Hydrocarbon resistant
- Oil resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	6,0	44
2x2x0,5	8,8	76
4x2x0,5	10,3	115
5x2x0,5	11,2	134
6x2x0,5	12,1	153
8x2x0,5	13,7	196
10x2x0,5	15,6	241
12x2x0,5	16,1	272
16x2x0,5	17,8	338
20x2x0,5	20,0	416
24x2x0,5	22,2	495
1x2x0,75	6,7	54
2x2x0,75	10,0	98
4x2x0,75	11,5	146
5x2x0,75	12,7	177
6x2x0,75	13,8	204
8x2x0,75	15,6	261
10x2x0,75	17,6	313
12x2x0,75	18,4	365
16x2x0,75	20,3	456
20x2x0,75	22,8	562
24x2x0,75	25,4	671
1x2x1	6,9	59
2x2x1	10,3	108
4x2x1	11,9	165
5x2x1	13,1	201
6x2x1	14,3	233
8x2x1	16,2	300
10x2x1	18,4	370
12x2x1	19,0	420
16x2x1	21,3	540
20x2x1	23,9	665
24x2x1	26,6	793

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	7,5	72
2x2x1,3	10,9	126
4x2x1,3	12,9	204
5x2x1,3	14,0	242
6x2x1,3	15,4	288
8x2x1,3	17,3	362
10x2x1,3	19,7	448
12x2x1,3	20,4	514
16x2x1,3	22,8	664
20x2x1,3	25,6	820
24x2x1,3	28,5	977
1x2x1,5	7,7	76
2x2x1,5	11,3	135
4x2x1,5	13,3	220
5x2x1,5	14,5	262
6x2x1,5	15,9	312
8x2x1,5	18,1	403
10x2x1,5	20,4	488
12x2x1,5	21,3	571
16x2x1,5	23,8	736
20x2x1,5	26,7	908
24x2x1,5	29,7	1083
1x2x2,5	8,9	103
2x2x2,5	13,4	193
4x2x2,5	15,9	324
5x2x2,5	17,3	387
6x2x2,5	19,1	461
8x2x2,5	21,7	597
10x2x2,5	24,7	738
12x2x2,5	25,6	853
16x2x2,5	28,6	1105
20x2x2,5	32,3	1380
24x2x2,5	36,0	1646

RE-2Y(St)Y-fl PIMF

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PE-Polyethylene compound to EN50290-2-23 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x0,5	10,1	96
4x2x0,5	11,7	145
5x2x0,5	13,0	177
6x2x0,5	14,1	205
8x2x0,5	16,0	263
10x2x0,5	18,2	325
12x2x0,5	18,8	370
16x2x0,5	21,1	474
20x2x0,5	23,7	583
24x2x0,5	26,4	696
2x2x0,75	11,2	115
4x2x0,75	13,2	184
5x2x0,75	14,4	217
6x2x0,75	16,0	260
8x2x0,75	18,1	322
10x2x0,75	20,6	410
12x2x0,75	21,3	468
16x2x0,75	24,0	528
20x2x0,75	26,8	741
24x2x0,75	30,0	884
2x2x1	11,6	126
4x2x1	13,7	204
5x2x1	15,0	242
6x2x1	16,5	290
8x2x1	18,7	372
10x2x1	21,4	488
12x2x1	22,1	526
16x2x1	24,7	678
20x2x1	27,8	836
24x2x1	31,0	998

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x1,3	12,5	150
4x2x1,3	14,5	237
5x2x1,3	16,1	291
6x2x1,3	17,6	340
8x2x1,3	20,0	438
10x2x1,3	23,0	543
12x2x1,3	23,8	635
16x2x1,3	26,7	820
20x2x1,3	30,0	1010
24x2x1,3	33,4	1205
2x2x1,5	13,0	160
4x2x1,5	15,2	262
5x2x1,5	16,6	312
6x2x1,5	18,3	372
8x2x1,5	20,8	481
10x2x1,5	23,8	595
12x2x1,5	24,6	684
16x2x1,5	27,5	883
20x2x1,5	30,9	1090
24x2x1,5	34,7	1317
2x2x2,5	15,3	221
4x2x2,5	18,1	370
5x2x2,5	19,8	443
6x2x2,5	21,8	528
8x2x2,5	24,8	684
10x2x2,5	28,4	848
12x2x2,5	29,6	993
16x2x2,5	33,1	1284
20x2x2,5	37,4	1602
24x2x2,5	41,7	1910

RE-2Y(St)Y-fl TIMF

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PE-Polyethylene compound to EN50290-2-23 Black / White / Red twisted triads with numbered cores
Binder Tape	Polyester foil on each twisted triad
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded triples
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x0,5	11,0	115
4x3x0,5	13,0	186
5x3x0,5	14,2	220
6x3x0,5	15,6	262
8x3x0,5	17,5	328
10x3x0,5	20,1	408
12x3x0,5	20,9	476
16x3x0,5	23,4	612
20x3x0,5	26,3	754
24x3x0,5	29,3	900
2x3x0,75	12,1	140
4x3x0,75	14,4	230
5x3x0,75	15,9	282
6x3x0,75	17,3	327
8x3x0,75	19,7	423
10x3x0,75	22,5	524
12x3x0,75	23,5	613
16x3x0,75	26,3	790
20x3x0,75	29,5	973
24x3x0,75	32,9	1160
2x3x1	12,7	160
4x3x1	14,8	258
5x3x1	16,4	317
6x3x1	18,1	378
8x3x1	20,3	478
10x3x1	23,5	606
12x3x1	24,3	696
16x3x1	27,2	900
20x3x1	30,5	1110
24x3x1	34,2	1342

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x1,3	13,5	187
4x3x1,3	15,9	314
5x3x1,3	17,4	377
6x3x1,3	19,2	450
8x3x1,3	21,8	583
10x3x1,3	25,0	724
12x3x1,3	26,0	848
16x3x1,3	29,1	1100
20x3x1,3	32,7	1356
24x3x1,3	36,5	1620
2x3x1,5	14,0	200
4x3x1,5	16,6	340
5x3x1,5	18,4	418
6x3x1,5	20,1	488
8x3x1,5	22,8	633
10x3x1,5	26,3	798
12x3x1,5	27,2	922
16x3x1,5	30,5	1196
20x3x1,5	34,4	1493
24x3x1,5	38,4	1782
2x3x2,5	16,7	285
4x3x2,5	19,8	490
5x3x2,5	21,9	603
6x3x2,5	24,1	718
8x3x2,5	27,4	933
10x3x2,5	31,6	1172
12x3x2,5	32,7	1360
16x3x2,5	36,8	1783
20x3x2,5	41,3	2200
24x3x2,5	46,3	2650

RE-2Y(St)YSWAY-fl

Collectively Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PE-Polyethylene compound to EN50290-2-23 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	PVC compound to EN50290-2-22
Armour	Round galvanised steel wires EN 10257-1
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version
- Multi core / Multi triple / Multi quad

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	10,7	218
2x2x0,5	13,4	314
4x2x0,5	14,9	384
5x2x0,5	15,8	425
6x2x0,5	16,7	465
8x2x0,5	18,3	540
10x2x0,5	20,7	728
12x2x0,5	21,4	782
16x2x0,5	23,1	900
20x2x0,5	25,3	1041
24x2x0,5	27,3	1163
1x2x0,75	11,5	252
2x2x0,75	14,6	360
4x2x0,75	16,1	443
5x2x0,75	17,1	490
6x2x0,75	18,4	548
8x2x0,75	20,7	748
10x2x0,75	22,9	873
12x2x0,75	23,5	930
16x2x0,75	25,6	1084
20x2x0,75	27,9	1253
24x2x0,75	30,5	1428
1x2x1	11,7	264
2x2x1	14,9	377
4x2x1	16,5	470
5x2x1	17,7	530
6x2x1	18,9	590
8x2x1	21,5	820
10x2x1	23,5	833
12x2x1	24,1	998
16x2x1	26,4	1183
20x2x1	29,0	1384
24x2x1	32,2	1753

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	12,1	281
2x2x1,3	15,5	409
4x2x1,3	17,5	532
5x2x1,3	18,6	592
6x2x1,3	19,8	660
8x2x1,3	22,6	910
10x2x1,3	24,8	1050
12x2x1,3	25,7	1152
16x2x1,3	27,9	1354
20x2x1,3	30,7	1587
24x2x1,3	34,7	2060
1x2x1,5	12,3	291
2x2x1,5	15,9	426
4x2x1,5	17,9	556
5x2x1,5	19,1	626
6x2x1,5	21,0	811
8x2x1,5	23,2	955
10x2x1,5	25,7	1126
12x2x1,5	26,4	1213
16x2x1,5	28,9	1444
20x2x1,5	32,3	1868
24x2x1,5	35,7	2190
1x2x2,5	13,5	342
2x2x2,5	18,0	530
4x2x2,5	21,0	822
5x2x2,5	22,6	934
6x2x2,5	24,2	1049
8x2x2,5	26,8	1251
10x2x2,5	29,8	1470
12x2x2,5	30,7	1621
16x2x2,5	34,8	2187
20x2x2,5	38,3	2570
24x2x2,5	42,0	2960

RE-2Y(St)YSWAY-fl PIMF

Individually Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PE-Polyethylene compound to EN50290-2-23 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	PVC compound to EN50290-2-22
Armour	Round galvanised steel wires to EN 10257-1
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x0,5	14,7	361
4x2x0,5	16,3	447
5x2x0,5	17,5	508
6x2x0,5	18,7	560
8x2x0,5	21,3	775
10x2x0,5	23,3	890
12x2x0,5	23,9	950
16x2x0,5	26,2	1118
20x2x0,5	28,6	1281
24x2x0,5	32,0	1660
2x2x0,75	15,8	408
4x2x0,75	17,8	521
5x2x0,75	19,0	578
6x2x0,75	21,0	761
8x2x0,75	23,2	890
10x2x0,75	25,7	1043
12x2x0,75	26,4	1115
16x2x0,75	29,0	1325
20x2x0,75	32,6	1723
24x2x0,75	35,9	1998
2x2x1	16,2	425
4x2x1	18,3	550
5x2x1	19,5	616
6x2x1	21,8	815
8x2x1	23,8	951
10x2x1	26,5	1108
12x2x1	27,2	1197
16x2x1	29,8	1415
20x2x1	33,6	1856
24x2x1	37,2	2170

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x1,3	16,9	460
4x2x1,3	19,1	604
5x2x1,3	21,4	805
6x2x1,3	22,9	902
8x2x1,3	25,3	1068
10x2x1,3	28,0	1240
12x2x1,3	28,9	1347
16x2x1,3	32,3	1785
20x2x1,3	35,9	2123
24x2x1,3	39,4	2441
2x2x1,5	17,5	490
4x2x1,5	19,6	630
5x2x1,5	21,9	850
6x2x1,5	23,4	940
8x2x1,5	25,9	1114
10x2x1,5	28,9	1308
12x2x1,5	29,7	1421
16x2x1,5	33,3	1885
20x2x1,5	37,1	2260
24x2x1,5	40,7	2595
2x2x2,5	19,7	594
4x2x2,5	23,2	926
5x2x2,5	25,1	1062
6x2x2,5	26,9	1188
8x2x2,5	29,9	1432
10x2x2,5	34,6	1935
12x2x2,5	35,6	2105
16x2x2,5	39,1	2502
20x2x2,5	44,2	3270
24x2x2,5	48,9	3804

RE-2Y(St)YSWAY-fl TIMF

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PE-Polyethylene compound to EN50290-2-23 Black / White / Red twisted triads with numbered cores
Binder Tape	Polyester foil on each twisted triad
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	PVC compound to EN50290-2-22
Armour	Round galvanised steel wires to EN 10257-1
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x0,5	15,6	402
4x3x0,5	17,6	517
5x3x0,5	18,8	580
6x3x0,5	20,7	752
8x3x0,5	22,8	814
10x3x0,5	25,4	1038
12x3x0,5	26,0	1109
16x3x0,5	28,3	1308
20x3x0,5	31,2	1526
24x3x0,5	35,3	1992
2x3x0,75	16,7	454
4x3x0,75	19,0	591
5x3x0,75	21,0	784
6x3x0,75	22,6	878
8x3x0,75	24,8	1028
10x3x0,75	27,6	1207
12x3x0,75	28,4	1309
16x3x0,75	31,2	1563
20x3x0,75	35,5	2067
24x3x0,75	38,9	2378
2x3x1	17,1	477
4x3x1	19,4	632
5x3x1	21,7	843
6x3x1	23,2	935
8x3x1	25,6	1110
10x3x1	28,4	1302
12x3x1	29,4	1432
16x3x1	33,0	1900
20x3x1	36,7	2262
24x3x1	40,2	2600

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x1,3	18,1	527
4x3x1,3	21,0	816
5x3x1,3	22,7	930
6x3x1,3	24,3	1043
8x3x1,3	26,9	1243
10x3x1,3	30,1	1473
12x3x1,3	31,0	1610
16x3x1,3	35,1	2190
20x3x1,3	38,7	2571
24x3x1,3	42,5	2958
2x3x1,5	18,6	554
4x3x1,5	21,9	877
5x3x1,5	23,5	986
6x3x1,5	25,4	1118
8x3x1,5	27,9	1328
10x3x1,5	31,2	1572
12x3x1,5	33,0	1923
16x3x1,5	36,7	2348
20x3x1,5	40,4	2753
24x3x1,5	45,2	3482
2x3x2,5	22,0	822
4x3x2,5	25,1	1109
5x3x2,5	27,0	1273
6x3x2,5	29,2	1442
8x3x2,5	33,2	1935
10x3x2,5	37,6	2348
12x3x2,5	38,7	2575
16x3x2,5	43,4	3401
20x3x2,5	48,5	4067
24x3x2,5	53,3	4708

RE-2X(St)Y-fl

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs.
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Multi core / Multi triple / Multi quad
- Hydrocarbon resistant
- Oil resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	6,0	44
2x2x0,5	8,8	76
4x2x0,5	10,3	115
5x2x0,5	11,2	134
6x2x0,5	12,1	153
8x2x0,5	13,7	196
10x2x0,5	15,6	241
12x2x0,5	16,1	272
16x2x0,5	17,8	338
20x2x0,5	20,0	416
24x2x0,5	22,2	495
1x2x0,75	6,7	54
2x2x0,75	10,0	98
4x2x0,75	11,5	146
5x2x0,75	12,7	177
6x2x0,75	13,8	204
8x2x0,75	15,6	261
10x2x0,75	17,6	313
12x2x0,75	18,4	365
16x2x0,75	20,3	456
20x2x0,75	22,8	562
24x2x0,75	25,4	671
1x2x1	6,9	59
2x2x1	10,3	108
4x2x1	11,9	165
5x2x1	13,1	201
6x2x1	14,3	233
8x2x1	16,2	300
10x2x1	18,4	370
12x2x1	19,0	420
16x2x1	21,3	540
20x2x1	23,9	665
24x2x1	26,6	793

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	7,5	72
2x2x1,3	10,9	126
4x2x1,3	12,9	204
5x2x1,3	14,0	242
6x2x1,3	15,4	288
8x2x1,3	17,3	362
10x2x1,3	19,7	448
12x2x1,3	20,4	514
16x2x1,3	22,8	664
20x2x1,3	25,6	820
24x2x1,3	28,5	977
1x2x1,5	7,7	76
2x2x1,5	11,3	135
4x2x1,5	13,3	220
5x2x1,5	14,5	262
6x2x1,5	15,9	312
8x2x1,5	18,1	403
10x2x1,5	20,4	488
12x2x1,5	21,3	571
16x2x1,5	23,8	736
20x2x1,5	26,7	908
24x2x1,5	29,7	1083
1x2x2,5	8,9	103
2x2x2,5	13,4	193
4x2x2,5	15,9	324
5x2x2,5	17,3	387
6x2x2,5	19,1	461
8x2x2,5	21,7	597
10x2x2,5	24,7	738
12x2x2,5	25,6	853
16x2x2,5	28,6	1105
20x2x2,5	32,3	1380
24x2x2,5	36,0	1646

RE-2X(St)Y-fl PIMF

Individually Screened
Unarmoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x0,5	10,1	96
4x2x0,5	11,7	145
5x2x0,5	13,0	177
6x2x0,5	14,1	205
8x2x0,5	16,0	263
10x2x0,5	18,2	325
12x2x0,5	18,8	370
16x2x0,5	21,1	474
20x2x0,5	23,7	583
24x2x0,5	26,4	696
2x2x0,75	11,2	115
4x2x0,75	13,2	184
5x2x0,75	14,4	217
6x2x0,75	16,0	260
8x2x0,75	18,1	322
10x2x0,75	20,6	410
12x2x0,75	21,3	468
16x2x0,75	24,0	528
20x2x0,75	26,8	741
24x2x0,75	30,0	884
2x2x1	11,6	126
4x2x1	13,7	204
5x2x1	15,0	242
6x2x1	16,5	290
8x2x1	18,7	372
10x2x1	21,4	488
12x2x1	22,1	526
16x2x1	24,7	678
20x2x1	27,8	836
24x2x1	31,0	998

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x1,3	12,5	150
4x2x1,3	14,5	237
5x2x1,3	16,1	291
6x2x1,3	17,6	340
8x2x1,3	20,0	438
10x2x1,3	23,0	543
12x2x1,3	23,8	635
16x2x1,3	26,7	820
20x2x1,3	30,0	1010
24x2x1,3	33,4	1205
2x2x1,5	13,0	160
4x2x1,5	15,2	262
5x2x1,5	16,6	312
6x2x1,5	18,3	372
8x2x1,5	20,8	481
10x2x1,5	23,8	595
12x2x1,5	24,6	684
16x2x1,5	27,5	883
20x2x1,5	30,9	1090
24x2x1,5	34,7	1317
2x2x2,5	15,3	221
4x2x2,5	18,1	370
5x2x2,5	19,8	443
6x2x2,5	21,8	528
8x2x2,5	24,8	684
10x2x2,5	28,4	848
12x2x2,5	29,6	993
16x2x2,5	33,1	1284
20x2x2,5	37,4	1602
24x2x2,5	41,7	1910

RE-2X(St)Y-fl TIMF

Individually Screened
Unarmoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White / Red twisted triads with numbered cores
Binder Tape	Polyester foil on each twisted triad
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded triples
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x0,5	11,0	115
4x3x0,5	13,0	186
5x3x0,5	14,2	220
6x3x0,5	15,6	262
8x3x0,5	17,5	328
10x3x0,5	20,1	408
12x3x0,5	20,9	476
16x3x0,5	23,4	612
20x3x0,5	26,3	754
24x3x0,5	29,3	900
2x3x0,75	12,1	140
4x3x0,75	14,4	230
5x3x0,75	15,9	282
6x3x0,75	17,3	327
8x3x0,75	19,7	423
10x3x0,75	22,5	524
12x3x0,75	23,5	613
16x3x0,75	26,3	790
20x3x0,75	29,5	973
24x3x0,75	32,9	1160
2x3x1	12,7	160
4x3x1	14,8	258
5x3x1	16,4	317
6x3x1	18,1	378
8x3x1	20,3	478
10x3x1	23,5	606
12x3x1	24,3	696
16x3x1	27,2	900
20x3x1	30,5	1110
24x3x1	34,2	1342

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x1,3	13,5	187
4x3x1,3	15,9	314
5x3x1,3	17,4	377
6x3x1,3	19,2	450
8x3x1,3	21,8	583
10x3x1,3	25,0	724
12x3x1,3	26,0	848
16x3x1,3	29,1	1100
20x3x1,3	32,7	1356
24x3x1,3	36,5	1620
2x3x1,5	14,0	200
4x3x1,5	16,6	340
5x3x1,5	18,4	418
6x3x1,5	20,1	488
8x3x1,5	22,8	633
10x3x1,5	26,3	798
12x3x1,5	27,2	922
16x3x1,5	30,5	1196
20x3x1,5	34,4	1493
24x3x1,5	38,4	1782
2x3x2,5	16,7	285
4x3x2,5	19,8	490
5x3x2,5	21,9	603
6x3x2,5	24,1	718
8x3x2,5	27,4	933
10x3x2,5	31,6	1172
12x3x2,5	32,7	1360
16x3x2,5	36,8	1783
20x3x2,5	41,3	2200
24x3x2,5	46,3	2650

RE-2X(St)YSWAY-fl

Collectively Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	PVC compound to EN50290-2-22
Armour	Round galvanised steel wires EN 10257-1
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version
- Multi core / Multi triple / Multi quad

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	10,7	218
2x2x0,5	13,4	314
4x2x0,5	14,9	384
5x2x0,5	15,8	425
6x2x0,5	16,7	465
8x2x0,5	18,3	540
10x2x0,5	20,7	728
12x2x0,5	21,4	782
16x2x0,5	23,1	900
20x2x0,5	25,3	1041
24x2x0,5	27,3	1163
1x2x0,75	11,5	252
2x2x0,75	14,6	360
4x2x0,75	16,1	443
5x2x0,75	17,1	490
6x2x0,75	18,4	548
8x2x0,75	20,7	748
10x2x0,75	22,9	873
12x2x0,75	23,5	930
16x2x0,75	25,6	1084
20x2x0,75	27,9	1253
24x2x0,75	30,5	1428
1x2x1	11,7	264
2x2x1	14,9	377
4x2x1	16,5	470
5x2x1	17,7	530
6x2x1	18,9	590
8x2x1	21,5	820
10x2x1	23,5	833
12x2x1	24,1	998
16x2x1	26,4	1183
20x2x1	29,0	1384
24x2x1	32,2	1753

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	12,1	281
2x2x1,3	15,5	409
4x2x1,3	17,5	532
5x2x1,3	18,6	592
6x2x1,3	19,8	660
8x2x1,3	22,6	910
10x2x1,3	24,8	1050
12x2x1,3	25,7	1152
16x2x1,3	27,9	1354
20x2x1,3	30,7	1587
24x2x1,3	34,7	2060
1x2x1,5	12,3	291
2x2x1,5	15,9	426
4x2x1,5	17,9	556
5x2x1,5	19,1	626
6x2x1,5	21,0	811
8x2x1,5	23,2	955
10x2x1,5	25,7	1126
12x2x1,5	26,4	1213
16x2x1,5	28,9	1444
20x2x1,5	32,3	1868
24x2x1,5	35,7	2190
1x2x2,5	13,5	342
2x2x2,5	18,0	530
4x2x2,5	21,0	822
5x2x2,5	22,6	934
6x2x2,5	24,2	1049
8x2x2,5	26,8	1251
10x2x2,5	29,8	1470
12x2x2,5	30,7	1621
16x2x2,5	34,8	2187
20x2x2,5	38,3	2570
24x2x2,5	42,0	2960

RE-2X(St)YSWAY-fl PIMF

Individually Screened Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	PVC compound to EN50290-2-22
Armour	Round galvanised steel wires to EN 10257-1
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x0,5	14,7	361
4x2x0,5	16,3	447
5x2x0,5	17,5	508
6x2x0,5	18,7	560
8x2x0,5	21,3	775
10x2x0,5	23,3	890
12x2x0,5	23,9	950
16x2x0,5	26,2	1118
20x2x0,5	28,6	1281
24x2x0,5	32,0	1660
2x2x0,75	15,8	408
4x2x0,75	17,8	521
5x2x0,75	19,0	578
6x2x0,75	21,0	761
8x2x0,75	23,2	890
10x2x0,75	25,7	1043
12x2x0,75	26,4	1115
16x2x0,75	29,0	1325
20x2x0,75	32,6	1723
24x2x0,75	35,9	1998
2x2x1	16,2	425
4x2x1	18,3	550
5x2x1	19,5	616
6x2x1	21,8	815
8x2x1	23,8	951
10x2x1	26,5	1108
12x2x1	27,2	1197
16x2x1	29,8	1415
20x2x1	33,6	1856
24x2x1	37,2	2170

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x1,3	16,9	460
4x2x1,3	19,1	604
5x2x1,3	21,4	805
6x2x1,3	22,9	902
8x2x1,3	25,3	1068
10x2x1,3	28,0	1240
12x2x1,3	28,9	1347
16x2x1,3	32,3	1785
20x2x1,3	35,9	2123
24x2x1,3	39,4	2441
2x2x1,5	17,5	490
4x2x1,5	19,6	630
5x2x1,5	21,9	850
6x2x1,5	23,4	940
8x2x1,5	25,9	1114
10x2x1,5	28,9	1308
12x2x1,5	29,7	1421
16x2x1,5	33,3	1885
20x2x1,5	37,1	2260
24x2x1,5	40,7	2595
2x2x2,5	19,7	594
4x2x2,5	23,2	926
5x2x2,5	25,1	1062
6x2x2,5	26,9	1188
8x2x2,5	29,9	1432
10x2x2,5	34,6	1935
12x2x2,5	35,6	2105
16x2x2,5	39,1	2502
20x2x2,5	44,2	3270
24x2x2,5	48,9	3804

RE-2X(St)YSWAY-fl TIMF

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White / Red twisted triads with numbered cores
Binder Tape	Polyester foil on each twisted triad
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	PVC compound to EN50290-2-22
Armour	Round galvanised steel wires to EN 10257-1
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x0,5	15,6	402
4x3x0,5	17,6	517
5x3x0,5	18,8	580
6x3x0,5	20,7	752
8x3x0,5	22,8	814
10x3x0,5	25,4	1038
12x3x0,5	26,0	1109
16x3x0,5	28,3	1308
20x3x0,5	31,2	1526
24x3x0,5	35,3	1992
2x3x0,75	16,7	454
4x3x0,75	19,0	591
5x3x0,75	21,0	784
6x3x0,75	22,6	878
8x3x0,75	24,8	1028
10x3x0,75	27,6	1207
12x3x0,75	28,4	1309
16x3x0,75	31,2	1563
20x3x0,75	35,5	2067
24x3x0,75	38,9	2378
2x3x1	17,1	477
4x3x1	19,4	632
5x3x1	21,7	843
6x3x1	23,2	935
8x3x1	25,6	1110
10x3x1	28,4	1302
12x3x1	29,4	1432
16x3x1	33,0	1900
20x3x1	36,7	2262
24x3x1	40,2	2600

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x1,3	18,1	527
4x3x1,3	21,0	816
5x3x1,3	22,7	930
6x3x1,3	24,3	1043
8x3x1,3	26,9	1243
10x3x1,3	30,1	1473
12x3x1,3	31,0	1610
16x3x1,3	35,1	2190
20x3x1,3	38,7	2571
24x3x1,3	42,5	2958
2x3x1,5	18,6	554
4x3x1,5	21,9	877
5x3x1,5	23,5	986
6x3x1,5	25,4	1118
8x3x1,5	27,9	1328
10x3x1,5	31,2	1572
12x3x1,5	33,0	1923
16x3x1,5	36,7	2348
20x3x1,5	40,4	2753
24x3x1,5	45,2	3482
2x3x2,5	22,0	822
4x3x2,5	25,1	1109
5x3x2,5	27,0	1273
6x3x2,5	29,2	1442
8x3x2,5	33,2	1935
10x3x2,5	37,6	2348
12x3x2,5	38,7	2575
16x3x2,5	43,4	3401
20x3x2,5	48,5	4067
24x3x2,5	53,3	4708

RE-2Y(St)H

Collectively Screened
Unarmoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PE-Polyethylene compound to EN50290-2-23 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs.
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Gray for indoor applications Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Multi core / Multi triple / Multi quad
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	6,0	44
2x2x0,5	8,8	76
4x2x0,5	10,3	115
5x2x0,5	11,2	134
6x2x0,5	12,1	153
8x2x0,5	13,7	196
10x2x0,5	15,6	241
12x2x0,5	16,1	272
16x2x0,5	17,8	338
20x2x0,5	20,0	416
24x2x0,5	22,2	495
1x2x0,75	6,7	54
2x2x0,75	10,0	98
4x2x0,75	11,5	146
5x2x0,75	12,7	177
6x2x0,75	13,8	204
8x2x0,75	15,6	261
10x2x0,75	17,6	313
12x2x0,75	18,4	365
16x2x0,75	20,3	456
20x2x0,75	22,8	562
24x2x0,75	25,4	671
1x2x1	6,9	59
2x2x1	10,3	108
4x2x1	11,9	165
5x2x1	13,1	201
6x2x1	14,3	233
8x2x1	16,2	300
10x2x1	18,4	370
12x2x1	19,0	420
16x2x1	21,3	540
20x2x1	23,9	665
24x2x1	26,6	793

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	7,5	72
2x2x1,3	10,9	126
4x2x1,3	12,9	204
5x2x1,3	14,0	242
6x2x1,3	15,4	288
8x2x1,3	17,3	362
10x2x1,3	19,7	448
12x2x1,3	20,4	514
16x2x1,3	22,8	664
20x2x1,3	25,6	820
24x2x1,3	28,5	977
1x2x1,5	7,7	76
2x2x1,5	11,3	135
4x2x1,5	13,3	220
5x2x1,5	14,5	262
6x2x1,5	15,9	312
8x2x1,5	18,1	403
10x2x1,5	20,4	488
12x2x1,5	21,3	571
16x2x1,5	23,8	736
20x2x1,5	26,7	908
24x2x1,5	29,7	1083
1x2x2,5	8,9	103
2x2x2,5	13,4	193
4x2x2,5	15,9	324
5x2x2,5	17,3	387
6x2x2,5	19,1	461
8x2x2,5	21,7	597
10x2x2,5	24,7	738
12x2x2,5	25,6	853
16x2x2,5	28,6	1105
20x2x2,5	32,3	1380
24x2x2,5	36,0	1646

RE-2Y(St)H PIMF

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PE-Polyethylene compound to EN50290-2-23 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Gray for indoor applications Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x0,5	10,1	96
4x2x0,5	11,7	145
5x2x0,5	13,0	177
6x2x0,5	14,1	205
8x2x0,5	16,0	263
10x2x0,5	18,2	325
12x2x0,5	18,8	370
16x2x0,5	21,1	474
20x2x0,5	23,7	583
24x2x0,5	26,4	696
2x2x0,75	11,2	115
4x2x0,75	13,2	184
5x2x0,75	14,4	217
6x2x0,75	16,0	260
8x2x0,75	18,1	322
10x2x0,75	20,6	410
12x2x0,75	21,3	468
16x2x0,75	24,0	528
20x2x0,75	26,8	741
24x2x0,75	30,0	884
2x2x1	11,6	126
4x2x1	13,7	204
5x2x1	15,0	242
6x2x1	16,5	290
8x2x1	18,7	372
10x2x1	21,4	488
12x2x1	22,1	526
16x2x1	24,7	678
20x2x1	27,8	836
24x2x1	31,0	998

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x1,3	12,5	150
4x2x1,3	14,5	237
5x2x1,3	16,1	291
6x2x1,3	17,6	340
8x2x1,3	20,0	438
10x2x1,3	23,0	543
12x2x1,3	23,8	635
16x2x1,3	26,7	820
20x2x1,3	30,0	1010
24x2x1,3	33,4	1205
2x2x1,5	13,0	160
4x2x1,5	15,2	262
5x2x1,5	16,6	312
6x2x1,5	18,3	372
8x2x1,5	20,8	481
10x2x1,5	23,8	595
12x2x1,5	24,6	684
16x2x1,5	27,5	883
20x2x1,5	30,9	1090
24x2x1,5	34,7	1317
2x2x2,5	15,3	221
4x2x2,5	18,1	370
5x2x2,5	19,8	443
6x2x2,5	21,8	528
8x2x2,5	24,8	684
10x2x2,5	28,4	848
12x2x2,5	29,6	993
16x2x2,5	33,1	1284
20x2x2,5	37,4	1602
24x2x2,5	41,7	1910

RE-2Y(St)H TIMF

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PE-Polyethylene compound to EN50290-2-23 Black / White / Red twisted triads with numbered cores
Binder Tape	Polyester foil on each twisted triad
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded triples
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Gray for indoor applications Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x0,5	11,0	115
4x3x0,5	13,0	186
5x3x0,5	14,2	220
6x3x0,5	15,6	262
8x3x0,5	17,5	328
10x3x0,5	20,1	408
12x3x0,5	20,9	476
16x3x0,5	23,4	612
20x3x0,5	26,3	754
24x3x0,5	29,3	900
2x3x0,75	12,1	140
4x3x0,75	14,4	230
5x3x0,75	15,9	282
6x3x0,75	17,3	327
8x3x0,75	19,7	423
10x3x0,75	22,5	524
12x3x0,75	23,5	613
16x3x0,75	26,3	790
20x3x0,75	29,5	973
24x3x0,75	32,9	1160
2x3x1	12,7	160
4x3x1	14,8	258
5x3x1	16,4	317
6x3x1	18,1	378
8x3x1	20,3	478
10x3x1	23,5	606
12x3x1	24,3	696
16x3x1	27,2	900
20x3x1	30,5	1110
24x3x1	34,2	1342

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x1,3	13,5	187
4x3x1,3	15,9	314
5x3x1,3	17,4	377
6x3x1,3	19,2	450
8x3x1,3	21,8	583
10x3x1,3	25,0	724
12x3x1,3	26,0	848
16x3x1,3	29,1	1100
20x3x1,3	32,7	1356
24x3x1,3	36,5	1620
2x3x1,5	14,0	200
4x3x1,5	16,6	340
5x3x1,5	18,4	418
6x3x1,5	20,1	488
8x3x1,5	22,8	633
10x3x1,5	26,3	798
12x3x1,5	27,2	922
16x3x1,5	30,5	1196
20x3x1,5	34,4	1493
24x3x1,5	38,4	1782
2x3x2,5	16,7	285
4x3x2,5	19,8	490
5x3x2,5	21,9	603
6x3x2,5	24,1	718
8x3x2,5	27,4	933
10x3x2,5	31,6	1172
12x3x2,5	32,7	1360
16x3x2,5	36,8	1783
20x3x2,5	41,3	2200
24x3x2,5	46,3	2650

RE-2Y(St)HSWAH

Collectively Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PE-Polyethylene compound to EN50290-2-23 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	LSZH compound to EN50290-2-27
Armour	Round galvanised steel wires EN 10257-1
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- Multi core / Multi triple / Multi quad

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	10,7	218
2x2x0,5	13,4	314
4x2x0,5	14,9	384
5x2x0,5	15,8	425
6x2x0,5	16,7	465
8x2x0,5	18,3	540
10x2x0,5	20,7	728
12x2x0,5	21,4	782
16x2x0,5	23,1	900
20x2x0,5	25,3	1041
24x2x0,5	27,3	1163
1x2x0,75	11,5	252
2x2x0,75	14,6	360
4x2x0,75	16,1	443
5x2x0,75	17,1	490
6x2x0,75	18,4	548
8x2x0,75	20,7	748
10x2x0,75	22,9	873
12x2x0,75	23,5	930
16x2x0,75	25,6	1084
20x2x0,75	27,9	1253
24x2x0,75	30,5	1428
1x2x1	11,7	264
2x2x1	14,9	377
4x2x1	16,5	470
5x2x1	17,7	530
6x2x1	18,9	590
8x2x1	21,5	820
10x2x1	23,5	833
12x2x1	24,1	998
16x2x1	26,4	1183
20x2x1	29,0	1384
24x2x1	32,2	1753

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	12,1	281
2x2x1,3	15,5	409
4x2x1,3	17,5	532
5x2x1,3	18,6	592
6x2x1,3	19,8	660
8x2x1,3	22,6	910
10x2x1,3	24,8	1050
12x2x1,3	25,7	1152
16x2x1,3	27,9	1354
20x2x1,3	30,7	1587
24x2x1,3	34,7	2060
1x2x1,5	12,3	291
2x2x1,5	15,9	426
4x2x1,5	17,9	556
5x2x1,5	19,1	626
6x2x1,5	21,0	811
8x2x1,5	23,2	955
10x2x1,5	25,7	1126
12x2x1,5	26,4	1213
16x2x1,5	28,9	1444
20x2x1,5	32,3	1868
24x2x1,5	35,7	2190
1x2x2,5	13,5	342
2x2x2,5	18,0	530
4x2x2,5	21,0	822
5x2x2,5	22,6	934
6x2x2,5	24,2	1049
8x2x2,5	26,8	1251
10x2x2,5	29,8	1470
12x2x2,5	30,7	1621
16x2x2,5	34,8	2187
20x2x2,5	38,3	2570
24x2x2,5	42,0	2960

RE-2Y(St)HSWAH PIMF

Individually Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PE-Polyethylene compound to EN50290-2-23 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	LSZH compound to EN50290-2-27
Armour	Round galvanised steel wires to EN 10257-1
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Gray for indoor applications Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x0,5	14,7	361
4x2x0,5	16,3	447
5x2x0,5	17,5	508
6x2x0,5	18,7	560
8x2x0,5	21,3	775
10x2x0,5	23,3	890
12x2x0,5	23,9	950
16x2x0,5	26,2	1118
20x2x0,5	28,6	1281
24x2x0,5	32,0	1660
2x2x0,75	15,8	408
4x2x0,75	17,8	521
5x2x0,75	19,0	578
6x2x0,75	21,0	761
8x2x0,75	23,2	890
10x2x0,75	25,7	1043
12x2x0,75	26,4	1115
16x2x0,75	29,0	1325
20x2x0,75	32,6	1723
24x2x0,75	35,9	1998
2x2x1	16,2	425
4x2x1	18,3	550
5x2x1	19,5	616
6x2x1	21,8	815
8x2x1	23,8	951
10x2x1	26,5	1108
12x2x1	27,2	1197
16x2x1	29,8	1415
20x2x1	33,6	1856
24x2x1	37,2	2170

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x1,3	16,9	460
4x2x1,3	19,1	604
5x2x1,3	21,4	805
6x2x1,3	22,9	902
8x2x1,3	25,3	1068
10x2x1,3	28,0	1240
12x2x1,3	28,9	1347
16x2x1,3	32,3	1785
20x2x1,3	35,9	2123
24x2x1,3	39,4	2441
2x2x1,5	17,5	490
4x2x1,5	19,6	630
5x2x1,5	21,9	850
6x2x1,5	23,4	940
8x2x1,5	25,9	1114
10x2x1,5	28,9	1308
12x2x1,5	29,7	1421
16x2x1,5	33,3	1885
20x2x1,5	37,1	2260
24x2x1,5	40,7	2595
2x2x2,5	19,7	594
4x2x2,5	23,2	926
5x2x2,5	25,1	1062
6x2x2,5	26,9	1188
8x2x2,5	29,9	1432
10x2x2,5	34,6	1935
12x2x2,5	35,6	2105
16x2x2,5	39,1	2502
20x2x2,5	44,2	3270
24x2x2,5	48,9	3804

RE-2Y(St)HSWAH TIMF

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	PE-Polyethylene compound to EN50290-2-23 Black / White / Red twisted triads with numbered cores
Binder Tape	Polyester foil on each twisted triad
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	LSZH compound to EN50290-2-27
Armour	Round galvanised steel wires to EN 10257-1
Outer Sheath	Halogen fre flame retardant LSZH compound to EN50290-2-27 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Gray for indoor applications Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-30˚C / + 70˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x0,5	15,6	402
4x3x0,5	17,6	517
5x3x0,5	18,8	580
6x3x0,5	20,7	752
8x3x0,5	22,8	814
10x3x0,5	25,4	1038
12x3x0,5	26,0	1109
16x3x0,5	28,3	1308
20x3x0,5	31,2	1526
24x3x0,5	35,3	1992
2x3x0,75	16,7	454
4x3x0,75	19,0	591
5x3x0,75	21,0	784
6x3x0,75	22,6	878
8x3x0,75	24,8	1028
10x3x0,75	27,6	1207
12x3x0,75	28,4	1309
16x3x0,75	31,2	1563
20x3x0,75	35,5	2067
24x3x0,75	38,9	2378
2x3x1	17,1	477
4x3x1	19,4	632
5x3x1	21,7	843
6x3x1	23,2	935
8x3x1	25,6	1110
10x3x1	28,4	1302
12x3x1	29,4	1432
16x3x1	33,0	1900
20x3x1	36,7	2262
24x3x1	40,2	2600

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x1,3	18,1	527
4x3x1,3	21,0	816
5x3x1,3	22,7	930
6x3x1,3	24,3	1043
8x3x1,3	26,9	1243
10x3x1,3	30,1	1473
12x3x1,3	31,0	1610
16x3x1,3	35,1	2190
20x3x1,3	38,7	2571
24x3x1,3	42,5	2958
2x3x1,5	18,6	554
4x3x1,5	21,9	877
5x3x1,5	23,5	986
6x3x1,5	25,4	1118
8x3x1,5	27,9	1328
10x3x1,5	31,2	1572
12x3x1,5	33,0	1923
16x3x1,5	36,7	2348
20x3x1,5	40,4	2753
24x3x1,5	45,2	3482
2x3x2,5	22,0	822
4x3x2,5	25,1	1109
5x3x2,5	27,0	1273
6x3x2,5	29,2	1442
8x3x2,5	33,2	1935
10x3x2,5	37,6	2348
12x3x2,5	38,7	2575
16x3x2,5	43,4	3401
20x3x2,5	48,5	4067
24x3x2,5	53,3	4708

RE-2X(St)H

Collectively Screened
Unarmoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs.
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Gray for indoor applications Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Multi core / Multi triple / Multi quad
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	6,0	44
2x2x0,5	8,8	76
4x2x0,5	10,3	115
5x2x0,5	11,2	134
6x2x0,5	12,1	153
8x2x0,5	13,7	196
10x2x0,5	15,6	241
12x2x0,5	16,1	272
16x2x0,5	17,8	338
20x2x0,5	20,0	416
24x2x0,5	22,2	495
1x2x0,75	6,7	54
2x2x0,75	10,0	98
4x2x0,75	11,5	146
5x2x0,75	12,7	177
6x2x0,75	13,8	204
8x2x0,75	15,6	261
10x2x0,75	17,6	313
12x2x0,75	18,4	365
16x2x0,75	20,3	456
20x2x0,75	22,8	562
24x2x0,75	25,4	671
1x2x1	6,9	59
2x2x1	10,3	108
4x2x1	11,9	165
5x2x1	13,1	201
6x2x1	14,3	233
8x2x1	16,2	300
10x2x1	18,4	370
12x2x1	19,0	420
16x2x1	21,3	540
20x2x1	23,9	665
24x2x1	26,6	793

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	7,5	72
2x2x1,3	10,9	126
4x2x1,3	12,9	204
5x2x1,3	14,0	242
6x2x1,3	15,4	288
8x2x1,3	17,3	362
10x2x1,3	19,7	448
12x2x1,3	20,4	514
16x2x1,3	22,8	664
20x2x1,3	25,6	820
24x2x1,3	28,5	977
1x2x1,5	7,7	76
2x2x1,5	11,3	135
4x2x1,5	13,3	220
5x2x1,5	14,5	262
6x2x1,5	15,9	312
8x2x1,5	18,1	403
10x2x1,5	20,4	488
12x2x1,5	21,3	571
16x2x1,5	23,8	736
20x2x1,5	26,7	908
24x2x1,5	29,7	1083
1x2x2,5	8,9	103
2x2x2,5	13,4	193
4x2x2,5	15,9	324
5x2x2,5	17,3	387
6x2x2,5	19,1	461
8x2x2,5	21,7	597
10x2x2,5	24,7	738
12x2x2,5	25,6	853
16x2x2,5	28,6	1105
20x2x2,5	32,3	1380
24x2x2,5	36,0	1646

RE-2X(St)H PIMF

Individually Screened
Unarmoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Gray for indoor applications Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x0,5	10,1	96
4x2x0,5	11,7	145
5x2x0,5	13,0	177
6x2x0,5	14,1	205
8x2x0,5	16,0	263
10x2x0,5	18,2	325
12x2x0,5	18,8	370
16x2x0,5	21,1	474
20x2x0,5	23,7	583
24x2x0,5	26,4	696
2x2x0,75	11,2	115
4x2x0,75	13,2	184
5x2x0,75	14,4	217
6x2x0,75	16,0	260
8x2x0,75	18,1	322
10x2x0,75	20,6	410
12x2x0,75	21,3	468
16x2x0,75	24,0	528
20x2x0,75	26,8	741
24x2x0,75	30,0	884
2x2x1	11,6	126
4x2x1	13,7	204
5x2x1	15,0	242
6x2x1	16,5	290
8x2x1	18,7	372
10x2x1	21,4	488
12x2x1	22,1	526
16x2x1	24,7	678
20x2x1	27,8	836
24x2x1	31,0	998

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x1,3	12,5	150
4x2x1,3	14,5	237
5x2x1,3	16,1	291
6x2x1,3	17,6	340
8x2x1,3	20,0	438
10x2x1,3	23,0	543
12x2x1,3	23,8	635
16x2x1,3	26,7	820
20x2x1,3	30,0	1010
24x2x1,3	33,4	1205
2x2x1,5	13,0	160
4x2x1,5	15,2	262
5x2x1,5	16,6	312
6x2x1,5	18,3	372
8x2x1,5	20,8	481
10x2x1,5	23,8	595
12x2x1,5	24,6	684
16x2x1,5	27,5	883
20x2x1,5	30,9	1090
24x2x1,5	34,7	1317
2x2x2,5	15,3	221
4x2x2,5	18,1	370
5x2x2,5	19,8	443
6x2x2,5	21,8	528
8x2x2,5	24,8	684
10x2x2,5	28,4	848
12x2x2,5	29,6	993
16x2x2,5	33,1	1284
20x2x2,5	37,4	1602
24x2x2,5	41,7	1910

RE-2X(St)H TIMF

Individually Screened
Unarmoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White / Red twisted triads with numbered cores
Binder Tape	Polyester foil on each twisted triad
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded triples
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Gray for indoor applications Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x0,5	11,0	115
4x3x0,5	13,0	186
5x3x0,5	14,2	220
6x3x0,5	15,6	262
8x3x0,5	17,5	328
10x3x0,5	20,1	408
12x3x0,5	20,9	476
16x3x0,5	23,4	612
20x3x0,5	26,3	754
24x3x0,5	29,3	900
2x3x0,75	12,1	140
4x3x0,75	14,4	230
5x3x0,75	15,9	282
6x3x0,75	17,3	327
8x3x0,75	19,7	423
10x3x0,75	22,5	524
12x3x0,75	23,5	613
16x3x0,75	26,3	790
20x3x0,75	29,5	973
24x3x0,75	32,9	1160
2x3x1	12,7	160
4x3x1	14,8	258
5x3x1	16,4	317
6x3x1	18,1	378
8x3x1	20,3	478
10x3x1	23,5	606
12x3x1	24,3	696
16x3x1	27,2	900
20x3x1	30,5	1110
24x3x1	34,2	1342

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x1,3	13,5	187
4x3x1,3	15,9	314
5x3x1,3	17,4	377
6x3x1,3	19,2	450
8x3x1,3	21,8	583
10x3x1,3	25,0	724
12x3x1,3	26,0	848
16x3x1,3	29,1	1100
20x3x1,3	32,7	1356
24x3x1,3	36,5	1620
2x3x1,5	14,0	200
4x3x1,5	16,6	340
5x3x1,5	18,4	418
6x3x1,5	20,1	488
8x3x1,5	22,8	633
10x3x1,5	26,3	798
12x3x1,5	27,2	922
16x3x1,5	30,5	1196
20x3x1,5	34,4	1493
24x3x1,5	38,4	1782
2x3x2,5	16,7	285
4x3x2,5	19,8	490
5x3x2,5	21,9	603
6x3x2,5	24,1	718
8x3x2,5	27,4	933
10x3x2,5	31,6	1172
12x3x2,5	32,7	1360
16x3x2,5	36,8	1783
20x3x2,5	41,3	2200
24x3x2,5	46,3	2650

RE-2X(St)HSWAH

Collectively Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	LSZH compound to EN50290-2-27
Armour	Round galvanised steel wires EN 10257-1
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Gray for indoor applications Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- Multi core / Multi triple / Multi quad

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	10,7	218
2x2x0,5	13,4	314
4x2x0,5	14,9	384
5x2x0,5	15,8	425
6x2x0,5	16,7	465
8x2x0,5	18,3	540
10x2x0,5	20,7	728
12x2x0,5	21,4	782
16x2x0,5	23,1	900
20x2x0,5	25,3	1041
24x2x0,5	27,3	1163
1x2x0,75	11,5	252
2x2x0,75	14,6	360
4x2x0,75	16,1	443
5x2x0,75	17,1	490
6x2x0,75	18,4	548
8x2x0,75	20,7	748
10x2x0,75	22,9	873
12x2x0,75	23,5	930
16x2x0,75	25,6	1084
20x2x0,75	27,9	1253
24x2x0,75	30,5	1428
1x2x1	11,7	264
2x2x1	14,9	377
4x2x1	16,5	470
5x2x1	17,7	530
6x2x1	18,9	590
8x2x1	21,5	820
10x2x1	23,5	833
12x2x1	24,1	998
16x2x1	26,4	1183
20x2x1	29,0	1384
24x2x1	32,2	1753

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	12,1	281
2x2x1,3	15,5	409
4x2x1,3	17,5	532
5x2x1,3	18,6	592
6x2x1,3	19,8	660
8x2x1,3	22,6	910
10x2x1,3	24,8	1050
12x2x1,3	25,7	1152
16x2x1,3	27,9	1354
20x2x1,3	30,7	1587
24x2x1,3	34,7	2060
1x2x1,5	12,3	291
2x2x1,5	15,9	426
4x2x1,5	17,9	556
5x2x1,5	19,1	626
6x2x1,5	21,0	811
8x2x1,5	23,2	955
10x2x1,5	25,7	1126
12x2x1,5	26,4	1213
16x2x1,5	28,9	1444
20x2x1,5	32,3	1868
24x2x1,5	35,7	2190
1x2x2,5	13,5	342
2x2x2,5	18,0	530
4x2x2,5	21,0	822
5x2x2,5	22,6	934
6x2x2,5	24,2	1049
8x2x2,5	26,8	1251
10x2x2,5	29,8	1470
12x2x2,5	30,7	1621
16x2x2,5	34,8	2187
20x2x2,5	38,3	2570
24x2x2,5	42,0	2960

RE-2X(St)HSWAH PIMF

Individually Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	LSZH compound to EN50290-2-27
Armour	Round galvanised steel wires to EN 10257-1
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Gray for indoor applications Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x0,5	14,7	361
4x2x0,5	16,3	447
5x2x0,5	17,5	508
6x2x0,5	18,7	560
8x2x0,5	21,3	775
10x2x0,5	23,3	890
12x2x0,5	23,9	950
16x2x0,5	26,2	1118
20x2x0,5	28,6	1281
24x2x0,5	32,0	1660
2x2x0,75	15,8	408
4x2x0,75	17,8	521
5x2x0,75	19,0	578
6x2x0,75	21,0	761
8x2x0,75	23,2	890
10x2x0,75	25,7	1043
12x2x0,75	26,4	1115
16x2x0,75	29,0	1325
20x2x0,75	32,6	1723
24x2x0,75	35,9	1998
2x2x1	16,2	425
4x2x1	18,3	550
5x2x1	19,5	616
6x2x1	21,8	815
8x2x1	23,8	951
10x2x1	26,5	1108
12x2x1	27,2	1197
16x2x1	29,8	1415
20x2x1	33,6	1856
24x2x1	37,2	2170

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x1,3	16,9	460
4x2x1,3	19,1	604
5x2x1,3	21,4	805
6x2x1,3	22,9	902
8x2x1,3	25,3	1068
10x2x1,3	28,0	1240
12x2x1,3	28,9	1347
16x2x1,3	32,3	1785
20x2x1,3	35,9	2123
24x2x1,3	39,4	2441
2x2x1,5	17,5	490
4x2x1,5	19,6	630
5x2x1,5	21,9	850
6x2x1,5	23,4	940
8x2x1,5	25,9	1114
10x2x1,5	28,9	1308
12x2x1,5	29,7	1421
16x2x1,5	33,3	1885
20x2x1,5	37,1	2260
24x2x1,5	40,7	2595
2x2x2,5	19,7	594
4x2x2,5	23,2	926
5x2x2,5	25,1	1062
6x2x2,5	26,9	1188
8x2x2,5	29,9	1432
10x2x2,5	34,6	1935
12x2x2,5	35,6	2105
16x2x2,5	39,1	2502
20x2x2,5	44,2	3270
24x2x2,5	48,9	3804

RE-2X(St)HSWAH TIMF

Individually Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White / Red twisted triads with numbered cores
Binder Tape	Polyester foil on each twisted triad
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	LSZH compound to EN50290-2-27
Armour	Round galvanised steel wires to EN10257-1
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable Gray for indoor applications Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x0,5	15,6	402
4x3x0,5	17,6	517
5x3x0,5	18,8	580
6x3x0,5	20,7	752
8x3x0,5	22,8	814
10x3x0,5	25,4	1038
12x3x0,5	26,0	1109
16x3x0,5	28,3	1308
20x3x0,5	31,2	1526
24x3x0,5	35,3	1992
2x3x0,75	16,7	454
4x3x0,75	19,0	591
5x3x0,75	21,0	784
6x3x0,75	22,6	878
8x3x0,75	24,8	1028
10x3x0,75	27,6	1207
12x3x0,75	28,4	1309
16x3x0,75	31,2	1563
20x3x0,75	35,5	2067
24x3x0,75	38,9	2378
2x3x1	17,1	477
4x3x1	19,4	632
5x3x1	21,7	843
6x3x1	23,2	935
8x3x1	25,6	1110
10x3x1	28,4	1302
12x3x1	29,4	1432
16x3x1	33,0	1900
20x3x1	36,7	2262
24x3x1	40,2	2600

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x1,3	18,1	527
4x3x1,3	21,0	816
5x3x1,3	22,7	930
6x3x1,3	24,3	1043
8x3x1,3	26,9	1243
10x3x1,3	30,1	1473
12x3x1,3	31,0	1610
16x3x1,3	35,1	2190
20x3x1,3	38,7	2571
24x3x1,3	42,5	2958
2x3x1,5	18,6	554
4x3x1,5	21,9	877
5x3x1,5	23,5	986
6x3x1,5	25,4	1118
8x3x1,5	27,9	1328
10x3x1,5	31,2	1572
12x3x1,5	33,0	1923
16x3x1,5	36,7	2348
20x3x1,5	40,4	2753
24x3x1,5	45,2	3482
2x3x2,5	22,0	822
4x3x2,5	25,1	1109
5x3x2,5	27,0	1273
6x3x2,5	29,2	1442
8x3x2,5	33,2	1935
10x3x2,5	37,6	2348
12x3x2,5	38,7	2575
16x3x2,5	43,4	3401
20x3x2,5	48,5	4067
24x3x2,5	53,3	4708

RE-2X(St)H..CI

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	Mica tape + XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs.
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Orange or Red for circuit integrity Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Fire Resistance	IEC 60331 / 21, IEC 60331 / 1-2
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Multi core / Multi triple / Multi quad
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.
Recommended for use where circuit integrity is required in case of fire.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	7,1	54
2x2x0,5	10,4	92
4x2x0,5	12,1	136
5x2x0,5	13,4	166
6x2x0,5	14,6	190
8x2x0,5	16,5	245
10x2x0,5	18,9	300
12x2x0,5	19,5	340
16x2x0,5	21,8	432
20x2x0,5	24,5	530
24x2x0,5	27,4	635
1x2x0,75	7,5	60
2x2x0,75	11,1	107
4x2x0,75	13,1	168
5x2x0,75	14,3	197
6x2x0,75	15,7	235
8x2x0,75	17,9	302
10x2x0,75	20,2	362
12x2x0,75	21,1	420
16x2x0,75	23,6	540
20x2x0,75	26,5	665
24x2x0,75	29,5	790
1x2x1	7,7	68
2x2x1	11,4	117
4x2x1	13,5	187
5x2x1	14,7	220
6x2x1	16,2	264
8x2x1	18,4	340
10x2x1	21,1	420
12x2x1	21,8	480
16x2x1	24,4	615
20x2x1	27,4	760
24x2x1	30,5	905

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	8,2	76
2x2x1,3	12,2	135
4x2x1,3	14,5	220
5x2x1,3	16,0	270
6x2x1,3	17,5	315
8x2x1,3	19,8	405
10x2x1,3	22,7	500
12x2x1,3	23,7	584
16x2x1,3	26,5	750
20x2x1,3	29,7	925
24x2x1,3	33,2	1104
1x2x1,5	8,3	80
2x2x1,5	12,6	150
4x2x1,5	14,7	236
5x2x1,5	16,2	290
6x2x1,5	17,9	344
8x2x1,5	20,1	434
10x2x1,5	23,0	538
12x2x1,5	24,0	630
16x2x1,5	26,9	812
20x2x1,5	30,2	1000
24x2x1,5	33,7	1194
1x2x2,5	9,9	115
2x2x2,5	14,9	206
4x2x2,5	17,6	345
5x2x2,5	19,5	424
6x2x2,5	21,6	505
8x2x2,5	24,5	655
10x2x2,5	28,0	810
12x2x2,5	29,2	948
16x2x2,5	32,7	1224
20x2x2,5	36,9	1528
24x2x2,5	41,2	1822

RE-2X(St)H-PIMF..CI

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	Mica tape + XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Orange or Red for circuit integrity Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Fire Resistance	IEC 60331 / 21, IEC 60331 / 1-2
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.
Recommended for use where circuit integrity is required in case of fire.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x0,5	11,9	118
4x2x0,5	14,1	186
5x2x0,5	15,6	227
6x2x0,5	17,0	260
8x2x0,5	19,3	334
10x2x0,5	22,1	414
12x2x0,5	22,9	470
16x2x0,5	25,6	600
20x2x0,5	29,0	755
24x2x0,5	32,3	896
2x2x0,75	12,9	140
4x2x0,75	15,2	220
5x2x0,75	16,6	260
6x2x0,75	18,3	310
8x2x0,75	20,8	400
10x2x0,75	23,8	493
12x2x0,75	24,6	560
16x2x0,75	27,5	717
20x2x0,75	30,9	882
24x2x0,75	34,7	1070
2x2x1	13,2	150
4x2x1	15,6	243
5x2x1	17,1	288
6x2x1	18,9	343
8x2x1	21,4	440
10x2x1	24,5	545
12x2x1	25,4	622
16x2x1	28,4	798
20x2x1	32,1	998
24x2x1	35,8	1190

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x1,3	14,2	172
4x2x1,3	16,8	280
5x2x1,3	18,6	342
6x2x1,3	20,3	397
8x2x1,3	23,0	510
10x2x1,3	26,6	646
12x2x1,3	27,5	738
16x2x1,3	30,8	948
20x2x1,3	34,8	1184
24x2x1,3	38,8	1410
2x2x1,5	14,3	180
4x2x1,5	17,0	296
5x2x1,5	18,8	362
6x2x1,5	20,7	430
8x2x1,5	23,5	554
10x2x1,5	26,9	687
12x2x1,5	27,9	787
16x2x1,5	31,4	1030
20x2x1,5	35,2	1265
24x2x1,5	39,5	1525
2x2x2,5	17,1	250
4x2x2,5	20,3	418
5x2x2,5	22,5	510
6x2x2,5	24,8	608
8x2x2,5	28,2	784
10x2x2,5	32,5	987
12x2x2,5	33,6	1134
16x2x2,5	37,8	1480
20x2x2,5	42,7	1843
24x2x2,5	47,9	2220

RE-2X(St)H-TIMF..CI

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	Mica tape + XLPE compound to EN50290-2-29 Black / White / Red twisted triads with numbered cores
Binder Tape	Polyester foil on each twisted triad
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded triples
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Orange or Red for circuit integrity Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	7,5 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Fire Resistance	IEC 60331 / 21, IEC 60331 / 1-2
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.
Recommended for use where circuit integrity is required in case of fire.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x0,5	13,1	148
4x3x0,5	15,5	237
5x3x0,5	16,9	280
6x3x0,5	18,7	334
8x3x0,5	21,2	430
10x3x0,5	24,2	530
12x3x0,5	25,1	605
16x3x0,5	28,0	776
20x3x0,5	31,7	972
24x3x0,5	35,4	1158
2x3x0,75	14,0	170
4x3x0,75	16,6	278
5x3x0,75	18,4	340
6x3x0,75	20,1	395
8x3x0,75	22,8	508
10x3x0,75	26,3	642
12x3x0,75	27,2	734
16x3x0,75	30,5	945
20x3x0,75	34,4	1180
24x3x0,75	38,4	1405
2x3x1	14,4	188
4x3x1	17,1	310
5x3x1	18,9	378
6x3x1	20,8	450
8x3x1	23,7	580
10x3x1	27,1	718
12x3x1	28,0	823
16x3x1	31,5	1076
20x3x1	35,4	1325
24x3x1	39,7	1600

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x1,3	15,4	220
4x3x1,3	18,2	367
5x3x1,3	19,9	438
6x3x1,3	22,0	523
8x3x1,3	25,0	676
10x3x1,3	28,8	850
12x3x1,3	29,8	980
16x3x1,3	33,3	1264
20x3x1,3	37,6	1577
24x3x1,3	42,2	1902
2x3x1,5	15,7	234
4x3x1,5	18,6	392
5x3x1,5	20,6	480
6x3x1,5	22,5	560
8x3x1,5	25,6	726
10x3x1,5	29,5	914
12x3x1,5	30,5	1053
16x3x1,5	34,4	1380
20x3x1,5	38,6	1700
24x3x1,5	43,3	2050
2x3x2,5	18,8	330
4x3x2,5	22,2	560
5x3x2,5	24,6	688
6x3x2,5	27,2	820
8x3x2,5	30,9	1062
10x3x2,5	35,6	1334
12x3x2,5	37,0	1560
16x3x2,5	41,4	2020
20x3x2,5	46,7	2514
24x3x2,5	52,4	3023

RE-2X(St)HSWAH..CI

Fire Resistant
Collectively Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	Mica tape + XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	LSZH compound to EN50290-2-27
Armour	Round galvanised steel wires EN 10257-1
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Orange or Red for circuit integrity Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Fire Resistance	IEC 60331 / 21, IEC 60331 / 1-2
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- Multi core / Multi triple / Multi quad

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.
Recommended for use where circuit integrity is required in case of fire.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	11,7	256
2x2x0,5	15,0	363
4x2x0,5	16,6	443
5x2x0,5	17,9	502
6x2x0,5	19,1	555
8x2x0,5	21,8	768
10x2x0,5	23,9	880
12x2x0,5	24,6	942
16x2x0,5	26,9	1090
20x2x0,5	29,6	1267
24x2x0,5	33,1	1634
1x2x0,75	12,1	270
2x2x0,75	15,6	390
4x2x0,75	17,6	497
5x2x0,75	18,8	555
6x2x0,75	20,8	724
8x2x0,75	22,9	854
10x2x0,75	25,5	992
12x2x0,75	26,1	1064
16x2x0,75	28,4	1235
20x2x0,75	32,0	1625
24x2x0,75	35,5	1884
1x2x1	12,3	283
2x2x1	16,0	415
4x2x1	18,0	525
5x2x1	19,3	590
6x2x1	21,0	824
8x2x1	21,5	787
10x2x1	23,5	906
12x2x1	26,1	1063
16x2x1	29,4	1350
20x2x1	33,1	1757
24x2x1	36,7	2054

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	12,8	300
2x2x1,3	16,8	450
4x2x1,3	19,0	580
5x2x1,3	21,3	782
6x2x1,3	22,7	863
8x2x1,3	25,1	1021
10x2x1,3	27,8	1184
12x2x1,3	28,5	1280
16x2x1,3	32,0	1714
20x2x1,3	35,7	2036
24x2x1,3	39,1	2320
1x2x1,5	12,9	305
2x2x1,5	16,9	457
4x2x1,5	19,2	602
5x2x1,5	21,5	812
6x2x1,5	23,0	898
8x2x1,5	25,4	1063
10x2x1,5	28,1	1234
12x2x1,5	29,1	1352
16x2x1,5	32,6	1792
20x2x1,5	36,1	2114
24x2x1,5	39,6	2429
1x2x2,5	14,5	376
2x2x2,5	19,4	578
4x2x2,5	22,9	907
5x2x2,5	24,6	1027
6x2x2,5	26,6	1160
8x2x2,5	29,5	1388
10x2x2,5	33,8	1830
12x2x2,5	35,1	2038
16x2x2,5	38,6	2421
20x2x2,5	43,4	3143
24x2x2,5	48,3	3683

RE-2X(St)HSWAH-PIMF..CI

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	Mica tape + XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	LSZH compound to EN50290-2-27
Armour	Round galvanised steel wires to EN 10257-1
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Orange or Red for circuit integrity Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Fire Resistance	IEC 60331 / 21, IEC 60331 / 1-2
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.
Recommended for use where circuit integrity is required in case of fire.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x0,5	16,5	421
4x2x0,5	18,7	533
5x2x0,5	20,7	710
6x2x0,5	22,3	790
8x2x0,5	24,4	917
10x2x0,5	27,2	1072
12x2x0,5	28,0	1150
16x2x0,5	30,7	1354
20x2x0,5	35,0	1805
24x2x0,5	38,3	2065
2x2x0,75	17,5	466
4x2x0,75	19,6	582
5x2x0,75	21,9	790
6x2x0,75	23,4	868
8x2x0,75	25,9	1020
10x2x0,75	28,9	1190
12x2x0,75	29,7	1280
16x2x0,75	33,3	1697
20x2x0,75	37,1	2025
24x2x0,75	40,7	2314
2x2x1	17,8	483
4x2x1	20,7	725
5x2x1	22,4	828
6x2x1	24,0	913
8x2x1	26,5	1073
10x2x1	29,6	1264
12x2x1	30,5	1364
16x2x1	34,6	1860
20x2x1	38,1	2162
24x2x1	41,8	2471

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x2x1,3	18,8	526
4x2x1,3	22,1	808
5x2x1,3	23,7	910
6x2x1,3	25,6	1015
8x2x1,3	28,1	1190
10x2x1,3	32,2	1590
12x2x1,3	33,3	1717
16x2x1,3	37,0	2090
20x2x1,3	40,8	2427
24x2x1,3	45,6	3096
2x2x1,5	18,9	534
4x2x1,5	22,3	825
5x2x1,5	23,9	930
6x2x1,5	25,8	1050
8x2x1,5	28,4	1233
10x2x1,5	32,7	1647
12x2x1,5	33,7	1783
16x2x1,5	37,4	2153
20x2x1,5	41,2	2522
24x2x1,5	46,5	3257
2x2x2,5	22,4	790
4x2x2,5	25,6	1035
5x2x2,5	27,6	1178
6x2x2,5	29,9	1337
8x2x2,5	34,0	1800
10x2x2,5	38,5	2154
12x2x2,5	39,6	2336
16x2x2,5	44,6	3106
20x2x2,5	49,7	3690
24x2x2,5	55,9	4740

RE-2X(St)HSWAH-TIMF..CI

Fire Resistant
Individually Screened
Armoured Cable

EN 50288-7 (500 V)

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	Mica tape + XLPE compound to EN50290-2-29 Black / White / Red twisted triads with numbered cores
Binder Tape	Polyester foil on each twisted triad
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	LSZH compound to EN50290-2-27
Armour	Round galvanised steel wires to EN 10257-1
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Orange or Red for circuit integrity Blue for intrinsically safe cable Black for UV resistant and/or non-instrinsically safe cable

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C
Fire Resistance	IEC 60331 / 21, IEC 60331 / 1-2
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- UV resistant

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.
Recommended for use where circuit integrity is required in case of fire.

ELECTRICAL CHARACTERISTICS(*)

Conductor size (Class 2)	nom.	mm2	0,5	0,75	1	1,3	1,5	2,5
Conductor resistance	max.	Ω/km	36,7	25,0	18,5	14,2	12,3	7,6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25	25	25	40	40	60

(*) At 20 °C

PHYSICAL CHARACTERISTICS

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x0,5	17,7	475
4x3x0,5	19,9	604
5x3x0,5	22,2	810
6x3x0,5	23,8	903
8x3x0,5	26,3	1061
10x3x0,5	29,3	1240
12x3x0,5	30,2	1336
16x3x0,5	33,8	1774
20x3x0,5	37,7	2117
24x3x0,5	41,4	2421
2x3x0,75	18,6	518
4x3x0,75	21,9	805
5x3x0,75	23,5	897
6x3x0,75	25,4	1012
8x3x0,75	27,9	1187
10x3x0,75	31,2	1396
12x3x0,75	33,0	1712
16x3x0,75	36,7	2067
20x3x0,75	40,4	2403
24x3x0,75	45,2	3062
2x3x1	19,0	540
4x3x1	22,4	848
5x3x1	24,0	947
6x3x1	25,9	1068
8x3x1	28,6	1260
10x3x1	32,9	1695
12x3x1	33,8	1820
16x3x1	37,5	2218
20x3x1	41,4	2584
24x3x1	46,7	3330

Cross Sections (mm²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
2x3x1,3	19,8	588
4x3x1,3	23,3	921
5x3x1,3	25,2	1053
6x3x1,3	27,1	1177
8x3x1,3	30,1	1404
10x3x1,3	34,8	1900
12x3x1,3	35,8	2062
16x3x1,3	39,3	2460
20x3x1,3	44,4	3200
24x3x1,3	49,2	3720
2x3x1,5	20,8	717
4x3x1,5	23,7	958
5x3x1,5	25,7	1097
6x3x1,5	27,6	1226
8x3x1,5	30,7	1476
10x3x1,5	35,5	1980
12x3x1,5	36,7	2172
16x3x1,5	40,4	2598
20x3x1,5	45,4	3350
24x3x1,5	50,3	3920
2x3x2,5	23,9	900
4x3x2,5	27,3	1215
5x3x2,5	29,7	1404
6x3x2,5	33,0	1795
8x3x2,5	37,1	2200
10x3x2,5	41,6	2594
12x3x2,5	43,6	3132
16x3x2,5	48,6	3850
20x3x2,5	53,7	4523
24x3x2,5	60,8	5805

RE-2X(L)2Y4YSWAY-fl

EN 50288-7 (500 V) CHEMICAL PROTECTION
ALTERNATIVE TO LEAD SHEATH

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	PVC compound to EN50290-2-22
Chemical & Moisture Barrier (Multi Layer Sheath)	Longitudinally applied protective plastic coated Aluminum tape bonded with an extruded layer of high density polyethylene (HDPE) to 50290-2-4 and plus an additional extruded layer of Polyamide (PA)
Armour	Round galvanised steel wires EN 10257-1
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Black colour. Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version
- Fire resistant version
- HDPE outher sheath alternative
- Multi core / Multi triple / Multi quad
- PE insulation
- PE Sheath

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.
Recomended for use protection needed against aliphatic and aromatic hydrocarbons, engine oils and other organic and inorganic chemicals. This multi layer barrier provide also excellent protection against corrosion and moisture.

RE-2X(L)2Y4YSWAY-fl PIMF

EN 50288-7 (500 V) CHEMICAL PROTECTION
ALTERNATIVE TO LEAD SHEATH

CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	XLPE compound to EN50290-2-29 Black / White twisted pairs with numbered cores
Binder Tape	Polyester foil on each twisted pair
Individual Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Binder Tape	Polyester foil on overall cable core formed by stranded pairs
Collective Screen	Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil
Inner Sheath	PVC compound to EN50290-2-22
Chemical & Moisture Barrier (Multi Layer Sheath)	Longitudinally applied protective plastic coated Aluminum tape bonded with an extruded layer of high density polyethylene (HDPE) to 50290-2-4 and plus an additional extruded layer of Polyamide (PA)
Armour	Round galvanised steel wires EN 10257-1
Outer Sheath	Flame retardant PVC compound to EN50290-2-22 Black colour. Other colours on request

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40˚C / + 90˚C (during operation) - 5 ˚C / + 50˚C (during installation)
Min Bending Radius (Fixed)	10 x D
Construction	EN 50288-7
Material Types & Tests	EN 50290-2 series
Electrical & Mechanical Tests	EN 50289 series
Flame Retardant	IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Yv type reinforced sheath
- Anti termit / anti rodent
- LSF (Low Smoke) version
- Fire resistant version
- HDPE outher sheath alternative
- PE insulation
- PE Sheath

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications.These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.
Recomended for use protection needed against aliphatic and aromatic hydrocarbons, engine oils and other organic and inorganic chemicals. This multi layer barrier provide also excellent protection against corrosion and moisture.

TECHNICAL DATA

NOMINATIVE REFERENCE STANDARDS

EN 50288-7: Sectional specification for instrumentation and control cables

PAS 5308-1: Control and Instrumentation Cables Part 1 : Specification for polyethylene insulated cables

PAS 5308-2: Control and Instrumentation Cables Part 2 : Specification for PVC insulated cables

IEC 60228: Conductors of insulated cables.

BS EN 50288-1: Multi-element metallic cables used in analogue and digital communication and control. Generic specification

EN 50289 Series: Communication cables - Specifications for test methods

EN 50290 Series: Communication cables

EN 50307: Lead and lead alloy sheath and sleeves of electric cables

EN 60708: Low-frequency cables with polyolefin insulation and moisture barrierpolyolefin sheath (IEC 60708)

EN 60811-1-1: Insulating and sheathing materials of electric and optical cables. Common test methods. Part 1-1: General application Measurement of thickness and overall dimensions. Tests for determining the mechanical properties (IEC 60811-1-1)

HD 383 S2 : Conductors of insulated cables First supplement: Guide to the dimensional limits of circular conductors (IEC 60228 + IEC 60228A, mod.)

HD 446.3 S1: Thermocouples - Part 3: Extension and compensating cables tolerances and identification system (IEC 60584-3, mod.)

IEC 60189-2 : Low-frequency cables and wires with PVC insulation and PVC sheath - Part 2: Cables in pairs, triples, quads and quintuples for inside installations

IEC 60332-1-2: Test for vertical flame propagation for single insulated wire or cable.

IEC 60332-3-24: Test for vertical flame spread of vertically - mouted bunched wires or cables - Category C

IEC 60754-1: Test on gases evolved during combustion of meterials from cables. Part 1: Determination of the halogen acid gas content

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.

EN 10218-1: Steel wire and wire products . General . Part 1: Test methods

EN 10244-2: Steel wire and wire products . Non-ferrous metallic coatings on steel wire . Part 2: Zinc or zinc alloy coatings

EN 10257-1: Zinc or zinc alloy coated non-alloy steel wire for armouring either power cables or telecommunications cables . Part 1: Land cables

GENERAL INFORMATION AND BASIC CABLE DESGIN CRITERIAS

Conductor: Conductors in accordance with the specifications defined in standard IEC 60228 and conductors shall be solid, stranded or flexible plain or metal coated copper in accordance with Class 1, 2 or 5 of HD 383 in the range of 0,5 mm² to 2,5 mm. For finished multi-pair, multi-triple and multi-quad cables the maximum resistance of HD 383 shall be increased by 2 %.

Insulation: The insulating material shall be applied to comply with the requirements of EN 50288-1.
The insulation materials are to be selected according to electrical properties, temperature ratings, flame/fire behaviour and environmental conditions.

Insulating materials have to comply:

a) PVC EN 50290-2-21
b) Polyethylene EN 50290-2-23
c) Polypropylene EN 50290-2-25
d) Halogen free flame retardant compound EN 50290-2-26
e) Cross-linked polyethylene EN 50290-2-29

Cabling elements: Instrumentation cables can be laid-up in cores, pairs, triples, quads. The lay length of a pair, triple or quad shall not exceed 100 mm for cables with conductor cross section ≤ 1,5 mm², nor 150 mm for cables with conductor cross-section 2,5 mm².

Screening: Screens are mainly used in instrumentation cables to prevent or reduce possible interference in cables that can be caused by Cross-talk from adjacent pairs or triples or interference induced by external source like electrical equipment, rotating machinery, power lines or other power cables.

Screening can be individually and / or overall screening.

Screening elements can be:
- Aluminium laminated polyester tape in contact with a tinned copper drain wire
- Braiding of tinned copper wires or plain copper wires
- Combination of aluminium laminated polyester tape and braiding of tinned copper wires
- Copper tape

Cable make-up: The cable elements shall be assembled together in concentric layers or in unit construction to form the cable core.

Moisture barriers: The moisture barrier materials can be

- Water swellable tapes
- Cords
- Swellable non-toxic powder
- Petro-jelly filling compound
- Laminated sheathings consisting of longitudinal overlapped metallic foil

Inner sheath material: When an additional inner sheath is applied under a metallic sheath or armouring it should comply with the requirements of EN 50288-1:

Inner sheath materials have to comply:

a) PVC to EN 50290-2-22;
b) Polyethylene to EN 50290-2-24;
c) Halogen free flame retardant compound to EN 50290-2-27

Chemical protection: Used mainly for protection against aggressive petrochemicals. Due to environmental regulations we prefer to use new developed multi-layer sheathing consisting of AL/HDPE/PA layers - aluminium tape and high density polyethylene HDPE sheath with a covering of polyamide PA (Nylon)- instead of Lead Sheath The multi-layer sheath cables have smaller diameter and lighter than the lead sheath cables and offers the advantage of easy handling and installation compare to Lead Sheath.

Armouring: Metallic armour are used when cables have to be installed direct buried, or if mechanical protection, protection against rodent, protection against accidental damages are required.

Armouring shall be done by

- R / SWA - Single layer of galvanized steel wires, coverage min. 90%.
- B / STA - Single or double layer of steel or brass tape
- Q / SWB - Metal braiding

Outer sheath material: Outer sheath material has to comply with the requirements of EN 50288-1. Outer sheath material should be selected according to climatic conditions, like moisture, temperature ratings (arctic, cold, high temperatures), flame behaviour, installation and connection methods, environmental conditions, chemicals, UV, sunlight, oil resistant, direct burials, anti-rodent or termite.

Outer sheath materials have to comply:

a) PVC to EN 50290-2-22;
b) Polyethylene to EN 50290-2-24;
c) Halogen free flame retardant compound to EN 50290-2-27

Outer sheath colours:
Black: UV resistant and/or non-intrinsically safe cables and circuits
Blue: For intrinsically safe cables and circuits
Red or Orange: For fire resistance cables
Grey: For indoor applications

Flame retardant: Flame retardant cables must be self-extinguishing when the source of flame dies out. The cables are tested according to IEC 60332-3-24 Cat C. Single, earth and bonding wires shall withstand the test specified in IEC 60332-1-2.

Fire resistance: During a fire it is vital that emergency circuits must continue to function. This could be communication circuits, emergency lights, alarms and fire pumps. Fire resistant cables are tested in accordance with IEC 60331-21, 31 and IEC 60331-1 or 2.

Content of halogen: Halogen-free cables will not cause corrosion to metals. When halogen - containing cables burn, the gases generated in combustion of the sheathing and insulation may cause corrosion. The secondary effects after a fire are often many times larger than the damages caused by the fire itself. The cables are tested to IEC 60754-1,2. Maximum content of halogen = 5 mg/g.

Smoke Emission: Smoke evolution has major significance in situations where escape routes are limited in case of fire. During the fire the light transmission is recommended to have a minimum value of 60% when tested in accordance with IEC 61034-2

Oil resistance: Oil resistant cables has to meets the criteria according to IEC 60811-2-1 for oil resistance to ASTM No.2 oil, 4 hours, 70 °C and ICEA S-82-552

UV resistance: Halogen free cables have been tested and pass the requirements for UV resistivity and meet the criteria written in UL 1581 section 1200 and ISO 4892-2

Hydrocarbon resistance: Hydrocarbon resistant cables has to meets the criteria according to UIC 895OR

Minimum installation temperature: -5 ˚C for PVC cables, -15 ˚C for LSZH cables

CODING OF INSTRUMENTATION CABLES

Cable Type
RE- Instrumentation and Instrumentation Control Cable resp.
RT- Thermocouple Extension or Compensating Cable

Metal cladding of conductor
-v Copper conductor, tinned

Insulation materials

Y	Polyvinylchloride (PVC)
Yw	Heat resistant Polyvinylchloride (PVCw)
2Y	Polyethylene (PE)
9Y	Polypropylene
2X	Cross-linked Polyethylene (XLPE)
2G	Silicone rubber (SiR)
3G	Ethylene propylene rubber (EPR)

Screening

(ST)	Static screen of Aluminium laminated plastic tape
C	Braid of tinned or untinned copper wires over cable core
(St)C	Aluminium laminated polyester tape with brading of tinned copper wires
(L)	Longitudinally applied Aluminium foil, one or both sides plastic coated
K / CuB	Wrapping of copper foils

PiMF Pair in Metal Foil
TiMF Triple in Metal Foil
QIMF Quad in Metal Foil
(C) Braid of tinned or untinned copper wires over single cabling element

Chemical protection
M Sheath of lead
Mz Sheath of lead alloy
(L)2Y4Y Multi-layer consisting of AL/HDPE/PA

Armour

R / SWA	Galvanized round steel wires
FG / SFA	Galvanized flat steel wires with galvanized steel tape
B / STA	Double layer of galvanized steel tapes
Q / SWB	Braid of galvanized round steel wires

Inner and outer sheath materials

Y	Polyvinylchloride (PVC)
Yw	Heat resistant Polyvinylchloride (PVCw)
Yv	Polyvinylchloride(PVC) of increased thickness
Yö	Oil resistant PVC
H	Halogen-free, flame retardant (LSZH)
Hö	Oil resistant LSZH
Hx	Cross-linked halogen-free, flame retardant LSZH
4Y	Polyamide (Nylon-PA)
11Y	Thermoplastic polyurethane (TPU)

Other properties

..CI	Circuit Integrity (Fire resistant)
-fl	Flame retardant; requirements for IEC 60332-3-24 (cat.C)
F	Cable core petro-jelly filled
-AR	Anti rodent type
-AT	Anti termit type
UV	UV resistant

Electrical test

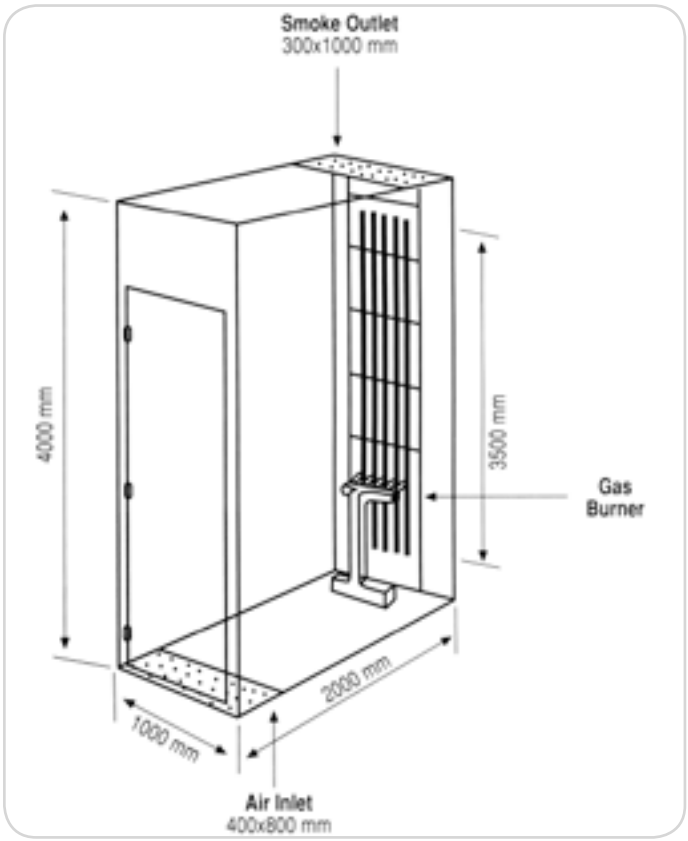
Parameter	test method	Requirement	
Conductor resistance	EN 50289-1-2	HD 383 for multicore cables and maximum shall be increased by 2% for multi-pair, multi-triple and multi-quad cables.	
Conductor resistance unbalance	EN 50289-1-2	N/A	
Dialectric strength	EN 50289-1-3	Duration 1 minute For 90 V rating ≥ 0,75 kV_{ac} or ≥ 1,5 kV_{ac} For 300 V rating ≥ 1,0 kV_{ac} or ≥ 2,0 kV_{ac} For 500 V rating ≥ 2,0 kV_{ac} or ≥ 3,0 kV_{ac}	
Insulation resistance	EN 50289-1-4	Material	Resistance MΩ/km
		PVC	10
		Polyethilene	1.000
		Polypropolene	1.000
		HFFR	10
		XPLE	1.000
Mutual capacitance	EN 50289-1-5	Polyolefin < 150 nf/km Others < 250 nf/km	
Capasitance Unbalance (pairs/quads)	EN 50289-1-5	Polyolefin 500 pf/500 m	
Inductance	EN 50289-1-12	Only to be used for L7R	
Inductance to resistance ratio (L/R)	EN 50289-1-2	< 25 µH/Ω for up to 1 mm² < 40 µH/Ω for 1,5 mm² < 60 µH/Ω for 2,5 mm²	

Mechanical tests

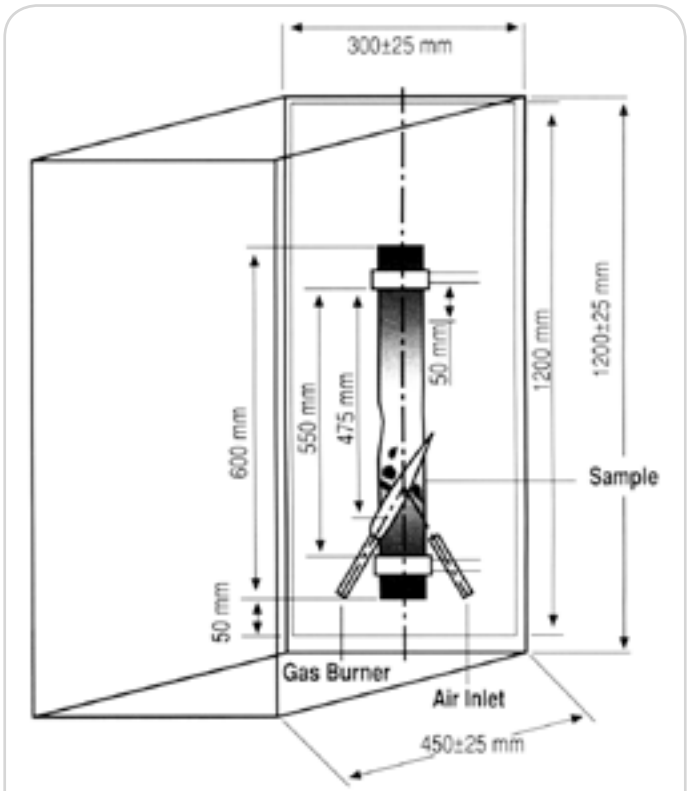
Parameter	test method	Requirement
Conductor relongation at break	EN 50289-3-2	> 10%
Shirinkage of insulation	EN 50289-3-4	EN 50288-1
Crush resistance of the cable	EN 50289-3-5	N/A
Impact resistance of the cable	EN 50289-3-6	N/A
Abrasion resistance of the sheath marking	EN 50289-3-8	N/A
Simultane installation testing of the cable	EN 50289-3-7	N/A
Tensile performance of the cable	EN 50289-3-16	N/A

TESTS ON ELECTRIC CABLES UNDER FIRE CONDITIONS

IEC 60332/3 Fire test on bunched and vertical laid cables.
Test chamber



IEC 60332/1 Fire test on a vertical laid single cable.Test chamber



Flame application time

Required volume of combustible material
per 1 m of cable bunch (lt) : V

IEC 60332/3 CATEGORY	V	MINIMUM BURNING TIME
A	7lt.	40 minutes
B	3.5lt.	40 minutes
C	1.5lt	20 minutes

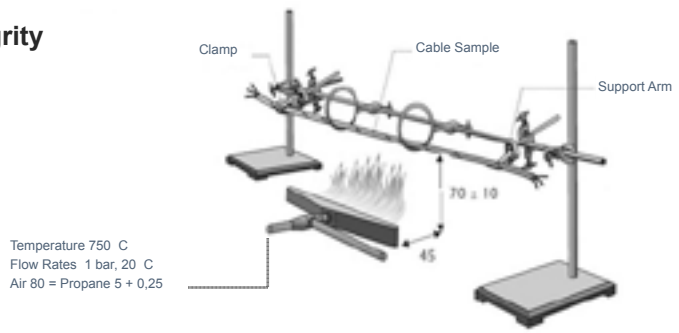
Flame application time

Weight of test piece (kg) : m
Flame application time (s) = 60+m/25

Test Conditions of IEC 60332/3

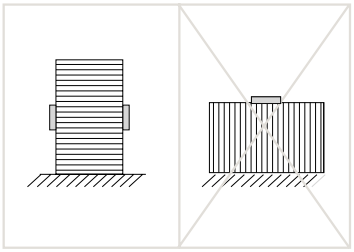
This test is to determine the fire propagation characteristics of a bunch of cables. The test should be carried out if the external wind speed measured by an anemometer fitted on the top of the test rig is not greater than 5 m/s and the temperature of the walls of the test chamber is in between 5 ºC and 40 ºC. The temperature inside of the chamber should be 23±5 ºC before the test

IEC 60331 - 21
Fire Test for circuit integrity

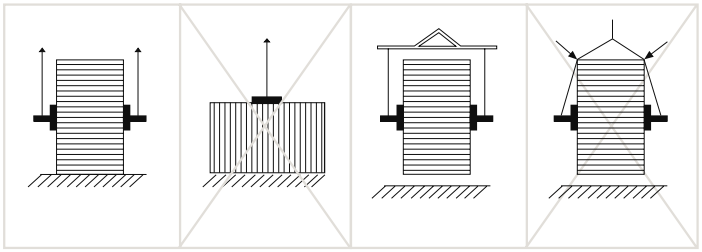


Cables and Drums User Guide Drums Handling

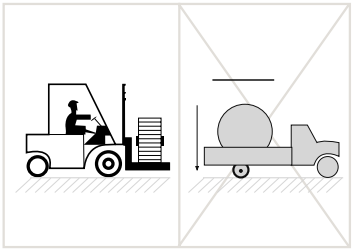
1.1.Position of Drums



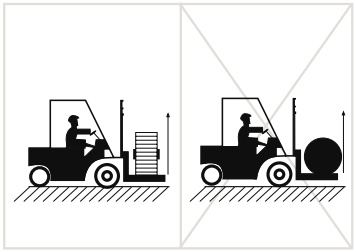
1.2.Loading



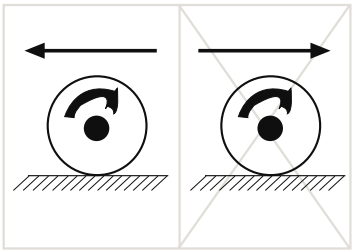
1.3.Unloading



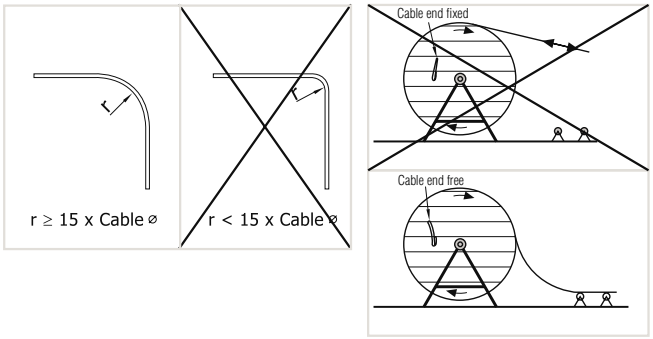
1.4.Handling by forklift



1.5.Rolling

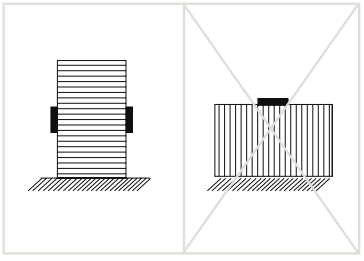


1.6.Paying-off the Cable

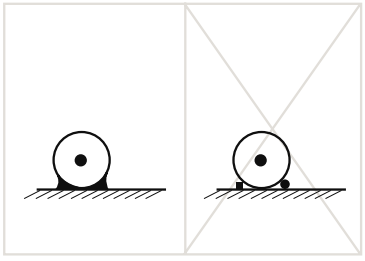


TransportRequirements

2.1.Position of the Drums

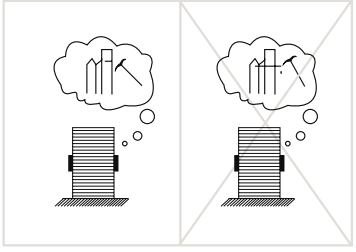


2.2.Fastening Drums

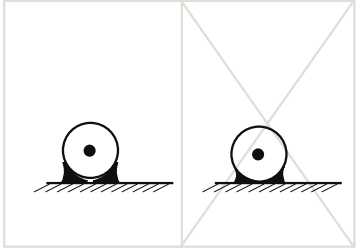


Cables and Drums User Guide

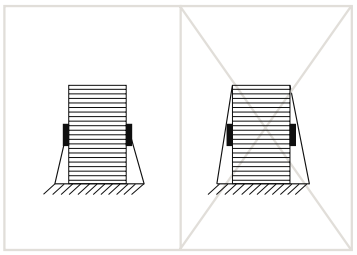
2.3.Use of nails



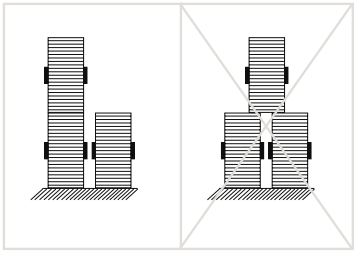
2.4.Bigger Drums



2.5.Binding of the Drums

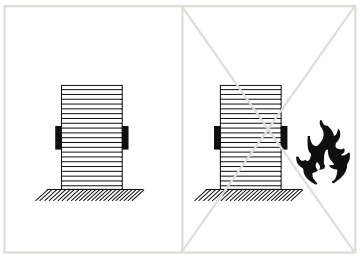


2.6.Multiple Drum Storage

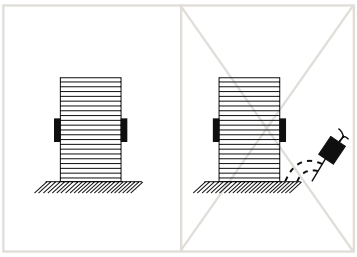


Storage Requirements

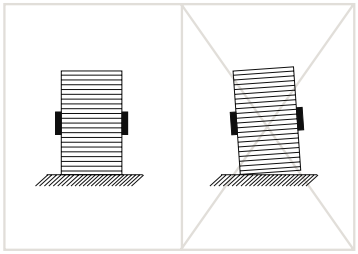
3.1.Do not store near heat sources



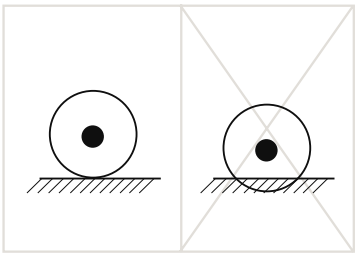
3.2. Do not store on vibrating surfaces. (Ship engine room etc.)



3.3.Do not store on irregular surfaces.

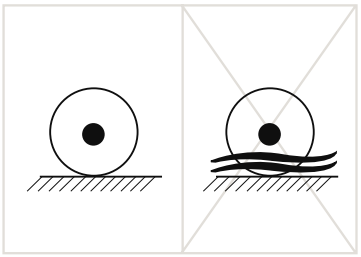


3.4.Do not store on soft surfaces

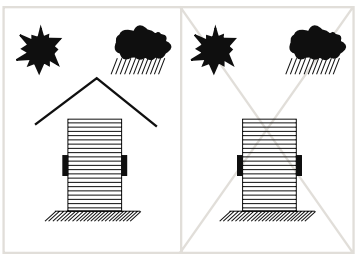


Cables and Drums User Guide

3.5. Do not store on areas liable of flooding. All cable ends must be fully sealed at all times to prevent the ingress of water. It is preferable to store reels off the ground on timbers or other supports. In damp locations, it is advisable to allow at least 3 inches between reels to permit circulation of air.



3.6. If storage is likely to last more than 6 months, drums should be stored in order to be protected from effects like rain, sunlight etc.



NOTES

OFFSHORE CABLES

AIRPORT CABLES

CRANE CABLES

MINING CABLES

DEFENSE INDUSTRY CABLES

MARINE CABLES

RAILWAY CABLES

INDUSTRIAL CABLES

TUNNELLING CABLES

INSTRUMENTATION CABLES

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