Datasheet

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Connection Module CL Cat. 6, unshielded/shielded





SCOPE OF SUPPLY

- RJ45 Connection module Cat.6
- Wiring element

GENERAL DESCRIPTION

The R&M connection module CL, Cat.6, unshielded or shielded, is ideal for voice, fast data transmissions and high bandwidth applications. This high-performance Cat.6 module is perfect for use in 1 Gigabit Ethernet (1000 BASE-T) and further high-speed applications up to 250MHz, eg. 5 Gigabit Ethernet (5GBASE-T). It is suitable for solid or stranded wires, 8-wire conductors of AWG 22 to AWG 26 (AWG 22/7-26/7). Each set in bulk packed environmentally friendly into a practical cardboard box with directly accessible installation guide via QR code printed onto the product label. PoE optimized – R&M PowerSafe seal granted.

FEATURES

- Intuitive and fast termination of unshielded cable (UTP)
- Intuitive and fast termination of all types of shielded cables (STP)
- Wiring option according to TIA 568A and 568B
- Category type marking and blue color for easy and quick recognition
- Achieves best transmission characteristics with R&Mfreenet Cat.6 patch cables
- Gold-plated contact area and tin-plated insulation displacement contact area
- Approved for solid and stranded wire AWG 22 to AWG 26
- Meets Cat.6, ISO, and TIA component specifications for the entire re-embedded plug range as specified by the standards ISO/IEC 11801, EN 50173, TIA/EIA 568.2-D, IEC 60603-7 IEC 60603-7-1, IEC 60603-7-41 and 60603-7-51.
- Capacitive and inductive compensation
- Compatible with Cat.6 standard patch cords and cables
- Mechanical and electrical backward compatibility with Cat.5e
- Fits perfectly into R&M ELISO outlets and patch panels
- Fits into 3rd party outlets and patch panels with 6 different optional adapters
- Installation guide accessible via QR code printed onto label
- Product info accessible via installation guide through QR code
- Environmentally friendly bulk packaging
- Exceeding the IEEE 802.3 minimum requirements for 1000 BASE-T, 2.5GBASE-T and 5GBASE-T performance
- Halogen-free materials, ROHS II
- Supports PoE (IEEE 802.3af), PoEP (IEEE 802.3at), 4PpoE (IEEE 802.3bt) and is compatible to IEC 60512-99-001/002

APPLICATION

- Ideal for voice, fast data transmissions
- Suitable for high bandwidth applications
- Unshielded and/or shielded applications

PRODUCT-NO	PRODUCT DESCRIPTION	PACKING UNIT
878843	Module RJ45/u-C6-CL	10 pcs./box
878844	Module RJ45/u-C6-CL-100	100 pcs./box
935645	Module RJ45/s-C6-CL	10 pcs./box
935646	Module RJ45/s-C6-CL-100	100 pcs./box

STANDARDS

- ISO/IEC 11801
- IEC 60603-7
- IEC 60603-7-1
- IEC 60603-7-41
- IEC 60603-7-51
- EN 50173-1
- ANSI/TIA 568.2-D
- IEC 60512-99-001/002
- Supports PoE (IEEE 802.3af), PoEP (IEEE 802.3at), 4PPoE (IEEE 802.3bt)

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MATERIAL

DESCRIPTION	VALUE	VALUE RANGE
Housing, unshielded version	Polycarbonate	UL-94-V0
Housing, shielded version	Zinc die cast	

TECHNICAL DATA

DESCRIPTION	VALUE / VALUE RANGE	STANDARD
Admissible solid wire Ø	0.4 mm – 0.65 mm (0.016 inch - 0.026 inch)	AWG 26 – AWG 22
Admissible stranded wire Ø	0.12 mm2 - 0.32 mm2	AWG 26/7 – AWG 22/7
Admissible wire insulation cable Ø	0.8 mm - 1.6 mm (0.032 inch - 0.063 inch)	
Admissible cable Ø	4.5 mm - 9.0mm (0.18 inch - 0.35 inch)	
Shield lance	Tin-plated bronze (CuSn6)	
Housing color, shielded version	Metallic	
Housing color, unshielded version	Black	
UL classification	Pending	
Re-termination	≥4x (same or bigger wire diameter)	IEC 60352-3

MECHANICAL DATA

DESCRIPTION	VALUE / VALUE RANGE	Typical value (at 20°C)	STANDARD
Number of wires	Max. 8 / jack		
Contact material	Bronze (CuSn)		
Contact surface	> 0.76 µm (0.029 mil) gold over 1.2 µm (0.047 mil) nickel		
Mating cycles	> 750	> 1000	ISO/IEC 11801
Connection type	IDC/Insulation displacement contact		IEC 60352-4*
IDC contact material	CuSn, tin-plated		
Protection rating	IP20		
Wiring diagramm	A & B		TIA568A and TIA568B
Wire strain relief	Through termination block		
Cable strain relief	Integrated anchorage tray for cable-tie		

ELECTRICAL DATA

DESCRIPTION	VALUE / VALUE RANGE	Typical value (at 20°C)	STANDARD
Electric strength			
Contacts	1000V DC or AC peak	1200V DC	IEC 60603-7
Contact to shield	1500V DC	1700V DC	IEC 60603-7
Insulation resistance	> 500MΩ (100V DC)	5GΩ (100V DC)	IEC 60603-7
Contact resistance	< 20mΩ	< 5mΩ	IEC 60603-7
I/O resistance	< 200mΩ	30mΩ	IEC 60603-7
I/O resistance unbalance	< 50mΩ	20mΩ	IEC 60603-7
Current carrying capacity	1A @ 60°C	Pass	IEC 60603-7

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CLIMATICAL DATA

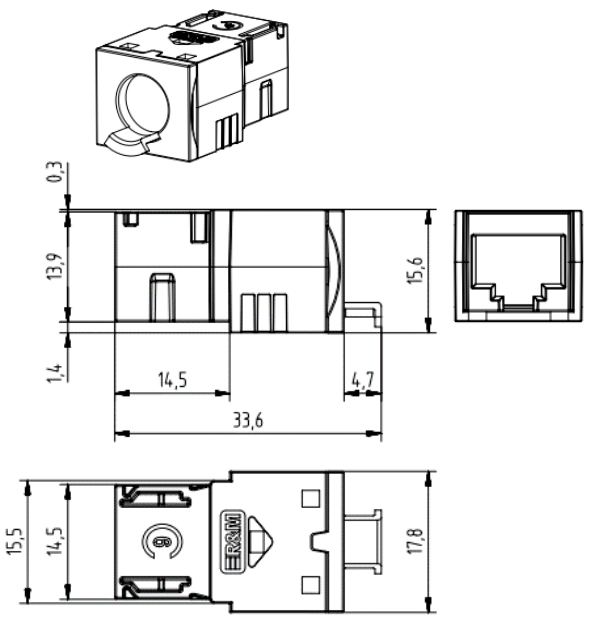
DESCRIPTION	VALUE / VALUE RANGE	STANDARD
Temperature range, operational	-10°C to +60°C (14°F to 140°F)	
Temperature range, storage	-40°C to +70°C (-40°F to 158°F)	
Humidity	95% (non-condensing)	

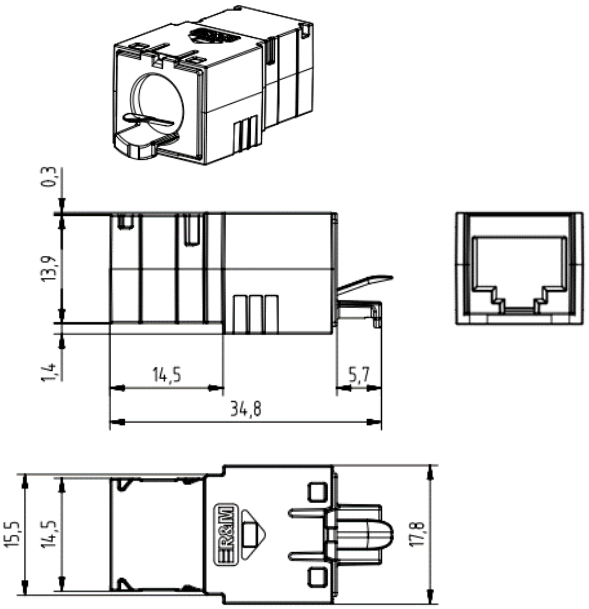
ENVIRONMENTAL PROPERTIES

DESCRIPTION	VALUE / VALUE RANGE	STANDARD
RoHS	Fulfilled	
REACH	Fulfilled	

TECHNICAL DRAWING

UNSHIELDED VERSION	SHIELDED VERSION





DIMENSIONS

DESCRIPTION	VALUE
Module version unshielded (length x width x height)	33.6x14.5/17.8x13.9/15.6 mm
Module version shielded (length x width x height)	33.6x14.5/17.8x13.9/15.6 mm

PACKAGING INFORMATION

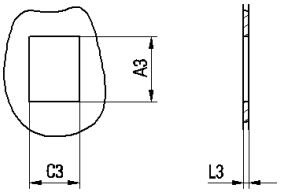
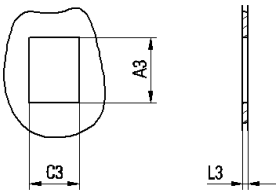
DESCRIPTION	UNIT
Cardboard box small, bulk	10 pcs.
Cardboard box large, bulk	100 pcs.

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ADAPTER INFORMATION /OPTIONAL

DESCRIPTION	APPLICATION / INFORMATION	DIMENSION / CUTOUT	PRODUCT PICTURE
Freenet	For integration into R&M platforms designed for Freenet holding plates UTP: 513484 STP: 513483	19.7 x 18.7 x 20.3 mm (W x H x D)	
Keystone IEC	The keystone adapter ensures that the module will fit into keystone cutout interface as defined in IEC60603-7 ed. 3 Annex D. A3: 19.3 – 19.6 mm C3: 14.8 – 15.0 mm L3: 1.2 – 1.8 mm UTP: 837033 STP: 837034		
Keystone LARGE	For use with different third-party keystone faceplates of larger cutout height of 20.3 mm A3: 20.1 - 20.9 mm L3: 1.20 – 1.95 mm UTP: 848274		
Adapter no. 1	For use with third-party faceplates with CommScope SYSTIMAX interface UTP: 832197	19.7 x 18.7 x 20.3 mm (W x H x D)	
Adapter no. 2	For use with third-party faceplates with Schneider Actassi S-One DPM interface STP: 930190	15.2 x 15.6 x 14.5 mm (W x H x D)	
Snap-In	Suitable for R&M cutout for special applications, similar to Keystone, but with flush mounting positions UTP: 513488 STP: 513487	18.2 x 19.35 x 14.5 mm (W x H x D)	

ACCESSORIES

DESCRIPTION		PRODUCT PICTURE
Termination tool (recommended)	814571	

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