



CABLES, WIRES, CORDS AND CONDUCTORS

About company					6
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Product type	Standard	Voltage range, V	Core quantity, pcs.	Core cross-section area, mm ²	
PVC-insulated single core non-sheathed cables					10
H05V-U, H05V-R, H05V-K	EN 50525-2-31	300/500	1	0.5÷1.0	10
H05V2-U, H05V2-R, H05V2-K				0.5÷1.0	11
H07V-U		450/750		1.5÷10	12
H07V-R				1.5÷400	
H07V-K				1.5÷240	
H07V2-U				1.5÷10	14
H07V2-R				1.5÷35	
H07V2-K				1.5÷35	
Low smoke halogen free single core non-sheathed cables					16
H05Z1-U, H05Z1-R, H05Z1-K	EN 50525-3-31	300/500	1	0.5÷1.0	16
H07Z1-U		450/750		1.5÷10	17
H07Z1-R				1.5÷400	
H07Z1-K				1.5÷240	
Low voltage power, control and instrumentation cables for fixed installation					19
NYM-J, NYM-O, (N)YM(St)	DIN VDE 0250-204, DIN VDE 0250-209	300/500	1÷5	1.5÷35	19
			7÷12	1.5÷2.5	
NHXMH-J, NHXMH-O, (N)HXMH(St)	DIN VDE 0250-214, DIN VDE 0250-209		1	1.5÷16	22
			2÷5	1.5÷25	
			7	1.5÷2.5	
PVC-sheathed flexible cords					25
H03VV-F	EN 50525-2-11	300/300	2÷4	0.5÷0.75	25
H03VVH2-F			2	0.5÷0.75	
H05VV-F		300/500	2÷5	0.75÷4	26
H05VVH2-F			2	0.75÷1.5	
H03V2V2-F		300/300	2÷4	0.5÷0.75	28
H03V2V2H2-F			2	0.5÷0.75	
H05V2V2-F		300/500	2÷5	0.75÷4	30
H05V2V2H2-F			2	0.75÷1.5	
Halogen free thermoplastic insulated and sheathed flexible cords					32
H03Z1Z1-F	EN 50525-3-11	300/300	2÷4	0.5÷0.75	32
H03Z1Z1H2-F			2	0.5÷0.75	
H05Z1Z1-F		300/500	2÷5	0.75÷4	34
H05Z1Z1H2-F			2	0.75÷1.0	

Content

Product type	Standard	Voltage range, V	Core quantity, pcs.	Core cross-section area, mm ²	
Low voltage PVC-insulated power and control cables					36
NYY-J, NYY-O	DIN VDE 0276-603, HD 627, IEC 60502-1	600/1000	1	10÷300	36
			2	1.5÷35	
			3÷4	1.5÷240	
			3/1	2.5/1.5÷240/120	
			5	1.5÷35	
			7÷30	1.5÷2.5	
NAYY- J, NAYY-O	HD 603, IEC 60502-1		1	16÷630	40
			4	6÷240	
Low voltage XLPE-insulated power and control cables					42
N2XY- J, N2XY-O	HD 603, HD 627, IEC 60502-1	600/1000	1	16÷630	42
			2	1.5÷35	
			3, 5	1.5÷50	
			3/1	16/10÷240/120	
			4	1.5÷240	
			7÷10	1.5÷4	
			12÷30	1.5÷2,5	
NA2XY- J, NA2XY-O	HD 603, IEC 60502-1		1	150÷500	46
			4	35÷240	
N2X2Y, NA2X2Y	HD 603, IEC 60502-1		1	50÷500	48
			4	16÷240	
Low voltage power and control cables with concentric copper conductor					50
NYCY, NAYCY	HD 603, HD 627, IEC 60502-1	600/1000	3	4/4÷240/120	50
			4	4/4÷150/70	
			5÷7	1.5/1.5÷6/6	
			10÷24	1.5/2.5÷2.5/10	
Low voltage armored power cables					53
NYRY	HD 603, HD 627, IEC 60502-1	600/1000	1	25÷400	53
			2, 5	1.5÷50	
			3, 4	1.5÷240	
			3/1	25/16÷240/120	
			7÷24	1.5÷2.5	
NYBY	HD 603, HD 627, IEC 60502-1		2, 5	1.5÷50	57
			3, 4	1.5÷240	
			3/1	25/16÷240/120	
			7÷24	1.5÷2.5	

Product type	Standard	Voltage range, V	Core quantity, pcs.	Core cross-section area, mm ²	
Halogen free low smoke power and control cables					60
N2XH	HD 604, HD 627, IEC 60502-1	600/1000	1	1.5÷300	60
			2, 5	1.5÷50	
			3, 4	1.5÷240	
			3/1	16/10ë	
N2XCH			7÷30	1.5÷2.5	64
			2	1.5/1.5÷16/16	
			3, 4	1.5/1.5÷240/120	
			5÷30	1.5/1.5÷2.5/10	
Halogen free low smoke fire resistant power and control cables					67
(N)HXH FE180/E30, (N)HXH FE180/E90, (N)HXCH FE180/E30, (N)HXCH FE180/E90	DIN VDE 0266, IEC 60502-1	600/1000	1	1.5÷240	67
			2	1.5÷150	
			3	1.5÷240	
			4	1.5÷185	
			5	1.5÷95	
Flexible control cables					71
H05VV5-F	EN 50525-2-51	300/500	2÷60	0.5÷2.5	71
H05VVC4V5-K			18÷36	0.5÷2.5	
			48÷60	0.5÷1.5	
Aerial bundled conductors					74
ABC (AXKA)	HD 626 S1	600/1000	2÷5	16/25÷120/95	74
NFA2X			4	25÷70	75
			4+1, 4+2	70/35	
AsXSn			1	70	76
			2	16÷35	
			4	16÷120	
	4+1, 4+2	35÷120+25÷35			
Bare conductors for overhead power transmission					78
AL1 (AAC)	EN 50182	-	1	16÷1000	78
AL3 (AAAC)				16÷1000	79
AL1/ST1A (ACSR)				15/3÷1046/45	80
AL3/ST1A (AACSR)				15/3÷679/86	82

About company



75 years of experience in the cable industry



We are among the eight largest producers of cable products in the CIS



More than 25 000 different brands and sizes of cables and wires



Member of the international associations Electrocable and Intercable



About 1000 employees



23 hectare area



ISO 9001 and ISO 14001 management systems implemented



Among our customers are enterprises of different industries



Cables and cable systems installation and supervising



100% continuous automated testing



Winner of the award Business Initiative Directions — International Gold Star



Testing centre of cable products is accredited in the National agency for accreditation of Ukraine



Recognized supplier of cable products for nuclear power plants

KEMA



KEMA (Netherlands), VDE (Germany), innogy SE Eurotest (Germany), IEn (Poland), VNIIEP JSC (Russia) certification



Clients from Armenia, Azerbaijan, Belarus, Bulgaria, France, Georgia, Germany, India, Iran, Israel, Kazakhstan, Kenya, Kyrgyzstan, Lithuania, Moldova, Netherlands, Poland, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan



The history of development

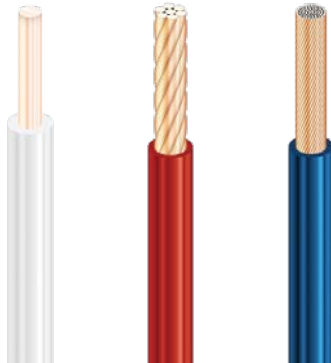


- Modernization of the site for the production of PVC-insulated low-voltage power cables **2019**
- Plywood cable drums production **2018**
- The commissioning of a new building of the sales, marketing and advertising department **2018**
- 18UD — 32UD type wooden cable drums production **2017**
- Flame retardant cables production **2013**
- 110–330 kV XLPE-insulated cables production **2008**
- 2019** Small-sized (micro tube) multi-fiber trunk and intra-object distribution optical cables production
- 2019** Modernization of the site for the production of XLPE-insulated low-voltage power cables
- 2018** The commissioning of a new site for the production of low-voltage cables and wires
- 2017** Solar cables production
- 2016** Special cables production
- 2012** PVC compounds and halogen free polyolefin compositions production
- 2007** Copper wire rod production

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- Polymer materials production **2007** ●
 - **2006** Self-supporting insulated wires production
 - Fibre-optic cables production **2004** ●
 - **2003** 6–110 kV XLPE-insulated cables production
 - PVC compounds production **2002** ●
 - **1999** Modernization of enameled wires production
 - Household wires production **1998** ●
 - **1996** Aluminum conductors production
 - Control and interlocking cables production **1980** ●
 - **1960** Drawn and rolled production
 - Power paper insulated cables production **1954** ●
 - **1944** Winding and enameled wires production
 - YUZHOCABLE founding **1943** ●



H05V-U, H05V-R, H05V-K

300/500 V
EN 50525-2-31


Design

Conductor: bare copper conductor of class 1 (solid), 2 (stranded) or 5 (flexible) acc. to IEC 60228

Insulation: PVC compound TI 1

Other dimensions and colours available on request

Application	– for internal wiring of electric machines and equipments
Temperature range – during installation – fixed installed – at short circuit of max 5 s – ambient temperature at storage	+5 °C up to +70 °C –30 °C up to +70 °C up to 160 °C up to 40 °C
Test voltage (50 Hz)	2000 V
Behavior in fire	EN 60332-1-2
Min bending radius at 20 °C, fixed installation	4D for H05V-U, H05V-R 3D for H05V-K
Core identification	yellow-green, white, black, grey, blue, brown, red or other upon request

Dimensional data

Designation	Nominal cross-section mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
H05V-U	0.5	RE	1	0.6	2.0	8
	0.75			0.6	2.2	10
	1.0			0.6	2.3	13
H05V-R	0.5	RM	2	0.6	2.1	8
	0.75			0.6	2.3	11
	1.0			0.6	2.5	14
H05V-K	0.5	RM	5	0.6	2.1	8
	0.75			0.6	2.3	11
	1.0			0.6	2.5	13

Technical data

Designation	Nominal cross-section mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation N	Permissible current rating acc. to EN 50565-1 (30 °C) A
H05V-U	0.5	36.0	25	3
	0.75	24.5	37.5	6
	1.0	18.1	50	10
H05V-R	0.5	36.0	25	3
	0.75	24.5	37.5	6
	1	18.1	50	10
H05V-K	0.5	39.0	7.5	3
	0.75	26.0	11.25	6
	1.0	19.5	15	10

H05V2-U, H05V2-R, H05V2-K

300/500 V

EN 50525-2-31



Design

Conductor: bare copper conductor of class 1 (solid), 2 (stranded) or 5 (flexible) acc. to IEC 60228

Insulation: PVC compound TI 3

Other dimensions and colours available on request

Application	– for internal wiring of electric machines and equipments – in premises at high temperature
Temperature range – during installation – fixed installed – at short circuit of max 5 s – ambient temperature at storage	+5 °C up to +90 °C –30 °C up to +90 °C up to 160 °C up to 40 °C
Test voltage (50 Hz)	2000 V
Behavior in fire	EN 60332-1-2
Min bending radius at 20 °C, fixed installation	4D for H05V2-U, H05V2-R 3D for H05V2-K
Core identification	yellow-green, white, black, grey, blue, brown, red or other upon request

Dimensional data

Designation	Nominal cross-section mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
H05V2-U	0.5	RE	1	0.6	2.0	8
	0.75			0.6	2.2	10
	1.0			0.6	2.3	13
H05V2-R	0.5	RM	2	0.6	2.1	8
	0.75			0.6	2.3	11
	1.0			0.6	2.5	14
H05V2-K	0.5	RM	5	0.6	2.1	8
	0.75			0.6	2.3	11
	1.0			0.6	2.5	13

Technical data

Designation	Nominal cross-section mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation N	Permissible current rating acc. to EN 50565-1 (30 °C) A
H05V2-U	0.5	36.0	25	3
	0.75	24.5	37.5	6
	1.0	18.1	50	10
H05V2-R	0.5	36.0	25	3
	0.75	24.5	37.5	6
	1.0	18.1	50	10
H05V2-K	0.5	39.0	7.5	3
	0.75	26.0	11.25	6
	1.0	19.5	15	10

H07V-U, H07V-R, H07V-K

450/750 V
EN 50525-2-31

Design

Conductor: bare copper conductor of class 1 (solid), 2 (stranded) or 5 (flexible) acc. to IEC 60228

Insulation: PVC compound TI 1

Other dimensions and colours available on request



Application	– installation in surface mounted or embedded conduits, or similar closed systems – suitable for fixed protected installation in, or on, lighting or control gear – cables may be used at 600/1000 V when this cable is used in fixed installations with mechanical protection, within switchgear and control gear			
Temperature range – during installation – fixed installed – at short circuit of max 5 s – ambient temperature at storage	+5 °C up to +70 °C –30 °C up to +70 °C up to 160 °C up to 40 °C			
Test voltage (50 Hz)	2500 V			
Behavior in fire	EN 60332-1-2			
Min bending radius at 20 °C, fixed installation	D ≤ 8 mm	8mm < D ≤ 12mm	12mm < D ≤ 20mm	D > 20 mm
	4D	5D	6D	6D
Min bending radius at 20 °C, fixed installation, flexible cables	D ≤ 8 mm	8mm < D ≤ 12mm	12mm < D ≤ 20mm	D > 20 mm
	3D	3D	4D	4D
Core identification	yellow-green, white, black, grey, blue, brown, red			

Dimensional data

Designation	Nominal cross-section mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
1	2	3	4	5	6	7
H07V-U	1.5	RE	1	0.7	2.7	18
	2.5			0.8	3.3	29
	4			0.8	3.7	43
	6			0.8	4.2	60
	10			1.0	5.4	99
H07V-R	1.5	RM	2	0.7	3.0	20
	2.5			0.8	3.6	31
	4			0.8	4.1	45
	6			0.8	4.5	64
	10			1.0	5.8	107
	16			1.0	6.8	163
	25			1.2	8.5	258
	35			1.2	9.6	350
	50			1.4	11.3	476
	70			1.4	12.6	668
	95			1.6	15.0	929
	120			1.6	16.4	1155
	150			1.8	18.4	1428
	185			2.0	20.3	1783
	240			2.2	23.2	2320
300	2.4	25.4	2901			
400	2.6	28.5	3750			

1	2	3	4	5	6	7
H07V-K	1.5	RM	5	0.7	2.9	19
	2.5			0.8	3.6	29
	4			0.8	4.1	43
	6			0.8	4.6	61
	10			1.0	6.0	104
	16			1.0	7.1	157
	25			1.2	8.7	243
	35			1.2	9.8	341
	50			1.4	11.8	478
	70			1.4	13.6	665
	95			1.6	16.1	881
	120			1.6	17.2	1107
	150			1.8	19.4	1383
	185			2.0	22.1	1692
240	2.2	24.0	2204			

Technical data

Designation	Nominal cross-section mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating (30 °C, two loaded conductors) acc. to IEC 60364-5-52 A	
					
H07V-U	1.5	12.1	0.075	14.5	17.5
	2.5	7.41	0.125	19.5	24
	4	4.61	0.2	26	32
	6	3.08	0.3	34	41
	10	1.83	0.5	46	57
H07V-R	1.5	12.1	0.075	14.5	17.5
	2.5	7.41	0.125	19.5	24
	4	4.61	0.2	26	32
	6	3.08	0.3	34	41
	10	1.83	0.5	46	57
	16	1.15	0.8	61	76
	25	0.727	1.25	80	101
	35	0.524	1.75	99	125
	50	0.387	2.5	119	151
	70	0.268	3.5	151	192
	95	0.193	4.75	182	232
	120	0.153	6	210	269
	150	0.124	7.5	240	300
	185	0.0991	9.25	273	341
240	0.0754	12	321	400	
H07V-K	1.5	13.3	0.0225	14.5	17.5
	2.5	7.98	0.0375	19.5	24
	4	4.95	0.06	26	32
	6	3.30	0.09	34	41
	10	1.91	0.15	46	57
	16	1.21	0.24	61	76
	25	0.780	0.375	80	101
	35	0.554	0.525	99	125
	50	0.386	0.75	119	151
	70	0.272	1.05	151	192
	95	0.206	1.425	182	232
	120	0.161	1.8	210	269
	150	0.129	2.25	240	300
185	0.106	2.775	273	341	
240	0.0801	3.6	321	400	

H07V2-U, H07V2-R, H07V2-K

450/750 V
EN 50525-2-31


Design

Conductor: bare copper conductor of class 1 (solid), 2 (stranded) or 5 (flexible) acc. to IEC 60228

Insulation: PVC compound TI 3



Other dimensions and colours available on request

Application	<ul style="list-style-type: none"> – installation in surface mounted or embedded conduits, or similar closed systems – suitable for fixed protected installation in, or on, lighting or control gear – cables may be used at 600/1000 V when this cable is used in fixed installations with mechanical protection, within switchgear and control gear 			
Temperature range – during installation – fixed installed – at short circuit of max 5 s – ambient temperature at storage	+5 °C up to +90 °C –30 °C up to +90 °C up to 160 °C up to 40 °C			
Test voltage (50 Hz)	2500 V			
Behavior in fire	EN 60332-1-2			
Min bending radius at 20 °C, fixed installation	D ≤ 8 mm	8mm < D ≤ 12mm	12mm < D ≤ 20mm	D > 20 mm
	4D	5D	6D	6D
Min bending radius at 20 °C, fixed installation, flexible cables	D ≤ 8 mm	8mm < D ≤ 12mm	12mm < D ≤ 20mm	D > 20 mm
	3D	3D	4D	4D
Core identification	yellow-green, white, black, grey, blue, brown, red or other upon request			

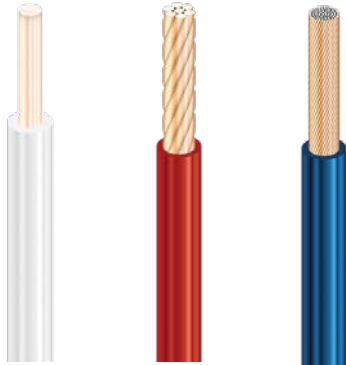
Dimensional data

Designation	Nominal cross-section mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
H07V2-U	1.5	RE	1	0.7	2.7	18
	2.5			0.8	3.3	29
	4			0.8	3.7	43
	6			0.8	4.2	60
	10			1.0	5.4	99
H07V2-R	1.5	RM	2	0.7	3.0	20
	2.5			0.8	3.6	31
	4			0.8	4.1	45
	6			0.8	4.5	64
	10			1.0	5.8	107
	16			1.0	6.8	163
	25			1.2	8.5	258
	35			1.2	9.6	350
H07V2-K	1.5	RM	5	0.7	2.9	19
	2.5			0.8	3.6	29
	4			0.8	4.1	43
	6			0.8	4.6	61
	10			1.0	6.0	104
	16			1.0	7.1	157
	25			1.2	8.7	243
	35			1.2	9.8	341

Technical data

Designation	Nominal cross-section mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating (30 °C, two loaded conductors) acc. to IEC 60364-5-52	
				A	
					
H07V2-U	1.5	12.1	0.075	14.5	17.5
	2.5	7.41	0.125	19.5	24
	4	4.61	0.2	26	32
	6	3.08	0.3	34	41
	10	1.83	0.5	46	57
H07V2-R	1.5	12.1	0.075	14.5	17.5
	2.5	7.41	0.125	19.5	24
	4	4.61	0.2	26	32
	6	3.08	0.3	34	41
	10	1.83	0.5	46	57
	16	1.15	0.8	61	76
	25	0.727	1.25	80	101
H07V2-K	1.5	13.3	0.0225	14.5	17.5
	2.5	7.98	0.0375	19.5	24
	4	4.95	0.06	26	32
	6	3.30	0.09	34	41
	10	1.91	0.15	46	57
	16	1.21	0.24	61	76
	25	0.780	0.375	80	101
	35	0.554	0.525	99	125

H05Z1-U, H05Z1-R, H05Z1-K

300/500 V
EN 50525-3-31


Design

Conductor: bare copper conductor of class 1 (solid), 2 (stranded) or 5 (flexible) acc. to IEC 60228

Insulation: thermoplastic compound TI 7

Other dimensions and colours available on request

Application	– for internal wiring of electric machines and equipments – in places where a low level of fumes and corrosive gases is required in case of fire or burning
Temperature range – during installation – fixed installed – at short circuit of max 5 s – ambient temperature at storage	+5 °C up to +70 °C –30 °C up to +70 °C up to 160 °C up to 40 °C
Test voltage (50 Hz)	2000 V
Behavior in fire	EN 60332-1-2, EN 60332-3-24, EN 61034-2
Min bending radius at 20 °C, fixed installation	4D for H05Z1-U, H05Z1-R 3D for H05Z1-K
Core identification	yellow-green, white, black, grey, blue, brown, red or other upon request

Dimensional data

Designation	Nominal cross-section mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
H05Z1-U	0.5	RE	1	0.6	2.0	8
	0.75			0.6	2.2	10
	1			0.6	2.3	13
H05Z1-R	0.5	RM	2	0.6	2.1	8
	0.75			0.6	2.3	11
	1			0.6	2.5	14
H05Z1-K	0.5	RM	5	0.6	2.1	8
	0.75			0.6	2.3	11
	1			0.6	2.5	13

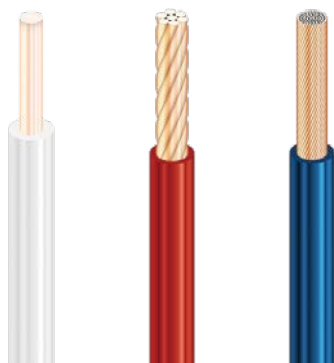
Technical data

Designation	Nominal cross-section mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation N	Permissible current rating acc. to EN 50565-1 (30 °C) A
H05Z1-U	0.5	36.0	25	3
	0.75	24.5	37.5	6
	1	18.1	50	10
H05Z1-R	0.5	36.0	25	3
	0.75	24.5	37.5	6
	1	18.1	50	10
H05Z1-K	0.5	39.0	7.5	3
	0.75	26.0	11.25	6
	1	19.5	15	10

H07Z1-U, H07Z1-R, H07Z1-K

450/750 V

EN 50525-3-31



Design

Conductor: bare copper conductor of class 1 (solid), 2 (stranded) or 5 (flexible) acc. to IEC 60228

Insulation: thermoplastic compound TI 7

Other dimensions and colours available on request



Application	– installation in surface mounted or embedded conduits, or similar closed systems – suitable for fixed protected installation in, or on, lighting or control gear – in places where a low level of fumes and corrosive gases is required in case of fire or burning – cables may be used at 600/1000 V when this cable is used in fixed installations with mechanical protection, within switchgear and control gear			
Temperature range – during installation – fixed installed – at short circuit of max 5 s – ambient temperature at storage	+5 °C up to +70 °C –30 °C up to +70 °C up to 160 °C up to 40 °C			
Test voltage (50 Hz)	2500 V			
Behavior in fire	EN 60332-1-2, EN 60332-3-24, EN 61034-2			
Min bending radius at 20 °C, fixed installation	D ≤ 8 mm 4D	8mm<D≤12mm 5D	12mm<D≤20mm 6D	D > 20 mm 6D
Min bending radius at 20 °C, fixed installation, flexible cables	D ≤ 8 mm 3D	8mm<D≤12mm 3D	12mm<D≤20mm 4D	D > 20 mm 4D
Core identification	yellow-green, white, black, grey, blue, brown, red			

Dimensional data

Designation	Nominal cross-section mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
1	2	3	4	5	6	7
H07Z1-U	1.5	RE	1	0.7	2.7	18
	2.5			0.8	3.3	29
	4			0.8	3.7	43
	6			0.8	4.2	60
	10			1.0	5.4	99
H07Z1-R	1.5	RM	2	0.7	3.0	20
	2.5			0.8	3.6	31
	4			0.8	4.1	45
	6			0.8	4.5	64
	10			1.0	5.8	107
	16			1.0	6.8	163
	25			1.2	8.5	258
	35			1.2	9.6	350
	50			1.4	11.3	476
	70			1.4	12.6	668
	95			1.6	15.0	929
	120			1.6	16.4	1155
	150			1.8	18.4	1428
	185			2.0	20.3	1783
	240			2.2	23.2	2320
300	2.4	25.4	2901			
400	2.6	28.5	3750			

1	2	3	4	5	6	7
H07Z1-K	1.5	RM	5	0.7	2.9	19
	2.5			0.8	3.6	29
	4			0.8	4.1	43
	6			0.8	4.6	61
	10			1.0	6.0	104
	16			1.0	7.1	157
	25			1.2	8.7	243
	35			1.2	9.8	341
	50			1.4	11.8	478
	70			1.4	13.6	665
	95			1.6	16.1	881
	120			1.6	17.2	1107
	150			1.8	19.4	1383
	185			2.0	22.1	1692
	240			2.2	24.0	2204

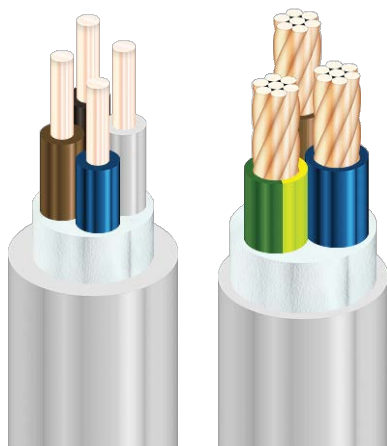
Technical data

Designation	Nominal cross-section mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating (30 °C, two loaded conductors) acc. to IEC 60364-5-52 A	
					
H07Z1-U	1.5	12.1	0.075	14.5	17.5
	2.5	7.41	0.125	19.5	24
	4	4.61	0.2	26	32
	6	3.08	0.3	34	41
	10	1.83	0.5	46	57
H07Z1-R	1.5	12.1	0.075	14.5	17.5
	2.5	7.41	0.125	19.5	24
	4	4.61	0.2	26	32
	6	3.08	0.3	34	41
	10	1.83	0.5	46	57
	16	1.15	0.8	61	76
	25	0.727	1.25	80	101
	35	0.524	1.75	99	125
	50	0.387	2.5	119	151
	70	0.268	3.5	151	192
	95	0.193	4.75	182	232
	120	0.153	6	210	269
	150	0.124	7.5	240	300
	185	0.0991	9.25	273	341
	240	0.0754	12	321	400
300	0.0601	15	367	458	
400	0.0470	20	-	-	
H07Z1-K	1.5	13.3	0.0225	14.5	17.5
	2.5	7.98	0.0375	19.5	24
	4	4.95	0.06	26	32
	6	3.30	0.09	34	41
	10	1.91	0.15	46	57
	16	1.21	0.24	61	76
	25	0.780	0.375	80	101
	35	0.554	0.525	99	125
	50	0.386	0.75	119	151
	70	0.272	1.05	151	192
	95	0.206	1.425	182	232
	120	0.161	1.8	210	269
	150	0.129	2.25	240	300
	185	0.106	2.775	273	341
	240	0.0801	3.6	321	400

NYM-J, NYM-O, (N)YM(St)

300/500 V

DIN VDE 0250–204, DIN VDE 0250–209



Design

Conductor: bare copper conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228
 Insulation: PVC compound TI 1
 Inner covering: polymer compound
 Electrostatic screening of Al-PET foil + tinned copper drain wire (for (N)YM(St))
 Sheath: PVC compound type TM 1
 NYM-J — with protective conductor
 NYM-O — without protective conductor
 Other dimensions, conductor constructions and colours available on request







Application	– for fixed installation in lighting networks, power system, control boards and machines – for use in dry, wet and damp rooms on or under the plaster – outdoor installation is possible with UV protection		
Max conductor temperature	70 °C		
Max conductor temperature at short circuit for 5 s	160 °C		
Ambient temperature	–20 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	4D		
Test voltage (50 Hz)	2000 V		
Behavior in fire	EN 60332–1–2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	2	brown, blue	-
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey
	7–12	black with number code	green-yellow, the other black with number code




Dimensional data




No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. (NYM-J, NYM-O) kg/km
1	2	3	4	5	6	7
1×1.5	RE	1	0.6	1.4	5	43
1×2.5			0.7	1.4	6	58
1×4			0.8	1.4	6	78
1×6			0.8	1.4	7	99
1×10			1.0	1.4	8	149
1×16	RM	2	1.0	1.4	9	217
1×25			1.2	1.4	11	323
1×35			1.2	1.4	12	420
2×1.5	RE	1	0.6	1.4	8	104
2×2.5			0.7	1.4	10	145
2×4			0.8	1.4	11	212
2×6			0.8	1.6	12	273
2×10			1.0	1.6	15	424

1	2	3	4	5	6	7
2×16	RM	2	1.0	1.6	17	578
2×25			1.2	1.8	21	868
2×35			1.2	1.8	23	1125
3×1.5	RE	1	0.6	1.4	9	120
3×2.5			0.7	1.4	10	168
3×4			0.8	1.4	11	240
3×6			0.8	1.6	12	326
3×10			1.0	1.6	15	502
3×16	RM	2	1.0	1.6	18	764
3×25			1.2	1.8	22	1168
3×35			1.2	1.8	24	1507
4×1.5	RE	1	0.6	1.4	9	141
4×2.5			0.7	1.4	10	202
4×4			0.8	1.6	12	303
4×6			0.8	1.6	14	399
4×10			1.0	1.6	16	619
4×16	RM	2	1.0	1.6	20	948
4×25			1.2	1.8	24	1454
4×35			1.2	1.8	27	1887
5×1.5	RE	1	0.6	1.4	10	168
5×2.5			0.7	1.4	11	241
5×4			0.8	1.6	13	363
5×6			0.8	1.6	15	479
5×10			1.0	1.6	18	747
5×16	RM	2	1.0	1.8	22	1169
5×25			1.2	1.8	27	1753
5×35			1.2	1.8	29	2291
7×1.5	RE	1	0.6	1.6	11	262
10×1.5	RE	1	0.6	1.6	14	357
12×1.5	RE	1	0.6	1.6	14	394
7×2.5	RE	1	0.7	1.6	13	311
10×2.5	RE	1	0.7	1.6	16	508
12×2.5	RE	1	0.7	1.6	16	567

Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating (30 °C) acc. to IEC 60364-5-52 A					
								
1×1.5	12.1	0.075	14,5	13.5	17,5	15.5	19,5	17.5
1×2.5	7.41	0.125	19,5	18	24	21	27	24
1×4	4.61	0.2	26	24	32	28	36	32
1×6	3.08	0.3	34	31	41	36	46	41
1×10	1.83	0.5	46	42	57	50	63	57
1×16	1.15	0.8	61	56	76	68	85	76
1×25	0.727	1.25	80	73	101	89	112	96
1×35	0.524	1.75	99	89	125	110	138	119

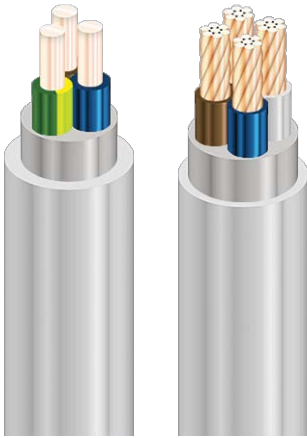
No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating (30 °C, two loaded conductors) acc. to IEC 60364-5-52 A		
					
2×1.5	12.1	0.15	14	16,5	19,5
2×2.5	7.41	0.25	18,5	23	27
2×4	4.61	0.4	25	30	36
2×6	3.08	0.6	32	38	46
2×10	1.83	1	43	52	63
2×16	1.15	1.6	57	69	85
2×25	0.727	2.5	75	90	112
2×35	0.524	3.5	92	111	138

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating (30 °C, three loaded conductors) acc. to IEC 60364-5-52 A		
					
3×1.5	12.1	0.225	13	15	17,5
3×2.5	7.41	0.375	17,5	20	24
3×4	4.61	0.6	23	27	32
3×6	3.08	0.9	29	34	41
3×10	1.83	1.5	39	46	57
3×16	1.15	2.4	52	62	76
3×25	0.727	3.75	68	80	96
3×35	0.524	5.25	83	99	119
4×1.5	12.1	0.3	13	15	17,5
4×2.5	7.41	0.5	17,5	20	24
4×4	4.61	0.8	23	27	32
4×6	3.08	1.2	29	34	41
4×10	1.83	2	39	46	57
4×16	1.15	3.2	52	62	76
4×25	0.727	5	68	80	96
4×35	0.524	7	83	99	119
5×1.5	12.1	0.375	13	15	17,5
5×2.5	7.41	0.625	17,5	20	24
5×4	4.61	1	23	27	32
5×6	3.08	1.5	29	34	41
5×10	1.83	2.5	39	46	57
5×16	1.15	4	52	62	76
5×25	0.727	6.25	68	80	96
5×35	0.524	8.75	83	99	119
7×2.5	7.41	0.875	-	-	-
10×1.5	12.1	0.8	-	-	-
12×2.5	7.41	1.5	-	-	-

NHXMH-J, NHXMH-O, (N)HXMH(St)

300/500 V

DIN VDE 0250-214, DIN VDE 0250-209



Design

Conductor: bare copper conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228

Insulation: XLPE type 2X11

Inner covering: halogen-free compound

Electrostatic screening of Al-PET foil + tinned copper drain wire (for (N)HXMH(St))

Sheath: halogen-free thermoplastic polymer compound type HM2

NHXMH-J — with protective conductor

NHXMH-O — without protective conductor

Other dimensions, conductor constructions and colours available on request







Application	<ul style="list-style-type: none"> – for fixed installation in lighting networks, power system, control boards and machines – for use in dry, wet and damp rooms on or under the plaster – outdoor installation is possible with UV protection – for installations where fire, smoke emission and toxic fumes create a potential risk to life and equipment (in hotels, schools, tunnels, high constructions, hospitals, power plants, data processing centers, business centers etc.) 		
Max conductor temperature	90 °C		
Max conductor temperature at short circuit for 5 s	250 °C		
Ambient temperature	–20 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	4D		
Test voltage (50 Hz)	2000 V		
Behavior in fire	EN 60332-3-24, EN 60754, EN 61034		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	2	brown, blue	-
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey
	7-12	black with number code	green-yellow, the other black with number code




Dimensional data




No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. (NHXMH-J, NHXMH-O) kg/km
1	2	3	4	5	6	7
1×1.5	RE	1	0.5	1.4	5	40
1×2.5			0.5	1.4	6	60
1×4			0.6	1.4	7	70
1×6			0.6	1.4	7	90
1×10			0.7	1.4	8	130
1×16	RM	2	0.7	1.4	9	190

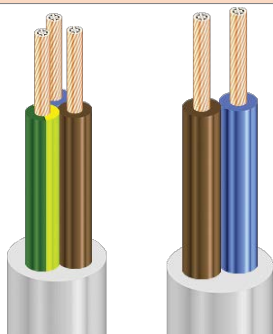
1	2	3	4	5	6	7
2×1.5	RE	1	0.5	1,4	9	120
2×2.5			0.5	1,4	10	150
2×4			0.6	1,4	11	210
2×6			0.6	1,4	12	270
2×10			0.7	1,6	15	430
2×16	RM	2	0.7	1,6	17	630
2×25			0.9	1,6	21	970
3×1.5			RE	1	0.5	1,4
3×2.5	0.5	1,4			10	180
3×4	0.6	1,4			11	250
3×6	0.6	1,6			13	340
3×10	0.7	1,6			16	530
3×16	RM	2	0.7	1,6	19	810
3×25			0.9	1,8	23	1230
4×1.5			RE	1	0.5	1,4
4×2.5	0.5	1,4			11	210
4×4	0.6	1,6			13	310
4×6	0.6	1,6			14	430
4×10	0.7	1,6			17	640
4×16	RM	2	0.7	1,6	21	990
4×25			0.9	1,8	26	1550
5×1.5			RE	1	0.5	1,4
5×2.5	0.5	1,4			12	250
5×4	0.6	1,6			14	390
5×6	0.6	1,6			16	510
5×10	0.7	1,6			18	780
5×16	RM	2	0.7	1,8	23	1220
5×25			0.9	1,8	28	1870
7×1.5			RE	1	0.5	1,4
7×2.5	RE	1	0.5	1,6	12	320

Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating (30 °C) acc. to IEC 60364-5-52 A					
								
1×1.5	12.1	0.075	19	17	23	20	24	22
1×2.5	7.41	0.125	26	23	31	28	33	30
1×4	4.61	0.2	35	31	42	37	45	40
1×6	3.08	0.3	45	40	54	48	58	52
1×10	1.83	0.5	61	54	75	66	80	70
1×16	1.15	0.8	81	73	100	88	107	96

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating (30 °C, two loaded conductors) acc. to IEC 60364-5-52 A		
					
2×1.5	12.1	0.15	18,5	22	24
2×2.5	7.41	0.25	25	30	33
2×4	4.61	0.4	33	40	45
2×6	3.08	0.6	42	51	58
2×10	1.83	1	57	69	80
2×16	1.15	1.6	76	91	107
2×25	0.727	2.5	99	119	138

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating (30 °C, three loaded conductors) acc. to IEC 60364-5-52 A		
					
3×1.5	12.1	0.225	16,5	19,5	22
3×2.5	7.41	0.375	22	26	30
3×4	4.61	0.6	30	35	40
3×6	3.08	0.9	38	44	52
3×10	1.83	1.5	51	60	71
3×16	1.15	2.4	68	80	96
3×25	0.727	3.75	89	105	119
4×1.5	12.1	0.3	16,5	19,5	22
4×2.5	7.41	0.5	22	26	30
4×4	4.61	0.8	30	35	40
4×6	3.08	1.2	38	44	52
4×10	1.83	2	51	60	71
4×16	1.15	3.2	68	80	96
4×25	0.727	5	89	105	119
5×1.5	12.1	0.375	16,5	19,5	22
5×2.5	7.41	0.625	22	26	30
5×4	4.61	1	30	35	40
5×6	3.08	1.5	38	44	52
5×10	1.83	2.5	51	60	71
5×16	1.15	4	68	80	96
5×25	0.727	6.25	89	105	119
7×1.5	12.1	0.525	-	-	-
7×2.5	7.41	0.875	-	-	-

H03VV-F, H03VVH2-F**300/300 V****EN 50525-2-11****Design**

Conductor: flexible copper conductors of class 5 acc. to IEC 60228

Insulation: PVC compound TI 2

Sheath: PVC compound type TM 2

Insulated conductors are twisted (H03VV-F) or laid in parallel (H03VVH2-F)

Other dimensions and colours available on request

Application	– for connecting electric appliances, devices and instruments to the power supply network		
Max conductor temperature	70 °C		
Temperature range	– during installation –5 °C up to +70 °C – fixed installed –40 °C up to +70 °C – at short circuit of max 5 s up to 160 °C – ambient temperature at storage up to 40 °C		
Min bending radius, free movement	5D		
Min bending radius, fixed installation	3D		
Test voltage (50 Hz)	2000 V		
Behavior in fire	EN 60332-1-2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	2	brown, blue	-
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey

Dimensional data — H03VV-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
2×0.5	RM	5	0.5	0.6	5	36
3×0.5			0.5	0.6	5	42
4×0.5			0.5	0.6	6	52
2×0.75			0.5	0.6	6	43
3×0.75			0.5	0.6	6	57
4×0.75			0.5	0.6	7	69

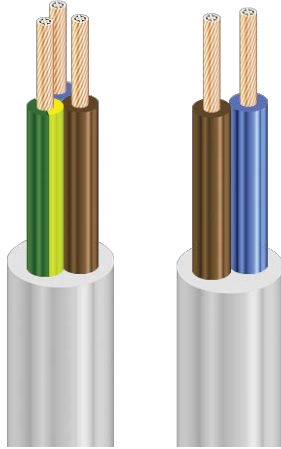
Dimensional data — H03VVH2-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer dimensions approx. mm	Cable mass approx. kg/km
2×0.5	RM	5	0.5	0.6	3×5	30
2×0.75			0.5	0.6	3×6	32

Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20 °C, d.c.) Ω/km	Permitted tensile stress during installation N	Permissible current rating acc. to EN 50565-1 (30 °C) A
2×0.5	39.0	15	3
3×0.5	39.0	22.5	3
4×0.5	39.0	30	3
2×0.75	26.0	22.5	6
3×0.75	26.0	33.75	6
4×0.75	26.0	45	6

H05VV-F, H05VVH2-F

300/500 V
EN 50525-2-11

Design

Conductor: flexible copper conductors of class 5 acc. to IEC 60228

Insulation: PVC compound TI 2

Sheath: PVC compound type TM 2

Insulated conductors are twisted (H05VV-F) or laid in parallel (H05VVH2-F)

Other dimensions and colours available on request

Application	– for connecting electric appliances, devices and instruments to the power supply network – for medium mechanical stress in damp and wet environments – for cooking and heating apparatus, provided that the cable does not come into direct contact with the hot parts of the apparatus or with any other heat source			
Max conductor temperature	70 °C			
Temperature range – during installation – fixed installed – at short circuit of max 5 s – ambient temperature at storage	–5 °C up to +70 °C –40 °C up to +70 °C up to 160 °C up to 40 °C			
Min bending radius, fixed installation	D ≤ 8 mm	8mm < D ≤ 12mm	12mm < D ≤ 20mm	D > 20 mm
	3D	3D	4D	4D
Min bending radius, free movement	D ≤ 8 mm	8mm < D ≤ 12mm	12mm < D ≤ 20mm	D > 20 mm
	5D	5D	6D	6D
Test voltage (50 Hz)	2000 V			
Behavior in fire	EN 60332-1-2			
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor	
	2	brown, blue	-	
	3	brown, black, grey	green-yellow, blue, brown	
	4	blue, brown, black, grey	green-yellow, brown, black, grey	
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey	

Dimensional data — H05VV-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
1	2	3	4	5	6	7
2×0.75	RM	5	0.6	0.8	6	56
2×1.0			0.6	0.8	7	63
2×1.5			0.7	0.8	8	85
2×2.5			0.8	1.0	9	130
2×4			0.8	1.1	10	160

1	2	3	4	5	6	7
3×0.75	RM	5	0.6	0.8	7	67
3×1.0			0.6	0.8	7	76
3×1.5			0.7	0.9	8	108
3×2.5			0.8	1.1	10	165
3×4			0.8	1.2	11	228
4×0.75	RM	5	0.6	0.8	7	82
4×1.0			0.6	0.9	8	98
4×1.5			0.7	1.0	9	139
4×2.5			0.8	1.1	11	205
4×4			0.8	1.2	13	287
5×0.75	RM	5	0.6	0.9	9	104
5×1.0			0.6	0.9	9	120
5×1.5			0.7	1.0	11	173
5×2.5			0.8	1.2	12	257
5×4			0.8	1.4	14	362

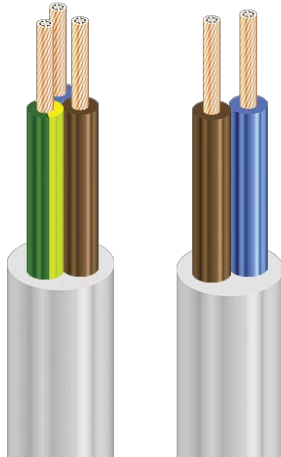
Dimensional data — H05VVH2-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer dimensions approx. mm	Cable mass approx. kg/km
2×0.75	RM	5	0.6	0.8	4×7	46
2×1.0			0.6	0.8	5×7	55
2×1.5			0.7	0.8	5×8	61

Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation N	Permissible current rating acc. to EN 50565-1 (30 °C) A
2×0.75	26.0	22.5	6
2×1.0	19.5	30	10
2×1.5	13.3	45	16
2×2.5	7.98	75	25
2×4	4.95	120	35
3×0.75	26.0	33.75	6
3×1.0	19.5	45	10
3×1.5	13.3	67.5	16
3×2.5	7.98	112.5	20
3×4	4.95	180	25
4×0.75	26.0	45	6
4×1.0	19.5	60	10
4×1.5	13.3	90	16
4×2.5	7.98	150	20
4×4	4.95	240	25
5×0.75	26.0	56.25	6
5×1.0	19.5	75	10
5×1.5	13.3	112.5	16
5×2.5	7.98	187.5	20
5×4	4.95	300	25

H03V2V2-F, H03V2V2H2-F

300/300 V
EN 50525-2-11


Design

Conductor: flexible copper conductors of class 5 acc. to IEC 60228

Insulation: PVC compound TI 3

Sheath: PVC compound type TM 3

Insulated conductors are twisted (H03V2V2-F) or laid in parallel (H03V2V2H2-F)

Other dimensions and colours available on request

Application	– for connecting electric appliances, devices and instruments to the power supply network – for apparatus in kitchen and heating and for use in zones with high temperatures (like lighting system apparatuses) without contact with warm parts and radiations		
Max conductor temperature	90 °C		
Temperature range – during installation – fixed installed – at short circuit of max 5 s – ambient temperature at storage	–5 °C up to +90 °C –40 °C up to +90 °C up to 250 °C up to 40 °C		
Min bending radius, free movement	5D		
Min bending radius, fixed installation	3D		
Test voltage (50 Hz)	2000 V		
Behavior in fire	EN 60332-1-2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	2	brown, blue	-
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey

Dimensional data — H03V2V2-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
2×0.5	RM	5	0.5	0.6	5	36
3×0.5			0.5	0.6	5	42
4×0.5			0.5	0.6	6	52
2×0.75			0.5	0.6	6	43
3×0.75			0.5	0.6	6	57
4×0.75			0.5	0.6	7	69

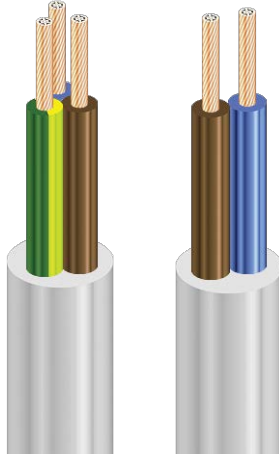
Dimensional data — H03V2V2H2-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer dimensions approx. mm	Cable mass approx. kg/km
2×0.5	RM	5	0.5	0.6	3×5	30
2×0.75			0.5	0.6	3×6	32

Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation N	Permissible current rating acc. to EN 50565-1 (30 °C) A
2×0.5	39.0	15	3
3×0.5	39.0	22.5	3
4×0.5	39.0	30	3
2×0.75	26.0	22.5	6
3×0.75	26.0	33.75	6
4×0.75	26.0	45	6

H05V2V2-F, H05V2V2H2-F

300/500 V
EN 50525-2-11


Design

Conductor: flexible copper conductors of class 5 acc. to IEC 60228

Insulation: PVC compound TI 3

Sheath: PVC compound type TM 3

Insulated conductors are twisted (H05V2V2-F) or laid in parallel (H05V2V2H2-F)

Other dimensions and colours available on request

Application	– for connecting electric appliances, devices and instruments to the power supply network – for medium mechanical stress in damp and wet environments – for apparatus in kitchen and heating and for use in zones with high temperatures (like lighting system apparatuses) without contact with warm parts and radiations			
Max conductor temperature	90 °C			
Temperature range – during installation – fixed installed – at short circuit of max 5 s – ambient temperature at storage	–5 °C up to +90 °C –40 °C up to +90 °C up to 250 °C up to 40 °C			
Min bending radius, fixed installation	D ≤ 8 mm	8mm<D≤12mm	12mm<D≤20mm	D > 20 mm
	3D	3D	4D	4D
Min bending radius, free movement	D ≤ 8 mm	8mm<D≤12mm	12mm<D≤20mm	D > 20 mm
	5D	5D	6D	6D
Test voltage (50 Hz)	2000 V			
Behavior in fire	EN 60332-1-2			
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor	
	2	brown, blue	-	
	3	brown, black, grey	green-yellow, blue, brown	
	4	blue, brown, black, grey	green-yellow, brown, black, grey	
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey	

Dimensional data — H05V2V2-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
2×0.75	RM	5	0.6	0.8	6	56
2×1.0			0.6	0.8	7	63
2×1.5			0.7	0.8	8	85
2×2.5			0.8	1.0	9	130
2×4			0.8	1.1	10	160
3×0.75	RM	5	0.6	0.8	7	67
3×1.0			0.6	0.8	7	76
3×1.5			0.7	0.9	8	108
3×2.5			0.8	1.1	10	165
3×4			0.8	1.2	11	228
4×0.75	RM	5	0.6	0.8	7	82
4×1.0			0.6	0.9	8	98
4×1.5			0.7	1.0	9	139
4×2.5			0.8	1.1	11	205
4×4			0.8	1.2	13	287
5×0.75	RM	5	0.6	0.9	9	104
5×1.0			0.6	0.9	9	120
5×1.5			0.7	1.0	11	173
5×2.5			0.8	1.2	12	257
5×4			0.8	1.4	14	362

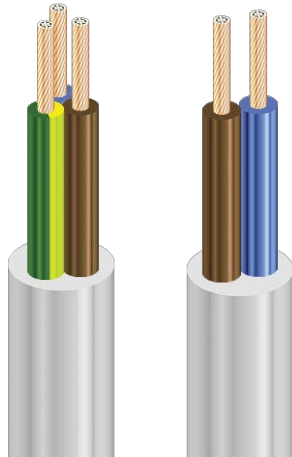
Dimensional data — H05V2V2H2-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer dimensions approx. mm	Cable mass approx. kg/km
2×0.75	RM	5	0.6	0.8	4×7	46
2×1.0			0.6	0.8	5×7	55
2×1.5			0.7	0.8	5×8	61

Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation N	Permissible current rating acc. to EN 50565-1 (30 °C) A
2×0.75	26.0	22.5	6
2×1.0	19.5	30	10
2×1.5	13.3	45	16
2×2.5	7.98	75	25
2×4	4.95	120	35
3×0.75	26.0	33.75	6
3×1.0	19.5	45	10
3×1.5	13.3	67.5	16
3×2.5	7.98	112.5	20
3×4	4.95	180	25
4×0.75	26.0	45	6
4×1.0	19.5	60	10
4×1.5	13.3	90	16
4×2.5	7.98	150	20
4×4	4.95	240	25
5×0.75	26.0	56.25	6
5×1.0	19.5	75	10
5×1.5	13.3	112.5	16
5×2.5	7.98	187.5	20
5×4	4.95	300	25

H03Z1Z1-F, H03Z1Z1H2-F

300/300 V
EN 50525-3-11


Design

Conductor: flexible copper conductors of class 5 acc. to IEC 60228

Insulation: thermoplastic compound TI 6

Sheath: thermoplastic compound TM 7

Insulated conductors are twisted (H03Z1Z1-F) or laid in parallel (H03Z1Z1H2-F)

Other dimensions and colours available on request

Application	– for connecting electric appliances, devices and instruments to the power supply network – in places where a low level of fumes and corrosive gases is required in case of fire or burning		
Max conductor temperature	70 °C		
Temperature range – during installation – fixed installed – at short circuit of max 5 s – ambient temperature at storage	–5 °C up to +70 °C –40 °C up to +70 °C up to 160 °C up to 40 °C		
Min bending radius, free movement	5D		
Min bending radius, fixed installation	3D		
Test voltage (50 Hz)	2000 V		
Behavior in fire	EN 60332-1-2, EN 60332-3-24, EN 61034-2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	2	brown, blue	-
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey

Dimensional data — H03Z1Z1-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
2×0.5	RM	5	0.5	0.6	5	38
3×0.5			0.5	0.6	5	43
4×0.5			0.5	0.6	6	53
2×0.75			0.5	0.6	6	48
3×0.75			0.5	0.6	6	58
4×0.75			0.5	0.6	7	68

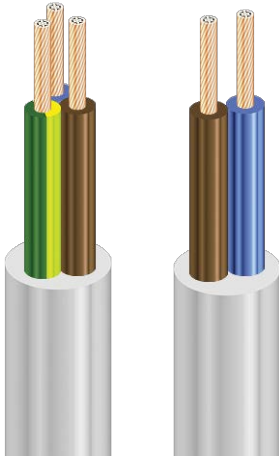
Dimensional data — H03Z1Z1H2-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer dimensions approx. mm	Cable mass approx. kg/km
2×0.5	RM	5	0.5	0.6	3×5	31
2×0.75			0.5	0.6	3×6	33

Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation N	Permissible current rating acc. to EN 50565-1 (30 °C) A
2×0.5	39.0	15	3
3×0.5	39.0	22.5	3
4×0.5	39.0	30	3
2×0.75	26.0	22.5	6
3×0.75	26.0	33.75	6
4×0.75	26.0	45	6

H05Z1Z1-F, H05Z1Z1H2-F

300/500 V
EN 50525-3-11

Design

Conductor: flexible copper conductors of class 5 acc. to IEC 60228

Insulation: thermoplastic compound TI 6

Sheath: thermoplastic compound TM 7

Insulated conductors are twisted (H05Z1Z1-F) or laid in parallel (H05Z1Z1H2-F)

Other dimensions and colours available on request

Application	– for connecting electric appliances, devices and instruments to the power supply network – for medium mechanical stress in damp and wet environments – for cooking and heating apparatus, provided that the cable does not come into direct contact with the hot parts of the apparatus or with any other heat source – in places where a low level of fumes and corrosive gases is required in case of fire or burning			
Max conductor temperature	70 °C			
Temperature range – during installation – fixed installed – at short circuit of max 5 s – ambient temperature at storage	–5 °C up to +70 °C –40 °C up to +70 °C up to 160 °C up to 40 °C			
Min bending radius, fixed installation	D ≤ 8 mm	8mm < D ≤ 12mm	12mm < D ≤ 20mm	D > 20 mm
	3D	3D	4D	4D
Min bending radius, free movement	D ≤ 8 mm	8mm < D ≤ 12mm	12mm < D ≤ 20mm	D > 20 mm
	5D	5D	6D	6D
Test voltage (50 Hz)	2000 V			
Behavior in fire	EN 60332-1-2, EN 60332-3-24, EN 61034-2			
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor	
	2	brown, blue	-	
	3	brown, black, grey	green-yellow, blue, brown	
	4	blue, brown, black, grey	green-yellow, brown, black, grey	
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey	

Dimensional data — H05Z1Z1-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
2×0.75	RM	5	0.6	0.8	6	57
2×1.0			0.6	0.8	7	64
2×1.5			0.7	0.8	8	85
2×2.5			0.8	1.0	9	131
2×4			0.8	1.1	10	168
3×0.75	RM	5	0.6	0.8	7	67
3×1.0			0.6	0.8	7	77
3×1.5			0.7	0.9	8	107
3×2.5			0.8	1.1	10	166
3×4			0.8	1.2	11	226
4×0.75	RM	5	0.6	0.8	7	82
4×1.0			0.6	0.9	8	99
4×1.5			0.7	1.0	9	137
4×2.5			0.8	1.1	11	203
4×4			0.8	1.2	13	288
5×0.75	RM	5	0.6	0.9	9	103
5×1.0			0.6	0.9	9	123
5×1.5			0.7	1.0	11	172
5×2.5			0.8	1.2	12	258
5×4			0.8	1.4	14	361

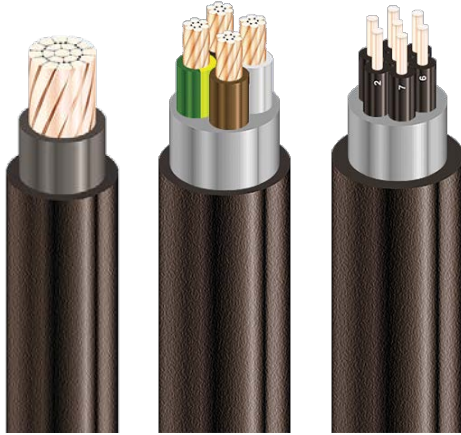
Dimensional data — H05Z1Z1H2-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer dimensions approx. mm	Cable mass approx. kg/km
2×0.75	RM	5	0.6	0.8	4×7	47
2×1.0			0.6	0.8	5×7	57

Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation N	Permissible current rating acc. to EN 50565-1 (30 °C) A
2×0.75	26.0	22.5	6
2×1.0	19.5	30	10
2×1.5	13.3	45	16
2×2.5	7.98	75	25
2×4	4.95	120	35
3×0.75	26.0	33.75	6
3×1.0	19.5	45	10
3×1.5	13.3	67.5	16
3×2.5	7.98	112.5	20
3×4	4.95	180	25
4×0.75	26.0	45	6
4×1.0	19.5	60	10
4×1.5	13.3	90	16
4×2.5	7.98	150	20
4×4	4.95	240	25
5×0.75	26.0	56.25	6
5×1.0	19.5	75	10
5×1.5	13.3	112.5	16
5×2.5	7.98	187.5	20
5×4	4.95	300	25

NYJ, NYO

600/1000 V
DIN VDE 0276–603, HD 627, IEC 60502–1

Design

Conductor: bare copper conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228

Insulation: PVC compound DIV 4

Inner covering: PVC compound or PET tapes

Sheath: PVC compound type DMV 5

NYJ — with protective conductor

NYO — without protective conductor

Other dimensions, conductor constructions and colours available on request

Application	– for fixed indoor installation – in the ground (only in a conduit or duct to provide protection against mechanical damage) – outdoor installation is possible with UV protection		
Max conductor temperature	70 °C		
Max conductor temperature at short circuit for 5 s	160 °C		
Ambient temperature	–50 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	15D for single core cables, 12D for multi core cables		
Test voltage (50 Hz)	4000 V		
Behavior in fire	EN 60332–1–2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	2	brown, blue	-
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey
	7 and above	black with number code	green-yellow, the other black with number code

Dimensional data

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
1	2	3	4	5	6	7
1×10	RE	1	1.0	1.8	9	170
1×16	RM	2	1.0	1.8	10	240
1×25			1.2	1.8	12	350
1×35			1.2	1.8	13	450
1×50			1.4	1.8	15	610
1×70			1.4	1.8	16	810
1×95			1.6	1.8	18	1090
1×120			1.6	1.8	20	1320
1×150			1.8	1.8	22	1610
1×185			2.0	1.8	24	1990
1×240			2.2	1.8	26	2560
1×300	2.4	2.0	29	3090		

1	2	3	4	5	6	7
2x1.5	RE	1	0.8	1.8	11	165
2x2.5			0.8	1.8	11	200
2x4			1.0	1.8	13	280
2x6			1.0	1.8	14	340
2x10			1.0	1.8	16	460
2x16	RM	2	1.0	1.8	18	660
2x25			1.2	1.8	21	970
2x35			1.2	1.8	23	1230
3x1.5	RE	1	0.8	1.8	11	210
3x2.5			0.8	1.8	12	260
3x4			1.0	1.8	14	320
3x6			1.0	1.8	15	400
3x10			1.0	1.8	16	560
3x16	RM	2	1.0	1.8	19	810
3x25			1.2	1.8	23	1200
3x35			1.2	1.8	25	1540
3x50			1.4	1.9	27	2240
3x70			1.4	2.0	30	2930
3x95	SM	2	1.6	2.2	34	3940
3x120			1.6	2.3	35	4870
3x150			1.8	2.4	40	5840
3x185			2.0	2.6	44	7310
3x240			2.2	2.8	50	9400
4x1.5	RE	1	0.8	1.8	12	220
4x2.5			0.8	1.8	13	270
4x4			1.0	1.8	15	380
4x6			1.0	1.8	16	490
4x10			1.0	1.8	18	680
4x16	RM	2	1.0	1.8	21	1000
4x25			1.2	1.8	25	1490
4x35			1.2	1.8	27	1930
4x50			1.4	2.1	31	2520
4x70			1.4	2.2	37	3610
4x95	SM	2	1.6	2.4	41	4820
4x120			1.6	2.5	44	5900
4x150			1.8	2.6	49	7210
4x185			2.0	2.8	55	9150
4x240			2.2	3.0	62	11630
3x2.5/1.5	RE/RE	1	0.8/0.8	1.8	14	310
3x4/2.5			0.8/0.8	1.8	16	430
3x6/4			1.0/0.8	1.8	17	540
3x10/6			1.0/1.0	1.8	19	730
3x16/10	RM/RE	2/1	1.0/1.0	1.8	22	1090
3x25/16	RM/RM	2	1.2/1.0	1.8	26	1610
3x35/16	RM/RM		1.2/1.0	2.0	28	1800
3x50/25	RM/RM		1.4/1.2	2.1	31	2350
3x70/35	SM/RM		1.4/1.2	2.2	37	3360
3x95/50	SM/RM		1.6/1.4	2.4	41	4430
3x120/70	SM/SM		1.6/1.4	2.5	44	5480
3x150/70	SM/SM		1.8/1.4	2.6	49	6600
3x185/95	SM/SM		2.0/1.6	2.8	55	8450
3x240/120	SM/SM		2.2/1.6	3.0	62	10730
5x1.5	RE		1	0.8	1.8	13
5x2.5		0.8		1.8	14	320
5x4		1.0		1.8	16	450
5x6		1.0		1.8	17	580
5x10		1.0		1.8	19	810
5x16	RM	2	1.0	1.8	23	1200
5x25			1.2	1.8	27	1800
5x35			1.2	1.8	30	2350

1	2	3	4	5	6	7
7×1.5	RE	1	0.8	1.8	17	330
7×2.5			0.8	1.8	18	420
10×1.5			0.8	1.8	20	440
10×2.5			0.8	1.8	21	570
12×1.5			0.8	1.8	21	490
12×2.5			0.8	1.8	23	630
14×1.5			0.8	1.8	21	550
14×2.5			0.8	1.8	23	710
19×1.5			0.8	1.8	24	670
19×2.5			0.8	1.8	25	900
24×1.5			0.8	1.8	26	840
24×2.5			0.8	1.8	28	1120
30×1.5			0.8	1.8	29	880
30×2.5			0.8	1.8	31	1110

Technical data — single core

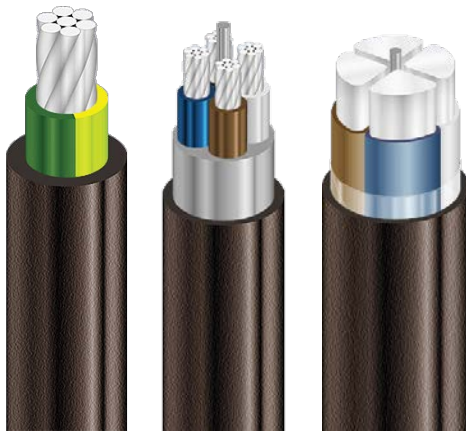
No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A			
			d.c.		a.c., triangle laying	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W	open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
1×10	1.83	0.5	86	124	68	83
1×16	1.15	0.8	113	159	89	107
1×25	0.727	1.25	153	207	121	137
1×35	0.524	1.75	187	249	147	163
1×50	0.387	2.5	227	295	179	194
1×70	0.268	3.5	286	364	226	237
1×95	0.193	4.75	354	436	280	285
1×120	0.153	6	413	499	326	324
1×150	0.124	7.5	473	561	373	364
1×185	0.0991	9.25	547	637	431	412
1×240	0.0754	12	655	743	512	477
1×300	0.0601	15	760	845	591	539

Technical data — multicore

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
1	2	3	4	5
2×1.5	12.1	0.15	21	27
2×2.5	7.41	0.25	27	36
2×4	4.61	0.4	36	47
2×6	3.08	0.6	46	59
2×10	1.83	1	63	79
2×16	1.15	1.6	84	102
2×25	0.727	2.5	112	133
2×35	0.524	3.5	137	158
3×1.5	12.1	0.225	21	27
3×2.5	7.41	0.375	27	36
3×4	4.61	0.6	36	47
3×6	3.08	0.9	46	59
3×10	1.83	1.5	63	79
3×16	1.15	2.4	84	102
3×25	0.727	3.75	112	133
3×35	0.524	5.25	137	158
3×50	0.387	7.5	167	187
3×70	0.268	10.5	211	231

1	2	3	4	5
3×95	0.193	14.25	261	279
3×120	0.153	18	302	317
3×150	0.124	22.5	346	358
3×185	0.0991	27.75	397	405
3×240	0.0754	36	472	471
4×1.5	12.1	0.3	19	25
4×2.5	7.41	0.5	25	33
4×4	4.61	0.8	33	43
4×6	3.08	1.2	42	54
4×10	1.83	2	58	73
4×16	1.15	3.2	78	94
4×25	0.727	5	104	123
4×35	0.524	7	127	146
4×50	0.387	10	155	173
4×70	0.268	14	196	214
4×95	0.193	19	242	259
4×120	0.153	24	280	294
4×150	0.124	30	321	332
4×185	0.0991	37	369	376
4×240	0.0754	48	438	438
3×2.5/1.5	7.41/12.1	0.45	27	36
3×4/2.5	4.61/7.41	0.725	36	47
3×6/4	3.08/4.61	1.1	46	59
3×10/6	1.83/3.08	1.8	63	79
3×16/10	1.15/1.83	2.9	84	102
3×25/16	0.727/1.15	4.55	112	133
3×35/16	0.524/1.15	6.05	137	158
3×50/25	0.387/0.727	8.75	167	187
3×70/35	0.268/0.524	12.25	211	231
3×95/50	0.193/0.387	16.75	261	279
3×120/70	0.153/0.268	21.5	302	317
3×150/70	0.124/0.268	26	346	358
3×185/95	0.0991/0.193	32.5	397	405
3×240/120	0.0754/0.153	42	472	471
5×1.5	12.1	0.375	19	25
5×2.5	7.41	0.625	25	33
5×4	4.61	1	33	43
5×6	3.08	1.5	42	54
5×10	1.83	2.5	58	73
5×16	1.15	4	78	94
5×25	0.727	6.25	104	123
5×35	0.524	8.75	127	146
7×1.5	12.1	0.375	-	-
7×2.5	7.41	0.625	-	-
10×1.5	12.1	0.75	-	-
10×2.5	7.41	1.25	-	-
12×1.5	12.1	0.9	-	-
12×2.5	7.41	1.5	-	-
14×1.5	12.1	1.05	-	-
14×2.5	7.41	1.75	-	-
19×1.5	12.1	1.425	-	-
19×2.5	7.41	2.375	-	-
24×1.5	12.1	1.8	-	-
24×2.5	7.41	3	-	-
30×1.5	12.1	2.25	-	-
30×2.5	7.41	3.75	-	-

NAYY-J, NAYY-O

600/1000 V
HD 603, IEC 60502-1

Design

Conductor: bare aluminium conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228

Insulation: PVC compound DIV 4

Inner covering: PVC compound or PET tapes

Sheath: PVC compound type DMV 5

NAYY-J — with protective conductor

NAYY-O — without protective conductor

Other dimensions, conductor constructions and colours available on request

Application	– for fixed indoor installation – in the ground (only in a conduit or duct to provide protection against mechanical damage) – outdoor installation is possible with UV protection		
Max conductor temperature	70 °C		
Max conductor temperature at short circuit for 5 s	160 °C		
Ambient temperature	–50 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	15D for single core cables, 12D for multi core cables		
Test voltage (50 Hz)	4000 V		
Behavior in fire	EN 60332-1-2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	4	blue, brown, black, grey	green-yellow, brown, black, grey

Dimensional data

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
1	2	3	4	5	6	7
1×16	RM	2	1.0	1.8	11	150
1×25			1.2	1.8	13	200
1×35			1.2	1.8	14	260
1×50			1.4	1.8	15	300
1×70			1.4	1.8	17	380
1×95			1.6	1.8	19	490
1×120			1.6	1.8	20	570
1×150			1.8	1.8	22	690
1×185			2.0	1.8	25	840
1×240			2.2	1.8	28	1100
1×300			2.4	1.9	30	1380
1×400			2.6	2.0	34	1610
1×500			2.8	2.1	37	2010
1×630			2.8	2.2	43	2470

1	2	3	4	5	6	7
4×6	RE	1	1.0	1.8	17	370
4×10			1.0	1.8	19	470
4×16			1.0	1.8	24	750
4×25			1.2	1.8	25	940
4×35			1.2	1.8	28	1080
4×50			1.4	1.9	30	1190
4×70	SE	1	1.4	2.1	35	1580
4×95			1.6	2.2	39	2090
4×120			1.6	2.4	43	2380
4×150			1.8	2.5	46	2970
4×185			2.0	2.7	51	3660
4×240			2.2	2.9	56	4950

Technical data — single core

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A			
			d.c.		a.c., triangle laying	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W	open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
1×16	1.91	0.48	93	83	68	82
1×25	1.20	0.75	117	159	92	106
1×35	0.868	1.05	143	192	113	127
1×50	0.641	1.5	176	229	139	150
1×70	0.443	2.1	223	282	176	184
1×95	0.320	2.85	275	339	217	221
1×120	0.253	3.6	320	388	253	252
1×150	0.206	4.5	366	434	290	283
1×185	0.164	5.55	425	494	336	321
1×240	0.125	7.2	508	576	401	374
1×300	0.100	9	589	654	464	423
1×400	0.0778	12	693	753	544	485
1×500	0.0605	15	819	870	636	556
1×630	0.0469	18.9	971	1007	744	633

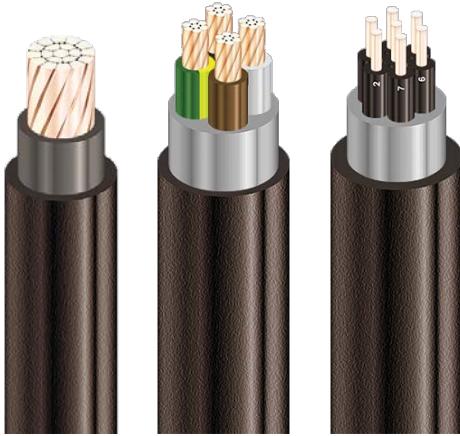
Technical data — four cores

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
4×6	5.11	0.72	34	40
4×10	3.08	1.2	46	54
4×16	1.91	1.92	62	71
4×25	1.20	3	80	94
4×35	0.868	4.2	98	114
4×50	0.641	6	117	132
4×70	0.443	8.4	149	165
4×95	0.320	11.4	183	199
4×120	0.253	14.4	212	226
4×150	0.206	18	242	254
4×185	0.164	22.2	280	290
4×240	0.125	28.8	333	337

N2XY-J, N2XY-O

600/1000 V

HD 603, HD 627, IEC 60502-1



Design

Conductor: bare copper conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228

Insulation: XLPE compound DIX 3

Inner covering: PVC compound or PET tapes

Sheath: PVC compound type DMV 6

N2XY-J — with protective conductor

N2XY-O — without protective conductor

Other dimensions, conductor constructions and colours available on request

Application	<ul style="list-style-type: none"> – for fixed indoor installation – in the ground (only in a conduit or duct to provide protection against mechanical damage) – outdoor installation is possible with UV protection 		
Max conductor temperature	90 °C		
Max conductor temperature at short circuit for 5 s	250 °C		
Ambient temperature	–50 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	15D for single core cables, 12D for multi core cables		
Test voltage (50 Hz)	4000 V		
Behavior in fire	EN 60332-1-2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	2	brown, blue	green-yellow, black
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey
	7 and above	black with number code	green-yellow, the other black with number code

Dimensional data

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
1	2	3	4	5	6	7
1×16	RM	2	0.7	1.8	10	210
1×25			0.9	1.8	12	320
1×35			0.9	1.8	13	410
1×50			1.0	1.8	14	540
1×70			1.1	1.8	16	740
1×95			1.1	1.8	18	990
1×120			1.2	1.8	19	1210
1×150			1.4	1.8	21	1500
1×185			1.6	1.8	23	1860
1×240			1.7	1.8	26	2380
1×300			1.8	1.8	28	2950
1×400			2.0	1.9	31	3810
1×500			2.2	2.0	35	4870
1×630			2.8	2.8	47	6510
2×1.5			RE	1	0.7	1.8
2×2.5	0.7	1.8			11	180
2×4	0.7	1.8			12	220
2×6	0.7	1.8			13	280
2×10	0.7	1.8			15	410
2×16	RM	2	0.7	1.8	17	580
2×25			0.9	1.8	20	850
2×35			0.9	1.8	23	1100
3×1.5	RE	1	0.7	1.8	10	160
3×2.5			0.7	1.8	11	200
3×4			0.7	1.8	12	260
3×6			0.7	1.8	13	330
3×10			0.7	1.8	15	490
3×16	RM	2	0.7	1.8	18	710
3×25			0.9	1.8	22	1070
3×35			0.9	1.8	24	1390
3×50			1.0	1.9	26	1600
4×1.5			RE	1	0.7	1.8
4×2.5	0.7	1.8			12	220
4×4	0.7	1.8			13	290
4×6	0.7	1.8			15	380
4×10	0.7	1.8			17	610
4×16	RM	2	0.7	1.8	20	880
4×25			0.9	1.8	24	1330
4×35			0.9	1.8	26	1740
4×50			1.0	2.0	27	2080
4×70			SM	2	1.1	2.1
4×95	1.1	2.2			35	3950
4×120	1.2	2.4			39	4980
4×150	1.4	2.6			44	6130
4×185	1.6	2.7			48	7590
4×240	1.7	2.9			54	9870
3×16/10	RM/RE	2/1			0.7/0.7	1.8
3×25/16	RM/RM	2	0.9/0.7	1.8	22	1210
3×35/16	RM/RM		0.9/0.7	1.8	24	1530
3×50/25	RM/RM		1.0/0.9	1.9	27	1820
3×70/35	SM/RM		1.1/0.9	2.0	31	2810
3×95/50	SM/RM		1.1/1.0	2.2	37	3820
3×120/70	SM/SM		1.2/1.1	2.3	40	4700
3×150/70	SM/SM		1.4/1.1	2.4	43	5710
3×185/95	SM/SM		1.6/1.1	2.6	48	7220
3×240/120	SM/SM		1.7/1.2	2.8	55	9220

1	2	3	4	5	6	7
5×1.5	RE	1	0.7	1.8	14	210
5×2.5			0.7	1.8	15	270
5×4			0.7	1.8	17	360
5×6			0.7	1.8	19	470
5×10			0.7	1.8	21	740
5×16	RM	2	0.7	1.8	23	1070
5×25			0.9	1.8	29	1600
5×35			0.9	1.8	38	2070
5×50			1.0	1.8	43	2570
7×1.5			RE	1	0.7	1.8
7×2.5	0.7	1.8			14	340
7×4	0.7	1.8			15	460
10×1.5	0.7	1.8			16	360
10×2.5	0.7	1.8			17	470
10×4	0.7	1.8			19	650
12×1.5	0.7	1.8			16	390
12×2.5	0.7	1.8			18	530
14×1.5	0.7	1.8			17	440
14×2.5	0.7	1.8			19	590
19×1.5	0.7	1.8			18	540
19×2.5	0.7	1.8			20	750
24×1.5	0.7	1.8			21	680
24×2.5	0.7	1.8			23	930
30×1.5	0.7	1.8			22	790
30×2.5	0.7	1.8			26	1160

Technical data — single core

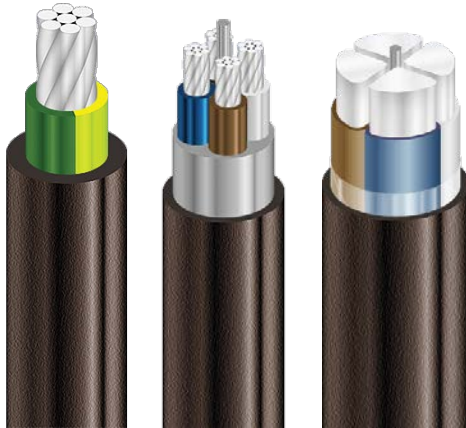
No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A			
			d.c.		a.c., triangle laying	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W	open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
1×16	1.15	0.8	139	175	108	115
1×25	0.727	1.25	188	228	146	147
1×35	0.524	1.75	230	274	180	176
1×50	0.387	2.5	281	325	220	208
1×70	0.268	3.5	356	399	279	255
1×95	0.193	4.75	440	478	345	306
1×120	0.153	6	514	546	403	348
1×150	0.124	7.5	591	614	464	392
1×185	0.0991	9.25	685	695	538	443
1×240	0.0754	12	821	812	641	515
1×300	0.0601	15	956	924	739	575
1×400	0.0470	20	1124	1060	860	661
1×500	0.0366	25	1328	1223	997	746
1×630	0.0283	31.5	1576	1416	1149	840

Technical data — multicore

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
1	2	3	4	5
2×1.5	12.1	0.15	25	31
2×2.5	7.41	0.25	34	40
2×4	4.61	0.4	45	52
2×6	3.08	0.6	56	64
2×10	1.83	1	78	86
2×16	1.15	1.6	104	112

1	2	3	4	5
2×25	0.727	2.5	141	144
2×35	0.524	3.5	172	173
3×1.5	12.1	0.225	25	31
3×2.5	7.41	0.375	34	40
3×4	4.61	0.6	45	52
3×6	3.08	0.9	56	64
3×10	1.83	1.5	78	86
3×16	1.15	2.4	104	112
3×25	0.727	3.75	141	144
3×35	0.524	5.25	172	173
3×50	0.387	7.5	209	205
4×1.5	12.1	0.3	23	28
4×2.5	7.41	0.5	31	37
4×4	4.61	0.8	41	48
4×6	3.08	1.2	52	59
4×10	1.83	2	72	79
4×16	1.15	3.2	96	104
4×25	0.727	5	131	133
4×35	0.524	7	159	160
4×50	0.387	10	194	190
4×70	0.268	14	246	235
4×95	0.193	19	304	282
4×120	0.153	24	354	322
4×150	0.124	30	406	363
4×185	0.0991	37	468	411
4×240	0.0754	48	556	478
3×16/10	1.15/1.83	2.9	104	112
3×25/16	0.727/1.15	4.55	141	144
3×35/16	0.524/1.15	6.05	172	173
3×50/25	0.387/0.727	8.75	209	205
3×70/35	0.268/0.524	12.25	265	253
3×95/50	0.193/0.387	16.75	327	304
3×120/70	0.153/0.268	21.5	381	347
3×150/70	0.124/0.268	26	437	391
3×185/95	0.0991/0.193	32.5	504	442
3×240/120	0.0754/0.153	42	598	515
5×1.5	12.1	0.375	23	28
5×2.5	7.41	0.625	31	37
5×4	4.61	1	41	48
5×6	3.08	1.5	52	59
5×10	1.83	2.5	72	79
5×16	1.15	4	96	104
5×25	0.727	6.25	131	133
5×35	0.524	8.75	159	160
5×50	0.387	12.5	194	190
7×1.5	12.1	0.375	-	-
7×2.5	7.41	0.625	-	-
7×4	4.61	1.4	-	-
10×1.5	12.1	0.75	-	-
10×2.5	7.41	1.25	-	-
10×4	4.61	2	-	-
12×1.5	12.1	0.9	-	-
12×2.5	7.41	1.5	-	-
14×1.5	12.1	1.05	-	-
14×2.5	7.41	1.75	-	-
19×1.5	12.1	1.425	-	-
19×2.5	7.41	2.375	-	-
24×1.5	12.1	1.8	-	-
24×2.5	7.41	3	-	-
30×1.5	12.1	2.25	-	-
30×2.5	7.41	3.75	-	-

NA2XY-J, NA2XY-O

600/1000 V
HD 603, IEC 60502-1

Design

Conductor: bare aluminium conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228

Insulation: XLPE compound DIX 3

Inner covering: PVC compound or PET tapes

Sheath: PVC compound type DMV 6

NA2XY-J — with protective conductor

NA2XY-O — without protective conductor

Other dimensions, conductor constructions and colours available on request

Application	– for fixed indoor installation – in the ground (only in a conduit or duct to provide protection against mechanical damage) – outdoor installation is possible with UV protection		
Max conductor temperature	90 °C		
Max conductor temperature at short circuit for 5 s	250 °C		
Ambient temperature	–50 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	15D for single core cables, 12D for multi core cables		
Test voltage (50 Hz)	4000 V		
Behavior in fire	EN 60332-1-2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	4	blue, brown, black, grey	green-yellow, brown, black, grey

Dimensional data

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
1×150	RM	2	1.4	1.8	24	620
1×185			1.6	1.8	27	760
1×240			1.7	1.8	30	950
1×300			1.8	1.8	31	1140
1×400			2.0	1.9	32	1450
1×500			2.2	2.0	35	1830
4×35	RE	1	0.9	1.8	30	990
4×50			1.0	1.9	33	1090
4×70	SE	1	1.1	2.0	38	1480
4×95			1.1	2.1	40	1800
4×120			1.2	2.3	47	2280
4×150			1.4	2.4	53	2730
4×185			1.6	2.6	57	3380
4×240			1.7	2.8	58	4310

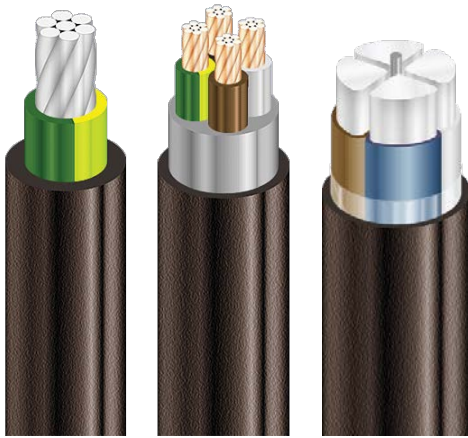
Technical data — single core

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A			
			d.c.		a.c., triangle laying	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W	open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
1×150	0.206	4.5	457	474	360	304
1×185	0.164	5.55	531	539	419	346
1×240	0.125	7.2	636	629	501	403
1×300	0.100	9	738	713	580	455
1×400	0.0778	12	871	822	682	523
1×500	0.0605	15	1030	949	800	599

Technical data — four cores

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
4×35	0.868	4.2	124	125
4×50	0.641	6	146	146
4×70	0.443	8.4	188	181
4×95	0.320	11.4	230	216
4×120	0.253	14.4	269	248
4×150	0.206	18	306	278
4×185	0.164	22.2	355	317
4×240	0.125	28.8	421	369

N2X2Y, NA2X2Y

600/1000 V
HD 603, IEC 60502-1


Design

Conductor: bare copper or aluminium conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228

Insulation: XLPE compound DIX 3

Inner covering: PVC compound or PET tapes

Sheath: PE compound type DMP 2

Other dimensions, conductor constructions and colours available on request

Application	– in the ground (only in a conduit or duct to provide protection against mechanical damage) – outdoor installation is possible with UV protection		
Max conductor temperature	90 °C		
Max conductor temperature at short circuit for 5 s	250 °C		
Ambient temperature	–60 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	15D for single core cables, 12D for multi core cables		
Test voltage (50 Hz)	4000 V		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	4	blue, brown, black, grey	green-yellow, brown, black, grey

Dimensional data

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km	
						N2X2Y	NA2X2Y
1×50	RM	2	1.0	1.8	16	640	-
1×70			1.1	1.8	17	850	-
1×95			1.1	1.8	19	1110	-
1×120			1.2	1.8	21	1370	470
1×150			1.4	1.8	24	1650	560
1×185			1.6	1.8	27	2000	690
1×240			1.7	1.8	30	2590	860
1×300			1.8	1.8	31	3250	1040
1×400			2.0	1.9	32	4200	1670
1×500			2.2	2.0	35	5250	2670
4×16			RE (Al) RM (Cu)	1 or 2	0.7	1.8	22
4×25	0.9	1.8			27	1630	730
4×35	0.9	1.8			30	1950	880
4×50	1.0	1.9			33	2590	910
4×70	SE (Al) SM (Cu)	1 or 2	1.1	2.0	38	3480	1280
4×95			1.1	2.1	40	4630	1640
4×120			1.2	2.3	47	5680	1950
4×150			1.4	2.4	53	6960	2440
4×185			1.6	2.6	57	8640	3100
4×240			1.7	2.8	58	-	3870

Technical data — N2X2Y, single core

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A			
			d.c.		a.c., triangle laying	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W	open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
1×50	0.387	2.5	281	325	220	208
1×70	0.268	3.5	356	399	279	255
1×95	0.193	4.75	440	478	345	306
1×120	0.153	6	514	546	403	348
1×150	0.124	7.5	591	614	464	392
1×185	0.0991	9.25	685	695	538	443
1×240	0.0754	12	821	812	641	515
1×300	0.0601	15	956	924	739	575
1×400	0.0470	20	1124	1060	860	661
1×500	0.0366	25	1328	1223	997	746

Technical data — NA2X2Y, single core

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A			
			d.c.		a.c., triangle laying	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W	open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
1×120	0.253	3.6	399	423	313	271
1×150	0.206	4.5	457	474	360	304
1×185	0.164	5.55	531	539	419	346
1×240	0.125	7.2	636	629	501	403
1×300	0.100	9	738	713	580	455
1×400	0.0778	12	871	822	682	523
1×500	0.0605	15	1030	949	800	599

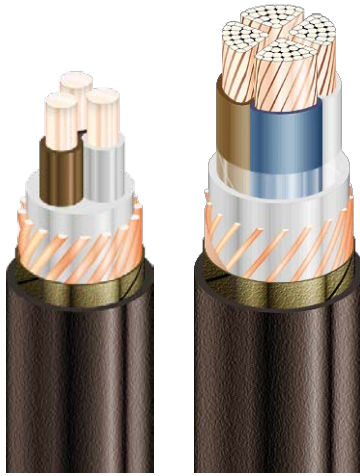
Technical data — N2X2Y, four cores

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
4×16	1.15	3.2	96	104
4×25	0.727	5	131	133
4×35	0.524	7	159	160
4×50	0.387	10	194	190
4×70	0.268	14	246	235
4×95	0.193	19	304	282
4×120	0.153	24	354	322
4×150	0.124	30	406	363
4×185	0.0991	37	468	411

Technical data — NA2X2Y, four cores

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
4×25	1.20	3	100	104
4×35	0.868	4.2	124	125
4×50	0.641	6	146	146
4×70	0.443	8.4	188	181
4×95	0.320	11.4	230	216
4×120	0.253	14.4	269	248
4×150	0.206	18	306	278
4×185	0.164	22.2	355	317
4×240	0.125	28.8	421	369

NYCY, NAYCY

600/1000 V
HD 603, HD 627, IEC 60502-1

Design

Conductor: bare copper conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228

Insulation: PVC compound DIV 4

Inner covering: PVC compound or PET tapes

Screen: copper wires concentric conductor + counter helix copper tape

Sheath: PVC compound type DMV 5

NYCY-J — with protective conductor

NYCY-O — without protective conductor

Other dimensions, conductor constructions and colours available on request

Application	– for fixed indoor installation, if increased mechanical and electrical protection is required – in the ground (only in a conduit or duct to provide protection against mechanical damage) – outdoor installation is possible with UV protection		
Max conductor temperature	70 °C		
Max conductor temperature at short circuit for 5 s	160 °C		
Ambient temperature	–50 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	12D		
Test voltage (50 Hz)	4000 V		
Behavior in fire	EN 60332-1-2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey
	7 and above	black with number code	green-yellow, the other black with number code

Dimensional data — NYCY

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
1	2	3	4	5	6	7
3×4/4	RM	2	1.0	1.8	16	380
3×6/6			1.0	1.8	18	520
3×10/10			1.0	1.8	20	710
3×16/16			1.0	1.8	22	1040
3×25/25			1.2	1.8	26	1470
3×25/16			1.2	1.8	25	1420
3×35/35			1.2	1.8	30	1760
3×35/16			1.2	1.8	28	1710
3×50/50			1.4	1.9	32	2320

1	2	3	4	5	6	7
3×50/25			1.4	1.9	31	2280
3×70/70	SM	2	1.4	2.0	34	3210
3×70/35			1.4	2.0	34	3170
3×95/95			1.6	2.2	38	4360
3×95/50			1.6	2.2	38	4320
3×120/120			1.6	2.3	42	5400
3×120/70			1.6	2.3	41	5330
3×150/150			1.8	2.4	46	6650
3×150/70			1.8	2.4	46	6580
3×185/95			2.0	2.6	55	8200
3×240/120			2.2	2.8	61	10610
4×4/4			RE	1	1.0	1.8
4×6/6	1.0	1.8			19	620
4×10/10	1.0	1.8			21	880
4×16/16	RM	2	1.0	1.8	23	1210
4×25/16			1.2	1.8	29	1780
4×35/16			1.2	1.8	31	2070
4×50/25	SM	2	1.4	2.0	33	2660
4×70/35			1.4	2.1	36	3660
4×95/50			1.6	2.3	43	5050
4×120/70			1.6	2.4	47	6350
4×150/70			1.8	2.6	50	7600
5×1.5/1.5	RE	1	0.8	1.8	15	330
5×2.5/2.5			0.8	1.8	16	400
5×4/4			0.8	1.8	19	550
5×6/6			0.8	1.8	21	700
7×1.5/2.5			0.8	1.8	15	350
7×2.5/2.5			0.8	1.8	17	450
7×4/4			0.8	1.8	20	600
7×6/6			0.8	1.8	22	790
10×1.5/2.5			0.8	1.8	18	410
10×2.5/4			0.8	1.8	20	600
12×1.5/2.5			0.8	1.8	19	470
12×2.5/4			0.8	1.8	21	660
14×1.5/2.5			0.8	1.8	20	520
14×2.5/6			0.8	1.8	22	750
16×1.5/4			0.8	1.8	20	620
16×2.5/6			0.8	1.8	23	800
19×1.5/4			0.8	1.8	22	660
19×2.5/6			0.8	1.8	23	940
21×1.5/6			0.8	1.8	23	790
24×1.5/6			0.8	1.8	26	850
24×2.5/10			0.8	1.8	27	1150

Dimensional data — NAYCY

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
3×35/35	RE	1	1.2	1.8	29	1140
3×50/50			1.4	1.9	32	1520
3×70/70	SE		1.4	2.0	33	1670
3×95/95			1.6	2.2	37	2240
3×120/120			1.6	2.3	40	2710
3×150/150			1.8	2.4	44	2770
3×185/95			2.0	2.6	49	3470

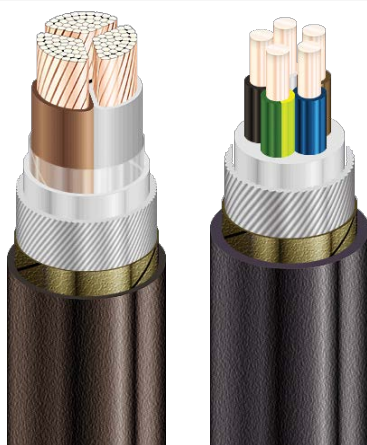
Technical data — NYCY

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
3×4/4	4.61/4.61	0.6	36	47
3×6/6	3.08/3.08	0.9	46	59
3×10/10	1.83/1.83	1.5	63	79
3×16/16	1.15/1.15	2.4	84	102
3×25/25	0.727/0.727	3.75	112	133
3×25/16	0.727/1.15	3.75	112	133
3×35/35	0.524/0.524	5.25	137	158
3×35/16	0.524/1.15	5.25	137	158
3×50/50	0.387/0.387	7.5	167	187
3×50/25	0.387/0.727	7.5	167	187
3×70/70	0.268/0.268	10.5	211	231
3×70/35	0.268/0.524	10.5	211	231
3×95/95	0.193/0.193	14.25	261	279
3×95/50	0.193/0.387	14.25	261	279
3×120/120	0.153/0.153	18	302	317
3×120/70	0.153/0.268	18	302	317
3×150/150	0.124/0.124	22.5	346	358
3×150/70	0.124/0.268	22.5	346	358
3×185/95	0.0991/0.193	27.75	397	405
3×240/120	0.0754/0.153	36	472	471
4×4/4	4.61/4.61	0.8	33	43
4×6/6	3.08/3.08	1.2	42	54
4×10/10	1.83/1.83	2	58	73
4×16/16	1.15/1.15	3.2	78	94
4×25/16	0.727/1.15	5	104	123
4×35/16	0.524/1.15	7	127	146
4×50/25	0.387/0.727	10	155	173
4×70/35	0.268/0.524	14	196	214
4×95/50	0.193/0.387	19	242	259
4×120/70	0.153/0.268	24	280	294
4×150/70	0.124/0.268	30	321	332
5×1.5/1.5	12.1/12.1	0.375	19	25
5×2.5/2.5	7.41/7.41	0.625	25	33
5×4/4	4.61/4.61	1	33	43
5×6/6	3.08/3.08	1.5	42	54
7×1.5/2.5	12.1/7.41	0.525	-	-
7×2.5/2.5	7.41/7.41	0.875	-	-
7×4/4	4.61/4.61	1.4	-	-
7×6/6	3.08/3.08	2.1	-	-
10×1.5/2.5	12.1/7.41	0.75	-	-
10×2.5/4	7.41/4.61	1.25	-	-
12×1.5/2.5	12.1/7.41	0.9	-	-
12×2.5/4	7.41/4.61	1.5	-	-
14×1.5/2.5	12.1/7.41	1.05	-	-
14×2.5/6	7.41/3.08	1.75	-	-
16×1.5/4	12.1/4.61	1.2	-	-
16×2.5/6	7.41/3.08	2	-	-
19×1.5/4	12.1/4.61	1.425	-	-
19×2.5/6	7.41/3.08	2.375	-	-
24×1.5/6	12.1/3.08	1.8	-	-
24×2.5/10	7.41/1.83	3	-	-

Technical data — NAYCY

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
3×35/35	0.868	3.15	106	123
3×50/50	0.641	4.5	126	143
3×70/70	0.443	6.3	161	178
3×95/95	0.320	8.55	197	214
3×120/120	0.253	10.8	229	244
3×150/150	0.206	13.5	261	274
3×185/95	0.164/0.320	16.65	302	312

600/1000 V
HD 603, HD 627, IEC 60502-1



Design

Conductor: bare copper conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228

Insulation: PVC compound

Inner covering: PVC compound or PET tapes

Armor: steel galvanized wires (aluminium wires for single core cables)

Sheath: PVC compound

Other dimensions, conductor constructions and colours available on request

Application	– for outdoor and indoor Installation, laid direct to the ground, where mechanical damages are expected to occur – outdoor installation is possible with UV protection		
Max conductor temperature	70 °C		
Max conductor temperature at short circuit for 5 s	160 °C		
Ambient temperature	–50 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	15D for single core cables, 12D for multi core cables		
Test voltage (50 Hz)	4000 V		
Behavior in fire	EN 60332-1-2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	2	brown, blue	-
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey
	7 and above	black with number code	green-yellow, the other black with number code

Dimensional data

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
1	2	3	4	5	6	7
1×25	RM	2	1.2	1.4	16	470
1×35			1.2	1.5	17	590
1×50			1.4	1.5	18	740
1×70			1.4	1.6	20	980
1×95			1.6	1.7	23	1320
1×120			1.6	1.7	25	1580
1×150			1.8	1.8	27	1890
1×185			2.0	1.9	29	2300
1×240			2.2	2.0	32	2910
1×300			2.4	2.1	36	3680
1×400			2.6	2.2	40	4580

1	2	3	4	5	6	7
2x1.5	RE	1	0.8	1.8	13	330
2x2.5			0.8	1.8	14	380
2x4			1.0	1.8	17	560
2x6			1.0	1.8	18	640
2x10			1.0	1.8	19	800
2x16	RM	2	1.0	1.8	23	1170
2x25			1.2	1.8	25	1510
2x35			1.2	1.8	28	1850
2x50			1.4	1.9	31	2290
3x1.5			RE	1	0.8	1.8
3x2.5	0.8	1.8			15	420
3x4	1.0	1.8			17	630
3x6	1.0	1.8			18	740
3x10	1.0	1.8			20	930
3x16	RM	2	1.0	1.8	24	1390
3x25			1.2	1.8	27	1810
3x35			1.2	1.9	29	2220
3x50			1.4	2.0	34	3020
3x70			SM	2	1.4	2.2
3x95	1.6	2.3			43	5070
3x120	1.6	2.5			47	6440
3x150	1.8	2.6			51	7660
3x185	2.0	2.8			57	9370
3x240	2.2	3.0			62	11600
4x1.5	RE	1			0.8	1.8
4x2.5			0.8	1.8	16	560
4x4			1.0	1.8	18	730
4x6			1.0	1.8	20	850
4x10			1.0	1.8	22	1100
4x16	RM	2	1.0	1.8	26	1620
4x25			1.2	1.9	29	2180
4x35			1.2	2.0	32	2720
4x50			1.4	2.0	34	3300
4x70			SM	2	1.4	2.2
4x95	1.6	2.3			42	5610
4x120	1.6	2.5			47	7130
4x150	1.8	2.6			51	8560
4x185	2.0	2.7			55	10300
4x240	2.2	3.0			62	13040
5x1.5	RE	1			0.8	1.8
5x2.5			0.8	1.8	17	630
5x4			1.0	1.8	20	830
5x6			1.0	1.8	21	980
5x10			1.0	1.8	24	1390
5x16	RM	2	1.0	1.8	28	1910
5x25			1.2	2.0	32	2590
5x35			1.2	2.1	36	3510
5x50			1.4	2.3	40	4450
3x25/16			RM	1	1.2/1.0	1.9
3x35/16	1.2/1.0	1.9			30	2450
3x50/25	1.4/1.2	1.9			32	2820
3x70/35	SM/RM	2/1	1.4/1.2	1.9	36	3910
3x95/50			1.6/1.4	2.0	40	5070
3x120/70			SM	2	1.6/1.4	2.1
3x150/70	1.8/1.4	2.3			49	7860
3x185/95	2.0/1.6	2.4			53	9440
3x240/120	2.2/1.6	2.6			59	11880

1	2	3	4	5	6	7
7×1.5	RE	1	0.8	1.8	17	650
7×2.5			0.8	1.8	18	770
10×1.5			0.8	1.8	20	840
10×2.5			0.8	1.8	23	1110
12×1.5			0.8	1.8	21	900
12×2.5			0.8	1.8	23	1210
14×1.5			0.8	1.8	22	1090
14×2.5			0.8	1.8	24	1310
16×1.5			0.8	1.8	23	1170
16×2.5			0.8	1.8	25	1410
19×1.5			0.8	1.8	24	1270
19×2.5			0.8	1.8	26	1560
21×1.5			0.8	1.8	25	1360
21×2.5			0.8	1.8	27	1690
24×1.5			0.8	1.8	27	1510
24×2.5			0.8	1.8	30	1900

Technical data — single core

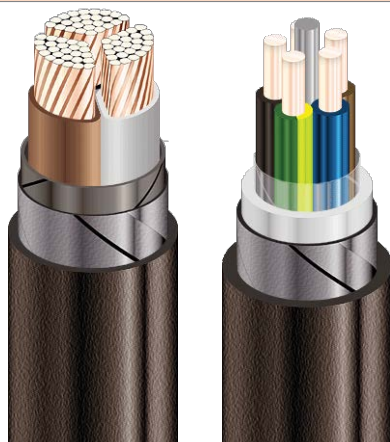
No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A			
			d.c.		a.c., triangle laying	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K-m/W	open air 25 °C	buried 15 °C, 0.7 m, 1.2 K-m/W
1×25	0.727	1.25	153	207	121	137
1×35	0.524	1.75	187	249	147	163
1×50	0.387	2.5	227	295	179	194
1×70	0.268	3.5	286	364	226	237
1×95	0.193	4.75	354	436	280	285
1×120	0.153	6	413	499	326	324
1×150	0.124	7.5	473	561	373	364
1×185	0.0991	9.25	547	637	431	412
1×240	0.0754	12	655	743	512	477
1×300	0.0601	15	760	845	591	539
1×400	0.0470	20	894	971	685	612

Technical data — multicore

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K-m/W
1	2	3	4	5
2×1.5	12.1	0.15	21	27
2×2.5	7.41	0.25	27	36
2×4	4.61	0.4	36	47
2×6	3.08	0.6	46	59
2×10	1.83	1	63	79
2×16	1.15	1.6	84	102
2×25	0.727	2.5	112	133
2×35	0.524	3.5	137	158
2×50	0.387	5	167	187
3×1.5	12.1	0.225	21	27
3×2.5	7.41	0.375	27	36
3×4	4.61	0.6	36	47
3×6	3.08	0.9	46	59
3×10	1.83	1.5	63	79
3×16	1.15	2.4	84	102
3×25	0.727	3.75	112	133
3×35	0.524	5.25	137	158

1	2	3	4	5
3×50	0.387	7.5	167	187
3×70	0.268	10.5	211	231
3×95	0.193	14.25	261	279
3×120	0.153	18	302	317
3×150	0.124	22.5	346	358
3×185	0.0991	27.75	397	405
3×240	0.0754	36	472	471
4×1.5	12.1	0.3	19	25
4×2.5	7.41	0.5	25	33
4×4	4.61	0.8	33	43
4×6	3.08	1.2	42	54
4×10	1.83	2	58	73
4×16	1.15	3.2	78	94
4×25	0.727	5	104	123
4×35	0.524	7	127	146
4×50	0.387	10	155	173
4×70	0.268	14	196	214
4×95	0.193	19	242	259
4×120	0.153	24	280	294
4×150	0.124	30	321	332
4×185	0.0991	37	369	376
4×240	0.0754	48	438	438
5×1.5	12.1	0.375	19	25
5×2.5	7.41	0.625	25	33
5×4	4.61	1	33	43
5×6	3.08	1.5	42	54
5×10	1.83	2.5	58	73
5×16	1.15	4	78	94
5×25	0.727	6.25	104	123
5×35	0.524	8.75	127	146
5×50	0.387	12.5	155	173
3×25/16	0.727/1.15	4.55	112	133
3×35/16	0.524/1.15	6.05	137	158
3×50/25	0.387/0.727	8.75	167	187
3×70/35	0.268/0.524	12.25	211	231
3×95/50	0.193/0.387	16.75	261	279
3×120/70	0.153/0.268	21.5	302	317
3×150/70	0.124/0.268	26	346	358
3×185/95	0.0991/0.193	32.5	397	405
3×240/120	0.0754/0.153	42	472	471
7×1.5	12.1	0.375	-	-
7×2.5	7.41	0.625	-	-
10×1.5	12.1	0.75	-	-
10×2.5	7.41	1.25	-	-
12×1.5	12.1	0.9	-	-
12×2.5	7.41	1.5	-	-
14×1.5	12.1	1.05	-	-
14×2.5	7.41	1.75	-	-
16×1.5	12.1	1.2	-	-
16×2.5	7.41	2	-	-
19×1.5	12.1	1.425	-	-
19×2.5	7.41	2.375	-	-
21×1.5	12.1	1.575	-	-
21×2.5	7.41	2.625	-	-
24×1.5	12.1	1.8	-	-
24×2.5	7.41	3	-	-

600/1000 V
HD 603, HD 627, IEC 60502-1



Design

Conductor: bare copper conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228

Insulation: PVC compound

Inner covering: PVC compound or PET tapes

Aarmor: steel galvanized tapes

Sheath: PVC compound

Other dimensions, conductor constructions and colours available on request

Application	– for outdoor and indoor Installation, laid direct to the ground, where mechanical damages are expected to occur – outdoor installation is possible with UV protection		
Max conductor temperature	70 °C		
Max conductor temperature at short circuit for 5 s	160 °C		
Ambient temperature	–50 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	12D		
Test voltage (50 Hz)	4000 V		
Behavior in fire	EN 60332-1-2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	2	brown, blue	-
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey
	7 and above	black with number code	green-yellow, the other black with number code

Dimensional data

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
1	2	3	4	5	6	7
2×1.5	RE	1	0.8	1.8	13	290
2×2.5			0.8	1.8	14	410
2×4			1.0	1.8	15	440
2×6			1.0	1.8	16	490
2×10			1.0	1.8	19	660
2×16	RM	2	1.0	1.8	21	860
2×25			1.2	1.8	24	1180
2×35			1.2	1.8	26	1460
2×50			1.4	1.8	29	1860
3×1.5	RE	1	0.8	1.8	13	310
3×2.5			0.8	1.8	14	370
3×4			1.0	1.8	16	470
3×6			1.0	1.8	17	570
3×10			1.0	1.8	20	780

1	2	3	4	5	6	7
3×16	RM	2	1.0	1.8	22	1040
3×25			1.2	1.8	25	1450
3×35			1.2	1.8	27	1820
3×50			1.4	1.9	31	2360
3×70	SM	2	1.4	2.0	35	3130
3×95			1.6	2.1	41	4480
3×120			1.6	2.2	44	5230
3×150			1.8	2.4	48	6470
3×185			2.0	2.5	54	7940
3×240			2.2	2.7	61	10090
4×1.5	RE	1	0.8	1.8	14	350
4×2.5			0.8	1.8	15	420
4×4			1.0	1.8	17	550
4×6			1.0	1.8	18	670
4×10			1.0	1.8	21	930
4×16	RM	2	1.0	1.8	24	1250
4×25			1.2	1.8	27	1790
4×35			1.2	1.8	30	2250
4×50			1.4	2.0	34	2910
4×70	SM	2	1.4	2.1	38	4160
4×95			1.6	2.3	45	5660
4×120			1.6	2.4	48	6610
4×150			1.8	2.6	53	8180
4×185			2.0	2.7	60	10050
4×240			2.2	2.9	67	12810
5×1.5	RE	1	0.8	1.8	15	400
5×2.5			0.8	1.8	16	480
5×4			1.0	1.8	18	640
5×6			1.0	1.8	20	790
5×10			1.0	1.8	22	1050
5×16	RM	2	1.0	1.8	25	1460
5×25			1.2	1.8	30	2190
5×35			1.2	1.8	34	2810
5×50			1.4	2.1	37	3490
3×25/16			RM	1	1.2/1.0	1.8
3×35/16	1.2/1.0	1.8			28	1640
3×50/25	1.4/1.2	1.9			32	1970
3×70/35	SM/RM	2/1	1.4/1.2	2.0	36	2600
3×95/50			1.6/1.4	2.2	43	3460
3×120/70	SM	2	1.6/1.4	2.3	46	4950
3×150/70			1.8/1.4	2.4	49	5910
3×185/95			2.0/1.6	2.6	56	7040
3×240/120			2.2/1.6	2.8	62	8840
7×1.5	RE	1	0.8	1.8	16	460
7×2.5			0.8	1.8	17	650
10×1.5			0.8	1.8	19	700
10×2.5			0.8	1.8	21	870
12×1.5			0.8	1.8	19	760
12×2.5			0.8	1.8	21	970
14×1.5			0.8	1.8	20	820
14×2.5			0.8	1.8	22	1030
16×1.5			0.8	1.8	21	890
16×2.5			0.8	1.8	23	1160
19×1.5			0.8	1.8	22	980
19×2.5			0.8	1.8	24	1290
21×1.5			0.8	1.8	23	1050
21×2.5			0.8	1.8	25	1380
24×1.5			0.8	1.8	25	1170
24×2.5			0.8	1.8	27	1630

Technical data

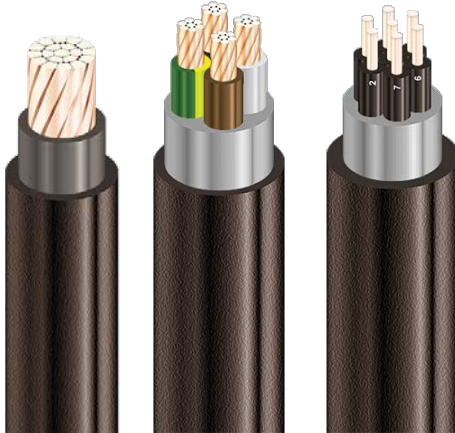
No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
1	2	3	4	5
2×1.5	12.1	0.15	21	27
2×2.5	7.41	0.25	27	36
2×4	4.61	0.4	36	47
2×6	3.08	0.6	46	59

1	2	3	4	5
2×10	1.83	1	63	79
2×16	1.15	1.6	84	102
2×25	0.727	2.5	112	133
2×35	0.524	3.5	137	158
2×50	0.387	5	167	187
3×1.5	12.1	0.225	21	27
3×2.5	7.41	0.375	27	36
3×4	4.61	0.6	36	47
3×6	3.08	0.9	46	59
3×10	1.83	1.5	63	79
3×16	1.15	2.4	84	102
3×25	0.727	3.75	112	133
3×35	0.524	5.25	137	158
3×50	0.387	7.5	167	187
3×70	0.268	10.5	211	231
3×95	0.193	14.25	261	279
3×120	0.153	18	302	317
3×150	0.124	22.5	346	358
3×185	0.0991	27.75	397	405
3×240	0.0754	36	472	471
4×1.5	12.1	0.3	19	25
4×2.5	7.41	0.5	25	33
4×4	4.61	0.8	33	43
4×6	3.08	1.2	42	54
4×10	1.83	2	58	73
4×16	1.15	3.2	78	94
4×25	0.727	5	104	123
4×35	0.524	7	127	146
4×50	0.387	10	155	173
4×70	0.268	14	196	214
4×95	0.193	19	242	259
4×120	0.153	24	280	294
4×150	0.124	30	321	332
4×185	0.0991	37	369	376
4×240	0.0754	48	438	438
5×1.5	12.1	0.375	19	25
5×2.5	7.41	0.625	25	33
5×4	4.61	1	33	43
5×6	3.08	1.5	42	54
5×10	1.83	2.5	58	73
5×16	1.15	4	78	94
5×25	0.727	6.25	104	123
5×35	0.524	8.75	127	146
5×50	0.387	12.5	155	173
3×25/16	0.727/1.15	4.55	112	133
3×35/16	0.524/1.15	6.05	137	158
3×50/25	0.387/0.727	8.75	167	187
3×70/35	0.268/0.524	12.25	211	231
3×95/50	0.193/0.387	16.75	261	279
3×120/70	0.153/0.268	21.5	302	317
3×150/70	0.124/0.268	26	346	358
3×185/95	0.0991/0.193	32.5	397	405
3×240/120	0.0754/0.153	42	472	471
7×1.5	12.1	0.375	-	-
7×2.5	7.41	0.625	-	-
10×1.5	12.1	0.75	-	-
10×2.5	7.41	1.25	-	-
12×1.5	12.1	0.9	-	-
12×2.5	7.41	1.5	-	-
14×1.5	12.1	1.05	-	-
14×2.5	7.41	1.75	-	-
16×1.5	12.1	1.2	-	-
16×2.5	7.41	2	-	-
19×1.5	12.1	1.425	-	-
19×2.5	7.41	2.375	-	-
21×1.5	12.1	1.575	-	-
21×2.5	7.41	2.625	-	-
24×1.5	12.1	1.8	-	-
24×2.5	7.41	3	-	-

N2XH

600/1000 V

HD 604, HD 627, IEC 60502-1



Design

Conductor: bare copper conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228

Insulation: XLPE compound 2XI 1

Inner covering: polyolefin compound or PET tapes

Sheath: thermoplastic polyolefin compound HM 4

N2XH-J — with protective conductor

N2XH-O — without protective conductor

Other dimensions, conductor constructions and colours available on request

Application	– for fixed indoor installation – in places where a low level of fumes and corrosive gases is required in case of fire or burning – in the ground (only in a conduit or duct to provide protection against mechanical damage) – outdoor installation is possible with UV protection		
Max conductor temperature	90 °C		
Max conductor temperature at short circuit for 5 s	250 °C		
Ambient temperature	–50 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	15D for single core cables, 12D for multi core cables		
Test voltage (50 Hz)	4000 V		
Behavior in fire	EN 60332-1-2, EN 60332-3-24, EN 61034-2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	2	brown, blue	green-yellow, black
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey
	7 and above	black with number code	green-yellow, the other black with number code

Dimensional data

No. x nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
1	2	3	4	5	6
1x1.5	RE	1	0.7	7	60
1x2.5			0.7	7	70
1x4			0.7	8	90
1x6			0.7	8	110
1x10			0.7	8	160
1x16	RM	2	0.7	9	220
1x25			0.9	11	330
1x35			0.9	12	430
1x50			1.0	13	560
1x70			1.1	15	780
1x95			1.1	17	1040
1x120			1.2	18	1300
1x150			1.4	21	1580
1x185			1.6	23	1960
1x240			1.7	24	2510
1x300			1.8	26	3130
2x1.5	RE	1	0.7	12	120
2x2.5			0.7	12	150
2x4			0.7	13	190
2x6			0.7	14	290
2x10			0.7	15	380
2x16	RM	2	0.7	16	550
2x25			0.9	18	840
2x35			0.9	21	1000
2x50			1.0	25	1340
3x1.5	RE	1	0.7	12	140
3x2.5			0.7	13	180
3x4			0.7	14	230
3x6			0.7	15	320
3x10			0.7	16	480
3x16	RM	2	0.7	17	700
3x25			0.9	21	1080
3x35			0.9	22	1410
3x50			1.0	26	1830
3x70	SM	2	1.1	30	2530
3x95			1.1	34	3410
3x120			1.3	38	4410
3x150			1.4	42	5350
3x185			1.6	46	6880
3x240			1.7	53	8380
4x1.5	RE	1	0.7	12	170
4x2.5			0.7	13	220
4x4			0.7	15	290
4x6			0.7	16	390
4x10			0.7	18	590
4x16	RM	2	0.7	21	860
4x25			0.9	25	1360
4x35			0.9	28	1860
4x50			1.0	31	2530
4x70	SM	2	1.1	36	2990
4x95			1.1	41	3940
4x120			1.2	45	5140
4x150			1.4	50	6130
4x185			1.6	54	7750
4x240			1.7	62	9520
3x16/10	RM/RE	2/1	0.7/0.7	19	770

1	2	3	4	5	6
3×25/16	RM/RM	2	0.9/0.7	22	1170
3×35/16	RM/RM		0.9/0.7	24	1480
3×50/25	RM/RM		1.0/0.9	28	2030
3×70/35	SM/RM		1.1/0.9	32	2800
3×95/50	SM/RM		1.1/1.0	36	3760
3×120/70	SM/SM		1.2/1.1	41	4830
3×150/70	SM/SM		1.4/1.1	44	5650
3×185/95	SM/SM		1.6/1.1	48	7050
3×240/120	SM/SM		1.7/1.2	56	9330
5×1.5	RE	1	0.7	13	190
5×2.5			0.7	14	250
5×4			0.7	16	340
5×6			0.7	17	470
5×10			0.7	20	720
5×16	RM	2	0.7	23	1050
5×25			0.9	25	1580
5×35			0.9	28	2120
5×50			1.0	32	2840
7×1.5	RE	1	0.7	12	310
7×2.5			0.7	15	400
10×1.5			0.7	16	420
10×2.5			0.7	18	540
12×1.5			0.7	17	460
12×2.5			0.7	18	600
14×1.5			0.7	18	540
14×2.5			0.7	19	670
19×1.5			0.7	19	650
19×2.5			0.7	21	840
24×1.5			0.7	22	760
24×2.5			0.7	24	1040
30×1.5			0.7	23	890
30×2.5			0.7	26	1220

Technical data — single core

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A			
			d.c.		a.c., triangle laying	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W	open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
1×1.5	12.1	0.075	35	48	28	33
1×2.5	7.41	0.125	46	63	36	42
1×4	4.61	0.2	60	82	47	54
1×6	3.08	0.3	76	102	59	67
1×10	1.83	0.5	105	136	82	89
1×16	1.15	0.8	139	175	108	115
1×25	0.727	1.25	188	228	146	147
1×35	0.524	1.75	230	274	180	176
1×50	0.387	2.5	281	325	220	208
1×70	0.268	3.5	356	399	279	255
1×95	0.193	4.75	440	478	345	306
1×120	0.153	6	514	546	403	348
1×150	0.124	7.5	591	614	464	392
1×185	0.0991	9.25	685	695	538	443
1×240	0.0754	12	821	812	641	515
1×300	0.0601	15	956	924	739	575

Technical data — multicore

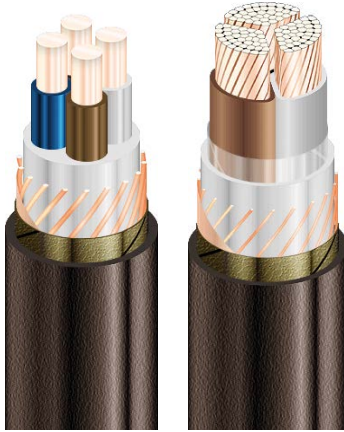
No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
1	2	3	4	5
2×1.5	12.1	0.15	25	31
2×2.5	7.41	0.25	34	40
2×4	4.61	0.4	45	52

1	2	3	4	5
2×6	3.08	0.6	56	64
2×10	1.83	1	78	86
2×16	1.15	1.6	104	112
2×25	0.727	2.5	141	144
2×35	0.524	3.5	172	173
2×50	0.387	5	209	205
3×1.5	12.1	0.225	25	31
3×2.5	7.41	0.375	34	40
3×4	4.61	0.6	45	52
3×6	3.08	0.9	56	64
3×10	1.83	1.5	78	86
3×16	1.15	2.4	104	112
3×25	0.727	3.75	141	144
3×35	0.524	5.25	172	173
3×50	0.387	7.5	209	205
3×70	0.268	10.5	265	253
3×95	0.193	14.25	327	304
3×120	0.153	18	381	347
3×150	0.124	22.5	437	391
3×185	0.0991	27.75	504	442
3×240	0.0754	36	598	515
4×1.5	12.1	0.3	23	28
4×2.5	7.41	0.5	31	37
4×4	4.61	0.8	41	48
4×6	3.08	1.2	52	59
4×10	1.83	2	72	79
4×16	1.15	3.2	96	104
4×25	0.727	5	131	133
4×35	0.524	7	159	160
4×50	0.387	10	194	190
4×70	0.268	14	246	235
4×95	0.193	19	304	282
4×120	0.153	24	354	322
4×150	0.124	30	406	363
4×185	0.0991	37	468	411
4×240	0.0754	48	556	478
3×16/10	1.15/1.83	2.9	104	112
3×25/16	0.727/1.15	4.55	141	144
3×35/16	0.524/1.15	6.05	172	173
3×50/25	0.387/0.727	8.75	209	205
3×70/35	0.268/0.524	12.25	265	253
3×95/50	0.193/0.387	16.75	327	304
3×120/70	0.153/0.268	21.5	381	347
3×150/70	0.124/0.268	26	437	391
3×185/95	0.0991/0.193	32.5	504	442
3×240/120	0.0754/0.153	42	598	515
5×1.5	12.1	0.375	23	28
5×2.5	7.41	0.625	31	37
5×4	4.61	1	41	48
5×6	3.08	1.5	52	59
5×10	1.83	2.5	72	79
5×16	1.15	4	96	104
5×25	0.727	6.25	131	133
5×35	0.524	8.75	159	160
5×50	0.387	12.5	194	190
7×1.5	12.1	0.375	-	-
7×2.5	7.41	0.625	-	-
10×1.5	12.1	0.75	-	-
10×2.5	7.41	1.25	-	-
12×1.5	12.1	0.9	-	-
12×2.5	7.41	1.5	-	-
14×1.5	12.1	1.05	-	-
14×2.5	7.41	1.75	-	-
19×1.5	12.1	1.425	-	-
19×2.5	7.41	2.375	-	-
24×1.5	12.1	1.8	-	-
24×2.5	7.41	3	-	-
30×1.5	12.1	2.25	-	-
30×2.5	7.41	3.75	-	-

N2XCH

600/1000 V

HD 604, HD 627, IEC 60502-1



Design

Conductor: bare copper conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228

Insulation: XLPE compound 2XI 1

Inner covering: polyolefin compound or PET tapes

Screen: copper wires concentric conductor + counter helix copper tape

Sheath: thermoplastic polyolefin compound HM 4

N2XCH-J — with protective conductor

N2XCH-O — without protective conductor

Other dimensions, conductor constructions and colours available on request

Application	– for fixed indoor installation, if increased mechanical and electrical protection is required – in places where a low level of fumes and corrosive gases is required in case of fire or burning – in the ground (only in a conduit or duct to provide protection against mechanical damage) – outdoor installation is possible with UV protection		
Max conductor temperature	90 °C		
Max conductor temperature at short circuit for 5 s	250 °C		
Ambient temperature	–50 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	15D for single core cables, 12D for multi core cables		
Test voltage (50 Hz)	4000 V		
Behavior in fire	EN 60332-1-2, EN 60332-3-24, EN 61034-2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	2	brown, blue	green-yellow, black
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey
	7 and above	black with number code	green-yellow, the other black with number code

Dimensional data

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
2×1.5/1.5	RE	1	0.7	12	240
2×2.5/2.5			0.7	12	270
2×4/4			0.7	14	310
2×6/6			0.7	15	400
2×10/10			0.7	17	530
2×16/16	RM	2	0.7	19	760
3×1.5/1.5	RE	1	0.7	12	250
3×2.5/2.5			0.7	13	320
3×4/4			0.7	14	400
3×6/6			0.7	16	490
3×10/10			0.7	18	740
3×16/16	RM	2	0.7	21	980
3×25/16			0.9	24	1580
3×35/16			0.9	27	1880
3×50/25			1.0	30	2370
3×70/35	SM	2	1.1	34	2580
3×95/50			1.1	38	3610
3×120/70			1.3	43	4570
3×150/70			1.4	47	5510
3×185/95			1.6	50	6650
3×240/120			1.7	57	8920
4×1.5/1.5	RE	1	0.7	13	230
4×2.5/2.5			0.7	14	300
4×4/4			0.7	15	410
4×6/6			0.7	17	520
4×10/10			0.7	19	750
4×16/16	RM	2	0.7	22	1120
4×25/16			0.9	26	1610
4×35/16			0.9	29	2060
4×50/25			1.0	33	2770
4×70/35	SM	2	1.1	41	3520
4×95/50			1.1	46	4770
4×120/70			1.2	50	6530
4×150/70			1.4	55	7870
4×185/95			1.6	62	9910
4×240/120			1.7	68	12870
5×1.5/1.5	RE	1	0.7	14	280
7×1.5/1.5			0.7	16	380
7×2.5/2.5			0.7	18	480
10×1.5/2.5			0.7	17	420
10×2.5/4			0.7	18	550
12×1.5/2.5			0.7	20	550
12×2.5/4			0.7	21	750
14×1.5/2.5			0.7	18	480
24×1.5/6			0.7	25	950
24×2.5/10			0.7	26	1100
30×1.5/6			0.7	27	1100
30×2.5/10			0.7	28	1500

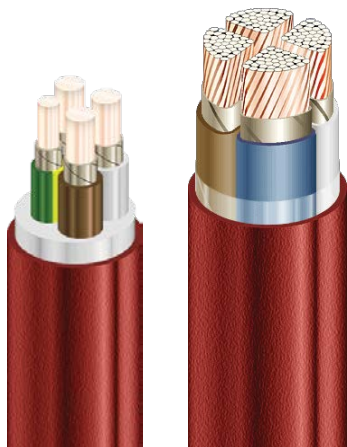
Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
2×1.5/1.5	12.1/12.1	0.15	25	31
2×2.5/2.5	7.41/7.41	0.25	34	40
2×4/4	4.61/4.61	0.4	45	52
2×6/6	3.08/3.08	0.6	56	64
2×10/10	1.83/1.83	1	78	86
2×16/16	1.15/1.15	1.6	104	112
3×1.5/1.5	12.1/12.1	0.225	25	31
3×2.5/2.5	7.41/7.41	0.375	34	40
3×4/4	4.61/4.61	0.6	45	52
3×6/6	3.08/3.08	0.9	56	64
3×10/10	1.83/1.83	1.5	78	86
3×16/16	1.15/1.15	2.4	104	112
3×25/16	0.727/1.15	3.75	141	144
3×35/16	0.524/1.15	5.25	172	173
3×50/25	0.387/0.727	7.5	209	205
3×70/35	0.268/0.524	10.5	265	253
3×95/50	0.193/0.387	14.25	327	304
3×120/70	0.153/0.268	18	381	347
3×150/70	0.124/0.268	22.5	437	391
3×185/95	0.0991/0.193	27.75	504	442
3×240/120	0.0754/0.153	36	598	515
4×1.5/1.5	12.1/12.1	0.3	23	28
4×2.5/2.5	7.41/7.41	0.5	31	37
4×4/4	4.61/4.61	0.8	41	48
4×6/6	3.08/3.08	1.2	52	59
4×10/10	1.83/1.83	2	72	79
4×16/16	1.15/1.15	3.2	96	104
4×25/16	0.727/1.15	5	131	133
4×35/16	0.524/1.15	7	159	160
4×50/25	0.387/0.727	10	194	190
4×70/35	0.268/0.524	14	246	235
4×95/50	0.193/0.387	19	304	282
4×120/70	0.153/0.268	24	354	322
4×150/70	0.124/0.268	30	406	363
4×185/95	0.0991/0.193	37	468	411
4×240/120	0.0754/0.153	48	556	478
5×1.5/1.5	12.1/12.1	0.375	23	28
7×1.5/1.5	12.1/12.1	0.375	-	-
7×2.5/2.5	7.41/7.41	0.625	-	-
10×1.5/2.5	12.1/7.41	0.75	-	-
10×2.5/4	7.41/4.61	1.25	-	-
12×1.5/2.5	12.1/7.41	0.9	-	-
12×2.5/4	7.41/4.61	1.5	-	-
14×1.5/2.5	12.1/7.41	1.05	-	-
24×1.5/6	12.1/3.08	1.8	-	-
24×2.5/10	7.41/1.83	3	-	-
30×1.5/6	12.1/3.08	2.25	-	-
30×2.5/10	7.41/3.08	3.75	-	-

(N)HXH FE180/E30, (N)HXH FE180/E90, (N)HXCH FE180/E30, (N)HXCH FE180/E90

600/1000 V

DIN VDE 0266, IEC 60502-1



Design

Conductor: bare copper conductors of class 1 (solid) or 2 (stranded) acc. to IEC 60228

Fire-resistant barrier: mica tape

Insulation: halogen-free thermoplastic compound

Inner covering: halogen-free compound

Screen (only for (N)HXCH): copper wires concentric conductor + counter helix copper tape

Sheath: halogen-free compound

(N)HXH-J — with protective conductor

(N)HXH-O — without protective conductor

Other dimensions, conductor constructions and colours available on request

Application	<ul style="list-style-type: none"> – for fixed indoor installation – in places where a low level of fumes and corrosive gases is required in case of fire or burning – in the ground (only in a conduit or duct to provide protection against mechanical damage) – outdoor installation is possible with UV protection 		
Max conductor temperature	70 °C		
Max conductor temperature at short circuit for 5 s	250 °C		
Ambient temperature	–50 °C up to +50 °C		
Min temperature during installation	–5 °C		
Min bending radius during installation	15D for single core cables, 12D for multi core cables		
Test voltage (50 Hz)	4000 V		
Behavior in fire	EN 60332-1-2, EN 60332-3-24, EN 61034-2		
Core identification	No. of cores	Cables without protective conductor	Cables with protective conductor
	2	brown, blue	green-yellow, black
	3	brown, black, grey	green-yellow, blue, brown
	4	blue, brown, black, grey	green-yellow, brown, black, grey
	5	blue, brown, black, grey, black	green-yellow, blue, brown, black, grey

Dimensional data

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Outer diameter D approx. (N)HXH mm	Cable mass approx. (N)HXH kg/km
1	2	3	4	5	6
1×1.5	RE	1	0.8	12	140
1×2.5			0.8	12	160
1×4			1.0	13	200
1×6			1.0	13	220
1×10			1.0	14	280
1×16	RM	2	1.0	15	350
1×25			1.2	16	470
1×35			1.2	17	570
1×50			1.4	19	720
1×70			1.4	21	990
1×95			1.5	23	1280
1×120			1.5	25	1570
1×150			1.6	27	1860
1×185			1.7	29	2280
1×240			1.9	32	2850
2×1.5	RE	1	0.8	16	290
2×2.5			0.8	17	330
2×4			1.0	18	420
2×6			1.0	19	490
2×10			1.0	21	640
2×16	RM	2	1.0	23	820
2×25			1.2	26	1160
2×35			1.2	28	1420
2×50			1.4	31	1800
2×70	SM	2	1.4	36	2500
2×95			1.5	40	3240
2×120			1.5	43	3890
2×150			1.6	46	4680
3×1.5	RE	1	0.8	16	320
3×2.5			0.8	17	370
3×4			1.0	19	480
3×6			1.0	21	590
3×10			1.0	22	760
3×16	RM	2	1.0	24	990
3×25			1.2	28	1410
3×35			1.2	30	1760
3×50			1.4	33	2250
3×70	SM	2	1.4	37	2840
3×95			1.5	39	3650
3×120			1.5	42	4420
3×150			1.6	45	5270
3×185			1.7	50	6620
3×240			1.9	54	8260

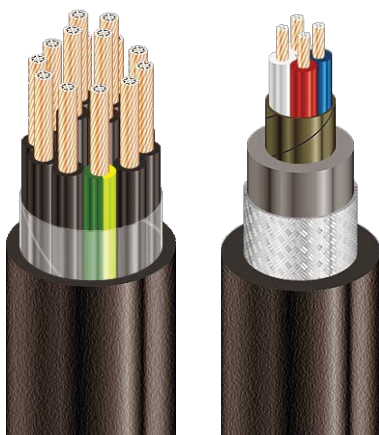
1	2	3	4	5	6
4×1.5	RE	1	0.8	18	370
4×2.5			0.8	18	430
4×4			1.0	21	590
4×6			1.0	22	700
4×10			1.0	24	910
4×16	RM	2	1.0	27	1230
4×25			1.2	30	1730
4×35			1.2	33	2180
4×50			1.4	37	2830
4×70	SM	2	1.4	41	3690
4×95			1.5	44	4760
4×120			1.5	46	5800
4×150			1.6	51	6960
4×185			1.7	56	8630
5×1.5	RE	1	0.8	19	420
5×2.5			0.8	20	520
5×4			1.0	22	680
5×6			1.0	24	820
5×10			1.0	26	1100
5×16	RM	2	1.0	29	1450
5×25			1.2	33	2070
5×35			1.2	36	2640
5×50			1.4	40	3400
5×70	SM	2	1.4	46	4790
5×95			1.5	52	6310

Technical data — single core

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A			
			d.c.		a.c., triangle laying	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W	open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
1×1.5	12.1	0.075	29	41	22	30
1×2.5	7.41	0.125	37	55	30	39
1×4	4.61	0.2	50	71	39	50
1×6	3.08	0.3	63	90	50	62
1×10	1.83	0.5	86	124	68	83
1×16	1.15	0.8	113	159	89	107
1×25	0.727	1.25	153	207	121	137
1×35	0.524	1.75	187	249	147	163
1×50	0.387	2.5	227	295	179	194
1×70	0.268	3.5	286	364	226	237
1×95	0.193	4.75	354	436	280	285
1×120	0.153	6	413	499	326	324
1×150	0.124	7.5	473	561	373	364
1×185	0.0991	9.25	547	637	431	412
1×240	0.0754	12	655	743	512	477

Technical data — multicore

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation kN	Permissible current rating A	
			open air 25 °C	buried 15 °C, 0.7 m, 1.2 K·m/W
2×1.5	12.1	0.15	21	27
2×2.5	7.41	0.25	27	36
2×4	4.61	0.4	36	47
2×6	3.08	0.6	46	59
2×10	1.83	1	63	79
2×16	1.15	1.6	84	102
2×25	0.727	2.5	112	133
2×35	0.524	3.5	137	158
2×50	0.387	5	167	187
2×70	0.268	7	211	231
2×95	0.193	9.5	261	279
2×120	0.153	12	302	317
2×150	0.124	15	346	358
3×1.5	12.1	0.225	21	27
3×2.5	7.41	0.375	27	36
3×4	4.61	0.6	36	47
3×6	3.08	0.9	46	59
3×10	1.83	1.5	63	79
3×16	1.15	2.4	84	102
3×25	0.727	3.75	112	133
3×35	0.524	5.25	137	158
3×50	0.387	7.5	167	187
3×70	0.268	10.5	211	231
3×95	0.193	14.25	261	279
3×120	0.153	18	302	317
3×150	0.124	22.5	346	358
3×185	0.0991	27.75	397	405
3×240	0.0754	36	472	471
4×1.5	12.1	0.3	19	25
4×2.5	7.41	0.5	25	33
4×4	4.61	0.8	33	43
4×6	3.08	1.2	42	54
4×10	1.83	2	58	73
4×16	1.15	3.2	78	94
4×25	0.727	5	104	123
4×35	0.524	7	127	146
4×50	0.387	10	155	173
4×70	0.268	14	196	214
4×95	0.193	19	242	259
4×120	0.153	24	280	294
4×150	0.124	30	321	332
4×185	0.0991	37	369	376
5×1.5	12.1	0.375	19	25
5×2.5	7.41	0.625	25	33
5×4	4.61	1	33	43
5×6	3.08	1.5	42	54
5×10	1.83	2.5	58	73
5×16	1.15	4	78	94
5×25	0.727	6.25	104	123
5×35	0.524	8.75	127	146
5×50	0.387	12.5	155	173
5×70	0.268	17.5	196	214
5×95	0.193	23.75	242	259

H05VV5-F, H05VVC4V5-K**300/500 V****EN 50525-2-51****Design**

Conductor: flexible copper conductors of class 5 acc. to IEC 60228

Insulation: PVC compound TI 2

Binder tape: PET film

Inner sheath(only for H05VVC4V5-K): PVC compound TM 2

Screen (only for H05VVC4V5-K): braid of plain or tinned copper wires

Sheath: PVC compound type TM 5

Other dimensions and colours available on request

Application	<ul style="list-style-type: none"> – in dry and wet locations for low and medium-level mechanical stress, but not in the open-air – to be used as a termination and connection cable in the control, measuring and signal technology – suitable as a signal and impulse cable for control and inspection of industrial plants, production lines and machinery 			
Max conductor temperature	70 °C			
Temperature range	<ul style="list-style-type: none"> – during installation – fixed installed – at short circuit of max 5 s – ambient temperature at storage 			
Test voltage (50 Hz)	2000 V			
Behavior in fire	EN 60332-1-2			
Min bending radius, fixed installation	D ≤ 8 mm	8mm < D ≤ 12mm	12mm < D ≤ 20mm	D > 20 mm
	3D	3D	4D	4D
Min bending radius, free movement	D ≤ 8 mm	8mm < D ≤ 12mm	12mm < D ≤ 20mm	D > 20 mm
	5D	5D	6D	6D
Core identification	one core is green-yellow, the other are black with number code, or by colours in accordance with HD 308 (for cables with 2–5 cores)			

Dimensional data — H05VV5-F

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
1	2	3	4	5	6	7
2×0.5	RM	5	0.6	0.7	6	50
2×0.75			0.6	0.8	6	60
2×1.0			0.6	0.8	7	60
2×1.5			0.7	0.8	7	70
2×2.5			0.8	1.0	9	100
3×0.5	RM	5	0.6	0.7	6	60
3×0.75			0.6	0.8	7	60
3×1.0			0.6	0.8	7	70
3×1.5			0.7	0.9	8	90
3×2.5			0.8	1.1	10	150

1	2	3	4	5	6	7
4×0.5	RM	5	0.6	0.8	7	70
4×0.75			0.6	0.8	8	80
4×1.0			0.6	0.8	8	90
4×1.5			0.7	0.9	9	130
4×2.5			0.8	1.1	11	200
5×0.5	RM	5	0.6	0.8	8	80
5×0.75			0.6	0.9	9	100
5×1.0			0.6	0.9	9	120
5×1.5			0.7	1.0	10	160
5×2.5			0.8	1.2	12	240
6×0.5	RM	5	0.6	0.9	8	100
6×0.75			0.6	0.9	9	130
6×1.0			0.6	1.0	10	150
6×1.5			0.7	1.1	11	200
6×2.5			0.8	1.2	12	270
7×0.5	RM	5	0.6	0.9	9	120
7×0.75			0.6	1.0	10	140
7×1.0			0.6	1.0	10	180
7×1.5			0.7	1.2	11	200
7×2.5			0.8	1.3	13	300
12×0.5	RM	5	0.6	1.1	12	180
12×0.75			0.6	1.1	12	220
12×1.0			0.6	1.2	13	250
12×1.5			0.7	1.3	14	330
12×2.5			0.8	1.5	18	530
18×0.5	RM	5	0.6	1.2	14	250
18×0.75			0.6	1.3	14	310
18×1.0			0.6	1.3	16	390
18×1.5			0.7	1.5	17	510
18×2.5			0.8	1.8	22	770
27×0.5	RM	5	0.6	1.4	17	370
27×0.75			0.6	1.5	18	460
27×1.0			0.6	1.5	20	680
27×1.5			0.7	1.8	21	740
27×2.5			0.8	2.1	26	1180
36×0.5	RM	5	0.6	1.5	20	490
36×0.75			0.6	1.6	21	600
36×1.0			0.6	1.7	22	730
36×1.5			0.7	2.0	24	940
36×2.5			0.8	2.3	29	1510
48×0.5	RM	5	0.6	1.7	22	620
48×0.75			0.6	1.8	24	770
48×1.0			0.6	1.9	25	960
48×1.5			0.7	2.2	17	1230
48×2.5			0.8	2.4	34	2000

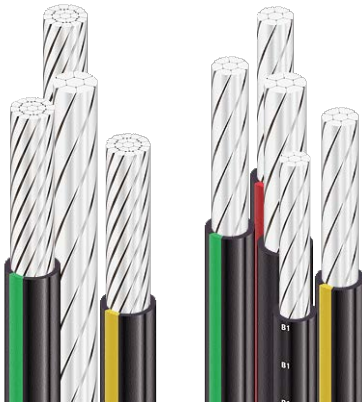
Dimensional data — H05VVC4V5-K

No. × nominal cross-section area of core mm ²	Shape of conductors	Conductor class	Nominal insulation thickness mm	Nominal sheath thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
18×0.5	RM	5	0.6	1.3	17	400
18×0.75			0.6	1.5	18	460
18×1.0			0.6	1.5	19	590
18×1.5			0.7	1.7	20	670
18×2.5			0.8	2.0	25	1000
27×0.5	RM	5	0.6	1.6	20	520
27×0.75			0.6	1.7	21	660
27×1.0			0.6	1.7	23	770
27×1.5			0.7	2.0	24	980
27×2.5			0.8	2.3	31	1490
36×0.5	RM	5	0.6	1.7	22	650
36×0.75			0.6	1.8	24	830
36×1.0			0.6	1.9	26	1020
36×1.5			0.7	2.2	27	1260
36×2.5			0.8	2.4	34	1780
48×0.5	RM	5	0.6	1.9	25	840
48×0.75			0.6	2.1	27	1090
48×1.0			0.6	2.1	29	1240
48×1.5			0.7	2.4	31	1610

Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation N	No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km	Permitted tensile stress during installation N
2×0.5	39.0	15	12×0.5	39.0	90
2×0.75	26.0	22.5	12×0.75	26.0	135
2×1.0	19.5	30	12×1.0	19.5	180
2×1.5	13.3	45	12×1.5	13.3	270
2×2.5	7.98	75	12×2.5	7.98	450
3×0.5	39.0	22.5	18×0.5	39.0	135
3×0.75	26.0	33.75	18×0.75	26.0	202.5
3×1.0	19.5	45	18×1.0	19.5	270
3×1.5	13.3	67.5	18×1.5	13.3	405
3×2.5	7.98	112.5	18×2.5	7.98	675
4×0.5	39.0	30	27×0.5	39.0	202.5
4×0.75	26.0	45	27×0.75	26.0	303.75
4×1.0	19.5	60	27×1.0	19.5	405
4×1.5	13.3	90	27×1.5	13.3	607.5
4×2.5	7.98	150	27×2.5	7.98	1012.5
5×0.5	39.0	37.5	36×0.5	39.0	270
5×0.75	26.0	56.25	36×0.75	26.0	405
5×1.0	19.5	75	36×1.0	19.5	540
5×1.5	13.3	112.5	36×1.5	13.3	810
5×2.5	7.98	187.5	36×2.5	7.98	1350
6×0.5	39.0	45	48×0.5	39.0	360
6×0.75	26.0	67.5	48×0.75	26.0	540
6×1.0	19.5	90	48×1.0	19.5	720
6×1.5	13.3	135	48×1.5	13.3	1080
6×2.5	7.98	225	48×2.5	7.98	1800
7×0.5	39.0	52.5			
7×0.75	26.0	78.75			
7×1.0	19.5	105			
7×1.5	13.3	157.5			
7×2.5	7.98	262.5			

ABC (AXKA)

600/1000 V
HD 626 S1


Design

Phase conductors: bare aluminium conductors acc. to IEC 60228

Messenger conductor: aluminium alloy

Insulation: XLPE compound TIX 4, UV and weather resistant

Other dimensions available on request

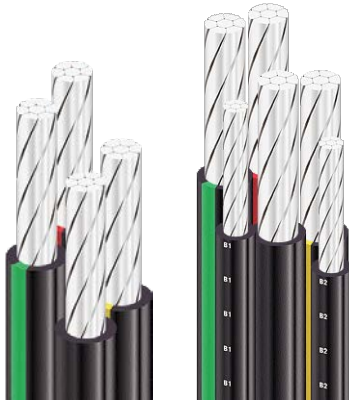
Application	– for overhead power transmission lines 220/380 V
Max conductor temperature	90 °C
Max conductor temperature at short circuit for 5 s	250 °C
Ambient temperature	–60 °C up to +50 °C
Min temperature during installation	–20 °C
Min bending radius during installation	10D
Test voltage (50 Hz)	4000 V
Core identification	by ridges

Dimensional data

No. × nominal cross-section area of core mm ²	No. of wires in phase/messenger conductor	Conductor diameter mm		Nominal insulation thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
		phase	messenger			
1×16+25	1/7	4.40±0.05	5.9±0.20	1.3	14	135
3×16+25	1/7	4.40±0.05	5.9±0.20	1.3	21	260
3×25+35	7/7	5.90±0.20	6.9±0.20	1.3	25	380
3×35+50	7/7	6.90±0.20	8.1±0.25	1.3	29	520
3×50+70	7/7	8.10±0.25	9.7±0.25	1.5	34	690
3×70+95	7/7	9.70±0.25	11.4±0.30	1.5	39	960
3×120+95	19/7	12.80±0.30	11.4±0.30	1.7	46	1460
4×16+25	1/7	4.40±0.05	5.9±0.20	1.3	21	320
4×25+35	7/7	5.90±0.20	6.9±0.20	1.3	25	480

Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of conductor (20°C, d.c.) Ω/km		Messenger breaking load, not less kN	Permissible current rating open air 25 °C wind velocity 0.6 m/s solar radiation 1000 W/m ² A
	phase	messenger		
1×16+25	1.91	1.38	7.4	105
3×16+25	1.91	1.38	7.4	100
3×25+35	1.20	0.986	10.3	130
3×35+50	0.868	0.720	14.2	160
3×50+70	0.641	0.493	20.6	195
3×70+95	0.443	0.363	27.9	240
3×120+95	0.253	0.363	27.9	340
4×16+25	1.91	1.38	7.4	100
4×25+35	1.20	0.986	10.3	130

600/1000 V**HD 626 S1****Design**

Conductor: bare aluminium round compacted acc. to IEC 60228

Insulation: XLPE compound TIX 2, UV and weather resistant

Other dimensions available on request

Application	– for overhead power transmission lines 220/380 V
Max conductor temperature	90 °C
Max conductor temperature at short circuit for 5 s	250 °C
Ambient temperature	–60 °C up to +50 °C
Min temperature during installation	–20 °C
Min bending radius during installation	10D
Test voltage (50 Hz)	4000 V
Core identification	by ridges

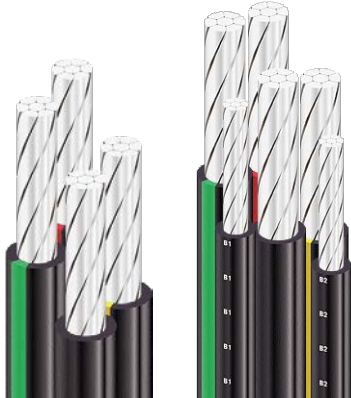
Dimensional data

No. × nominal cross-section area of core mm ²	No. of wires in conductor	Phase conductor diameter mm		Nominal insulation thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
		min	max			
4×25	7	5.6	6.5	1.3	22	400
4×35	7	6.6	7.5	1.3	25	520
4×50	19	7.7	8.6	1.5	28	690
4×70	19	9.3	10.2	1.5	32	930
4×70+1×35	19/7	9.3	10.2	1.5/1.3	36	1055
4×70+2×35	19/7	9.3	10.2	1.5/1.3	40	1180

Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of phase conductor (20°C, d.c.) Ω/km	Min tensile strength of cable kN	Permissible current rating open air 35 °C wind velocity 0.6 m/s solar radiation 1000 W/m ² A
4×25	1.20	15.4	130
4×35	0.868	21.5	160
4×50	0.641	30.7	195
4×70	0.443	43.0	240
4×70+1×35	0.443	43.0	240
4×70+2×35	0.443	43.0	240

AsXSn

600/1000 V
HD 626 S1


Design

Conductor: bare aluminium round compacted acc. to IEC 60228

Insulation: XLPE compound TIX 2, UV and weather resistant, flame retardant

Other dimensions available on request

Application	– for overhead power transmission lines 220/380 V
Max conductor temperature	90 °C
Max conductor temperature at short circuit for 5 s	250 °C
Ambient temperature	–60 °C up to +50 °C
Min temperature during installation	–20 °C
Min bending radius during installation	10D
Test voltage (50 Hz)	4000 V
Behavior in fire	EN 60332–1–2
Core identification	by ridges

Dimensional data

No. × nominal cross-section area of core mm ²	Min No. of wires in conductor	Phase conductor diameter mm		Nominal phase insulation thickness mm	Outer diameter D approx. mm	Cable mass approx. kg/km
		min	max			
1×70	7	9.45	9.95	1.5	13	230
2×16	6	4.60	5.10	1.4	15	140
2×25	6	5.70	6.10	1.4	17	200
2×35	6	6.70	7.10	1.4	19	260
4×16	6	4.60	5.10	1.4	18	280
4×25	6	5.70	6.10	1.4	21	400
4×35	6	6.70	7.10	1.4	23	520
4×50	6	7.85	8.35	1.5	27	680
4×70	7	9.45	9.95	1.5	30	930
4×95	7	11.00	12.00	1.7	35	1270
4×120	15	12.50	13.10	1.7	39	1570
4×35+1×25	6	6.70	7.10	1.4	26	620
4×35+1×35	6	6.70	7.10	1.4	26	650
4×50+1×25	6	7.85	8.35	1.5	30	780
4×50+1×35	6	7.85	8.35	1.5	30	810
4×70+1×25	7/6	9.45	9.95	1.5	34	1020
4×70+1×35	7/6	9.45	9.95	1.5	34	1050
4×95+1×25	7/6	11.00	12.00	1.7	40	1370
4×95+1×35	7/6	11.00	12.00	1.7	40	1400
4×120+1×25	15/6	12.50	13.10	1.7	44	1670
4×120+1×35	15/6	12.50	13.10	1.7	44	1700
4×35+2×25	6	6.70	7.10	1.4	29	720
4×35+2×35	6	6.70	7.10	1.4	29	780
4×50+2×25	6	7.85	8.35	1.5	33	880
4×50+2×35	6	7.85	8.35	1.5	33	940
4×70+2×25	7/6	9.45	9.95	1.5	38	1120
4×70+2×35	7/6	9.45	9.95	1.5	38	1180
4×95+2×25	7/6	11.00	12.00	1.7	44	1470
4×95+2×35	7/6	11.00	12.00	1.7	44	1530
4×120+2×25	15/6	12.50	13.10	1.7	49	1760
4×120+2×35	15/6	12.50	13.10	1.7	49	1820

Technical data

No. × nominal cross-section area of core mm ²	Electrical resistance of phase conductor (20°C, d.c.) Ω/km	Min tensile strength of cable kN	Permissible current rating open air 35 °C wind velocity 0.6 m/s solar radiation 1000 W/m ² A
1×70	0.443	11,2	240
2×16	1.91	5,0	100
2×25	1.2	7,8	130
2×35	0.868	11,0	160
4×16	1.91	9,8	100
4×25	1.2	15,4	130
4×35	0.868	21,5	160
4×50	0.641	30,7	195
4×70	0.443	43,0	240
4×95	0.320	58,4	300
4×120	0.253	73,7	340
4×35+1×25	0.868	21,5	160
4×35+1×35	0.868	21,5	160
4×50+1×25	0.641	30,7	195
4×50+1×35	0.641	30,7	195
4×70+1×25	0.443	43,0	240
4×70+1×35	0.443	43,0	240
4×95+1×25	0.320	58,4	300
4×95+1×35	0.320	58,4	300
4×120+1×25	0.253	73,7	340
4×120+1×35	0.253	73,7	340
4×35+2×25	0.868	21,5	160
4×35+2×35	0.868	21,5	160
4×50+2×25	0.641	30,7	195
4×50+2×35	0.641	30,7	195
4×70+2×25	0.443	43,0	240
4×70+2×35	0.443	43,0	240
4×95+2×25	0.320	58,4	300
4×95+2×35	0.320	58,4	300
4×120+2×25	0.253	73,7	340
4×120+2×35	0.253	73,7	340

AL1 (AAC)

600/1000 V
EN 50182

Design

aluminium stranded conductor

Other dimensions and conductor constructions available on request

Application	- for overhead power transmission lines
Permissible conductor temperature	80 °C

Dimensional data

Designation	Nominal cross-section area mm ²	No. of wires	Conductor diameter mm	Mass approx. kg/km
16-AL1	15.9	7	5.1	43
24-AL1	24.2	7	6.3	66
34-AL1	34.4	7	7.5	94
49-AL1	49.5	7	9.0	135
48-AL1	48.3	19	9.0	133
66-AL1	65.8	19	10.5	181
93-AL1	93.3	19	12.5	256
117-AL1	117.0	19	14.0	322
147-AL1	147.1	37	15.8	406
182-AL1	181.6	37	17.5	501
243-AL1	242.5	61	20.3	671
299-AL1	299.4	61	22.5	829
400-AL1	400.1	61	26.0	1107
500-AL1	499.8	61	29.1	1383
626-AL1	626.2	91	32.6	1740
802-AL1	802.1	91	36.9	2228
1000-AL1	999.7	91	41.1	2777

Technical data

Designation	Electrical resistance (20°C, d.c.) Ω/km	Rated strength kN	Permissible current rating open air 35 °C wind velocity 0.6 m/s solar radiation 1000 W/m ² A
16-AL1	1.7986	3.02	110
24-AL1	1.1787	4.36	145
34-AL1	0.8317	6.01	180
49-AL1	0.5776	8.41	225
48-AL1	0.5944	8.94	225
66-AL1	0.4367	11.85	270
93-AL1	0.3081	16.32	340
117-AL1	0.2456	19.89	390
147-AL1	0.1960	26.48	455
182-AL1	0.1588	31.78	520
243-AL1	0.1193	43.66	625
299-AL1	0.0966	52.40	710
400-AL1	0.0723	68.02	855
500-AL1	0.0579	82.47	990
626-AL1	0.0464	106.45	1140
802-AL1	0.0362	132.34	1340
1000-AL1	0.0291	159.95	1540

AL3 (AAAC)**600/1000 V****EN 50182****Design**

aluminium alloy stranded conductor

Other dimensions and conductor constructions available on request

Application	– for overhead power transmission lines
Permissible conductor temperature	80 °C

Dimensional data

Designation	Nominal cross-section area mm ²	No. of wires	Conductor diameter mm	Mass approx. kg/km
16-AL3	15.9	7	5.1	43
24-AL3	24.2	7	6.3	66
34-AL3	34.4	7	7.5	94
49-AL3	49.5	7	9.0	135
48-AL3	48.3	19	9.0	133
66-AL3	65.8	19	10.5	181
93-AL3	93.3	19	12.5	256
117-AL3	117.0	19	14.0	321
147-AL3	147.1	37	15.8	405
182-AL3	181.6	37	17.5	500
243-AL3	242.5	61	20.3	670
299-AL3	299.4	61	22.5	828
400-AL3	400.1	61	26.0	1106
500-AL3	499.8	61	29.1	1381
626-AL3	626.2	91	32.6	1738
802-AL3	802.1	91	36.9	2226
1000-AL3	999.7	91	41.1	2774

Technical data

Designation	Electrical resistance (20°C, d.c.) Ω/km	Rated strength kN	Permissible current rating open air 35 °C wind velocity 0.6 m/s solar radiation 1000 W/m ² A
16-AL3	2.0701	4.69	105
24-AL3	1.3566	7.15	135
34-AL3	0.9572	10.14	170
49-AL3	0.6647	14.60	210
48-AL3	0.6841	14.26	210
66-AL3	0.5026	19.41	255
93-AL3	0.3546	27.51	320
117-AL3	0.2827	34.51	365
147-AL3	0.2256	43.40	425
182-AL3	0.1827	53.58	490
243-AL3	0.1373	71.55	585
299-AL3	0.112	88.33	670
400-AL3	0.0832	118.04	810
500-AL3	0.0666	147.45	930
626-AL3	0.0534	184.73	1075
802-AL3	0.0417	236.62	1255
1000-AL3	0.0334	294.91	1450

AL1/ST1A (ACCR)

600/1000 V
EN 50182

Design

aluminium stranded steel reinforced conductor
Other dimensions and conductor constructions available on request

Application	- for overhead power transmission lines
Permissible conductor temperature	80 °C

Dimensional data

Designation	Nominal cross-section area mm ²			No. of wires		Conductor diameter mm	Mass approx. kg/km
	Al	Steel	Total	Al	Steel		
15-AL1/3-ST1A	15.3	2.54	17.8	6	1	5.4	62
24-AL1/4-ST1A	23.9	3.98	27.8	6	1	6.8	96
34-AL1/6-ST1A	34.4	5.73	40.1	6	1	8.1	139
44-AL1/32-ST1A	44.0	31.7	75.6	14	7	11.2	369
48-AL1/8-ST1A	48.3	8.04	56.3	6	1	9.6	195
51-AL1/30-ST1A	51.2	29.8	81.0	12	7	11.7	375
70-AL1/11-ST1A	69.9	11.4	81.3	26	7	11.7	282
94-AL1/15-ST1A	94.4	15.3	109.7	26	7	13.6	381
97-AL1/56-ST1A	96.5	56.3	152.8	12	7	16.0	707
106-AL1/76-ST1A	105.7	75.5	181.2	14	19	17.5	885
122-AL1/20-ST1A	121.6	19.8	141.4	26	7	15.5	491
122-AL1/71-ST1A	122.1	71.3	193.4	12	7	18.0	895
128-AL1/30-ST1A	127.9	29.8	157.8	30	7	16.3	587
149-AL1/24-ST1A	148.9	24.2	173.1	26	7	17.1	601
172-AL1/40-ST1A	171.8	40.1	211.8	30	7	18.9	788
184-AL1/30-ST1A	183.8	29.8	213.6	26	7	19.0	741
209-AL1/34-ST1A	209.1	34.1	243.2	26	7	20.3	844
212-AL1/49-ST1A	212.1	49.5	261.5	30	7	21.0	973
231-AL1/30-ST1A	230.9	29.8	260.8	24	7	21.0	871
243-AL1/39-ST1A	243.1	39.5	282.5	26	7	21.8	980
264-AL1/34-ST1A	263.7	34.1	297.7	24	7	22.4	994
304-AL1/49-ST1A	304.3	49.5	353.7	26	7	24.4	1227
305-AL1/39-ST1A	304.6	39.5	344.1	54	7	24.1	1151
339-AL1/30-ST1A	339.3	29.8	369.1	48	7	25.0	1171
382-AL1/49-ST1A	381.7	49.5	431.2	54	7	27.0	1443
386-AL1/34-ST1A	386.0	34.1	420.1	48	7	26.7	1334
434-AL1/56-ST1A	434.3	56.3	490.6	54	7	28.8	1641
449-AL1/39-ST1A	448.7	39.5	488.2	48	7	28.7	1549
490-AL1/64-ST1A	490.3	63.6	553.8	54	7	30.6	1853
494-AL1/34-ST1A	494.4	34.1	528.4	45	7	29.9	1633
511-AL1/45-ST1A	510.5	45.3	555.8	48	7	30.7	1765
550-AL1/71-ST1A	549.7	71.3	620.9	54	7	32.4	2077
562-AL1/49-ST1A	561.7	49.5	611.2	48	7	32.2	1940
571-AL1/39-ST1A	571.2	39.5	610.6	45	7	32.2	1887
653-AL1/45-ST1A	653.5	45.3	698.8	45	7	34.4	2160
679-AL1/86-ST1A	678.6	86.0	764.5	54	19	36.0	2550
1046-AL1/45-ST1A	1045.6	45.3	1090.9	72	7	43.0	3248

Technical data

Designation	Electrical resistance (20°C, d.c.) Ω/km	Rated strength kN	Permissible current rating open air 35 °C wind velocity 0.6 m/s solar radiation 1000 W/m ² A
15-AL1/3-ST1A	1.8679	5.80	105
24-AL1/4-ST1A	1.2012	8.95	140
34-AL1/6-ST1A	0.8342	12.37	170
44-AL1/32-ST1A	0.6574	44.24	-
48-AL1/8-ST1A	0.5939	16.81	210
51-AL1/30-ST1A	0.5644	42.98	-
70-AL1/11-ST1A	0.4132	26.27	290
94-AL1/15-ST1A	0.3060	34.93	350
97-AL1/56-ST1A	0.2992	77.85	-
106-AL1/76-ST1A	0.2742	105.82	-
122-AL1/20-ST1A	0.2376	44.50	410
122-AL1/71-ST1A	0.2364	97.92	-
128-AL1/30-ST1A	0.2260	56.41	425
149-AL1/24-ST1A	0.1940	53.67	470
172-AL1/40-ST1A	0.1683	74.89	520
184-AL1/30-ST1A	0.1571	65.27	535
209-AL1/34-ST1A	0.1381	73.36	590
212-AL1/49-ST1A	0.1363	92.46	610
231-AL1/30-ST1A	0.1250	72.13	630
243-AL1/39-ST1A	0.1188	85.12	645
264-AL1/34-ST1A	0.1095	81.04	680
304-AL1/49-ST1A	0.0949	105.09	740
305-AL1/39-ST1A	0.0949	96.80	740
339-AL1/30-ST1A	0.0852	91.71	790
382-AL1/49-ST1A	0.0758	121.30	840
386-AL1/34-ST1A	0.0749	102.56	850
434-AL1/56-ST1A	0.0666	133.59	900
449-AL1/39-ST1A	0.0644	119.05	920
490-AL1/64-ST1A	0.0590	150.81	960
494-AL1/34-ST1A	0.0584	117.96	985
511-AL1/45-ST1A	0.0566	133.31	995
550-AL1/71-ST1A	0.0526	166.32	1020
562-AL1/49-ST1A	0.0515	146.28	1040
571-AL1/39-ST1A	0.0506	136.40	1050
653-AL1/45-ST1A	0.0442	156.18	1120
679-AL1/86-ST1A	0.0426	206.56	1150
1046-AL1/45-ST1A	0.0277	218.92	1580

AL3/ST1A (AACCR)

600/1000 V
EN 50182

Design

aluminium alloy stranded steel reinforced conductor
Other dimensions and conductor constructions available on request

Application	- for overhead power transmission lines
Permissible conductor temperature	80 °C

Dimensional data

Designation	Nominal cross-section area mm ²			No. of wires		Conductor diameter mm	Mass approx. kg/km
	Al	Steel	Total	Al	Steel		
15-AL3/3-ST1A	15.3	2.54	17.8	6	1	5.4	62
24-AL3/4-ST1A	23.9	3.98	27.8	6	1	6.8	96
34-AL3/6-ST1A	34.4	5.73	40.1	6	1	8.1	139
44-AL3/32-ST1A	44.0	31.7	75.6	14	7	11.2	369
48-AL3/8-ST1A	48.3	8.04	56.3	6	1	9.6	195
51-AL3/30-ST1A	51.2	29.8	81.0	12	7	11.7	375
70-AL3/11-ST1A	69.9	11.4	81.3	26	7	11.7	282
94-AL3/15-ST1A	94.4	15.3	109.7	26	7	13.6	380
97-AL3/56-ST1A	96.5	56.3	152.8	12	7	16.0	707
106-AL3/76-ST1A	105.7	75.5	181.2	14	19	17.5	885
122-AL3/20-ST1A	121.6	19.8	141.4	26	7	15.5	491
122-AL3/71-ST1A	122.1	71.3	193.4	12	7	18.0	894
128-AL3/30-ST1A	127.9	29.8	157.8	30	7	16.3	587
149-AL3/24-ST1A	148.9	24.2	173.1	26	7	17.1	600
172-AL3/40-ST1A	171.8	40.1	211.8	30	7	18.9	788
184-AL3/30-ST1A	183.8	29.8	213.6	26	7	19.0	740
209-AL3/34-ST1A	209.1	34.1	243.2	26	7	20.3	844
212-AL3/49-ST1A	212.1	49.5	261.5	30	7	21.0	973
231-AL3/30-ST1A	230.9	29.8	260.8	24	7	21.0	870
243-AL3/39-ST1A	243.1	39.5	282.5	26	7	21.8	979
264-AL3/34-ST1A	263.7	34.1	297.7	24	7	22.4	994
304-AL3/49-ST1A	304.3	49.5	353.7	26	7	24.4	1226
305-AL3/39-ST1A	304.6	39.5	344.1	54	7	24.1	1150
339-AL3/30-ST1A	339.3	29.8	369.1	48	7	25.0	1170
382-AL3/49-ST1A	381.7	49.5	431.2	54	7	27.0	1441
386-AL3/34-ST1A	386.0	34.1	420.1	48	7	26.7	1332
434-AL3/56-ST1A	434.3	56.3	490.6	54	7	28.8	1640
449-AL3/39-ST1A	448.7	39.5	488.2	48	7	28.7	1548
490-AL3/64-ST1A	490.3	63.6	553.8	54	7	30.6	1851
550-AL3/71-ST1A	549.7	71.3	620.9	54	7	32.4	2076
562-AL3/49-ST1A	561.7	49.5	611.2	48	7	32.2	1938
679-AL3/86-ST1A	678.6	86.0	764.5	54	19	36.0	2548

Technical data

Designation	Electrical resistance (20°C, d.c.) Ω/km	Rated strength kN	Permissible current rating open air 35 °C wind velocity 0.6 m/s solar radiation 1000 W/m ² A
15-AL3/3-ST1A	2.1602	7.48	100
24-AL3/4-ST1A	1.3825	11.69	135
34-AL3/6-ST1A	0.9601	16.66	165
44-AL3/32-ST1A	0.7566	49.08	-
48-AL3/8-ST1A	0.6835	23.08	200
51-AL3/30-ST1A	0.6496	49.12	-
70-AL3/11-ST1A	0.4756	33.96	270
94-AL3/15-ST1A	0.3521	45.79	330
97-AL3/56-ST1A	0.3444	90.40	-
106-AL3/76-ST1A	0.3155	119.56	-
122-AL3/20-ST1A	0.2734	59.09	385
122-AL3/71-ST1A	0.2721	114.41	-
128-AL3/30-ST1A	0.2601	71.76	400
149-AL3/24-ST1A	0.2233	72.28	445
172-AL3/40-ST1A	0.1937	96.36	490
184-AL3/30-ST1A	0.1809	88.24	505
209-AL3/34-ST1A	0.1590	100.54	555
212-AL3/49-ST1A	0.1569	118.96	575
231-AL3/30-ST1A	0.1439	102.14	595
243-AL3/39-ST1A	0.1368	116.72	605
264-AL3/34-ST1A	0.1260	116.64	640
304-AL3/49-ST1A	0.1092	146.16	700
305-AL3/39-ST1A	0.1093	134.88	700
339-AL3/30-ST1A	0.0980	134.12	740
382-AL3/49-ST1A	0.0872	169.01	790
386-AL3/34-ST1A	0.0862	152.74	800
434-AL3/56-ST1A	0.0766	190.04	845
449-AL3/39-ST1A	0.0741	177.39	865
490-AL3/64-ST1A	0.0679	214.54	905
550-AL3/71-ST1A	0.0605	240.52	960
562-AL3/49-ST1A	0.0592	222.11	980
679-AL3/86-ST1A	0.0490	298.17	1080



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