

Cable reference

EFFC-CAB	-M12	-FM	-5	-DD	-LX
	Type	Ending	Number of pins	Orientation	Length
	M12 A-Coded (standard)	FM (female – male)		DD (Straight-Straight)	L2 (2 meters) L5 (5 meters) L5 (10 meters)

Cable description

M12 Double-Ended Cordset: Female straight to Male straight, 4 contacts, A-coded, translucent body, 60 V DC, 4 A; PUR black cable, 5-wires, 0.50mm²

Technical specifications

Scale drawing	Contact arrangement
	<p>Female</p> <ul style="list-style-type: none"> 1 brown 2 white 3 blue 4 black 5 green-yellow
	<p>Male</p> <ul style="list-style-type: none"> 1 brown 2 white 3 blue 4 black 5 green-yellow

Product Description

Connector Type:	Cordset, double ended
Shielding:	Unshielded
Rated Voltage:	60 V
Rated Voltage (UL):	30 V AC/DC
Rated Impulse Voltage:	1.5 kV
Operating Voltage:	50 V AC / 60 V DC
Rated Current*:	4 A
Rated Current (UL)*:	4 A

Technical Data Side 1

Product Sub Family:	M12 Standard
Type of Contact / Gender:	Male
Connector Design:	Straight
Attachment Type:	Coupling Screw
Number of Pins:	5
Coding:	A
Contact Resistance:	≤ 10 mOhm
Insulation Resistance:	> 10 ⁹ Ohm
Mating Cycles:	≤ 100
Ambient Temperature (Operation)*:	- 40 °C - + 90 °C
Operating Temperature (UL):	max. + 50 °C
Protection Degree / IP Rating**:	IP65, IP67, IP68 (1 m / 24 h), IP69K
Design Standard:	IEC 61076-2-101

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Pollution Degree:	3 acc. to DIN EN 60664-1 (VDE 0110-1)
Overvoltage Category:	III acc. to DIN EN 60664-1 (VDE 0110-1)
Contact Base Material:	CuSn
Contact Plating:	Cu/Au
Contact Bearer Material:	TPU-GF
Contact Bearer Color:	Orange
Flammability Class (Contact Bearer):	UL 94 HB
Molded Body Material:	TPU
Molded Body Color:	Translucent
Flammability Class (Molded Body):	UL 94 HB
Attachment Material:	CuZn
Attachment Plating:	Nickel-plated
Fastening Torque (Attachment):	M 12x1: (50-60) Ncm, hand-tight
Note:	Do not connect or disconnect under load.

Cable Data

Cable Number:	228
Conductor Size:	0.5 mm ²
Number of Wires:	5
Minimal Bending Radius (Fixed Inst):	> 5 x D
Minimal Bending Radius (Flexible Inst):	> 10 x D
Cycles (Bending):	> 5 M
Cycles (Torsion):	> 5 M @ ± 360 °/1 m
Conductor material:	Cu
Cable Jacket Material:	PUR
Cable Jacket Color:	black matt similarly RAL 9005
Cable Diameter D:	ø 5.40 ± 0.20 mm
Wire Insulation Material:	PP
Insulated Wire Diameter:	ø 1.50 ± 0.05 mm
Ambient Temperature (Fixed Installation):	- 50 °C - + 105 °C (UL: + 80 °C)
Ambient Temperature (Flex Installation):	- 25 °C - + 105 °C (UL: + 80 °C)
Ambient Temperature (Drag Chain Inst):	- 25 °C - + 60 °C
UL Cable Type:	AWM: 20549
Flammability Class (Cable Jacket):	DIN EN 60332-2-2, VDE 0482-332-2-2, IEC 60332-2-2, CSA FT-2
Cable Characteristics:	Good microbes and hydrolysis resistance; Mainly plasticizer diffusion free; Exclusion of PVC and silicone; Free of lacquer wetting disturbing substances; Coldness flexibility

Technical Data Side 2

Product Sub Family, Side 2:	M12 Standard
Type of Contact / Gender, Side 2:	Female
Connector Design, Side 2:	Straight
Attachment Type, Side 2:	Coupling Nut
Number of Pins, Side 2:	5
Coding, Side 2:	A
Contact Resistance, Side 2:	≤ 10 mOhm
Insulation Resistance, Side 2:	> 10 ⁹ Ohm
Mating Cycles, Side 2:	≤ 100
Ambient Temperature (Operation), Side 2:	- 40 °C - + 90 °C
Operating Temperature (UL), Side 2:	max. + 50 °C
Protection Degree / IP Rating, Side 2**:	IP65, IP67, IP68 (1 m / 24 h), IP69K
Design Standard, Side 2:	IEC 61076-2-101
Pollution Degree, Side 2:	3 acc. to DIN EN 60664-1 (VDE 0110-1)
Overvoltage Category, Side 2:	III acc. to DIN EN 60664-1 (VDE 0110-1)
Contact Base Material, Side 2:	CuSn
Contact Plating, Side 2:	Cu/Au
Contact Bearer Material, Side 2:	TPU

Contact Bearer Color, Side 2:	Orange
Flammability Class (Contact Bearer), Side 2:	UL 94 HB
Molded Body Material, Side 2:	TPU
Molded Body Color, Side 2:	Translucent
Flammability Class (Molded Body), Side 2:	UL 94 HB
Attachment Material, Side 2:	CuZn
Attachment Plating, Side 2:	Nickel-plated
O-Ring Material, Side 2:	FKM, green
Fastening Torque (Attachment), Side 2:	M 12x1: (50-60) Ncm, hand-tight

Approvals

UL-File:	E315587
UL:	UL 2238; cURus

Safety & Environmental Compliance

RoHS Compliant:	yes
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Resistances

Halogenfree:	DIN EN 50267-2-1, IEC 60754-1, VDE 0482-267-2-1
Oil Resistance:	IEC 60811:404

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