CATEGORY 5e
RJ45 SOLUTION

Category 5e RJ45 Solution

The Clipsal titanium® Category 5e Solution has stood the test of time for many years, and is still an ideal offer for the business, school or home requiring bandwidth up to 155 Mhz. The system is capable of supporting applications such as 155Mb/s ATM, Gigabit Ethernet, 622Mb/s ATM and others.

This solution includes cable, patch panels, patch cables, modular jacks as well as faceplates and cable management. It offers Class D performance and excellent headroom as indicated in the performance specifications. The product is UL Listed, and certificates are available on request. The Clipsal Lifetime Warranty is available upon application.

Clipsal titanium® Category 5e Patch Cord

The Clipsal titanium® Series Category 5e Patch Cord is a superior product delivering the best network performance when used in conjunction with other Clipsal titanium® Series Category 5e products.

The patch cord is constructed of high grade cable and quality RJ45 plugs. The RJ45 plugs are provided with a fully moulded boot and a moulded insert to ensure pair integrity. The fully moulded boot offers excellent strain relief ensuring that performance is not degraded when using the patch cord.

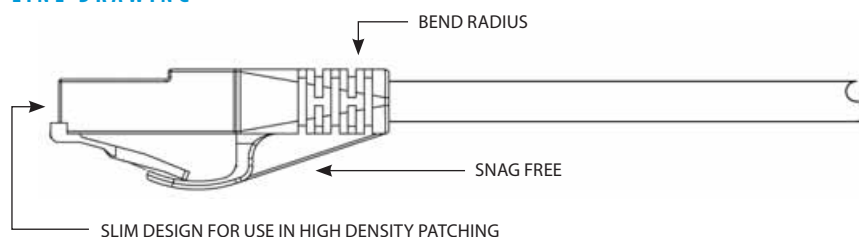Patch cords are available in multiple colours to help with circuit identification in the cabinet/rack.

RJ5A8/10PL, BU

TRANSMISSION SPECIFICATIONS

@100MHZ	Product Specification	Category 5e Standard
Crosstalk (–dB) – 2M	35.3	35.0
Crosstalk (–dB) – 5M	35.1	34.7
Crosstalk (–dB) –10M	34.8	34.5
Return Loss (– dB)	20.0	18.0

PRODUCT FEATURES
- Category 5e compliant to AS/NZS 3080: 2003 Class D.
- Moulded RJ45 plugs ensure stable performance.
- UL CMR fire rated jacket.
- ETL verified.
- Strain relief boot.
- Snag free design.

CUSTOMER BENEFITS
- Standards compliant.
- The fully moulded boot and insert not only ensures pair integrity but also provides an enhanced strain relief during installations or moves.
- Multiple colours allow for easier circuit identification and administration.

MECHANICAL CHARACTERISTICS OF CABLE

Cable	
Pair Count	**4 Pair individually colour coded with filler and PVC jacket**
Sequence	**Wiring sequences in 568 A**
Durability	**1,000 mating cycles**
RJ45 Plug	**Polycarbonate, FCC Part 68 Subpart F, UL 94V-0**
Plug Boot	**PVC**
Contact Material	**Phosphor bronze with 50 micro-inches gold over 100 micro-inches nickel**
Electrical	
Dielectric Strength	**100V RMS at 60Hz for 1 minute**
Voltage Rating	**150V a.c. maximum**
Current Rating	**1.5 A maximum**
Insulation	**1MΩ maximum**
Contact Resistance	**10MΩ maximum**

LINE DRAWING

BEND RADIUS

SNAG FREE

SLIM DESIGN FOR USE IN HIGH DENSITY PATCHING

CATALOGUE NUMBER	DESCRIPTION
RJ5A8/05PL (XX)	Clipsal titanium® Category 5e Modular Patch Cord, 0.5m
RJ5A8/10PL (XX)	Clipsal titanium® Category 5e Modular Patch Cord, 1.0m
RJ5A8/15PL (XX)	Clipsal titanium® Category 5e Modular Patch Cord, 1.5m
RJ5A8/20PL (XX)	Clipsal titanium® Category 5e Modular Patch Cord, 2.0m
RJ5A8/30PL (XX)	Clipsal titanium® Category 5e Modular Patch Cord, 3.0m
RJ5A8/50PL (XX)	Clipsal titanium® Category 5e Modular Patch Cord, 5.0m
RJ5A8/100PL (XX)	Clipsal titanium® Category 5e Modular Patch Cord, 10.0m
RJ88P	Category 5e RJ45 Plug, Pack of 100
(XX) for colours: (BU) Blue, (BK) Black, (GR) Green, (WE) White, (RD) Red, (GY) Grey, (YL) Yellow	

Clipsal titanium® Category 5e Jacks
Modular – Suits Clipsal Wall Plates

30RJ88SMA5

The Clipsal titanium® range of products are the next generation of data communications solutions.

These modular jacks are colour coded for both 568A and 568B standards and can be terminated using a Clipsal 110 tool (recommended). Clear wire retaining caps are supplied and can be used to provide additional cable strain relief.

PRODUCT FEATURES

- Fits all Clipsal style wall plates.
- Flexible locking tabs for easy insertion/removal from the wall plate.
- Universal colour coding for 568A and 568B Standards.
- Fully compliant to AS/NZS 3080:2003, ISO/IEC 11801 2002 and ANSI/TIA/EIA-568-B Series Connecting Hardware Standards.
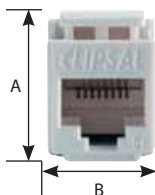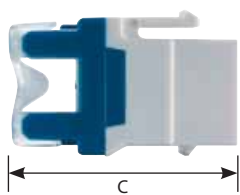- Wire retaining cap.
- ACMA compliant.

CUSTOMER BENEFITS

- Available in various colours allows for easier circuit identification and administration.
- The modules can be easily removed for reuse.

DIMENSIONS

Product	A	B	C
30RJ88SMA5	23mm	23mm	35mm

COLOUR AVAILABILITY

White (WE)	Black (BK)	Cream (CM)	Blue (BU)	Desert Sand (DS)	Soft Grey (SG)

Red (RD)	Green (GR)	Yellow (YL)

ELECTRICAL CHARACTERISTICS

Dielectric Strength	**1,000V RMS at 60Hz for 1 minute**
Current Rating	**1.5Amp maximum**
Insulation Resistance	**500MΩ minimum**
Contact Resistance	**2MΩ per contact**
Temperature Range	**-10˚C to +60˚C**
Transmission Performance	**Exceeds ISO/IEC 11801 Class D**
	AS/NZS 3080:2003 Class D

MECHANICAL CHARACTERISTICS

Modular Connector	
RJ45 8-Pin Connector	**FCC part 68, Subpart F and**
	IEC 60603-7 compliant
Durability	**750 insertion cycles minimum**
Material	**Phosphor bronze with 50 micro- inches of gold over 100 micro-inches nickel plating**
IDC Connector	
IDC Connector	**Suitable insulation of 22 to 24 AWG (0.64 to 0.41mm)**
Insulation Diameter (Wire)	**0.70 - 1.60mm**
Connector Material	**Phosphor bronze with nickel plating**
IDC Body and Cover Material	**Fire-retardant UL 94V-0, plastic**

CATALOGUE NUMBER	DESCRIPTION
30RJ88SMA5, (XX)	Category 5e 30 Mech Modular Jack
30RJSMA5/10, (XX)	Category 5e 30 Mech Modular Jack, 10 Pack (only available in White and Black)
(XX) for colours: WE (White), BK (Black), CM (Cream), BU (Blue), DS (Desert Sand), SG (Soft Grey), RD (Red), GR (Green), YL (Yellow)	

Clipsal titanium® Category 5e Jacks Keystone

The Clipsal titanium® range of products are the next generation of data communications solutions.

These modular jacks are colour coded for both 568A and 568B standards and can be terminated using a Clipsal 110 tool (recommended). Clear wire retaining caps are supplied and can be used to provide additional cable strain relief.

RJ88SMA5

PRODUCT FEATURES
- Universal colour coding for 568A and 568B Standards.
- Fully compliant to AS/NZS 3080:2003, ISO/IEC 11801 2002 and ANSI/TIA/EIA-568-B. Series Connecting Hardware Standards.
- Wire retaining cap.
- ACMA compliant.

CUSTOMER BENEFITS
- Available in various colours allows for easier circuit identification and administration.

DIMENSIONS

Product	A	B	C
RJ88SMA5	22mm	15mm	36mm

COLOUR AVAILABILITY

White (WE)	*Black (BK)*	*Soft Grey (SG)*

ELECTRICAL CHARACTERISTICS

Dielectric Strength	**1,000V RMS at 60Hz for 1 minute**
Current Rating	**1.5 A maximum**
Insulation Resistance	**500MΩ minimum**
Contact Resistance	**2MΩ per contact**
Temperature Range	**-10˚C to +60˚C**
Transmission Performance	**Exceeds ISO/IEC 11801 Class D AS/NZS 3080:2003 Class D**

MECHANICAL CHARACTERISTICS

Modular Connector	
RJ45 8-Pin Connector	**FCC part 68, Subpart F and IEC 60603-7 compliant**
Durability	**750 insertion cycles minimum**
Material	**Phosphor bronze with 50 micro- inches of gold over 100 micro-inches nickel plating**
IDC Connector	
IDC Connector	**Suitable insulation of 22 to 24 AWG (0.64 to 0.41mm)**
Insulation Diameter (Wire)	**0.70 - 1.60mm**
Connector Material	**Phosphor bronze with nickel plating**
IDC Body and Cover Material	**Fire-retardant UL 94V-0, plastic**

CATALOGUE NUMBER	DESCRIPTION
RJ88SMA5, (XX)	Category 5e Keystone Modular Jack
(XX) for colours: WE (White), BK (Black), SG (Soft Grey)	

Clipsal titanium® Category 5e Jacks
Shuttered Modular – Suits Clipsal Wall Plates

A

B

C

30RJ88SMA5SH

The Clipsal titanium® range of products are the next generation of data communications solutions.

These modular jacks are colour coded for both 568A and 568B standards and can be terminated using a Clipsal 110 tool (recommended). Clear wire retaining caps are supplied and can be used to provide additional cable strain relief.

DIMENSIONS

Product	A	B	C
30RJ88SMA5SH	23mm	23mm	35mm

COLOUR AVAILABILITY

White (WE) *Black (BK)* *Pink (PK)* *Blue (BU)* *Red (RD)* *Soft Grey (SG)*

Battleship Grey (GB) *Green (GR)* *Yellow (YL)*

PRODUCT FEATURES

- Fits all Clipsal style wall plates.
- Flexible locking tabs for easy insertion/removal from the wall plate.
- Universal colour coding for 568A and 568B Standards.
- IDC termination using Clipsal 110 tool.
- Fully compliant to AS/NZS 3080:2003, ISO/IEC 11801 2002 and ANSI/TIA/EIA-568-B. Series Connecting Hardware Standards.
- Patented shutter.
- Wire retaining cap.
- ACMA compliant.

CUSTOMER BENEFITS

- Available in various colours allows for easier circuit identification and administration.
- The modules can be easily removed for reuse.
- Prevents against accidental insertion, dust, spider webs etc.
- Complies with ASIF009 regarding areas with small children.

- IP22 rated.
- Prevents dust ingress.
- Protects against insect infestation.
- Deters foreign object insertion.

ELECTRICAL CHARACTERISTICS

Dielectric Strength	**1,000V RMS at 60Hz for 1 minute**
Current Rating	**1.5 A maximum**
Insulation Resistance	**500MΩ minimum**
Contact Resistance	**2MΩ per contact**
Temperature Range	**-10˚C to +60˚C**
Transmission Performance	**Exceeds ISO/IEC 11801 Class D AS/NZS 3080:2003 Class D**

MECHANICAL CHARACTERISTICS

Modular Connector

RJ45 8-Pin Connector	**FCC part 68, Subpart F and IEC 60603-7 compliant**
Durability	**750 insertion cycles minimum**
Material	**Phosphor bronze with 50 micro- inches of gold over 100 micro-inches nickel plating**

IDC Connector

IDC Connector	**Suitable insulation of 22 to 24 AWG (0.64 to 0.41mm)**
Insulation Diameter (Wire)	**0.70 - 1.60mm**
Connector Material	**Phosphor bronze with nickel plating**
IDC Body and Cover Material	**Fire-retardant UL 94V-0, plastic**

CATALOGUE NUMBER	DESCRIPTION
30RJ88SMA5SH, (XX)	Category 5e 30 Mech Shuttered Modular Jack
(XX) for colours: WE (White), BK (Black), PK (Pink), BU (Blue), RD (Red), SG (Soft Grey), GB (Battleship Grey), GR (Green), YL (Yellow)	

Clipsal titanium® Category 5e Jacks Shuttered Keystone

The Clipsal titanium® range of products are the next generation of data communications solutions.

These modular jacks are colour coded for both 568A and 568B standards and can be terminated using a Clipsal 110 tool (recommended). Clear wire retaining caps are supplied and can be used to provide additional cable strain relief.

RJ88SMA5SH

DIMENSIONS

Product	A	B	C
RJ88SMA5SH	22mm	15mm	36mm

COLOUR AVAILABILITY

White (WE) *Black (BK)* *Blue (BU)* *Green (GR)* *Red (RD)* *Soft Grey (SG)*

Yellow (YL)

PRODUCT FEATURES

- Universal colour-coding for 568A and 568B Standards.
- IDC termination using Clipsal 110 Tool.
- Fully compliant to AS/NZS 3080:2003, ISO/IEC 11801 2002 and ANSI/TIA/EIA-568-B. Series Connecting Hardware Standards.
- Patented shutter.
- Wire retaining cap.
- ACMA compliant.

CUSTOMER BENEFITS

- Available in various colours allows for easier circuit identification and administration.
- The modules can be easily removed for reuse.
- Prevents against accidental insertion, dust, spider webs, etc.

- IP22 rated.
- Prevents dust ingress.
- Protects against insect infestation.
- Deters foreign object insertion.

ELECTRICAL CHARACTERISTICS

Dielectric Strength	**1,000V RMS at 60Hz for 1 minute**
Current Rating	**1.5 A maximum**
Insulation Resistance	**500MΩ minimum**
Contact Resistance	**2MΩ per contact**
Temperature Range	**-10˚C to +60˚C**
Transmission Performance	**Exceeds ISO/IEC 11801 Class D** **AS/NZS 3080:2003 Class D**

MECHANICAL CHARACTERISTICS

Modular Connector

RJ45 8-Pin Connector	**FCC part 68, Subpart F and** **IEC 60603-7 compliant**
Durability	**750 insertion cycles minimum**
Material	**Phosphor bronze with 50 micro- inches of gold over 100 micro-inches nickel plating**

IDC Connector

IDC Connector	**Suitable insulation of 22 to 24 AWG** **(0.64 to 0.41mm)**
Insulation Diameter (Wire)	**0.70 - 1.60mm**
Connector Material	**Phosphor bronze with nickel plating**
IDC Body and Cover Material	**Fire-retardant UL 94V-0, plastic**

CATALOGUE NUMBER	DESCRIPTION
RJ88SMA5SH, (XX)	Category 5e Keystone Shuttered Modular Jack
(XX) for colours: WE (White), BK (Black), BU (Blue), GR (Green), RD (Red), SG (Soft Grey), YL (Yellow)	

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Clipsal titanium® Category 5e 16 & 24 Port Patch Panels

The Clipsal titanium® range of products feature individual Category 5e modular jacks that are colour coded for both 568A and 568B standards and can be terminated using a Clipsal 110 tool. Clear wire retaining caps are supplied and can be used to provide additional cable strain relief.

The patch panel comprises three designation-strip holders with a label kit supplied. Rear cable management tray, velcro cable ties, cage nuts and screws are also provided with the product.

RJ5A1/16PP

RJ5A1/24PP

ELECTRICAL CHARACTERISTICS

Dielectric Strength	**1,000V RMS at 60Hz for 1 minute**
Current Rating	**1.5 A maximum**
Insulation Resistance	**10MΩ minimum**
Contact Resistance	**2MΩ per contact**
Temperature Range	**-10˚C to +60˚C**
Transmission Performance	**Exceeds ISO/IEC 11801 Class D** **AS/NZS 3080:2003 Class D**

MECHANICAL CHARACTERISTICS

Modular Connector	
RJ45 8-Pin Connector	**FCC part 68, Subpart F and IEC 60603-7 compliant**
Durability	**750 insertion cycles minimum**
Material	**Phosphor bronze with 50 micro inches of gold over 100 micro-inches nickel plating**
IDC Connector	
IDC Connector	**Suitable insulation of 22 to 24 AWG (0.64 to 0.41mm)**
Insulation Diameter (Wire)	**0.70 - 1.60mm**
Connector Material	**Phosphor bronze with nickel plating**
IDC Body and Cover Material	**Fire-retardant, UL 94V-0, plastic**

PRODUCT FEATURES

- Powder-coated metal framework.
- Universal colour coding for 568A and 568B Standards.
- Removable rear cable management tray.
- Compatible with standard 19" equipment frames.
- IDC termination using Clipsal 110 tool.
- Fully compliant to AS/NZS 3080:2003, ISO/IEC 11801 Edition 2 2002 and ANSI/TIA/EIA-568-B. Series Connecting Hardware Standards.
- Individual removable modular jacks.
- Wire retaining cap.
- ACMA compliant.

CUSTOMER BENEFITS

- Complete with all mounting and cable fixing hardware.
- Rear cable management tray is supplied loose, allowing the installer to fit after termination.
- The front labelling system provides a clear and efficient means of identifying circuits.
- Powder coated metal frame is robust and protects the patch panel from corrosion and scratching.

CATALOGUE NUMBER	DESCRIPTION
RJ5A1/16PP	Category 5e, 16 Port Patch Panel
RJ5A1/24PP	Category 5e, 24 Port Patch Panel

Unloaded Configurable Patch Panel

The Clipsal Unloaded Configurable Patch Panel is a superior product delivering the best multimedia connectivity when used in conjunction with Clipsal Category 5e modular jacks.

The Clipsal Unloaded Configurable Patch Panel can be fully or partly loaded with Category 5e or Category 6 modular jacks or with any of the Clipsal 30-Mech style adaptors. Panels are metal constructed and powder coated for protection against scratches and rust.

RJ5H1/16PP

MECHANICAL CHARACTERISTICS

Panel Material	**1.6mm mild steel, powder coated**

DIMENSIONS

Product	Height	Width	Depth
RJ5H1/16PP	44mm	482mm	10mm

CONFIGURABLE PATCH PANEL OPTIONS

Catalogue Number	Description
30PFM	TV F-Type to F-Type (3GHz)
30FAVRWY	Audio Visual F-Type RCA Connector - Red, White, Yellow
30FAVRGB	Audio Visual F-Type RCA Connector - Red, Green, Blue
30FAVRWO	Audio Visual F-Type RCA Connector- Red, White, Orange
30FAVY	Audio Visual F-Type RCA Connector- Yellow
30FAVB	Audio Visual F-Type RCA Connector- Black
30P	Removeable Plug
30PID	ID Circuit Plug
30SPK/2	Audio Connector RCA Pair - Red and White
30RJ88SMA5	Category 5e 30 Mech Modular Jack
30RJ88SMA6	Category 6 30 Mech Modular Jack
30RJ88SMA5SH	Category 5e 30 Mech Modular Jack Shuttered
30RJ88SMA6SH	Category 6 30 Mech Modular Jack Shuttered
30RJ64SM	6 Way, 4 Contact Socket Mechanism (RJ11)
30RJ64SMT	6 Way, 4 Contact Socket Mechanism Telephone (RJ11)
30RJ66SM	6 Way, 6 Contact Socket Mechanism (RJ12)
30RJ66SMT	6 Way, 6 Contact Socket Mechanism Telephone (RJ12)
30FFPFMS	TV F-Type Female to PAL Female
30BCRM	Banana Connector - Red
30BCBM	Banana Connector - Black

PRODUCT FEATURES

- Powder coated to provide protection against scratches and rust.
- Graphite Grey.
- Designation strip label holder provided.
- Comes with cage nut sets for rack mounting.
- Accepts other 30-Mech adaptors such as RJ45, BNC, 75Ω coax, etc.
- Compatible with standard 19" equipment.

CUSTOMER BENEFITS

- The powder coated metal provides protection from scratches while being installed and stops rust from forming, ensuring the full life of the product.
- The panel is designed to accept all 30-Mech style adaptors and sockets.
- Being fully configurable, the panel is very cost effective.

CATALOGUE NUMBER	DESCRIPTION
RJ5H1/16PP	16 Port Unloaded Configurable Patch Panel

Patch Panel Labels

To complement the range of Clipsal titanium® patch panels, Clipsal Datacomms have introduced window label stickers. This value-added product has been designed specifically for Clipsal titanium® patch panels in the portfolio:

• RJ5A1/16PP

• RJ5A1/24PP.

Each pack contains ten A4 label sheets, five with small numbers on the left hand side (1 – 144) and five sheets with blank labels. There are 18 labels per sheet and each window label accommodates one block of eight data outlets. The stickers are finished in silver to match the front fascia of the patch panels. Most inkjet and laser printers will print on these labels.

Customers can download the printing software from clipsal.com, simply type in http://www.clipsal.com/label to take you to the product page and link to the software. The instructions found on the web page provide handy hints in formatting, printing and adhering the identification stickers.

The Clipsal titanium® patch panel window label stickers provide a professional finishing touch to any structured cabling system.

RJ5/6CTWLS

CATALOGUE NUMBER	DESCRIPTION
RJ5/6CTWLS	Patch Panel Window Label Stickers (10 Pack) to suit Clipsal titanium® Patch Panels

Clipsal titanium® C2000 Series Wall Plates

The Clipsal titanium® C2000 Flexiport Wall Plates are supplied with Clipsal titanium® Category 5e jacks. All Clipsal titanium® C2000 Flexiport Wall Plates come standard with designation labelling behind a clear removable window, and a sheet of commonly used icons.

IDENTIFICATION ICONS
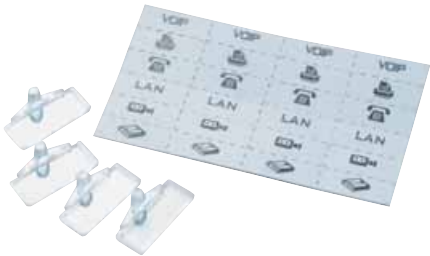Identification is accomplished with an icon sheet, pre-printed with symbols or text labels.

DIMENSIONS

Product	Height	Width
Grid Plate Only	68mm	110mm
Grid Plate with Surround	76mm	116mm

C2031HRJA5S

C2032HRJA5S

Labelling

PRODUCT FEATURES
- Grid plate comes with standard white colour surrounds.
- Protected clear designation label windows.
- Supplied complete with mounting screws.

CUSTOMER BENEFITS
- Complete with all mounting and fixing hardware.
- The front labelling system provides a clear and efficient means of identifying outlets.
- Flame-retardant polycarbonate material with finely polished finish for extra durability.

CATALOGUE NUMBER	DESCRIPTION
C2031HRJA5S,WE	1 Gang Category 5e RJ45 Keystone Wall Plates with Channel and Circuit ID slot
C2032HRJA5S,WE	2 Gang Category 5e RJ45 Keystone Wall Plates with Channel and Circuit ID slot

Clipsal titanium® Category 5e Cable

Clipsal titanium® Category 5e 4-Pair Cable consists of 24 AWG (0.57mm) solid copper conductors, insulated with high-density polyethylene. The insulated conductors are tightly twisted into pairs and covered with PVC material.

The Clipsal titanium® Category 5e 4-Pair Cable provides excellent high speed transmission, is certified to 155MHz and supports applications such as 155Mb/s ATM, 622Mb/s ATM and IEEE 802.3 1,000 Base-T (Gigabit Ethernet) standard, using parallel transmission technology. This product is UL listed with a CM fire rating.

2D4P5IPV3B, BU

Conductor
Insulation
Jacket
Rip Cord

PHYSICAL SPECIFICATIONS

| Rated Temperature (°C)	75
Product Standard Certification	UL File E 215065
Flammability Test	CM
Application	Horizontal wiring in LAN
Reference Standard	UL Subject 444, EIA/TIA568 & ISO/IEC 11801
Comply to RoHS Standard	Yes

CONSTRUCTION

Conductor	Solid bare copper (annealed)
Gauge (AWG)	24
Conductor Diameter Nom. (mm)	0.51
Insulation	HDPE
Average Thickness (mm)	0.18
Min. Point Thickness (mm)	0.15
Insulation Diameter (±0.10mm)	0.87
Twisting Lay Length (mm) (See Pair colour coding)	P1:13 ± 0.5 P2:21 ± 0.5 P3:15 ± 0.5 P4:17 ± 0.5
Cabling Lay Length (mm)	155 ± 5
Jacket	PVC
Average Thickness (±0.05mm)	0.58
Min. Point Thickness (mm)	0.46
Outer Diameter (±0.2mm)	5
Rip Cord	YES

MECHANICAL CHARACTERISTICS

Test Object	Jacket
Test Material	PVC
Before Tensile Strength (Mpa)	≥13.8
Aging Elongation (%)	≥100
Aging Condition (°C x hrs)	100C x 240H
After Tensile Strength (Mpa)	≥85% of original
Aging Elongation (%)	≥50% of original
Cold Bend (-20 ± 2°C x 4hrs)	No crack
Bend Radius (mm)	51

PAIR COLOUR CODING

Pair 1 (P1)	Blue - White/Blue
Pair 2 (P2)	Orange - White/Orange
Pair 3 (P3)	Green - White/Green
Pair 4 (P4)	Brown - White/Brown
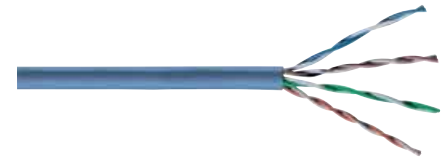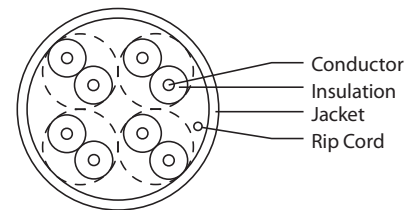
ELECTRICAL CHARACTERISTICS

Frequency (MHz)	Return Loss (dB)	Attenuation (dB/100m)	ACR (dB)	Delay (ns/100m)
0.772	/	1.8	65.2	/
1	20.0	2.0	63.3	570.0
4	23.0	4.1	52.2	/
8	24.5	5.3	46.5	/
10	25.0	6.5	43.8	545.0
16	25.0	8.2	39.0	/
20	25.0	9.3	36.5	/
25	24.3	10.4	33.9	/
31.25	23.6	11.7	31.2	/
62.5	21.5	17.0	21.4	/
100	20.1	22.0	13.2	538.0

Frequency (MHz)	NEXT (dB)	PSNEXT (dB/100m)	ELFEXT (dB/100m)	PSELFEXT (dB/100m)
0.772	67.0	64.0	/	/
1	65.3	62.3	63.8	60.8
4	56.3	53.3	51.8	48.8
8	51.8	48.8	45.7	42.7
10	50.3	47.3	43.8	40.8
16	47.2	44.2	39.7	36.7
20	45.8	42.8	37.8	34.8
25	44.3	41.3	35.8	32.8
31.25	42.9	39.3	33.9	30.9
62.5	38.4	35.4	27.9	24.9
100	35.2	32.3	23.8	20.8

1.0-100.0MHz Input Impedance (Ohms)	100+/-15
1.0-250.0MHz Delay Skew (ns/100m)	<=45
Pair-to-Ground Capacitance Unbalance (pF/100m)	330
Max. Conductor DC Resistance 20°C (Ohms/km)	93.8
Resistance Unbalance (%)	5
Nominal Velocity of Propagation (NVP,%)	69

| CATALOGUE NUMBER	DESCRIPTION
2D4P5IPV3B	Clipsal titanium® Category 5e, 4-Pair Cable, 24AWG, 305m
2D4P5IPV5B, BU	Clipsal titanium® Category 5e, 4-Pair Cable, 24AWG, 500m Box, (Blue Only)
Colours: (BK) Black, (BU) Blue, (GR) Green, (RD) Red, (GY) Grey, (YL) Yellow	

Clipsal titanium® Cable Management Panel Deep

The Clipsal titanium® Cable Management Panel is a 1 rack unit (1RU) item designed for use in 19" rack environments, managing patch cords that are connected between patch panels and active switches. The product is recommended for mounting between every second row of patch panels/active switches.

The unique clips provide a quick and simple means of installing the panel in the rack or cabinet. Each of the four cable management rings have been reinforced to accommodate the capacity for up to 50 patch cords. The rings have been designed to facilitate easy insertion and removal of the patch leads, necessary in dynamic environments where moves and changes are required.

RJ1UCMPC

DIMENSIONS

Product	A	B	C
RJ1UCMPC	44mm	482mm	100mm
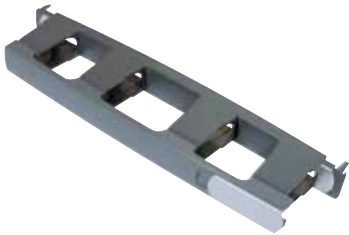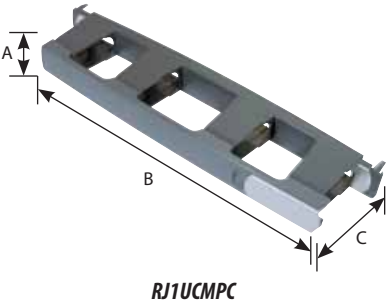
RJ1UCMPC
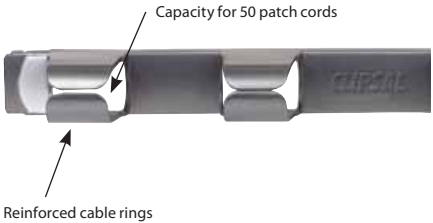
Clipsal titanium® styling

Rack clips for easy mounting

Capacity for 50 patch cords

Reinforced cable rings

PRODUCT FEATURES

- Clip on cover (patented).
- Rack mount clips eliminate the need for cage nuts and screws.
- Reinforced cable management rings can accommodate up to 50 patch cords.
- Cavities behind each ring provide additional space for cable slack.
- Additional depth on cable rings ensures compliance with minimum bend radius requirements.
- Complements Clipsal titanium® patch panel styling.
- 100mm cable ring depth.

CUSTOMER BENEFITS

- Quick product installation using rack mount clips.

| CATALOGUE NUMBER	DESCRIPTION
RJ1UCMPC	1RU Clipsal titanium® Cable Management Panel, Deep

Clipsal titanium® Cable Management Panel Shallow

The Clipsal titanium® Cable Management Panel is a 1 rack unit (1U) item designed for use in 19" rack environments, managing patch cords that are connected between patch panels and active switches. The product is recommended for mounting between every second row of patch panels/active switches.

The unique clips provide a quick and simple means of installing the panel in the rack or cabinet. Each of the four cable management rings have been reinforced to accommodate the capacity for up to 24 patch cords. The rings have been designed to facilitate easy insertion and removal of the patch leads, necessary in dynamic environments where moves and changes are required.

RJ1UCMPSC

DIMENSIONS

Product	A	B	C
RJ1UCMPSC	44mm	482mm	70mm
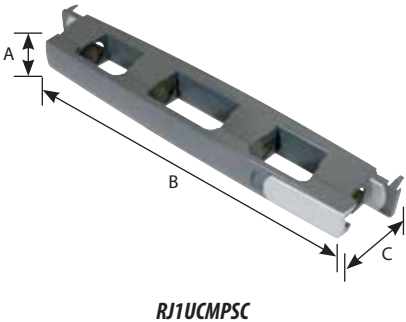
RJ1UCMPSC

Clipsal titanium® styling

Rack clips for easy mounting

Capacity for 24 patch cords

Reinforced cable rings

PRODUCT FEATURES

• Clip on cover (patented).

• Rack mount clips eliminate the need for cage nuts and screws.

• Reinforced cable management rings can accommodate up to 24 patch cords (recommended for Category 5e only).

• Cavities behind each ring provide additional space for cable slack.

• Additional depth on cable rings ensures compliance with minimum bend radius requirements.

• Complements Clipsal titanium® patch panel styling.

• 70mm cable ring depth.

CUSTOMER BENEFITS

• Quick product installation using rack mount clips.

CATALOGUE NUMBER	DESCRIPTION
RJ1UCMPSC	1RU Clipsal titanium® Cable Management Panel, Shallow

Clipsal Side Rings

The side rings are typically used in frames or cabinets to provide vertical patch cord management. These rings have several features that make them stand out. The "ring and lock" design utilises proven plastic hinge technology to guide patch cords. These rings have unique teeth locks that are easy to open and snap back to lock tight again, should you need to open the rings.

The rings can be mounted with patch panels or directly onto the vertical panel mounts (VPM) of the equipment frame.

MECHANICAL CHARACTERISTICS

Test Object	Jacket
Ring Material	Polypropylene, Graphite Grey

DIMENSIONS

Product	A	B	C
RJ1HUSSR	42mm	43mm	65mm
RJ1HUDSR	42mm	43mm	130mm

RJ1HUDSR

RJ1HUSSR

PRODUCT FEATURES

- Graphite Grey.
- Teeth locks that provide easy access and security for patch cords.
- Available in 1RU deep and shallow versions.

CUSTOMER BENEFITS

- The key benefit is the "Ring and Lock" design which not only makes the loading and unloading of patch cords or cables easier, but also secures them in place, keeping the cabinet neat and uncluttered. This makes circuit identification and administration for the customer far more efficient.
- The two rings' depths enable the installer to manage the cabinet or rack better, depending on the amount of patch cords being used.

CATALOGUE NUMBER	DESCRIPTION
RJ1HUSSR	1RU Shallow Side Ring
RJ1HUDSR	1RU Deep Side Ring

MUTOs

MULTI USER TELECOMMUNICATIONS OUTLETS (MUTO)

Clipsal provides a range of MUTO options, which are ideal in situations where a number of terminals are required in the one area.

Floor outlet housings can also be used in desktop applications where up to 12 services are required, and they fit all standard Clipsal face plates.

All Clipsal 2000 Series wall plates will fit into the housing and surrounds of the MUTO's.

224/1

*Loaded 224/1
Floor Outlet*

Loaded Faceplate

2000/3

2000H2

CATALOGUE NUMBER	DESCRIPTION
224/1	Floor Outlet Housing for two Standard Plates. Can be used on desktops
224/2	Floor Outlet Housing for four Standard Plates. Can be used on desktops
2000/2	Two Gang Flush Surround, Curved Sides. Suits all 2000 Series grids
2000/3	Three Gang Flush Surround, Curved Sides. Suits all 2000 Series grids
2000/4	Four Gang Flush Surround, Curved Sides. Suits all 2000 Series grids
2000H2	Horizontal Two Gang Flush Surround, Curved Sides. Suits all 2000 Series grids
2000H4	Horizontal Four Gang Flush Surround, Curved Sides. Suits all 2000 Series grids

Surface Mount Blocks

The Clipsal Surface Mount Blocks are suitable for desk or wall mounting. The port sizes range from one through to six ports and can be accommodated side-by-side to give greater port counts if necessary. The keystone modular products snap into place, in the block, to provide quick installation. The blocks come with screws and double-sided tape to provide an alternative mounting option.

TECHNICAL SPECIFICATIONS

	Height	Width	Depth
One Port	25.1mm	38.4mm	58mm
Two Port	25.1mm	62mm	58mm
Four Port	25.2mm	114.3mm	70mm
Six Port	35mm	170mm	110mm

SMRJ88A5/1,WE

SMRJ88A5/2,WE

SMRJ88A5/4,WE

SMRJ88A5/6,WE

PRODUCT FEATURES

- Surface mounted on either wall or desk.
- Accommodates modular products.
- Port labelling area provided.
- Category 5e connectors included.

CATALOGUE NUMBER	DESCRIPTION
SMRJ88A5/1,WE	Surface Mount Block One Port Category 5e RJ45
SMRJ88A5/2,WE	Surface Mount Block Two Port Category 5e RJ45
SMRJ88A5/4,WE	Surface Mount Block Four Port Category 5e RJ45
SMRJ88A5/6,WE	Surface Mount Block Six Port Category 5e RJ45