



# 3M™ Volition™ Category 6A RJ45 STP Jack

## 3M Volition Category 6A RJ45 STP Jack with straight cable entry

The new Category 6A RJ45 Jack is a key component of the Volition Category 6A system, designed for Class E<sub>A</sub> and Category 6A twisted copper pairs in compliance with the most recent ISO/IEC, EN and TIA standards for Channel and Permanent Link configurations.

The Volition Category 6A RJ45 Jack is an innovation from 3M Telecommunications. The 360° shielding of the jack facilitates a worry-free Class E<sub>A</sub> / Category 6A installation. Its design allows an easy, tool-less termination on Volition Category 6A F/UTP, F/FTP and Category 7 S/FTP cables.

The parameter which causes most difficulty for Ethernet 10Gb/s over twisted pairs applications (10GBASE-T) is alien crosstalk, which is crosstalk between pairs in neighbouring cables. However, alien crosstalk relates not only to cables but also to RJ45 Jacks, in particular in cross connects or patch panels where many channels are adjacent.

The 360° shielding of the Volition Category 6A RJ45 Jacks acts like a Faraday screen around the RJ45 which gives unsurpassed protection against alien crosstalk. The quality of the 360° shielding is maintained in the connection to the cable thanks to the metal braid of the shielding cap. This method of wiring is without equal in reducing the noise between pairs in neighbouring cables.

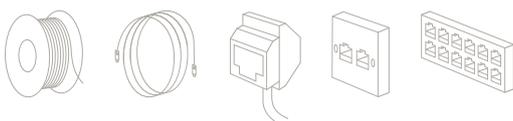
### Applications

- IEEE 802.3 10G BASE-T

### Standards

- ISO / IEC 11801 Edition 2, Am 1 & 2
- ISO / IEC 60603-7-5
- EN 50173-1
- ANSI/TIA 568C

## Technology built for business



### Features

- 360° metallic shielding
- 360° shielding is maintained in the connection to the cable because of the integral earth braid
- Tool-less termination
- Re-usable jack
- Separate wire guide
- Limited untwisting of pairs before termination
- Connector can be terminated with both solid and stranded wire
- Compact size
- Integral shutter

### Benefits

- Immunity to alien crosstalk
- Good transfer impedance to give immunity to electromagnetic interference
- Quality of connection by design, not dependent on tool condition or operator skills
- If a wiring mistake is made there is no need to use a new jack
- Minimised stripping length, with wires all the same length
- Very fast and safe termination process
- Enables 'jack to plug' cables to be manufactured using stranded conductors (for use in open office architectures)
- Easier cable management and more space and flexibility to ensure the cable minimum bend radius is never compromised
- Increased dust protection, especially during installation or in a dirty environment, no additional shuttering required on faceplates, allows direct mounting into floor boxes and protects jacks in the patch panel



## Specification

### Features

- Galvanised copper shielding as protection against the effects of alien crosstalk
- Galvanised copper cap for the rear of the jack
- Metal braid on cap gives 360° connection to cable screen
- Tool-less connection of all eight wires at one time by closing the metal locking wings
- Wire holder is labelled with both 568A and 568B wire maps
- Single forked contacts
- Keystone mounting
- Integrated shutter
- White colour on shutter (RAL 9010)

### Technical characteristics

Conforms to the Channel and Permanent Link performance parameters of Class Ea and Category 6A

Conductor diameter

Solid wires: 0,50 to 0,65 mm

Stranded wires: 7 x 0,15 to 0,20 mm

Maximum diameter of

wire insulation: 1,6 mm

Lead through resistance: < 200 mΩ

Insulation resistance: > 500 MΩ

Protection on contacts: 1,6 µm gold

### Electrical parameters (typical values)

### Margin for Permanent Link Amendment 2 ISO/IEC 11801 2nd edition: 2002 "Class Ea"

### Margins for Channel Amendment 1 ISO/IEC 11801 2nd edition: 2002 "Class Ea"

Insertion Loss	4%	7%
NEXT	3 dB	4 dB
PSNEXT	3.5 dB	6 dB
ACR-F	7	8
PSACR-F	9	10
Return Loss	5 dB	6 dB

## Ordering information

### 3M Volition K6A RJ45 Jack, STP

Supplied with a cable tie to hold the connector braid onto the cable shielding

### Ref. No.

VOL-OCK6A-SE8

VOL-OCK6A-SEB (bulk)



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