

Technical Datasheet



R&M Cat. 6 Connection Modules

Cat. 6 Connection Modules

R&M's Cat.6 connection modules from the R&Mfreenet cabling system are ideal for voice and fast data transmissions. They can be used for transmission frequencies of up to 250 MHz.

Cat. 6 Features

- All Cat. 6 requirements of the relevant cabling standards (ISO/IEC 11801, EN 50173 and TIA/EIA 568B) are fulfilled
- Cat. 6 values as laid down in the component standards IEC 60603–7 combined with R&M Cat. 6 patch cables from the R&Mfreenet cabling system are achieved
- Best transmission characteristics with R&Mfreenet Cat. 6 patch cables (R302298-R302341)
- NEXT values at 100 MHz are by 11dB better than Cat. 5e
- NEXT and dual bandwidth performance tripled compared with Cat. 5e
- Gold-plating in contacting area and tin-plating in insulation displacement area
- The contacts are made of one-piece (no internal transfer points)
- Capacitive and inductive compensation
- Compatible with Cat. 6 standard plugs
- Fully mechanically and electrically backwards compatible with Cat. 5e and 5
- Fit into all R&Mfreenet patch panels and outlets
- Tool-free connection technique for installation cables of AWG 22-24 plus stranded cables of AWG 24/7-26/7
- Error-free connection acc. to TIA/EIA 568B without crossover of pairs thanks to wiring labels and integral production date
- 360° shield coverage with shielded modules
- Simple and time-saving, patented shield contacting with integral cable strain relief
- Halogen-free materials
- 3P,UL, CUL certified

Datasheet. Cat. 6 Connection Modules

Standards

IEC 60603-7: Electrical Characteristics of the Telecommunications Outlets

Draft ISO/IEC 11801 Second edition: ISO/IEC JTC 1/SC 25 N 780; May 2002

Final Draft prEN 50173-1 Second edition; June 2002

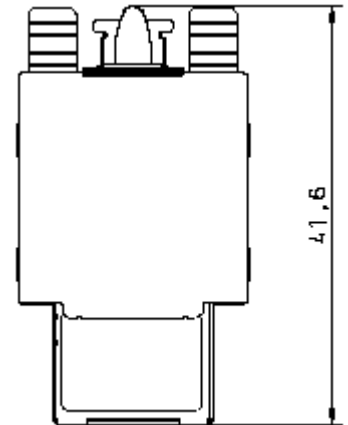
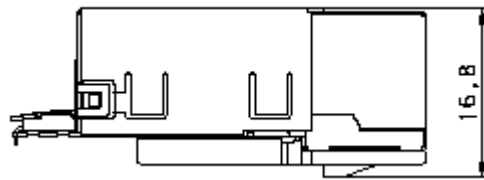
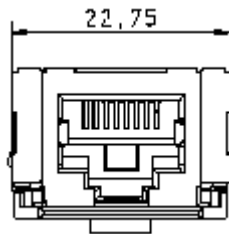
Mechanical Data

Number of RJ45 jacks	1
Contact material	CuSn
Contact surface	>0.76 µm gold over >1.2 µm nickel
Jack insulation material	Polycarbonate (UL-94-V0)
Number of IDC* connections	8 / jack
IDC contact material	CuSn, tin-plated
IDC insulation material	Polycarbonate (UL-94-V0)
Wire Ø	0.5 mm (AWG24) – 0.65 mm (AWG22) Strands = AWG26/7 – AWG24/7
Insulation Ø	0.8 mm – 1.6 mm
Wire strain relief	Through labyrinth in IDC block
Cable strain relief	Through cable ties
Shield contacting on plug	Through contact springs (on plugs)
Shield contacting on installation cable	Large surface with shield lance (on cable)
Earth contacting	2 contact fingers for flat plug 4.8 x 0.5 mm
Shield material	CuSn, tin-plated 2-4 µm

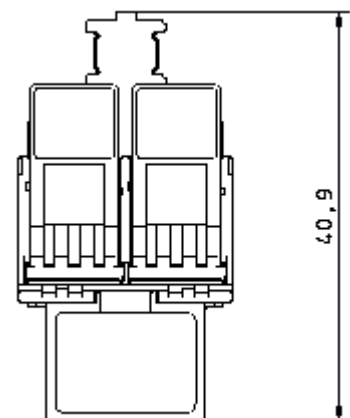
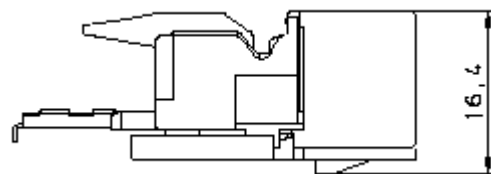
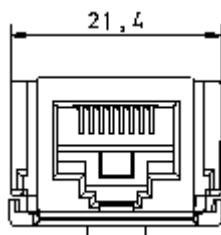
*IDC: Insulation Displacement Contact

Description	Standard value	Relevant standard	Typical value (at 20°C)
Mating cycles min.	>750	ISO/IEC 11801 2 nd Ed.	>1000
Insertion cycles installation cables	>20	ISO/IEC 11801 2 nd Ed.	>20

Dimensions, shielded



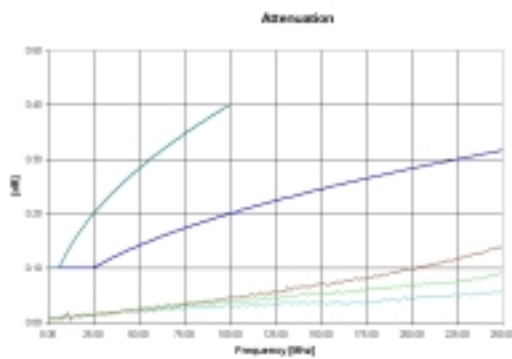
Dimensions, unshielded



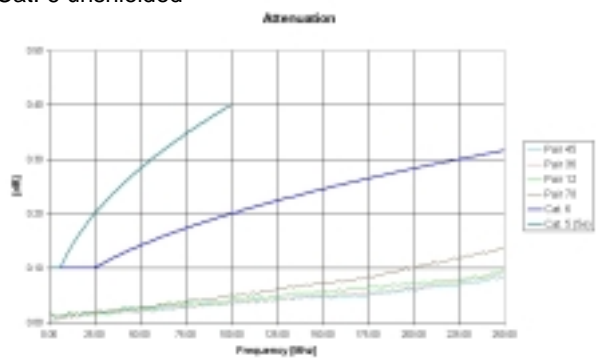
Electrical Data

Description	Standard value	Relevant standard	Typical value (at 20°C)
Electric strength	1000V DC or AC peak	IEC 60603-7	> 1000V eff
Insulation resistance	> 500 MΩ (500VDC)	IEC 60603-7	> 500 MΩ (500VDC)
Contact resistance	<200mΩ	IEC 60603-7	< 50mΩ
Transfer impedance		prEN 50173	
1 MHz	<100mΩ		< 20mΩ
10MHz	< 200mΩ		< 50mΩ
30MHz	< 620mΩ		< 200mΩ

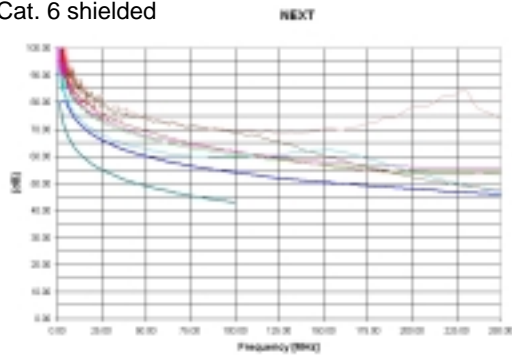
Cat. 6 shielded



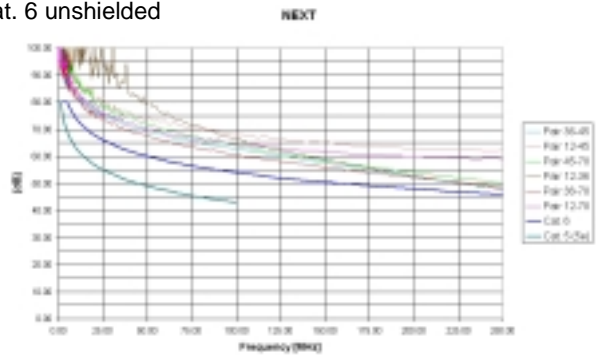
Cat. 6 unshielded



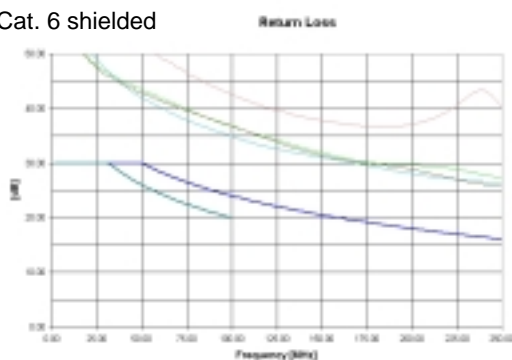
Cat. 6 shielded



Cat. 6 unshielded



Cat. 6 shielded



Cat. 6 unshielded

