European <HAR> cable type certification
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.



CE <HAR> RoHS

Info
<HAR>

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

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

Norm references / Approvals
<HAR> cable type certification acc. EN 50525-2-31

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

Remark
Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100kg. 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.

Technical Data

Classification:	ETIM 5.0 Class-ID: EC000993 ETIM 5.0 Class-Description: Single core cable
Conductor stranding:	Fine-wired copper conductor of bare copper strands in line with conductor class 5 acc. IEC 60228
Minimum bending radius:	At a cable temperature of 20°C ±10°C, according to HD 516 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 HD 516/VDE 0298-300
Temperature range:	Fixed installation: -30°C to +80°C Moved: +5°C to +70°C

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Part number	Conductor cross-section (mm²)	Outer diameter (mm)	Core colour	m/ring	m/spool	Copper index (kg/km)	Weight (kg/km)
4510001	0,5	2.5	green/yellow	100		4.8	9
4510011	0,5	2.5	black	100		4.8	9
4510021	0,5	2.5	blue	100		4.8	9
4510141	0,5	2.5	Dark blue	100		4.8	9
4510031	0,5	2.5	brown	100		4.8	9
4510111	0,5	2.5	yellow	100		4.8	9
4510121	0,5	2.5	green	100		4.8	9
4510071	0,5	2.5	violet	100		4.8	9
4510081	0,5	2.5	pink	100		4.8	9
4510091	0,5	2.5	orange	100		4.8	9
4510041	0,5	2.5	red	100		4.8	9
4510051	0,5	2.5	white	100		4.8	9
4510061	0,5	2.5	grey	100		4.8	9
4510161	0,5	2.5	ultra-marine blue	100		4.8	9
4510921	0,5	2.5	Dark blue/white	100		4.8	9
4510002	0,75	2.7	green/yellow	100		7.2	12
4510012	0,75	2.7	black	100		7.2	12
4510022	0,75	2.7	blue	100		7.2	12
4510142	0,75	2.7	Dark blue	100		7.2	12
4510032	0,75	2.7	brown	100		7.2	12
4510112	0,75	2.7	yellow	100		7.2	12
4510122	0,75	2.7	green	100		7.2	12
4510072	0,75	2.7	violet	100		7.2	12
4510082	0,75	2.7	pink	100		7.2	12
4510092	0,75	2.7	orange	100		7.2	12
4510042	0,75	2.7	red	100		7.2	12
4510052	0,75	2.7	white	100		7.2	12
4510062	0,75	2.7	grey	100		7.2	12
4510922	0,75	2.7	Dark blue/white	100		7.2	12
4510003	1	2.8	green/yellow	100		9.6	15
4510013	1	2.8	black	100		9.6	15
4510023	1	2.8	blue	100		9.6	15
4510143	1	2.8	Dark blue	100		9.6	15
4510033	1	2.8	brown	100		9.6	15

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Part number	Conductor cross-section (mm²)	Outer diameter (mm)	Core colour	m/ring	m/spool	Copper index (kg/km)	Weight (kg/km)
4510113	1	2.8	yellow	100		9.6	15
4510123	1	2.8	green	100		9.6	15
4510073	1	2.8	violet	100		9.6	15
4510083	1	2.8	pink	100		9.6	15
4510093	1	2.8	orange	100		9.6	15
4510043	1	2.8	red	100		9.6	15
4510053	1	2.8	white	100		9.6	15
4510063	1	2.8	grey	100		9.6	15
4510163	1	2.8	ultra-marine blue	100		9.6	15
4510923	1	2.8	Dark blue/white	100		9.6	15
4510001S	0,5	2.5	green/yellow		250	4.8	9
4510011S	0,5	2.5	black		250	4.8	9
4510021S	0,5	2.5	blue		250	4.8	9
4510141S	0,5	2.5	Dark blue		250	4.8	9
4510031S	0,5	2.5	brown		250	4.8	9
4510111S	0,5	2.5	yellow		250	4.8	9
4510121S	0,5	2.5	green		250	4.8	9
4510071S	0,5	2.5	violet		250	4.8	9
4510091S	0,5	2.5	orange		250	4.8	9
4510041S	0,5	2.5	red		250	4.8	9
4510051S	0,5	2.5	white		250	4.8	9
4510061S	0,5	2.5	grey		250	4.8	9
4510002S	0,75	2.7	green/yellow		250	7.2	12
4510012S	0,75	2.7	black		250	7.2	12
4510022S	0,75	2.7	blue		250	7.2	12
4510142S	0,75	2.7	Dark blue		250	7.2	12
4510032S	0,75	2.7	brown		250	7.2	12
4510112S	0,75	2.7	yellow		250	7.2	12
4510072S	0,75	2.7	violet		250	7.2	12
4510082S	0,75	2.7	pink		250	7.2	12
4510092S	0,75	2.7	orange		250	7.2	12
4510102S	0,75	2.7	transparent		250	7.2	12
4510042S	0,75	2.7	red		250	7.2	12
4510052S	0,75	2.7	white		250	7.2	12

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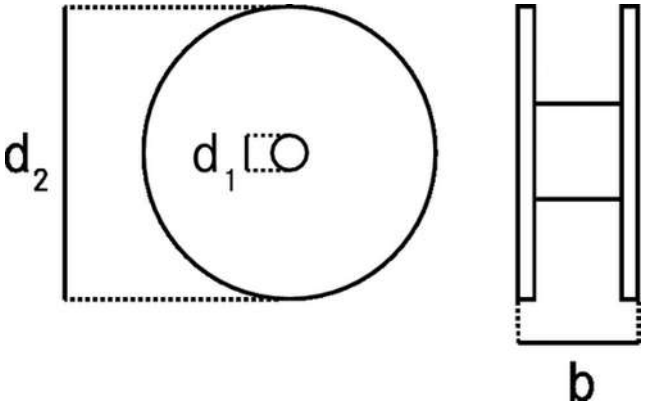
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Part number	Conductor cross-section (mm²)	Outer diameter (mm)	Core colour	m/ring	m/spool	Copper index (kg/km)	Weight (kg/km)
4510062S	0,75	2.7	grey		250	7.2	12
4510162S	0,75	2.7	ultra-marine blue		250	7.2	12
4510003S	1	2.8	green/yellow		250	9.6	15
4510013S	1	2.8	black		250	9.6	15
4510023S	1	2.8	blue		250	9.6	15
4510143S	1	2.8	Dark blue		250	9.6	15
4510033S	1	2.8	brown		250	9.6	15
4510073S	1	2.8	violet		250	9.6	15
4510103S	1	2.8	transparent		250	9.6	15
4510043S	1	2.8	red		250	9.6	15
4510053S	1	2.8	white		250	9.6	15
4510063S	1	2.8	grey		250	9.6	15
4510163S	1	2.8	ultra-marine blue		250	9.6	15

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