

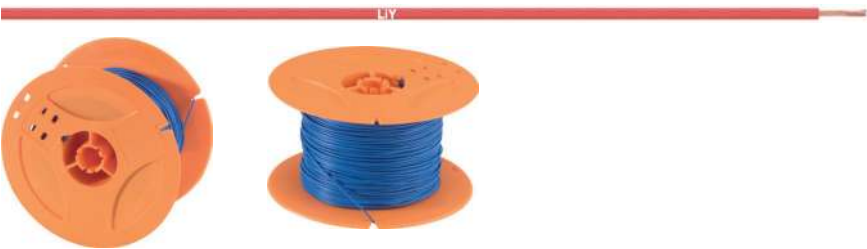
Power and control cables

Control Cabinet Single Cores • Various applications



LiY

Stranded hook-up wire for telecommunication devices and electronic components



i Info

- PVC control hook-up wire
- Cost-effective

Application range

- Stranded hook-up wires for wiring of telecommunication devices and electronic components within devices

Product features

- Flame-retardant according IEC 60332-1-2
- Spool: d1 = 18 mm; d2 = 150 mm; b = 85 mm

Norm references / Approvals

- Based on VDE 0812

Product Make-up

- Stranded copper wire
- Core insulation: PVC-based, type YI 2/TI 2 according to VDE 0207-4

Technical data

Classification

ETIM 5.0 Class-ID: EC000993
ETIM 5.0 Class-Description:
Single core cable

Peak operating voltage

500 V (0.14 mm²)
900 V (0.25 sq.mm)

Conductor stranding

0.14 mm²: ≥ 18 strands
(each with 0.10 mm Ø)
0.25 mm²: ≥ 14 strands
(each with 0.15 mm Ø)

Nominal voltage

Operating voltage < 50 VAC
UPP - peak-to-peak voltage: ≤ 250 V

Test voltage

1200 V (0.14 mm²)
2500 V (0.25 mm²)

Temperature range

Fixed installation: -30 °C to +70 °C

Conductor cross-section (mm²)	Outer diameter (mm)	m/spool	Copper index (kg/km)	brown	black	grey	blue	green/yellow
0.14	1.1	500	1.35	4125003S	4125001S	4125106S	4125002S	4125000S
0.25	1.3	250	2.4	4126003S	4126001S	4126106S	4126002S	4126000S

Conductor cross-section (mm²)	Outer diameter (mm)	m/spool	Copper index (kg/km)	orange	dark blue	white	green	yellow
0.14	1.1	500	1.35	4125009S		4125105S	4125006S	4125005S
0.25	1.3	250	2.4	4126009S	4126014S	4126105S	4126006S	4126005S

Conductor cross-section (mm²)	Outer diameter (mm)	m/spool	Copper index (kg/km)	violet	red	pink
0.14	1.1	500	1.35	4125007S	4125104S	4125008S
0.25	1.3	250	2.4	4126007S	4126104S	4126008S

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
Photographs are not to scale and do not represent detailed images of the respective products.



LiY with twin colour helix insulation

Stranded hook-up wire with telecommunication conductor and coloured stripes



Info

- PVC control hook-up wire
- Cost-effective
- Twin-colour spiralized PVC



Application range

- Stranded hook-up wires for wiring of telecommunication devices and electronic components within devices

Product features

- Flame-retardant according IEC 60332-1-2
- Spool: d1 = 18 mm; d2 = 150 mm; b = 85 mm

Norm references / Approvals

- Based on VDE 0812

Product Make-up

- Stranded copper wire
- Core insulation: PVC-based, type YI 2/TI 2 according to VDE 0207-4
- Labelled with coloured stripes

Technical data

	Classification ETIM 5.0 Class-ID: EC000993 ETIM 5.0 Class-Description: Single core cable
	Peak operating voltage 900 V (0.25 sq.mm)
	Conductor stranding 0.25 mm ² : ≥ 14 strands (each with 0.15 mm Ø)
	Nominal voltage Operating voltage < 50 VAC UPP - peak-to-peak voltage: ≤ 250 V
	Test voltage 2500 V (0.25 mm ²)
	Temperature range Fixed installation: -30°C to +70°C

Conductor cross-section (mm ²)	Outer diameter (mm)	m/spool	Copper index (kg/km)	blue/white	blue/black	brown/green	brown/white
0.25	1.5	250	2.4	4502262S	4502232S	4502282S	4502292S

Conductor cross-section (mm ²)	Outer diameter (mm)	m/spool	Copper index (kg/km)	green-white	orange-white	white-blue	white-red
0.25	1.5	250	2.4	4502342S	4502392S	4502442S	4502462S

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 Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
 Photographs are not to scale and do not represent detailed images of the respective products.

Power and control cables

Control Cabinet Single Cores • Various applications



H05V-K <VDE>

<VDE> cable type certification



Info

- <VDE>

Benefits

- Cables' <VDE> marking is a testing mark/ proof of the successful testing according to VDE/ EN/ HD/ IEC standards as well as possible health and safety regulations. <VDE> is issued by the VDE testing and certification institute.

Application range

- Internal wiring of devices
- Protected installation in and on lighting equipments
- Signal systems in and on plaster in tubes

Product features

- Flame-retardant according IEC 60332-1-2

Norm references / Approvals

- <VDE> cable type certification acc. EN 50525-2-31

Product Make-up

- Fine-wired copper conductor of bare copper strands in line with conductor class 5 acc. IEC 60228
- Core insulation: Based on PVC

Technical data

Classification
 ETIM 5.0 Class-ID: EC000993
 ETIM 5.0 Class-Description:
 Single core cable

Conductor stranding
 Fine wire according to VDE 0295
 Class 5/ IEC 60228 Class 5

Minimum bending radius
 According to EN 50565-1
 4 x outer diameter (OD) for normal use;
 2 x OD for cautions bending

Nominal voltage
 U₀/U: 300/500 V

Test voltage
 2000 V

Current rating
 VDE 0298 Part 4
 EN 50565-1/ VDE 0298-565-1

Temperature range
 Fixed installation: -40°C to +80°C
 Moved: +5°C to +70°C

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	Copper index (kg/km)	Weight (kg/km)	brown	black	grey	blue	green/yellow
1	2.4 – 2.8	100	9.6	15	8110033	8110013	8110063	8110023	8110003

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i

Info

- <HAR>

H05V-K <HAR>

European <HAR> cable type certification



Benefits

- Cables' <HAR>marking also stands for the international endorsement of national certification institutes' testing marks and certificates, e. g. <VDE><HAR>. The <HAR>marking is of special importance in case of goods traffic between European countries.

Application range

- Internal wiring of devices
- Protected installation in and on lighting equipments
- Signal systems in and on plaster in tubes

Product features

- Flame-retardant according IEC 60332-1-2
- Spool: d1 = 18 mm; d2 = 200 mm; b = 85 mm

Norm references / Approvals

- <HAR> cable type certification acc. EN 50525-2-31

Product Make-up

- Fine-wired copper conductor of bare copper strands in line with conductor class 5 acc. IEC 60228
- Core insulation: Based on PVC

Technical data

	Classification ETIM 5.0 Class-ID: EC000993 ETIM 5.0 Class-Description: Single core cable
	Conductor stranding Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5
	Minimum bending radius According to EN 50565-1 4 x outer diameter (OD) for normal use; 2 x OD for cautions bending
	Nominal voltage U ₀ /U: 300/500 V
	Test voltage 2000 V
	Current rating VDE 0298 Part 4 EN 50565-1/ VDE 0298-565-1
	Temperature range Fixed installation: -40°C to +80°C Moved: +5°C to +70°C

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/spool	Copper index (kg/km)	Weight (kg/km)	brown	black	grey	blue	green/yellow
0.5	2.1 - 2.5	100		4.8	9	4510031	4510011	4510061	4510021	4510001
0.75	2.2 - 2.7	100		7.2	12	4510032	4510012	4510062	4510022	4510002
1	2.4 - 2.8	100		9.6	15	4510033	4510013	4510063	4510023	4510003
0.5	2.1 - 2.5		250	4.8	9	4510031S	4510011S	4510061S	4510021S	4510001S
0.75	2.2 - 2.7		250	7.2	12	4510032S	4510012S	4510062S	4510022S	4510002S
1	2.4 - 2.8		250	9.6	15	4510033S	4510013S	4510063S	4510023S	4510003S

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/spool	Copper index (kg/km)	Weight (kg/km)	orange	dark blue	white	green	yellow
0.5	2.1 - 2.5	100		4.8	9	4510091	4510141	4510051	4510121	4510111
0.75	2.2 - 2.7	100		7.2	12	4510092	4510142	4510052	4510122	4510112
1	2.4 - 2.8	100		9.6	15	4510093	4510143	4510053	4510123	4510113
0.5	2.1 - 2.5		250	4.8	9	4510091S	4510141S	4510051S	4510121S	4510111S
0.75	2.2 - 2.7		250	7.2	12	4510092S	4510142S	4510052S	4510122S	4510112S
1	2.4 - 2.8		250	9.6	15	4510093S	4510143S	4510053S	4510123S	

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/spool	Copper index (kg/km)	Weight (kg/km)	violet	red	ultra-marine blue	Dark blue/white	transparent
0.5	2.1 - 2.5	100		4.8	9	4510071	4510041	4510161	4510921	
0.75	2.2 - 2.7	100		7.2	12	4510072	4510042		4510922	
1	2.4 - 2.8	100		9.6	15	4510073	4510043	4510163	4510923	
0.5	2.1 - 2.5		250	4.8	9	4510071S	4510041S			
0.75	2.2 - 2.7		250	7.2	12	4510072S	4510042S	4510162S		4510102S
1	2.4 - 2.8		250	9.6	15	4510073S	4510043S	4510163S		4510103S

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/spool	Copper index (kg/km)	Weight (kg/km)	pink
0.5	2.1 - 2.5	100		4.8	9	4510081
0.75	2.2 - 2.7	100		7.2	12	4510082
1	2.4 - 2.8	100		9.6	15	4510083
0.75	2.2 - 2.7		250	7.2	12	4510082S

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Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
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The outer diameters stated in the part number table are maximum values.



H05V-K in big one-way cardboard box

Harmonised, flexible single conductor for protected, fixed installation



Info

- Efficient
- <HAR>

Benefits

- Higher cost-effectiveness due to optimum processing volumes
- Single cores are embossed so that an additional, subsequent marking by ink jet printing is readable
- The comparatively low weight of the cardboard boxes makes handling easy
- Time-saving assembly

Application range

- Ideal for assembling to achieve longer operating times and trouble-free printing
- Suitable for assembling cable harnesses and wiring during switch cabinet installation

Product features

- Flame-retardant according IEC 60332-1-2

Norm references / Approvals

- <HAR> cable type certification acc. EN 50525-2-31

Product Make-up

- Fine-wired copper conductor of bare copper strands in line with conductor class 5 acc. IEC 60228
- Core insulation: Based on PVC

Technical data

Classification
 ETIM 5.0 Class-ID: EC000993
 ETIM 5.0 Class-Description:
 Single core cable

Conductor stranding
 Fine wire according to VDE 0295
 Class 5/ IEC 60228 Class 5

Minimum bending radius
 According to EN 50565-1
 4 x outer diameter (OD) for normal use;
 2 x OD for cautions bending

Nominal voltage
 U₀/U: 300/500 V

Test voltage
 2000 V

Current rating
 VDE 0298 Part 4
 EN 50565-1/ VDE 0298-565-1

Temperature range
 Fixed installation: -40°C to +80°C
 Moved: +5°C to +70°C

Conductor cross-section (mm²)	Outer diameter (mm)	m/box	Copper index (kg/km)	Weight (kg/km)	brown	black	grey	blue	green/yellow
0.5	2.1 - 2.5	3000	4.8	9	4511065K	4510011K	4511073K	4510021K	4510001K
0.5	2.1 - 2.5	9000	4.8	9				4510021E	
0.75	2.2 - 2.7	2500	7.2	12	4510032K	4510012K	4510062K	4510022K	4510002K
0.75	2.2 - 2.7	7500	7.2	12				4510022E	
1	2.4 - 2.8	2000	9.6	15	4510033K	4510013K	4510063K	4510023K	4510003K
1	2.4 - 2.8	6000	9.6	15		4510013E		4510023E	

Conductor cross-section (mm²)	Outer diameter (mm)	m/box	Copper index (kg/km)	Weight (kg/km)	orange	dark blue	white	green	yellow
0.5	2.1 - 2.5	3000	4.8	9		4511064K	4511072K		
0.5	2.1 - 2.5	9000	4.8	9		4511060E			
0.75	2.2 - 2.7	2500	7.2	12	4510092K	4510142K	4510052K	4510122K	4510112K
0.75	2.2 - 2.7	7500	7.2	12		4511061E			
1	2.4 - 2.8	2000	9.6	15	4510093K	4510143K	4510053K		4510113K
1	2.4 - 2.8	6000	9.6	15		4511062E			

Conductor cross-section (mm²)	Outer diameter (mm)	m/box	Copper index (kg/km)	Weight (kg/km)	violet	red	ultra-marine blue	blue/white	Dark blue/white
0.5	2.1 - 2.5	3000	4.8	9	4511068K	4511071K	4510161K		4510921K
0.75	2.2 - 2.7	2500	7.2	12	4510072K	4510042K	4510162K	4510262K	4510922K
1	2.4 - 2.8	2000	9.6	15	4510073K	4510043K	4510163K	4510263K	4510923K

Conductor cross-section (mm²)	Outer diameter (mm)	m/box	Copper index (kg/km)	Weight (kg/km)	pink
0.75	2.2 - 2.7	2500	7.2	12	4510082K

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 The outer diameters stated in the part number table are maximum values.

Similar products

- H05V-K <VDE> refer to page 202
- H05V-K <HAR> refer to page 203

Accessories

- DIN-assorted boxes conductor end sleeves refer to page 1011
- EASY STRIP stripping and cutting tool refer to page 1004
- BULLI cable shears refer to page 998
- PEW 8.87 crimping pliers refer to page 1016



X05V-K with twin colour helix insulation



Info

- Twin-colour spiralized PVC



Application range

- Internal wiring of devices
- Protected installation in and on lighting equipments
- Signal systems in and on plaster in tubes

Product features

- Flame-retardant according IEC 60332-1-2
- Spool: d1 = 18 mm; d2 = 200 mm; b = 85 mm

Norm references / Approvals

- Based on EN 50525-2-31

Product Make-up

- Fine-wired copper conductor of bare copper strands in line with conductor class 5 acc. IEC 60228
- Core insulation: Based on PVC
- Labelled with coloured stripes

Technical data



Classification

ETIM 5.0 Class-ID: EC000993
ETIM 5.0 Class-Description:
Single core cable



Conductor stranding

Fine wire according to VDE 0295
Class 5/ IEC 60228 Class 5



Minimum bending radius

4 x outer diameter (OD) if used as defined for H05V-K; 2 x OD for cautious bending



Nominal voltage

U₀/U: 300/500 V



Test voltage

2000 V



Current rating

VDE 0298 Part 4
EN 50565-1/ VDE 0298-565-1



Temperature range

Fixed installation: -40°C to +80°C
Moved: +5°C to +70°C

Conductor cross-section (mm²)	Outer diameter (mm)	m/spool	Copper index (kg/km)	Weight (kg/km)	blue/white	Dark blue/white	black/white	blue/black
0.5	2.1 - 2.5	250	4.8	9	4512261S	4512921S	4512221S	4512231S
0.75	2.2 - 2.7	250	7.2	12	4512262S	4512922S	4512222S	4512232S
1	2.4 - 2.8	250	9.6	15	4512263S	4512923S	4512223S	4512233S

Conductor cross-section (mm²)	Outer diameter (mm)	m/spool	m/box	Copper index (kg/km)	Weight (kg/km)	blue/green	blue / red	brown/black	brown/white
0.5	2.1 - 2.5	250		4.8	9	4512241S	4512251S		4512291S
0.75	2.2 - 2.7	250		7.2	12	4512242S	4512252S	4512272S	4512292S
0.75	2.2 - 2.7		4000	7.2	12		4512252K		
1	2.4 - 2.8	250		9.6	15	4512243S	4512253S		4512293S

Conductor cross-section (mm²)	Outer diameter (mm)	m/spool	Copper index (kg/km)	Weight (kg/km)	yellow-white	violet-black	violet-white	orange-black
0.5	2.1 - 2.5	250	4.8	9	4512321S	4512351S	4512371S	4512381S
0.75	2.2 - 2.7	250	7.2	12	4512322S	4512352S	4512372S	4512382S
1	2.4 - 2.8	250	9.6	15		4512353S	4512373S	4512383S

Conductor cross-section (mm²)	Outer diameter (mm)	m/spool	m/box	Copper index (kg/km)	Weight (kg/km)	orange-white	red-black	red-white	white=black
0.5	2.1 - 2.5	250		4.8	9	4512391S	4512401S	4512421S	4512431S
0.75	2.2 - 2.7	250		7.2	12	4512392S	4512402S	4512422S	4512432S
1	2.4 - 2.8	250		9.6	15	4512393S	4512403S	4512423S	4512433S
1	2.4 - 2.8		2000	9.6	15	4512393K		4512423K	

Conductor cross-section (mm²)	Outer diameter (mm)	m/spool	Copper index (kg/km)	Weight (kg/km)	white-blue	grey-black
0.5	2.1 - 2.5	250	4.8	9	4512441S	4512471S
0.75	2.2 - 2.7	250	7.2	12	4512442S	4512472S
1	2.4 - 2.8	250	9.6	15	4512443S	4512473S

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Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
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The outer diameters stated in the part number table are maximum values.

Power and control cables

Control Cabinet Single Cores • Various applications



H07V-K <VDE>

<VDE> cable type certification



Info

- <VDE>

Benefits

- Cables' <VDE> marking is a testing mark/ proof of the successful testing according to VDE/ EN/ HD/ IEC standards as well as possible health and safety regulations. <VDE> is issued by the VDE testing and certification institute.

Application range

- Laying in tubes, exposed or buried in plaster, and in closed installation ducts
- For direct laying on racks, troughs and tubes only as potential equalisation conductor

Product features

- Flame-retardant according IEC 60332-1-2

Norm references / Approvals

- <VDE> cable type certification acc. EN 50525-2-31

Product Make-up

- Fine-wired copper conductor of bare copper strands in line with conductor class 5 acc. IEC 60228
- Core insulation: Based on PVC

Technical data

Classification
 ETIM 5.0 Class-ID: EC000993
 ETIM 5.0 Class-Description:
 Single core cable

Conductor stranding
 Fine wire according to VDE 0295
 Class 5/ IEC 60228 Class 5

Minimum bending radius
 According to EN 50565-1
 4 x outer diameter (OD) for normal use;
 2 x OD for cautions bending

Nominal voltage
 U₀/U: 450/750 V

Test voltage
 2500 V

Current rating
 VDE 0298 Part 4
 EN 50565-1/ VDE 0298-565-1

Temperature range
 Fixed installation: -40°C to +80°C
 Moved: +5°C to +70°C

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	Copper index (kg/km)	Weight (kg/km)	brown	black	grey	blue	green/yellow
1.5	2.8 - 3.4	100	14.4	22	8120031	8120011	8120061	8120021	8120001
2.5	3.4 - 4.1	100	24	37	8120032	8120012	8120062	8120022	8120002
4	3.9 - 4.8	100	38.4	45	8120033	8120013	8120063	8120023	8120003
6	4.4 - 5.3	100	57.6	71	8120034	8120014	8120064	8120024	8120004

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
 Photographs are not to scale and do not represent detailed images of the respective products.
 The outer diameters stated in the part number table are maximum values.



H07V-K <HAR>

European <HAR> cable type certification



Info

- <HAR>



Benefits

- Cables' <HAR> marking also stands for the international endorsement of national certification institutes' testing marks and certificates, e. g. <VDE><HAR>. The <HAR> marking is of special importance in case of goods traffic between European countries.

Application range

- Laying in tubes, exposed or buried in plaster, and in closed installation ducts
- For direct laying on racks, troughs and tubes only as potential equalisation conductor

Product features

- Flame-retardant according IEC 60332-1-2
- Spool: d1 = 18 mm; d2 = 200 mm; b = 85 mm

Norm references / Approvals

- <HAR> cable type certification acc. EN 50525-2-31
- No cable type certified core insulation colours according to EN 50525-1/ VDE 0285-525-1: transparent, green (single colour), yellow (single colour), all double colours (except of green-yellow and yellow-green)

Product Make-up

- Fine-wired copper conductor of bare copper strands in line with conductor class 5 acc. IEC 60228
- Core insulation: Based on PVC

Technical data

	Classification ETIM 5.0 Class-ID: EC000993 ETIM 5.0 Class-Description: Single core cable
	Conductor stranding Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5
	Minimum bending radius According to EN 50565-1 OD ≤ 8 mm: 4 x OD* / 2 x OD**; 8 < OD ≤ 12 mm: 5 x OD* / 3 x OD**; OD > 12 mm: 6 x OD* / 4 x OD**
	Nominal voltage U ₀ /U: 450/750 V
	Test voltage 2500 V
	Current rating VDE 0298 Part 4 EN 50565-1/ VDE 0298-565-1
	Temperature range Fixed installation: -40°C to +80°C Moved: +5°C to +70°C

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/spool	Copper index (kg/km)	Weight (kg/km)	brown	black	grey	blue	green/yellow
1.5	2.8 - 3.4		150	14.4	22	4520031S	4520011S	4520061S	4520021S	4520001S
2.5	3.4 - 4.1		100	24	37	4520032S	4520012S	4520062S	4520022S	4520002S
1.5	2.8 - 3.4	100		14.4	22	4520031	4520011	4520061	4520021	4520001
2.5	3.4 - 4.1	100		24	37	4520032	4520012	4520062	4520022	4520002
4	3.9 - 4.8	100		38.4	45	4520033	4520013	4520063	4520023	4520003
6	4.4 - 5.3	100		57.6	71	4520034	4520014	4520064	4520024	4520004
10	5.7 - 6.8	100		96	120	4520035	4520015	4520065	4520025	4520005
16	6.7 - 8.1			153.6	187	4520036	4520016	4520066	4520026	4520006
25	8.4 - 10.2			240	290	4521031	4521011		4521021	4521001
35	9.7 - 11.7			336	399	4521032	4521012	4521062	4521022	4521002
50	11.5 - 13.9			480	559		4521013		4521023	4521003
70	13.2 - 16			672	776		4521014		4521024	4521004
95	15.1 - 18.2			912	1031		4521015		4521025	4521005
120	16.7 - 20.2			1152	1285		4521016			4521006
150	18.6 - 22.5			1440	1563		4521017			4521007
185	20.6 - 24.9			1776	1915		4521018			4521008
240	23.5 - 28.4			2304	2550		4521019			4521009

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/spool	Copper index (kg/km)	Weight (kg/km)	orange	dark blue	white	green	yellow
1.5	2.8 - 3.4		150	14.4	22		4520141S	4520051S		
2.5	3.4 - 4.1		100	24	37		4520142S	4520052S		
1.5	2.8 - 3.4	100		14.4	22	4520091	4520141	4520051	4520121	4520111
2.5	3.4 - 4.1	100		24	37	4520092	4520142	4520052	4520122	4520112
4	3.9 - 4.8	100		38.4	45	4520093	4520143	4520053	4520123	4520113
6	4.4 - 5.3	100		57.6	71	4520094	4520144	4520054	4520124	4520114
10	5.7 - 6.8	100		96	120	4520095	4520145	4520055		
16	6.7 - 8.1			153.6	187	4520096	4520146	4520056	4520126	
25	8.4 - 10.2			240	290	4521091				
35	9.7 - 11.7			336	399	4521092				

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/spool	Copper index (kg/km)	Weight (kg/km)	violet	red	ultra-marine blue
1.5	2.8 - 3.4		150	14.4	22		4520041S	
2.5	3.4 - 4.1		100	24	37		4520042S	
1.5	2.8 - 3.4	100		14.4	22	4520071	4520041	4520161
2.5	3.4 - 4.1	100		24	37	4520072	4520042	4520162
4	3.9 - 4.8	100		38.4	45		4520043	4520163
6	4.4 - 5.3	100		57.6	71	4520074	4520044	4520164
10	5.7 - 6.8	100		96	120		4520045	
16	6.7 - 8.1			153.6	187		4520046	
25	8.4 - 10.2			240	290		4521041	
35	9.7 - 11.7			336	399		4521042	
50	11.5 - 13.9			480	559		4521043	
70	13.2 - 16			672	776		4521044	

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
 Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
 Packaging size: Coil ≤ 30 kg, otherwise drum
 Photographs are not to scale and do not represent detailed images of the respective products.
 *for conventional use, **for careful bending; "OD" = outer diameter
 The outer diameters stated in the part number table are maximum values.

Similar products

- MULTI-STANDARD SC 2.1 refer to page 212
- MULTI-STANDARD SC 2.2 refer to page 214

Accessories

- Mobile crimp tool crimping pliers refer to page 1033
- DIN-assorted boxes conductor end sleeves refer to page 1011
- PEW 8.87 crimping pliers refer to page 1016
- FLEXIMARK® Collar Snap-on refer to page 985



H07V-K in big one-way cardboard box

Harmonised, flexible single conductor for protected, fixed installation



Info

- Efficient
- <HAR>



Benefits

- Higher cost-effectiveness due to optimum processing volumes
- Single cores are embossed so that an additional, subsequent marking by ink jet printing is readable
- The comparatively low weight of the cardboard boxes makes handling easy
- Time-saving assembly

Application range

- Ideal for assembling to achieve longer operating times and trouble-free printing
- Suitable for assembling cable harnesses and wiring during switch cabinet installation

Product features

- Flame-retardant according IEC 60332-1-2

Norm references / Approvals

- <HAR> cable type certification acc. EN 50525-2-31
- No cable type certified core insulation colours according to EN 50525-1 / VDE 0285-525-1: transparent, green (single colour), yellow (single colour), all double colours (except of green-yellow and yellow-green)

Product Make-up

- Fine-wired copper conductor of bare copper strands in line with conductor class 5 acc. IEC 60228
- Core insulation: Based on PVC

Technical data



Classification

ETIM 5.0 Class-ID: EC000993
ETIM 5.0 Class-Description:
Single core cable



Conductor stranding

Fine wire according to VDE 0295
Class 5 / IEC 60228 Class 5



Minimum bending radius

According to EN 50565-1
4 x outer diameter (OD) for normal use;
2 x OD for cautions bending



Nominal voltage

U₀/U: 450/750 V



Test voltage

2500 V AC



Current rating

VDE 0298 Part 4
EN 50565-1 / VDE 0298-565-1



Temperature range

Fixed installation: -40°C to +80°C
Moved: +5°C to +70°C

Conductor cross-section (mm²)	Outer diameter (mm)	m/box	Copper index (kg/km)	Weight (kg/km)	brown	black	grey	blue	green/yellow
1.5	2.8 - 3.4	1500	14.4	22	4520031K	4520011K	4520061K	4520021K	4520001K
1.5	2.8 - 3.4	4000	14.4	22		4520011E		4520021E	4520001E
2.5	3.4 - 4.1	900	24	37	4520032K	4520012K	4520062K	4520022K	4520002K
2.5	3.4 - 4.1	2500	24	37		4520012E		4520022E	4520002E
4	3.9 - 4.8	600	38.4	45	4520033K	4520013K	4520063K	4520023K	4520003K
4	3.9 - 4.8	2000	38.4	45		4520013E			
6	4.4 - 5.3	400	57.6	71		4520014K		4520024K	4520004K
6	4.4 - 5.3	1500	57.6	71		4520014E		4520024E	4520004E

Conductor cross-section (mm²)	Outer diameter (mm)	m/box	Copper index (kg/km)	Weight (kg/km)	orange	dark blue	white	green	yellow
1.5	2.8 - 3.4	1500	14.4	22	4520091K	4520141K	4520051K		4520111K
1.5	2.8 - 3.4	4000	14.4	22		4520141E			
2.5	3.4 - 4.1	900	24	37	4520092K	4520142K	4520052K	4520122K	
4	3.9 - 4.8	600	38.4	45	4520093K	4520143K			
6	4.4 - 5.3	400	57.6	71	4520094K				

Conductor cross-section (mm²)	Outer diameter (mm)	m/box	Copper index (kg/km)	Weight (kg/km)	violet	red	blue/white	Dark blue/white
1.5	2.8 - 3.4	1500	14.4	22	4520071K	4520041K		
1.5	2.8 - 3.4	4000	14.4	22		4520041E		
2.5	3.4 - 4.1	900	24	37		4520042K		4520922K
4	3.9 - 4.8	600	38.4	45		4520043K	4520263K	4520923K
6	4.4 - 5.3	400	57.6	71		4520044K	4520264K	4520924K
6	4.4 - 5.3	1500	57.6	71		4520044E		

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.

Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.

Photographs are not to scale and do not represent detailed images of the respective products.

The outer diameters stated in the part number table are maximum values.

Similar products

- H05V-K <HAR> refer to page 203
- H07V-K <HAR> refer to page 207

Accessories

- DIN-assorted boxes conductor end sleeves refer to page 1011
- EASY STRIP stripping and cutting tool refer to page 1004
- BULLI cable shears refer to page 998
- PEW 8.87 crimping pliers refer to page 1016



X07V-K with twin colour helix insulation



Info

- Twin-colour spiralized PVC

Application range

- Laying in tubes, exposed or buried in plaster, and in closed installation ducts
- For direct laying on racks, troughs and tubes only as potential equalisation conductor

Product features

- Flame-retardant according IEC 60332-1-2
- Spool: d1 = 18 mm; d2 = 200 mm; b = 85 mm

Norm references / Approvals

- Based on EN 50525-2-31

Product Make-up

- Fine-wired copper conductor of bare copper strands in line with conductor class 5 acc. IEC 60228
- Core insulation: Based on PVC
- Labelled with coloured stripes

Technical data

Classification
 ETIM 5.0 Class-ID: EC000993
 ETIM 5.0 Class-Description:
 Single core cable

Conductor stranding
 Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
 4 x outer diameter if used as defined for H07V-K; 2 x outer diameter for short-term bending

Nominal voltage
 U₀/U: 450/750 V

Test voltage
 2500 V

Current rating
 VDE 0298 Part 4
 EN 50565-1/ VDE 0298-565-1

Temperature range
 Fixed installation: -40°C to +80°C
 Moved: +5°C to +70°C

Conductor cross-section (mm²)	Outer diameter (mm)	m/spool	Copper index (kg/km)	Weight (kg/km)	blue/white	Dark blue/white	black/red	black/white	blue/black	blue / red	brown/white
1.5	2.8 - 3.4	150	14.4	22	4522261S	4522921S	4522211S	4522221S	4522231S	4522251S	4522291S
2.5	3.4 - 4.1	100	24	37	4522262S	4522922S		4522222S		4522252S	4522292S

Conductor cross-section (mm²)	Outer diameter (mm)	m/spool	Copper index (kg/km)	Weight (kg/km)	yellow-red	yellow-white	violet-white	orange-black	orange-white	red-black	red-white
1.5	2.8 - 3.4	150	14.4	22	4522311S	4522321S	4522371S	4522381S	4522391S	4522401S	4522421S
2.5	3.4 - 4.1	100	24	37					4522392S		4522422S

Conductor cross-section (mm²)	Outer diameter (mm)	m/spool	Copper index (kg/km)	Weight (kg/km)	white-blue	white-red
1.5	2.8 - 3.4	150	14.4	22	4522441S	4522461S

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
 Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
 Photographs are not to scale and do not represent detailed images of the respective products.
 The outer diameters stated in the part number table are maximum values.

Similar products

- X05V-K with twin colour helix insulation refer to page 205

Accessories

- DIN-assorted boxes conductor end sleeves refer to page 1011
- EASY STRIP stripping and cutting tool refer to page 1004
- PEW 8.87 crimping pliers refer to page 1016



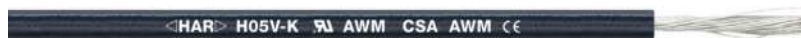
MULTI-STANDARD SC 1

UL-recognised (AWM) + CSA AWM I A/B + <HAR> H05V-K, tinned-copper strands



Info

- Formerly: Multi-Standard single core UL-CSA-HAR 1007/1569



Benefits

- For use in the most important global markets
- Reduction in technical documentation
- Easy storage
- Increases the cost-effectiveness of the production process

Application range

- Factory wiring
- Internal wiring of devices
- Control cabinet wiring

Product features

- Flame-retardant according IEC 60332-1-2
- Flame-retardant according to UL VW1/CSA FT1
- Oil-resistant

Norm references / Approvals

- Multi-standard cables have conductor strands with nominal sizes in mm² or AWG/kcmil. The master size is mentioned in the table below, while the equivalent size of the other system can be found in the Appendix T16 of this catalogue. For this related secondary size the cross-section of the conductor mostly works out to be greater than the specified nominal value.
- Cable type certifications: <HAR> H05V-K acc. EN 50525-2-31, UL AWM styles 1007 & 1569 (by UL acc. UL standard UL 758, U.I. Lapp GmbH's UL AWM file number: E63634), CSA AWM I A/B (by CSA acc. CSA standard CSA C22.2 No. 210-05, CSA class 5851-01)

Product Make-up

- Fine-wire strand made of tinned-copper wires
- Special PVC-based core insulation

Technical data



Classification

ETIM 5.0 Class-ID: EC000993
ETIM 5.0 Class-Description:
Single core cable



Conductor stranding

Fine wire according to VDE 0295
Class 5/ IEC 60228 Class 5



Minimum bending radius

4 x outer diameter (OD) for normal use;
2 x OD for cautions bending



Nominal voltage

HAR / IEC: U₀/U: 300/500 V;
UL (AWM): U: 300 V;
CSA (AWM I A/B): U: 300 V



Test voltage

2000 V



Temperature range

Fixed installation:
HAR/IEC: -40°C to +70°C;
UL (AWM): -40°C to +105°C;
CSA (AWM I A/B): -40°C to +105°C

Conductor cross-section (mm ²)	Outer diameter (mm)	m/ring	Copper index (kg/km)	Weight (kg/km)	brown	black	grey
0.5	2.5	100	4.8	9	4180403	4180401	4180406
0.75	2.6	100	7.2	12	4180503	4180501	4180506
1	2.8	100	9.6	15	4180603	4180601	4180606

Conductor cross-section (mm ²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	blue	green/yellow	orange
0.5	2.5	100		4.8	9	4180402	4180400	4180409
0.75	2.6	100		7.2	12	4180502	4180500	
1	2.8	100		9.6	15	4180602	4180600	4180609
1	2.8		2000	9.6	15		4180600K	

Conductor cross-section (mm ²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	dark blue	white	violet
0.5	2.5	100		4.8	9	4180414	4180405	
0.5	2.5		3000	4.8	9	4180414K		
0.75	2.6	100		7.2	12	4180514		4180507
0.75	2.6		2500	7.2	12	4180514K		
1	2.8	100		9.6	15	4180614	4180605	

Conductor cross-section (mm ²)	Outer diameter (mm)	m/ring	Copper index (kg/km)	Weight (kg/km)	red
0.5	2.5	100	4.8	9	4180404
0.75	2.6	100	7.2	12	4180504
1	2.8	100	9.6	15	4180604

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
Photographs are not to scale and do not represent detailed images of the respective products.
The outer diameters stated in the part number table are maximum values.

Similar products

- H05V-K <HAR> refer to page 203
- MULTI-STANDARD SC 2.1 refer to page 212

Accessories

- DIN-assorted boxes conductor end sleeves refer to page 1011
- EASY STRIP stripping and cutting tool refer to page 1004
- PEW 8.87 crimping pliers refer to page 1016
- FLEXIMARK® Collar Snap-on refer to page 985

Power and control cables

Control Cabinet Single Cores • Harmonised and certified



MULTI-STANDARD SC 2.1

USA: UL-listed (MTW), Canada: CSA (TEW), Europe: <HAR> H07V-K (depending on cross s.), tin-coated strands



Benefits

- For use in the most important global markets
- Reduction in technical documentation
- Easier storage; increases the cost-effectiveness of the production process
- Works with "Conductor end sleeves XL, insulated"

Application range

- Factory wiring
- Field wiring
- Internal wiring of devices
- Control cabinet wiring

Product features

- Flame-retardant according IEC 60332-1-2
- Flame-retardant according to UL VW1/CSA FT1
- Oil-resistant

Norm references / Approvals

- Multi-standard cables have conductor strands with nominal sizes in mm² or AWG/kcmil. The master size is mentioned in the table below, while the equivalent size of the other system can be found in the Appendix T 16 of this catalogue. For this related secondary size the cross-section of the conductor mostly works out to be greater than the specified nominal value.
- Cable type certifications: <HAR> H07V-K acc. EN 50525-2-31, UL AWM style 1015 (by UL acc. UL standard UL 758, U.I. Lapp GmbH's UL AWM file number: E63634), (UL) MTW (by UL acc. UL standard UL 1063, U.I. Lapp GmbH's (UL) MTW file number: E198296), CSA TEW (by CSA acc. CSA standard CSA C22.2 No. 127, CSA class 5835-01)

Product Make-up

- Fine-wire strand made of tinned-copper wires
- Special PVC-based core insulation

Info

- The all-rounder for many markets

Technical data

	Classification ETIM 5.0 Class-ID: EC000993 ETIM 5.0 Class-Description: Single core cable
	Conductor stranding Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5
	Minimum bending radius OD ≤ 8 mm: 4 x OD* / 2 x OD**; 8 < OD ≤ 12 mm: 5 x OD* / 3 x OD**; OD > 12 mm: 6 x OD* / 4 x OD**
	Nominal voltage HAR / IEC: U ₀ /U: 450/750 V; UL (AWM): U: 600 V; UL (MTW): U: 600 V; CSA (TEW): U: 600 V
	Temperature range Fixed installation: HAR/IEC: -40°C to +70°C; UL (AWM): -40°C to +105°C; UL (MTW): -40°C to +90°C; CSA (TEW): -40°C to +105°C

Conductor cross-section (mm ²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	brown	black
0.5	2.7	100		4.8	11	4160103	4160101
0.5	2.7		3000	4.8	11		4160101K
0.75	2.9	100		7.2	14	4160203	4160201
0.75	2.9		2500	7.2	14	4160203K	4160201K
1	3.1	100		9.6	16	4160303	4160301
1	3.1		2000	9.6	16	4160303K	4160301K
1.5	3.4	100		14.4	22	4160403	4160401
1.5	3.4		1500	14.4	22	4160403K	4160401K
2.5	4	100		24	37	4160503	4160501
2.5	4		900	24	37		4160501K
4	4.6	100		38.4	49	4160603	4160601
4	4.6		600	38.4	49		4160601K
6	5.1	100		57.6	67	4160703	4160701
6	5.1		400	57.6	67		4160701K
10	6.8	100		96	120	4160803	4160801
16	9	100		153.6	185	4160903	4160901
25	10.2	100		240	260	4161003	4161001
35	11.7			336	360		4161101
50	13.9			480	535		4161201
70	16			672	735		4161301
95	18.2			912	930		4161401
120	19.8			1152	1160		4161501

Conductor cross-section (mm ²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	grey	blue
0.5	2.7	100		4.8	11	4160106	4160102
0.5	2.7		3000	4.8	11	4160106K	4160102K
0.75	2.9	100		7.2	14	4160206	4160202
0.75	2.9		2500	7.2	14		4160202K
1	3.1	100		9.6	16	4160306	4160302
1	3.1		2000	9.6	16		4160302K
1.5	3.4	100		14.4	22	4160406	4160402
1.5	3.4		1500	14.4	22	4160406K	4160402K
2.5	4	100		24	37	4160506	4160502
2.5	4		900	24	37	4160506K	4160502K
4	4.6	100		38.4	49	4160606	4160602
4	4.6			38.4	49		4160602K
6	5.1	100		57.6	67	4160706	4160702
6	5.1		400	57.6	67		4160702K
10	6.8	100		96	120	4160806	4160802
16	9	100		153.6	185	4160906	4160902
25	10.2	100		240	260	4161006	4161002
35	11.7			336	360		4161102
50	13.9			480	535		4161202
95	18.2			912	930		4161402
120	19.8			1152	1160		4161502

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	green/yellow	orange
0.5	2.7	100		4.8	11	4160100	4160109
0.5	2.7		3000	4.8	11		4160109K
0.75	2.9	100		7.2	14	4160200	4160209
0.75	2.9		2500	7.2	14		4160209K
1	3.1	100		9.6	16	4160300	4160309
1	3.1		2000	9.6	16	4160300K	4160309K
1.5	3.4	100		14.4	22	4160400	4160409
1.5	3.4		1500	14.4	22	4160400K	4160409K
2.5	4	100		24	37	4160500	4160509
2.5	4		900	24	37	4160500K	4160509K
4	4.6	100		38.4	49	4160600	4160609
4	4.6		600	38.4	49	4160600K	4160609K
6	5.1	100		57.6	67	4160700	4160709
6	5.1		400	57.6	67	4160700K	4160709K
10	6.8	100		96	120	4160800	4160809
16	9	100		153.6	185	4160900	4160909
25	10.2	100		240	260	4161000	4161009
35	11.7			336	360	4161100	
50	13.9			480	535	4161200	
70	16			672	735	4161300	
95	18.2			912	930	4161400	
120	19.8			1152	1160	4161500	

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	dark blue	white
0.5	2.7	100		4.8	11	4160114	4160105
0.5	2.7		3000	4.8	11	4160114K	
0.75	2.9	100		7.2	14	4160214	4160205
0.75	2.9		2500	7.2	14	4160214K	
1	3.1	100		9.6	16	4160314	4160305
1	3.1		2000	9.6	16	4160314K	4160305K
1.5	3.4	100		14.4	22	4160414	4160405
1.5	3.4		1500	14.4	22	4160414K	4160405K
2.5	4	100		24	37	4160514	4160505
2.5	4		900	24	37	4160514K	4160505K
4	4.6	100		38.4	49	4160614	4160605
6	5.1	100		57.6	67	4160714	4160705
6	5.1		400	57.6	67	4160714K	
10	6.8	100		96	120	4160814	4160805
16	9	100		153.6	185	4160914	4160905

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	green	yellow
0.5	2.7	100		4.8	11	4160111	4160110
0.75	2.9	100		7.2	14		4160210
1	3.1	100		9.6	16	4160311	4160310
1.5	3.4	100		14.4	22	4160411	4160410
2.5	4	100		24	37	4160511	4160510
4	4.6	100		38.4	49	4160611	4160610
4	4.6		600	38.4	49		4160610K
6	5.1	100		57.6	67	4160711	4160710
10	6.8	100		96	120	4160811	4160810
16	9	100		153.6	185	4160911	4160910
25	10.2	100		240	260	4161011	4161010
35	11.7			336	360	4161111	
50	13.9			480	535	4161211	

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	violet	red
0.5	2.7	100		4.8	11	4160107	4160104
0.5	2.7		3000	4.8	11		4160104K
0.75	2.9	100		7.2	14	4160207	4160204
1	3.1	100		9.6	16	4160307	4160304
1	3.1		2000	9.6	16		4160304K
1.5	3.4	100		14.4	22	4160407	4160404
1.5	3.4		1500	14.4	22		4160404K
2.5	4	100		24	37	4160507	4160504
2.5	4		900	24	37		4160504K
4	4.6	100		38.4	49		4160604
6	5.1	100		57.6	67		4160704
6	5.1		400	57.6	67		4160704K
10	6.8	100		96	120		4160804
16	9	100		153.6	185		4160904
25	10.2	100		240	260		4161004
35	11.7			336	360		4161104

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	blue/white	pink
0.5	2.7	100		4.8	11	4160126	
0.75	2.9	100		7.2	14	4160226	
0.75	2.9		2500	7.2	14	4160226K	
1	3.1	100		9.6	16	4160326	4160308
1	3.1		2000	9.6	16	4160326K	
1.5	3.4	100		14.4	22	4160426	4160408
1.5	3.4		1500	14.4	22	4160426K	
2.5	4	100		24	37	4160526	
4	4.6	100		38.4	49	4160626	
6	5.1	100		57.6	67	4160726	
10	6.8	100		96	120	4160826	

Power and control cables



Control Cabinet Single Cores • Harmonised and certified

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	white-blue
0.5	2.7		3000	4.8	11	4160144K
0.75	2.9	100		7.2	14	4160244
0.75	2.9		2500	7.2	14	4160244K
1	3.1	100		9.6	16	4160344
1	3.1		2000	9.6	16	4160344K
1.5	3.4	100		14.4	22	4160444
2.5	4	100		24	37	4160544
2.5	4		900	24	37	4160544K
4	4.6	100		38.4	49	4160644
6	5.1	100		57.6	67	4160744
10	6.8	100		96	120	4160844

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
Packaging size: Coil ≤ 30 kg, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.
Non-harmonised, nominal cross-sections: 0.5 mm², 0.75 mm², 1 mm², 16 mm²
*for conventional use, **for careful bending; "OD" = outer diameter
The outer diameters stated in the part number table are maximum values.

Similar products

- H07V-K <HAR> refer to page 207
- MULTI-STANDARD SC 2.2 refer to page 214

Accessories

- DIN-assorted boxes conductor end sleeves refer to page 1011
- Conductor end sleeves XL, insulated refer to page 1012
- PEW 8.87 crimping pliers refer to page 1016



MULTI-STANDARD SC 2.2

UL-listed (MTW), CSA (TEW), <HAR> H07V2-K: max. +90 °C, UL (AWM): Umax = 1 kV, tinned-copper strands



Info

- Higher maximum conductor temperature - H07V2-K: +90 °C according to EN 50525-2-31
- Higher voltage range according to UL

Benefits

- For use in the most important global markets
- Reduction in technical documentation
- Easier storage; increases the cost-effectiveness of the production process
- Works with "Conductor end sleeves XL, insulated"

Application range

- Factory wiring
- Field wiring
- Frequency converter power supply
- Internal wiring of devices and in control cabinets
- Protected installation in and on lighting equipments

Product features

- Flame-retardant according IEC 60332-1-2
- Flame-retardant according to UL VW1/CSA FT1
- Oil-resistant

Norm references / Approvals

- Multi-standard cables have conductor strands with nominal sizes in mm² or AWG/kcmil. The master size is mentioned in the table below, while the equivalent size of the other system can be found in the Appendix T16 of this catalogue. For this related secondary size the cross-section of the conductor mostly works out to be greater than the specified nominal value.
- Cable type certifications: <HAR> H07V2-K acc. EN 50525-2-31, UL AWM style 10269 (by UL acc. UL standard UL 758, U.I. Lapp GmbH's UL AWM file number: E63634), (UL) MTW (by UL acc. UL standard UL 1063, U.I. Lapp GmbH's (UL) MTW file number: E198296), CSA TEW (by CSA acc. CSA standard CSA C22.2 No. 127, CSA class 5835-01)

Product Make-up

- Fine-wire strand made of tinned-copper wires
- Special PVC-based core insulation

Technical data



Classification

ETIM 5.0 Class-ID: EC000993
ETIM 5.0 Class-Description:
Single core cable



Conductor stranding

Fine wire according to VDE 0295
Class 5/ IEC 60228 Class 5



Minimum bending radius

OD ≤ 8 mm: 4 x OD*/2 x OD**;
8 < OD ≤ 12 mm: 5 x OD*/3 x OD**;
OD > 12 mm: 6 x OD*/4 x OD**



Nominal voltage

HAR / IEC: U₀/U: 450/750 V;
UL (AWM): U: 1000 V;
UL (MTW): U: 600 V;
CSA (TEW): U: 600 V



Temperature range

Fixed installation:
HAR/IEC: -40 °C to +90 °C;
UL (AWM): -40 °C to +105 °C;
UL (MTW): -40 °C to +90 °C;
CSA (TEW): -40 °C to +105 °C

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	brown	black	grey
0.5	2.7	100		4.8	10	4150103	4150101	
0.75	2.9	100		7.2	13		4150201	
1	3.1	100		9.6	16	4150303	4150301	
1	3.1		2000	9.6	16		4150301K	
1.5	3.4	100		14.4	22	4150403	4150401	4150406
2.5	4	100		24	37	4150503	4150501	4150506
2.5	4		900	24	37		4150501K	
4	4.6	100		38.4	49	4150603	4150601	
4	4.6		600	38.4	49		4150601K	
6	5.1	100		57.6	71		4150701	4150706
10	6.8	100		96	120		4150801	
16	9	100		153.6	185		4150901	
25	10.2	100		240	260		4151001	
35	11.7			336	360		4151101	
50	13.9			480	535		4151201	
70	16			672	735		4151301	
95	18.2			912	930		4151401	

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	Copper index (kg/km)	Weight (kg/km)	blue	green/yellow	orange
0.5	2.7	100	4.8	10	4150102		
0.75	2.9	100	7.2	13	4150202		
1	3.1	100	9.6	16	4150302		4150309
1.5	3.4	100	14.4	22	4150402	4150400	4150409
2.5	4	100	24	37	4150502	4150500	4150509
4	4.6	100	38.4	49	4150602	4150600	
6	5.1	100	57.6	71	4150702	4150700	
10	6.8	100	96	120	4150802	4150800	
16	9	100	153.6	185		4150900	
25	10.2	100	240	260		4151000	
35	11.7		336	360		4151100	

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	Copper index (kg/km)	Weight (kg/km)	dark blue	white	yellow
0.5	2.7	100	4.8	10	4150114	4150105	
0.75	2.9	100	7.2	13	4150214	4150205	
1	3.1	100	9.6	16		4150305	
1.5	3.4	100	14.4	22	4150414	4150405	4150410
4	4.6	100	38.4	49	4150614	4150605	4150610

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	Copper index (kg/km)	Weight (kg/km)	red
0.5	2.7	100	4.8	10	4150104
0.75	2.9	100	7.2	13	4150204
1	3.1	100	9.6	16	4150304
1.5	3.4	100	14.4	22	4150404
2.5	4	100	24	37	4150504
4	4.6	100	38.4	49	4150604
6	5.1	100	57.6	71	4150704

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.

Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.

Packaging size: Coil ≤ 30 kg, otherwise drum

Photographs are not to scale and do not represent detailed images of the respective products.

Non-harmonised, nominal cross-sections: 0.5 mm², 0.75 mm², 1 mm², 16 mm², 50 mm², 70 mm², 95 mm², 120 mm²

*for conventional use, **for careful bending; "OD" = outer diameter

The outer diameters stated in the part number table are maximum values.

Similar products

- MULTI-STANDARD SC 2.1 refer to page 212

Accessories

- DIN-assorted boxes conductor end sleeves refer to page 1011
- Conductor end sleeves XL, insulated refer to page 1012
- EASY STRIP stripping and cutting tool refer to page 1004
- PEW 8.87 crimping pliers refer to page 1016
- FLEXIMARK® Collar Snap-on refer to page 985

**H05Z-K 90°C**

Harmonised; halogen-free to protect human life, the environment and material assets

**Info**

- Halogen-free and harmonised (HAR)
- For expanded ambient temperatures see ÖLFLEX® HEAT 125 SC

Technical data**Classification**

ETIM 5.0 Class-ID: EC000993
ETIM 5.0 Class-Description:
Single core cable

**Conductor stranding**

Fine wire according to VDE 0295
Class 5/ IEC 60228 Class 5

**Minimum bending radius**

According to EN 50565-1
4 x outer diameter (OD) for normal use;
2 x OD for cautions bending

**Nominal voltage**

U₀/U: 300/500 V

**Test voltage**

2000 V AC

**Current rating**

VDE 0298-4
EN 50565-1/ VDE 0298-565-1

**Temperature range**

During installation: -5°C bis +90°C
Fixed installation: -40°C bis +90°C

Benefits

- Protection of human life and the environment thanks to the avoidance of the formation of acid in case of fire
- Time-saving assembly

Application range

- For wiring of lamps, devices, switchgear cabinets and distribution boxes
- For installation in tubes, on, in and under plaster as well as in closed installation ducts
- In building with a high density of people or valuable assets
- For use in dry rooms
- For expanded ambient temperatures see ÖLFLEX® HEAT 125 SC

Product features

- The insulation material is halogen-free and free of other materials which could release toxic gases in the event of fire
- Low amount of corrosive gases in the event of fire
- Low smokes/low smoke density in the event of fire according to IEC 61034
- Flame-retardant according IEC 60332-1-2

Norm references / Approvals

- <HAR> cable type certification acc. EN 50525-3-41

Product Make-up

- Fine-wire strand made of bare copper wires
- Core insulation: Halogen-free

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	brown	black	grey	blue
0.5	2.1 - 2.6	100		4.8	9	4725031	4725011	4725061	4725021
0.5	2.1 - 2.6		3000	4.8	9	4725031K	4725011K	4725061K	4725021K
0.75	2.2 - 2.8	100		7.2	11	4725032	4725012	4725062	4725022
0.75	2.2 - 2.8		2500	7.2	11	4725032K	4725012K	4725062K	4725022K
1	2.4 - 2.9	100		9.6	14	4725033	4725013	4725063	4725023
1	2.4 - 2.9		2000	9.6	14	4725033K	4725013K	4725063K	4725023K

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	green/yellow	orange	dark blue	white
0.5	2.1 - 2.6	100		4.8	9	4725001	4725091	4725141	4725051
0.5	2.1 - 2.6		3000	4.8	9	4725001K	4725091K	4725141K	4725051K
0.75	2.2 - 2.8	100		7.2	11	4725002	4725092	4725142	4725052
0.75	2.2 - 2.8		2500	7.2	11	4725002K	4725092K	4725142K	4725052K
1	2.4 - 2.9	100		9.6	14	4725003	4725093	4725143	4725053
1	2.4 - 2.9		2000	9.6	14	4725003K	4725093K	4725143K	4725053K

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	green	yellow	violet	red
0.5	2.1 - 2.6	100		4.8	9	4725121	4725111	4725071	4725041
0.5	2.1 - 2.6		3000	4.8	9	4725121K	4725111K	4725071K	4725041K
0.75	2.2 - 2.8	100		7.2	11	4725122	4725112	4725072	4725042
0.75	2.2 - 2.8		2500	7.2	11	4725122K	4725112K	4725072K	4725042K
1	2.4 - 2.9	100		9.6	14	4725123	4725113	4725073	4725043
1	2.4 - 2.9		2000	9.6	14	4725123K	4725113K	4725073K	4725043K

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	blue/white	pink
0.5	2.1 - 2.6	100		4.8	9		4725081
0.5	2.1 - 2.6		3000	4.8	9		4725081K
0.75	2.2 - 2.8	100		7.2	11		4725082
0.75	2.2 - 2.8		2500	7.2	11		4725082K
1	2.4 - 2.9	100		9.6	14		4725083
1	2.4 - 2.9		2000	9.6	14	4725263K	4725083K

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
Packaging size: Coil ≤ 30 kg, otherwise drum
Photographs are not to scale and do not represent detailed images of the respective products.
The outer diameters stated in the part number table are maximum values.

Similar products

- ÖLFLEX® HEAT 125 SC refer to page 189



H07Z-K 90°C

Harmonised; halogen-free to protect human life, the environment and material assets



Info

- Halogen-free and harmonised (HAR)
- For expanded ambient temperatures and higher conductor cross-sections see ÖLFLEX® HEAT 125 SC



Benefits

- Protection of human life and the environment thanks to the avoidance of the formation of acid in case of fire
- Time-saving assembly

Application range

- For wiring of lamps, devices, switchgear cabinets and distribution boxes
- For installation in tubes, on, in and under plaster as well as in closed installation ducts
- In building with a high density of people or valuable assets
- For use in dry rooms
- For expanded ambient temperatures and higher conductor cross-sections see ÖLFLEX® HEAT 125 SC

Product features

- The insulation material is halogen-free and free of other materials which could release toxic gases in the event of fire
- Low amount of corrosive gases in the event of fire
- Low smokes/low smoke density in the event of fire according to IEC 61034
- Flame-retardant according to IEC 60332-1/2

Norm references / Approvals

- <HAR> cable type certification acc. EN 50525-3-41
- No cable type certified core insulation colours according to EN 50525-1/ VDE 0285-525-1: transparent, green (single colour), yellow (single colour), all double colours (except of green-yellow and yellow-green)

Product Make-up

- Fine-wire strand made of bare copper wires
- Core insulation: Halogen-free

Technical data



Classification

ETIM 5.0 Class-ID: EC000993
ETIM 5.0 Class-Description:
Single core cable



Conductor stranding

Fine wire according to VDE 0295
Class 5/ IEC 60228 Class 5



Minimum bending radius

According to EN 50565-1
OD ≤ 8 mm: 4 x OD* / 2 x OD**;
8 < OD ≤ 12 mm: 5 x OD* / 3 x OD**;
OD > 12 mm: 6 x OD* / 4 x OD**



Nominal voltage

U₀/U: 450/ 750 V



Test voltage

2500 V



Current rating

VDE 0298-4
EN 50565-1/ VDE 0298-565-1



Temperature range

During installation: -5°C bis +90°C
Fixed installation: -40°C bis +90°C

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	brown	black	grey	blue
1.5	2.8 - 3.5	100		14.4	20	4726031	4726011	4726061	4726021
1.5	2.8 - 3.5		1500	14.4	20	4726031K	4726011K	4726061K	4726021K
2.5	3.4 - 4.3	100		24	32	4726032	4726012	4726062	4726022
2.5	3.4 - 4.3		900	24	32	4726032K	4726012K	4726062K	4726022K
4	3.9 - 4.9	100		38.4	45	4726033	4726013	4726063	4726023
4	3.9 - 4.9		600	38.4	45	4726033K	4726013K	4726063K	4726023K
6	4.4 - 5.5	100		57.6	65	4726034	4726014	4726064	4726024
6	4.4 - 5.5		400	57.6	65	4726034K	4726014K	4726064K	4726024K
10	5.7 - 7.1	100		96	110	4726035	4726015	4726065	4726025
16	6.7 - 8.4	100		153.6	170	4726036	4726016	4726066	4726026
25	8.4 - 10.6	100		240	290	4726037	4726017	4726067	4726027
35	9.7 - 12.1			336	380	4726038	4726018	4726068	4726028
50	11.5 - 14.4			480	530	4726039	4726019	4726069	4726029
70	13.2 - 16.6			672	750	4727031	4727011	4727061	4727021
95	15.1 - 18.8			912	1000	4727032	4727012	4727062	4727022

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	green/yellow	orange	dark blue	white
1.5	2.8 - 3.5	100		14.4	20	4726001	4726091	4726141	4726051
1.5	2.8 - 3.5		1500	14.4	20	4726001K	4726091K	4726141K	4726051K
2.5	3.4 - 4.3	100		24	32	4726002	4726092	4726142	4726052
2.5	3.4 - 4.3		900	24	32	4726002K	4726092K	4726142K	4726052K
4	3.9 - 4.9	100		38.4	45	4726003	4726093	4726143	4726053
4	3.9 - 4.9		600	38.4	45	4726003K	4726093K	4726143K	4726053K
6	4.4 - 5.5	100		57.6	65	4726004	4726094	4726144	4726054
6	4.4 - 5.5		400	57.6	65	4726004K	4726094K	4726144K	4726054K
10	5.7 - 7.1	100		96	110	4726005	4726095	4726145	4726055
16	6.7 - 8.4	100		153.6	170	4726006	4726096	4726146	4726056
25	8.4 - 10.6	100		240	290	4726007	4726097	4726147	4726057
35	9.7 - 12.1			336	380	4726008	4726098	4726148	4726058
50	11.5 - 14.4			480	530	4726009	4726099	4726149	4726059
70	13.2 - 16.6			672	750	4727001	4727091	4727141	4727051
95	15.1 - 18.8			912	1000	4727002	4727092	4727142	4727052

Power and control cables



Control Cabinet Single Cores • Halogen-free

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	green	yellow	violet	red
1.5	2.8 - 3.5	100		14.4	20	4726121	4726111	4726071	4726041
1.5	2.8 - 3.5		1500	14.4	20	4726121K	4726111K	4726071K	4726041K
2.5	3.4 - 4.3	100		24	32	4726122	4726112	4726072	4726042
2.5	3.4 - 4.3		900	24	32	4726122K	4726112K	4726072K	4726042K
4	3.9 - 4.9	100		38.4	45	4726123	4726113	4726073	4726043
4	3.9 - 4.9		600	38.4	45	4726123K	4726113K	4726073K	4726043K
6	4.4 - 5.5	100		57.6	65	4726124	4726114	4726074	4726044
6	4.4 - 5.5		400	57.6	65	4726124K	4726114K	4726074K	4726044K
10	5.7 - 7.1	100		96	110	4726125	4726115	4726075	4726045
16	6.7 - 8.4	100		153.6	170	4726126	4726116	4726076	4726046
25	8.4 - 10.6	100		240	290	4726127	4726117	4726077	4726047
35	9.7 - 12.1			336	380	4726128	4726118	4726078	4726048
50	11.5 - 14.4			480	530	4726129	4726119	4726079	4726049
70	13.2 - 16.6			672	750	4727121	4727111	4727071	4727041
95	15.1 - 18.8			912	1000	4727122	4727112	4727072	4727042

Conductor cross-section (mm²)	Outer diameter (mm)	m/ring	m/box	Copper index (kg/km)	Weight (kg/km)	blue/white	pink
1.5	2.8 - 3.5	100		14.4	20		4726081
1.5	2.8 - 3.5		1500	14.4	20	4726261K	4726081K
2.5	3.4 - 4.3	100		24	32		4726082
2.5	3.4 - 4.3		900	24	32	4726262K	4726082K
4	3.9 - 4.9	100		38.4	45		4726083
4	3.9 - 4.9		600	38.4	45		4726083K
6	4.4 - 5.5	100		57.6	65		4726084
6	4.4 - 5.5		400	57.6	65		4726084K
10	5.7 - 7.1	100		96	110		4726085
16	6.7 - 8.4	100		153.6	170		4726086
25	8.4 - 10.6	100		240	290		4726087
35	9.7 - 12.1			336	380		4726088
50	11.5 - 14.4			480	530		4726089
70	13.2 - 16.6			672	750		4727081
95	15.1 - 18.8			912	1000		4727082

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
 Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
 Packaging size: Coil ≤ 30 kg, otherwise drum
 Photographs are not to scale and do not represent detailed images of the respective products.
 *for conventional use, **for careful bending; "OD" = outer diameter
 The outer diameters stated in the part number table are maximum values.

- Similar products
- ÖLFLEX® HEAT 125 SC refer to page 189

**LiYCY**

Screened, PVC-based wiring single core

**Benefits**

- Prevention of electromagnetic interference to other components

Application range

- Wiring of measuring instruments, switch cabinets, electrical components, transmitters and receivers
- In EMC-sensitive environments

Product features

- Flame-retardant according IEC 60332-1-2
- The outer diameters stated in the part number table are maximum values

Norm references / Approvals

- Based on VDE 0812

Product Make-up

- Strands of tinned-copper wires
- Core insulation: Based on PVC
- Tinned-copper braiding
- Outer sheath: Based on PVC, transparent

Technical data**Classification**

ETIM 5.0 Class-ID: EC000993
ETIM 5.0 Class-Description:
Single core cable

**Peak operating voltage**

350 V (not for power transmission)

**Test voltage**

800 V

**Temperature range**

Occasional flexing: -5°C to +70°C
Fixed installation: -30°C to +80°C

Article number	Conductor cross-section (mm ²)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
LiYCY				
4530101	0.14	2.8	7	13
4530102	0.25	3.3	9	18
4530103	0.5	3.6	15	20
4530104	0.75	3.9	18	31
4530105	1	4.7	25	35.9
4530106	1.5	5.1	30	39
4530107	2.5	6	35	55.3

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths

Packaging size: Coil

Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- SENSOR STRIP stripping tool refer to page 1003

**Li2YCY**

Low-capacitance, screened wiring single-core with PVC-based outer sheath

**Benefits**

- Prevention of electromagnetic interference to other components

Application range

- Wiring of measuring instruments, switch cabinets, electrical components, transmitters and receivers
- In EMC-sensitive environments

Product features

- Flame-retardant according IEC 60332-1-2
- Low cable capacitance, short signal transmission time
- The outer diameters stated in the part number table are maximum values

Norm references / Approvals

- Based on VDE 0812

Product Make-up

- Strands of tinned-copper wires
- Core insulation: PE
- Wrapped screening made from tinned copper wire
- Outer sheath: Based on PVC, transparent

Technical data**Classification**

ETIM 5.0 Class-ID: EC000993
ETIM 5.0 Class-Description:
Single core cable

**Peak operating voltage**

350 V (not for power transmission)

**Test voltage**

1200 V

**Temperature range**

Occasional flexing: -5°C to +70°C
Fixed installation: -30°C to +80°C

Article number	Conductor cross-section (mm ²)	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
Li2YCY				
4550115	0.14	2.4	7	10
4550116	0.25	2.6	9	15
4550117	0.5	3.2	15	19.5
4550118	0.75	3.4	18	28
4550119	1	3.8	25	30

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths

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