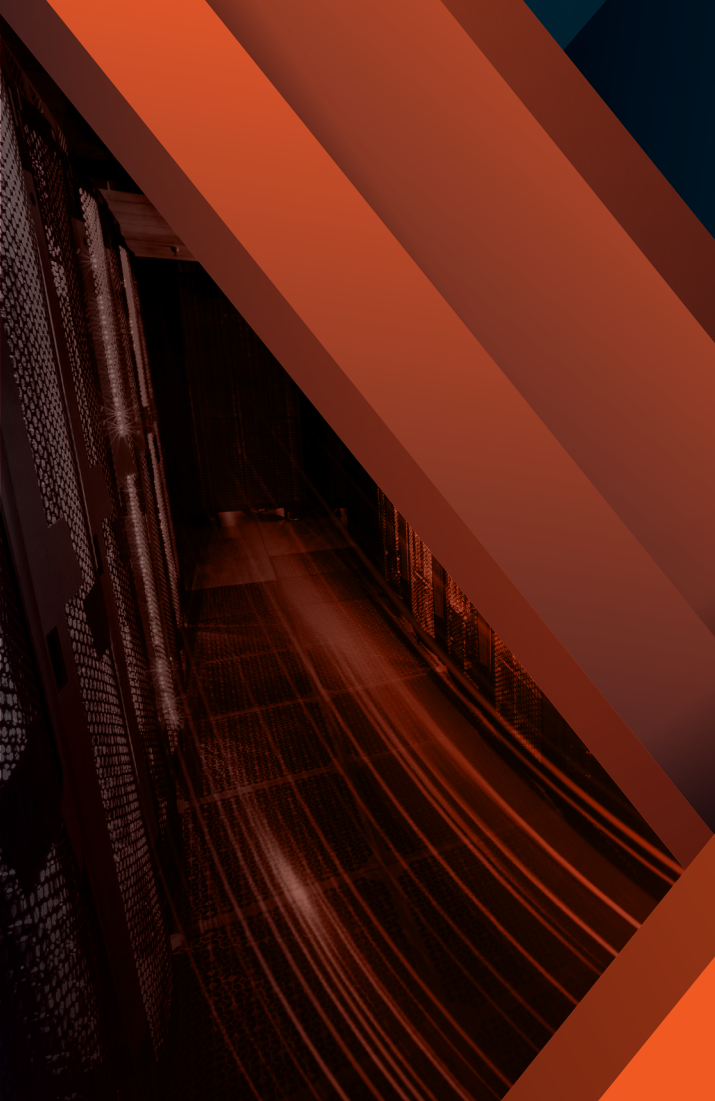




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# HypaConnect Connectivity Infrastructure for Enterprise ICT networks

Optical fibre and copper  
structured cabling

25  
  
HYPACONNECT



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# Get the leading edge with the HypaConnect HY Series Integrated Cabling Solution

**ICT networks support many critical business applications and are a key piece of building infrastructure. As well as supporting current business requirements, ICT networks need to be designed and installed with the view of supporting future bandwidth intensive applications.**

The HypaConnect HY series takes your network to the next level by providing industry leading performance, reliability, customer support, as well as improved installation time, thereby reducing the total cost of network ownership.

Get the leading edge for your network with the HypaConnect HY series.

## Fast and efficient installation

Termination times for the HY series modular jacks have been significantly reduced, increasing the efficiency of the overall installation and providing a reliable termination. The modular system also allows for easy network deployment, as well as catering for network expansion as the need arises. No network ever stays the same, therefore the HypaConnect ICS is built with manageability, scalability and flexibility in mind.

The HypaConnect ICS is able to reliably support all of today's networking technologies and at the same time cater for the future generations of technology that are always around the corner.

## Performance and reliability

HypaConnect ICS products represent the ultimate in high performance component engineering and systems design. In developing the HypaConnect ICS, the technology team set out to create the best performing solution for the delivery of diverse organizational network technologies across a single ubiquitous platform. The HypaConnect ICS represents years of research, testing and development.

The HypaConnect ICS component level specifications exceed the requirements of all global and locally recognized standards, including ISO/IEC, TIA and of course AS/NZS. The HypaConnect ICS combines the highest level of component specifications installed by WBT's highly trained and skilled network of ICS Certified Integrators.

Supported by our 25 year component and optional certified site warranty, you can have peace of mind knowing that your network will perform well into the future.

## Global coverage and local customer support

Along with having world class products to do the job, it's the Warren and Brown Technologies local support that really makes the difference. The HypaConnect solution is offered with design and installation support by means of our network of certified consultants and integrators.

The HypaConnect program is based upon the latest standards, technologies and best practices in design, installation and testing, which ensures that every ICS warranted site is comprehensively and professionally delivered.

Furthermore, this level of support is also backed up by stock availability and fast delivery for most common items, ensuring that your network is up and running as quickly and efficiently as possible.



### Voice & Data

- LAN
- Internet
- VoIP
- Analogue Phones
- Fax & PBX
- Wi-Fi Access Points



### Building Automation

- Lighting (sensors, control panels, etc)
- Fire alarm systems
- Time & Attendance
- Access Control (card & biometric readers)



### Security

- CCTV (analog & IP based systems)
- Motion Detectors
- Scan & sensor devices



### A/V (Audio & Video)

- LCD Display screens & signage
- CATV
- IPTV
- Inhouse video & broadcast (hotels)
- Intercom
- Overhead Paging



### Manufacturing / Industrial

- Infrared sensors
- Machinery control
- Air handlers & ventilation
- Temperature & Humidity sensors
- Remote Control Devices



### Other Low voltage systems

- Telemetry
- Nurse Call systems
- Patient Monitoring

## Total building ICT infrastructure support

The Warren & Brown Technologies HypaConnect Integrated Cabling Solution (ICS) supports multiple applications over a single cabling infrastructure. This allows for a simplified network design, using common items and a standard cabling topology.

This innovative approach, simplifies network deployment and operations and reduces costs associated with installing and maintaining multiple cabling networks.

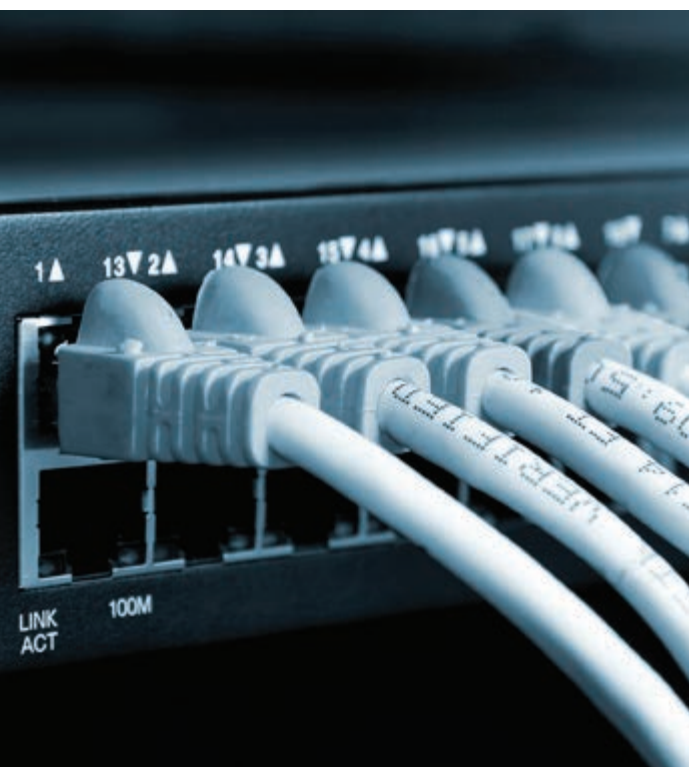
The HypaConnect HY series ICS has been tested and designed to support many ICT applications, as well as PoE and PoE+.

## Copper and optical fibre infrastructure

The HypaConnect Integrated Cabling Solution (ICS) from Warren & Brown Technologies combines the latest products and solutions from our optical fibre and copper structured cabling portfolios into a single solution offering, backed up by an optional 25 year certified site warranty. Every ICS is designed and tested against the latest version of the ISO/IEC 11801 standard. Combined with our comprehensive HypaConnect certification program, based on best practice, the result is world class performance and reliability.

In addition, the ICS is also backed up by a network of designers, consultants and integrators. All the products contained in this catalogue are suitable for a variety of networks, including but not limited to: voice and data, building automation, security and audio/visual.

The complete end-to-end optical fibre cabling solution is also included in the range of the HypaConnect ICS. Please refer to our optical fibre catalogue or website for more information.



## The Warren & Brown HypaConnect ICS warranty

The WBT HypaConnect ICS provides performance defined by the relevant cabling standards at the time of the design. For example, if the system is made up of category 6A cables and connectors, is designed and tested against the latest version of the ISO/IEC 11801, at the completion of the project, the system is guaranteed to deliver performance to this standard for the life of the warranty.

### Features and conditions of the HypaConnect ICS Warranty:

- 25-year component and optional certified site warranty. Please refer to the HypaConnect warranty T&C's for eligibility
- Covers both copper and optical fibre infrastructures
- Includes the replacement cost of ICS components and labour in the event of a valid warranty claim
- Is designed, installed and tested by WBT HypaConnect Certified Integrators, who have successfully completed the ICS Training program. WBT have certified integrators that are able to integrate the myriad of networks and technologies onto the ICS
- Is comprised entirely of WBT ICS products, which are factory backed by the manufacturer
- The installed link must pass the field test according to the relevant standards (test equipment is specified to make it even more convenient)
- Channel Warranty must also include WBT patch cords at time of installation

For further info BT technical sales consultants.



# RJ45 modular jacks

**HypaConnect modular RJ45 jacks meet and exceed technical specifications outlined in ISO/IEC 11801. Featuring a simplified and fast termination method, the HY and H2 series RJ45 modular jacks are user friendly and provide excellent performance and reliability. Suitable for a variety of cable types, these RJ45 jacks, are a versatile and reliable solution for a variety of network applications.**

## Category 6A UTP modular jack (unshielded)



HypaConnect category 6A UTP modular jacks have been designed to simplify and accelerate network deployment. These unshielded modular jack/outlets, meet or exceed ISO/IEC 11801 system performance for Class EA networks (10G, 500MHz) and category 6A connectivity. Used with unshielded cable (U/UTP), these modular jacks are easy to install in modular patch panels, wall outlets or floor distributors.

- Toolless, easy and fast to terminate options available
- Easy visual inspection of the wiring colour code to ensure every connection is correct
- Universal keystone format allowing multiple mounting options
- Optimised printed circuit design for improved high frequency crosstalk performance
- Suitable for PoE and PoE+ applications
- UTP, category 6A unshielded RJ45 modular jack, keystone
- Meets or exceeds ISO/IEC 11801, ANSI/TIA 568-C.2
- ACMA compliant – RCM
- Class EA, 500MHz, 10G



PART NO.	DESCRIPTION
66340022WHT	Category 6A unshielded jack, RJ45, with shutter, white, toolless, HZ series



PART NO.	DESCRIPTION	
66340024WHT	Category 6A unshielded jack, RJ45, white, toolless, HZ series	
66340024BLK	Category 6A unshielded jack, RJ45, black, toolless, HZ series	

## Category 6A STP modular jack (shielded)

HypaConnect category 6A STP modular jacks have been designed to simplify and accelerate network deployment. These fully shielded modular jacks meet or exceed ISO/IEC 11801 system performance for Class EA networks (10G, 500MHz) and category 6A connectivity. Used with shielded cable (U/FTP, F/UTP or S/FTP), these modular jacks are easy to install in modular patch panels, wall outlets or floor distributors.





CAT6A shielded keystone jacks are designed to easily snap in and out of wall outlets, patch panels and surface mount boxes.

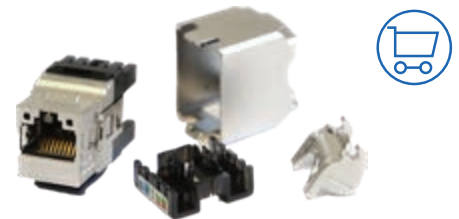
STP CAT6A keystone jacks come with T568A/568B colour label and fully comply with connecting hardware transmission performance of ISO/IEC 11801-1 and ANSI/TIA-568-C.2 for Return loss, Insertion loss, NEXT loss, FEXT loss, TCL, TCTL, PSANEXT loss, and PSAFEXT loss up to 500MHz.

The unique structure provides an efficient and effective method of reducing alien crosstalk from neighbouring connectors.

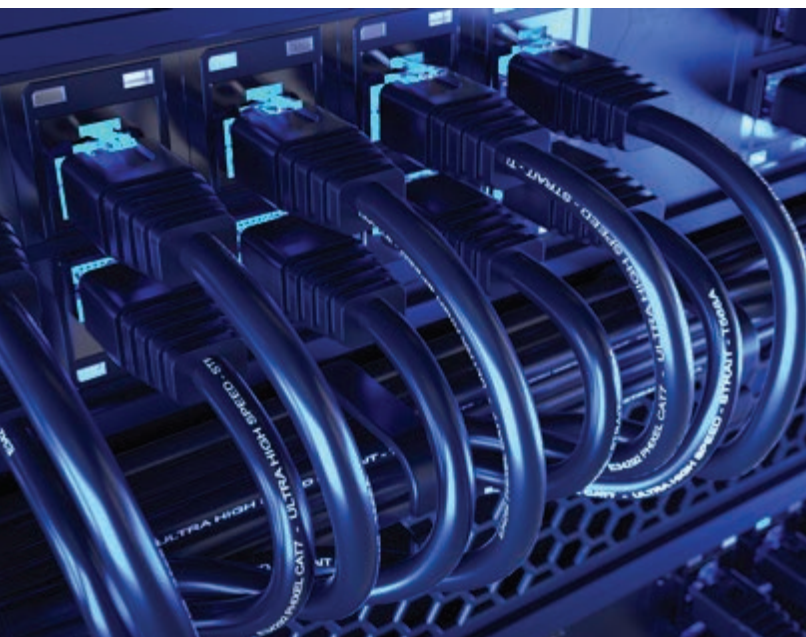
- Easy visual inspection of the wiring colour code to ensure every connection is correct
- Can be terminated with standard IDC termination tool or with the HY series terminating tool. Toolless, easy and fast to terminate options available (HZ series)
- Universal keystone format allows multiple mounting options
- Optimised printed circuit design for improved high frequency crosstalk performance
- Secure metal contact provides earthing integrity at the patch panel
- ACMA compliant – RCM
- Class EA, 500MHz, 10GSTP, category 6A shielded RJ45 modular jack, keystone




PART NO.	DESCRIPTION
66340023BLK	Category 6A shielded jack, RJ45, with shutter, black, HZ series 
66340023BLU	Category 6A shielded jack, RJ45, with shutter, blue, HZ series 
66340023RED	Category 6A shielded jack, RJ45, with shutter, red, HZ series 
66340023WHT	Category 6A shielded jack, RJ45, with shutter, white, HZ series 



PART NO.	DESCRIPTION
66340013	Category 6A shielded jack, RJ45, keystone, HY series 



PART NO.	DESCRIPTION
66340027	Category 6A shielded, keystone, toolless, HZ series 

**Bezels for installing jacks into outlets are also available separately.**



## Category 6 UTP modular jack (unshielded)

These unshielded modular jacks, meet or exceed ISO/IEC 11801 system performance for Class E networks and category 6 component connectivity. Used with unshielded cable (U/UTP), these modular jacks are easy to install in modular patch panels, wall outlets or floor distributors.

- Equipped with a translucent wire management cap
- Can be terminated with standard IDC termination tool or with the HY series terminating tool
- Easy visual inspection of the wiring colour code to ensure every connection is correct
- Universal keystone format allows multiple mounting options
- UTP, category 6 unshielded RJ45 modular jack
- Meets or exceeds ISO/IEC 11801, ANSI/TIA 568-C.2
- ACMA compliant – RCM
- Class E, 250MHz, 1G



PART NO.	DESCRIPTION	
66340017	Category 6 unshielded jack, RJ45, white, HY series	
66340020	,Category 6 unshielded jack, RJ45, toolless white, HY series	
66340024WHT	,Category 6A unshielded jack, RJ45, white toolless, HZVseries	



PART NO.	DESCRIPTION	
66340021BLK	Category 6 unshielded jack, RJ45, black, HZ series, 180° cable entry	
66340021WHT	Category 6 unshielded jack, RJ45, white, HZ series, 180° cable entry	

Use standard punchdown or 62x45 termination tool for 66340021WHT



# RJ45 couplers

The HypaConnect RJ45 couplers are a female to female outlet, which provide a direct connection for RJ45 patch cords. These modular couplers can be mounted directly into patch panels or consolidation points and do not require any field termination. They can be used to provide link extensions and transition between patch cords. They meet performance requirements of ISO/IEC 11801 and are a versatile and reliable solution for a variety of network applications.

## Category 6A STP RJ45 coupler (shielded)

The HY series RJ45 category 6A shielded coupler is a female to female outlet, which provides a direct connection between RJ45 patch cords. These fully shielded couplers, are suitable for connecting RJ45 category 6A STP patch cords and meet performance requirements of ISO/IEC 11801, Class EA.

- Category 6A RJ45 coupler female/female
- Applications: cross connect or consolidation point
- Shielded coupler with high EMC performance
- Class EA link performance - 10G, 500Mhz
- Direct connection without tools



PART NO.	DESCRIPTION
66222023	Category 6A, shielded coupler RJ45, F-F

## Category 6 RJ45 coupler (unshielded & shielded)

The HY series RJ45 category 6 couplers are a female to female outlet, which provide a direct connection between RJ45 patch cords. Available as either shielded or unshielded options, these couplers are suitable for connecting RJ45 patch cords and meet performance requirements of ISO/IEC 11801, Class E.

- Category 6 RJ45 coupler female/female – unshielded
- Category 6 RJ45 coupler female/female - shielded
- Applications: cross connect or consolidation point
- Shielded coupler has high EMC performance
- Class E link performance – 1G, 250Mhz
- Direct connection without tools



PART NO.	DESCRIPTION
66222024	Category 6, unshielded coupler RJ45, F-F
66222025	Category 6, shielded coupler RJ45, F-F




# Category 6A RJ45 field installable connectors

**RJ45 category 6A field installable connectors provide great flexibility in copper cabling networks. Suitable for office networks, data centres or home cabling systems, these connectors can be installed in less than 2 minutes, without any special tools. As well as being able to support PoE and PoE+, these connectors are ideal for network repairs or custom cable lengths.**

- Shielded and unshielded connector options
- Suits a variety of copper conductor sizes
- Connector strain relief
- Easy to terminate in less than 2 minutes
- Supreme reliability
- Suitable for PoE and PoE+ applications
- Complies with ISO/IEC 11801
- Used for category 6A, 10G, 500MHz Class EA networks

## Category 6A RJ45 connector (shielded)

PART NO.	DESCRIPTION	
TGJ00026A2110	MFP8 T568A Category 6A, AWG 24/1-22/1, AWG 27/7-22/7, incl. pre-assembled dust protection cap	
TGJ00026A2111	MFP8 T568B Category 6A, AWG 24/1-22/1, AWG 27/7-22/7, incl. pre-assembled dust protection cap	



## Category 6A RJ45 connector (unshielded)

PART NO.	DESCRIPTION	
TGJ00026A3110	UFP8 T568A Category 6A, AWG 24/1-23/1, AWG 27/7-23/7	
TGJ00026A3111	UFP8 T568B Category 6A, AWG 24/1-23/1, AWG 27/7-23/7	
TGJ00026A3112	UFP8 T568A Category 6A, AWG 23/1-22/1, AWG 23/7-22/7	
TGJ00026A3113	UFP8 T568A Category 6A, AWG 23/1-22/1, AWG 23/7-22/8	



### Long release latch

Insertion and withdrawal made easy in confined spaces

### Adjustable strain relief

Suitable for cable diameters from 5.5-8.5mm

### Standardised plug interface

Conforming to IEC 60603-7-41

### Pre-assembled protection cap

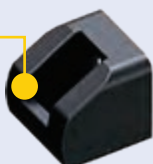
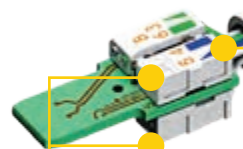
Effective protection of contacts from dirt and damage in transit

### Piercing contacts

Suitable for conductor cross-sections AWG27/7-22/7; AWG24/1-22/1

### Four-chamber wire manager

Available with colour code T568A or T568B



# Data outlets

Warren and Brown Technologies offer a wide range of Data Outlets which can be used for various applications. Some of the modular data outlets allow for CAT6A AMJ and UMJ modules and couplers to be installed for flexible use.

Data Outlets for CAT5E and CAT6 keystones are also available which allow these to be installed with a bezel.

## Modular outlets, standard

Data outlets (telecommunication outlets) are designed to accept HY series category 6 and category 6A jacks. These outlets contain multiple cable entries and can be wall or surface mounted. They are an effective solution for providing an interface between horizontal cabling and equipment patch cords used in workstation areas.

- Unloaded – HY series jacks are purchased separately
- Easy to install, and can be wall or surface mounted
- Single or dual port options



PART NO.	DESCRIPTION	
66090017	Modular outlet, standard, single port	
66090019	Modular outlet, standard, dual port	

## Modular outlets, shuttered

Modular outlets (telecommunication outlets) are designed to accept HY series category 6A and category 6 jacks. These outlets contain multiple cable entries and can be wall or surface mounted. They are an effective solution for providing an interface between horizontal cabling and equipment patch cords used in workstation areas.

- Unloaded – HY series jacks are purchased separately
- Easy to install, and can be wall or surface mounted
- Single or dual port options
- Shuttered design



PART NO.	DESCRIPTION	
66090018	Modular outlet, shuttered, single port	
66090020	Modular outlet, shuttered, dual port	



## Wall plates, 8P socket

A mounting plate for installation of one or two modular sockets, on a cavity wall (mounting bracket, available separately). Can also be mounted on a solid wall using a 32mm mounting block. Modular sockets; available separately.

- Mounting plate for installation of modular sockets
- Features a clip-on front cover plate
- The plate can be mounted on a cavity or solid wall
- Supplied as a pack of 10 pcs



PART NO.	DESCRIPTION	
26800138	Plate, wall 8P socket single (bag of 10)	
26800139	Plate, wall 8P socket dual (bag of 10)	

## Bezels, adaptor for Clipsal wall plates

Used to fit a keystone socket to a Clipsal wall plate.

PART NO.	COLOUR	DESCRIPTION
26800136	White	
26800136BLU	Blue	
26800136GRY	Grey	Bag of 10
26800136GRN	Green	
26800136BLK	Black	
26800136ORN	Orange	



# Floor distributors

Floor distributors provide great flexibility in office areas where moves, additions and changes are constantly undertaken. As an intermediary cabling point in a back bone network, floor distributors provide another connection point for housing modular jacks and couplers.

They are suitable as cable distributors or as connection devices for groups of participants in either 6, 8 or 12 port variations.

## Floor distributor - modular system

The HY series 6 and 12 port floor distributors, also known as consolidation points (CP), provides great flexibility in office networks for easy Moves, Additions and Changes (MAC's).

It is an additional point in a permanent link, which allows for quick network modifications and is ideal for dynamic work environments.

- Modular solution
- Generally used as an intermediary point between patch panels and wall outlets
- Can be mounted in the ceiling, cabinet, desktop, etc
- 6 port and 12 port options
- Accepts HY series modular jacks or couplers, which are purchased separately



PART NO.	DESCRIPTION	
66090021	6 port modular floor distributor for hy series jacks or couplers	
66090022	12 port modular floor distributor for hy series jacks or couplers	

## Category 6 floor distributor, 8 ports (unshielded)

The 8 port category 6 unshielded floor distributor, also known as a consolidation point (CP), provides great flexibility in office networks for easy Moves, Additions and Changes (MAC's). It is an additional point in a permanent link, which allows for quick network modifications and is ideal for dynamic work environments.

- Generally used as an intermediary point between patch panels and wall outlets
- Can be mounted in the ceiling, cabinet, desktop, etc
- 8 ports
- Category 6 shielded, 1G ethernet, Class E networks, 250Mhz
- Standards compliant



PART NO.	DESCRIPTION
66090023	Category 6 unshielded, 8 port, floor distributor (CP)

## Category 6A floor distributor, 8 or 12 ports, RJ45 (shielded)



PART NO.	DESCRIPTION	
66090024	CAT6A STP floor distributor, 8 ports, RJ45	
66090025	CAT6A STP floor distributor, 12 ports, RJ45	

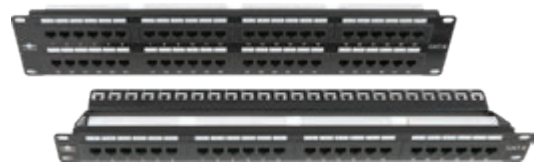
# Patch panels



Patch panels are installed in a data or communications rack with 19" mounting rails and provide connectivity for RJ45 category 6 or category 6A data services. HypaConnect HY series modular patch panels are easy to install in any network environment. The rear cable support bar provides a tie down and cable management point for LAN cable and the front patching fields contain a labeling area for identifying connections. HypaConnect patch panels are modular and are provided in loaded and unloaded versions. The unloaded panels perfectly suit the HY series modular jacks, including category 6A STP and category 6A UTP, which are ordered separately. The loaded category 6 UTP patch panels provide direct termination on to the patch panel, by means of an IDC termination tool.

## Category 6 loaded patch panel (unshielded, RJ45)

The HypaConnect HY series category 6 UTP Patch panel is easy to install and terminate in any network environment. The rear cable support bar provides a tie down and cable management point for LAN cable and the front patching field contains a labelling area for identifying connections. Available as either a 1RU, 24 Port or 2RU, 48 port versions, the HY patch panel series provides great flexibility for your network. This patch panel is suitable for unshielded cable (U/UTP), which is terminated onto the patch panel using a standard IDC termination tool.

- Category 6 unshielded, loaded patch panel
- Available in 1RU 24 port or 2RU 48 port
- Suitable for 19" mounting formats
- Rear cable management support bar
- IDC connectors for easy termination
- Supports 23AWG cable
- Colour coding for TIA 568 A or B usage
- Steel powder coated panel
- Meets or exceeds ISO/IEC 11801, ANSI/TIA-568-C.2
- ACMA compliant – RCM
- Class E, 250MHz, 1G



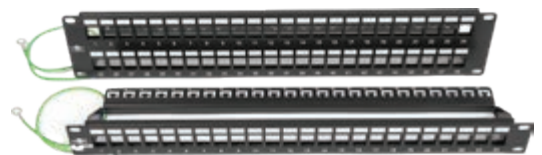
PART NO.	DESCRIPTION
TC402-41	Category 6 unshielded 19" loaded patch panel 24 ports 1RU with rear cable management support bar, HY series 
TC402-42	Category 6 unshielded 19" loaded patch panel 48 ports 2RU with rear cable management support bar, HY series 



## Patch panel (shielded, modular, RJ45) for category 6A jacks & couplers

The HypaConnect HY series shielded modular patch panel is easy to install in any network environment. The rear cable support bar provides a tie down and cable management point for LAN cable and the front patching fields contain a labelling area for identifying connections. These patch panels are unloaded and suit the HY series category 6A shielded modular jacks & couplers, which are ordered separately.

These patch panels are provided with all mounting hardware.

- Unloaded patch panel
- Available in 1RU 24 port or 2RU 48 port
- Suitable for 19" mounting formats
- Rear cable management support bar
- Steel powder coated panel
- Suits HY & HZ series modular jacks – category 6A STP
- Suits HY & HZ series couplers



PART NO.	DESCRIPTION
TC402-44	1RU, 24 port, modular patch panel with cable support bar, 19" rack mount, unloaded 
TC402-46	2RU, 48 port, modular patch panel with cable support bar, 19" rack mount, unloaded 



## Patch panel (unshielded or shielded, modular, RJ45) for category 6 & 6A jacks & couplers

The HypaConnect HY series unshielded modular patch panel is easy to install in any network environment. The rear cable support bar provides a tie down and cable management point for LAN cable and the front patching field contains a labelling area for identifying connections. These patch panels are unloaded and suit the HY series category 6, 6A modular jacks & couplers, which are ordered separately.

These patch panels are provided with all mounting hardware.

- Unloaded patch panel
- Available in 1RU 24 port or 2RU 48 port
- Suitable for 19" mounting formats
- Rear cable management support bar
- Steel powder coated panel
- Suits HY & HZ series modular jacks – category 6, 6A UTP & STP
- Suits HY & HZ series couplers





PART NO.	DESCRIPTION	
TC402-43	1RU, 24 port, modular patch panel with cable support bar, 19" rack mount, unloaded	
TC402-45	2RU, 48 port, modular patch panel with cable support bar, 19" rack mount, unloaded	

## 19" rack mount angled patch panel

- Angled patch panels ensure proper bend radius control
- Minimizes the need for horizontal cable managers
- Mounts into standard rack with 19" mounting rails
- Accepts HypaConnect modular jacks
- Easy front access to installed modules for moves, adds and changes
- Rear cable support and management
- Vertical cable management options available to suit




PART NO.	DESCRIPTION	
TC402A0101	1RU – 24 port, black	
TC402A0201	2RU – 48 port, black	
TC402A0101HC	1RU – 24 port, black	

## 19" rack mount modular patch panel

- High Density - 48 ports in 1RU, RJ45
- Suitable for use with H2 series jacks
- Non-powder coated finish



PART NO.	DESCRIPTION	
TC402F0150P	1RU - 48 ports modular patch panel	



# Patch cords

HypaConnect HY series patch cords provide unparalleled performance and reliability. With solutions in category 6, category 6A unshielded and shielded along with many innovative options, including reduced (mini) diameter patch cords, there is a solution for any application.

## Category 6A shielded patch cords, mini, AWG28, U/FTP, LSZH

Category 6A mini shielded patch cords (U/FTP) allow for data transmission between patch panels, outlets and/or IT equipment. Shielded U/FTP patch cords feature individually shielded pairs, providing optimum protection against EMI. The smaller conductor size (AWG28) reduces the overall patch cord diameter, when compared to standard category 6A shielded patch cords, thereby reducing congestion around patching fields and cable managers, providing greater flexibility.

- Snagless moulded patch cords - category 6A – 500 MHz, 10G
- Category 6A shielded – U/FTP
- Available in various lengths
- Suitable for 10G Ethernet
- LSZH outer sheath
- ACMA compliant – RCM
- Meets category 6A channel link transmission performance requirements of ISO/IEC 11801 and ANSI/TIA 568-C.2
- Suitable for PoE & PoE+
- AWG28 copper conductor size
- Patch cord OD – 5.5mm
- Approx. 15-20% smaller in diameter than regular category 6A S/FTP patch cords, which are approx. 6.5mm in OD
- Note - permanent link de-rating required



LENGTH	PART NO. 1	2	COLOUR
0.3m	660821003		
0.5m	660821005	BLU	Blue
		GRY	Grey
1.0m	66082101	WHT	White
1.5m	660821015	GRN	Green
		YEL	Yellow
2.0m	66082102	RED	Red
3.0m	66082103	BLK	Black
5.0m	66082105	PNK	Pink
		ORN	Orange
7.5m	660821075		

Ex. Mini category 6A U/FTP patch cord, 1.5m, blue: **P/N 660821015BLU**

## Category 6A unshielded patch cords, mini, AWG28, U/UTP, LSZH

The Mini CAT6A U/UTP patch cords from WBT, provide a superior solution when compared to standard patch cords. The mini CAT6A unshielded patch cords provide the same high level of performance as standard CAT6A patch cords, with the added benefit of being 50% smaller in diameter. In addition, the flexible LSZH outer sheath enables the patch cords to be easily routed and connected into patching fields. As with all WBT patch cords, the mini CAT6A unshielded patch cords meet all the relevant cabling standards and provide reliable connectivity for Class EA (10Gbps) networks.

- U/UTP cable – unshielded
- Exceeds CAT6A technical and performance specifications as per ISO/IEC 11801 and EIA/TIA 568-C
- ACMA compliant - RCM
- LSZH outer sheath
- Copper - AWG28
- Suitable for Class EA (10Gbps) networks
- Flexible and extremely easy to work with
- Approx. 50% smaller in diameter than standard CAT6A (3.5mm outer diameter)



LENGTH	PART NO. 1	2	COLOUR
0.3m	660811003		
0.5m	660811005		
1.0m	66081101		
1.5m	660811015		
2.0m	66081102		
2.5m	660811025	BLU	Blue
3.0m	66081103		
5.0m	66081105		
7.0m	66081107		
10.0m	66081110		

Ex. Mini category 6A U/UTP patch cord, 1.5m, blue: **P/N 660811015BLU**

## Category 6 unshielded patch cords, mini, AWG28, U/UTP, LSZH

Mini category 6 U/UTP patch cords provide a superior solution when compared to standard category 6 U/UTP patch cords. Mini category 6 unshielded patch cords provide the same high level of performance as standard category 6 patch cords, with the added benefit of being 50% smaller in diameter. In addition, the flexible LSZH outer sheath enables the patch cords to be easily routed and connected into patching fields.

- Meets category 6 channel link performance specifications as per ISO/IEC 11801 and ANSI/TIA 568-C.2
- ACMA compliant, RCM tick
- LSZH outer sheath
- Copper – AWG28
- Suitable for Class E (1Gbps) networks
- Flexible and extremely easy to work with
- 50% smaller in diameter than standard category 6 (3.5mm outer diameter)
- Note - permanent link de-rating required



LENGTH	PART NO. 1	2	COLOUR
0.3m	660614003	+	BLU Blue
0.5m	660614005		GRY Grey
1.0m	66061401		WHT White
1.5m	660614015		GRN Green
2.0m	66061402		YEL Yellow
2.5m	660614025		RED Red
3.0m	66061403		BLK Black
5.0m	66061405		PNK Pink
7.5m	660614075		
10.0m	66061410		

Ex. Mini category 6 U/UTP patch cord, 0.5m, black: **P/N66061405BLK**

**50% smaller in diameter**

**12 Mini CAT6 U/UTP**



**12 Regular CAT6 U/UTP**

## Category 6A shielded patch cords, S/FTP, LSZH

Category 6A shielded patch cords (S/FTP) allow for data transmission between patch panels, outlets and/or IT equipment. Shielded S/FTP patch cords feature an outer shielded braid, covering individually shielded pairs, providing optimum protection against EMI.

- Snagless moulded patch cords - category 6A – 500 MHz, 10G
- Category 6A shielded – S/FTP
- Suitable for 10G Ethernet
- LSZH outer sheath
- ACMA compliant – RCM
- Complies with ISO/IEC 11801 and ANSI/TIA 568-C.2
- RJ45 High performance category 6A special insert bar on two levels for NEXT compensation
- 100% component compliant
- AWG24



LENGTH	PART NO. 1	2	COLOUR
0.5m	660831005	+	BLU Blue
1.0m	66083101		GRY Grey
1.5m	660831015		WHT White
2.0m	66083102		GRN Green
3.0m	66083103		YEL Yellow
5.0m	66083105		RED Red
7.5m	660831075		BLK Black
10.0m	66083110		PNK Pink
15.0m	66083115		

Ex. Category 6A S/FTP patch cord, 1.5m, blue: **P/N660831015BLU**

## Category 6A unshielded patch cords, U/UTP, LSZH

Category 6A unshielded patch cords (U/UTP) allow for data transmission between patch panels, outlets and/or IT equipment.

- Snagless moulded patch cords - category 6A – 500 MHz, 10G
- Category 6A unshielded – U/UTP
- Suitable for 10G Ethernet
- LSZH outer sheath
- ACMA compliant – RCM
- Complies with ISO/IEC 11801 and ANSI/TIA 568-C.2
- RJ45 High performance category 6A special insert bar on two levels for NEXT compensation
- 100% component compliant
- PE cross separator to reduce crosstalk
- AWG24



LENGTH	PART NO. 1	2	COLOUR
0.5m	660851005		
1.0m	66085101		
2.0m	66085102		
3.0m	66085103		
5.0m	66085105	+	BLU Blue GRY Grey
7.5m	660851075		
10.0m	66085110		
15.0m	66085115		

Ex. Category 6A S/FTP patch cord, 15m, blue: **P/N 660831015BLU**

## Category 6 unshielded patch cords, U/UTP, LSZH

- Snagless moulded patch cords - category 6 – 500 MHz, 10G
- Category 6 unshielded – U/UTP
- Suitable for 10G Ethernet
- LSZH outer sheath
- ACMA compliant – RCM
- Complies with ISO/IEC 11801 and ANSI/TIA 568-C.2
- RJ45 High performance category 6 special insert bar on two levels for NEXT compensation
- 100% component compliant
- PE cross separator to reduce crosstalk
- AWG24



LENGTH	PART NO. 1	2	COLOUR
0.5m	660611005		
1.0m	66061101		
1.5m	660611015		
2.0m	66061102		
2.5m	660611025		
3.0m	66061103	+	BLU Blue
5.0m	66061105		
7.5m	660611075		
10.0m	66061110		
15.0m	66061115		



HYPACONNECT



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1

2

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4

5

4

# LAN cables

## Category 5E aerial cable

Category 5E, Aerial Cable, IBC Intra Building Cable has an Aerial Bearer in it to allow for overhead installation applications. Supplied in 305m reel.

- Aerial cable
- Intra building cable (IBC) has an aerial bearer in it to allow for overhead installation applications
- Supplied in a 305m reel
- Foil shielded
- Colour - black



PART NO.	DESCRIPTION
66113088	Category 5E, 4 pair, IBC messenger 305m reel

## Category 6 U/UTP underground/outdoor cable

This PE sheath Category 6 U/UTP (Unshielded twisted pairs) cable is suitable for outdoor and underground environments.

The performances of this cable exceed the current standards and its use with WBT/HypaConnect connectors ensures conformity with Class E channel.

Underground/Outdoor cable is gel-filled to prevent water ingress and is tested and are manufactured to exceed Australian standards.

- Gel filled
- Outdoor and underground applications
- UTP, 4-Twisted Pairs, Al-Foil and Mylar tape (FTP)
- Colour - black
- Unshielded copper twisted pairs
- 23AWG copper conductor size
- PE outer sheath
- Supplied in a 305m drum
- Meets or exceeds transmission performance requirements of ISO/IEC 11801 and ANSI/TIA 568-C.2
- Class E network performance
- ACMA compliant – RCM
- Flexible and easy to install
- Available as part of a full connectivity solution



PART NO.	DESCRIPTION
66110063	Category 6, U/UTP, 4 PAIR, 23AWG LAN, black, 305m drum

## Types of twisted pair cables



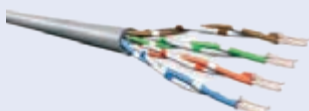
**S/FTP**  
Overall braid screen (S),  
Elements foil screened (FTP)



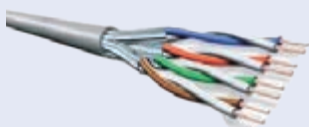
**F/UTP**  
Overall foil screen (F),  
Elements unshielded (UTP)



**SF/UTP**  
Overall braid and foil screen (SF),  
Elements unshielded (UTP)

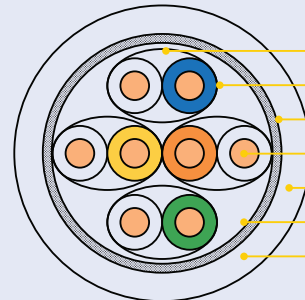


**U/UTP**  
No overall screen (U),  
Elements unshielded (UTP)



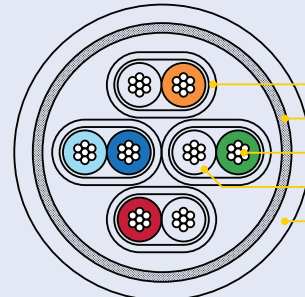
**U/FTP**  
No overall screen (U),  
Elements foil screened (FTP)

### Solid



- Pair Shielding
- Insulation
- Tinned Copper Braiding
- Bare Copper
- Outer Jacket
- Overall Shielding
- Cable Jacket

### Stranded

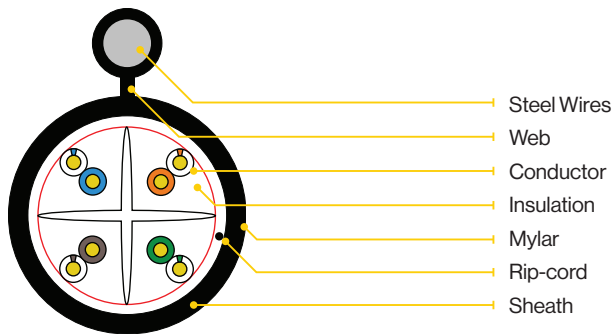


- Aluminium Mylar Tape
- Tinned Copper Braiding
- Copper Conductor
- Foamed PE Dielectric
- Outer Jacket

## Category 6 U/UTP aerial cable, IBC messenger (with steel wire)

Category 6, Aerial Cable, IBC Intra Building Cable has an Aerial Bearer in it to allow it to be installed in overhead applications.

Supplied in 305m reel.



PART NO.	DESCRIPTION
66110064	Category 6, U/UTP, black, 305m drum

## Category 6A U/FTP cable

Category 6A, U/FTP LAN cables are produced using a 4 x 2 x 23 AWG copper wire structure to a class EA standard and supports up to 10Gbps at 500 MHz. Foil protection surrounding each copper pair makes this cable the ideal solution for horizontal and backbone installations without a risk of cross talk interference with other cables and surrounding equipment.

- U/FTP cable – each pair is foil shielded for extra protection
- Exceeds standards ISO/IEC 11801 and ANSI/TIA 568-C.2 for Category 6A and Class EA
- RoHS / REACH
- LSZH high quality outer sheath - NOT PVC
- Guaranteed to support up to 10 Gigabit Ethernet
- Available in 305m drums
- Provides superior protection against cross talk and EMI
- Solution is part of the HypaConnect 25-year Integrated Cabling Solution Warranty

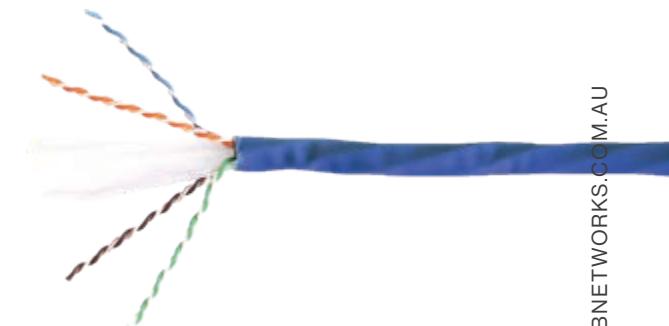


PART NO.	DESCRIPTION
66110033	Category 6A U/FTP, 4 PAIR, 23AWG LAN, blue, LSZH, 305m drum
66110062	Category 6A U/FTP, 4 pair, 23AWG LAN, blue, LSZH, 500m drum

## Category 6A U/UTP cable

Category 6A unshielded twisted pair (U/UTP) cables are produced using a 4 x 2 x 23 AWG copper wire structure to a class EA standard, and supports protocols up to 500 MHz. It is ideal for horizontal and backbone installations.

- 305m drum
- Colour – blue
- AWG23
- Unshielded twisted pair
- Exceeds ISO/IEC 11801 and ANSI/TIA 568-C.2 performance
- ACMA compliant - RCM
- LSZH sheath



PART NO.	DESCRIPTION
66110023BLU	Category 6A U/UTP, 4 pair, 23AWG LAN, blue, LSZH, 305m drum

## Category 6A F/UTP cable

Category 6A shielded twisted pair (F/UTP) cables are produced using a 4 x 2 x 23 AWG copper wire structure to a class EA standard, and supports protocols up to 500MHz. It is ideal for horizontal and backbone installations. Ideal for environments where heavy external interference can disrupt signals such as EMI.

- 305 or 500m drums
- Colours – violet, blue
- AWG23
- Overall foil shielded
- Exceeds ISO/IEC 11801 and ANSI/TIA 568-C.2 performance
- ACMA compliant - RCM
- LSZH sheath

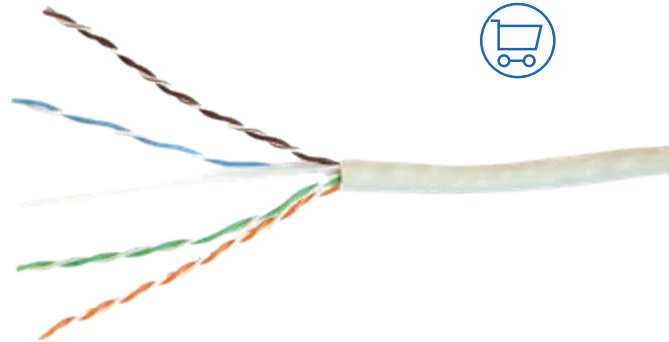


PART NO.	DESCRIPTION
66110022	Category 6A F/UTP, 4 pair, 23AWG LAN, violet, LSZH, 305m drum
66110022BLU	Category 6A F/UTP, 4 pair, 23AWG LAN, blue, LSZH, 305m drum

## Category 6 U/UTP cable

U/UTP (Unshielded twisted pairs) cable, which is used in a horizontal or vertical configuration (Backbone), constitutes the base of a very high bit rate V.D.I. (Voice-Data-Image) network. The performance of this cable exceeds the current standards and its use with WBT/HypaConnect connectors ensures conformity with Class E channel. This cable is used for transmission of digital and analogue voice, data and video signals.

- 305m box
- Specially designed speed reel box for easy unspooling and deployment of cables
- LSZH
- Colours: grey, blue, red, yellow, black
- AWG23
- Unshielded
- Exceeds ISO/IEC 11801 and ANSI/TIA 568-C.2 performance
- ACMA compliant - RCM



PART NO.	DESCRIPTION
66110006	Category 6 U/UTP, 4 PAIR, 23AWG LAN, grey, LSZH, 305m box
66110051	Category 6 U/UTP, 4 PAIR, 23AWG LAN, black, LSZH, 305m box
66110052	Category 6 U/UTP, 4 PAIR, 23AWG LAN, red, LSZH, 305m box
66110053	Category 6 U/UTP, 4 PAIR, 23AWG LAN, yellow, LSZH, 305m box
66110054	Category 6 U/UTP, 4 PAIR, 23AWG LAN, blue, LSZH, 305m box
66110066	Category 6 U/UTP, 4 PAIR, 23AWG LAN, pink, LSZH, 305m box



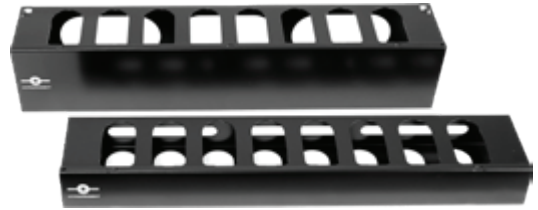
**\*Other cable options are available including category 6A, category 6 outdoor cables.**



# Cable management

## 1RU / 2RU, 19" rack mount cable management rail

This slotted 1RU / 2RU rack mount cable management rail will keep your rack tidy and your cables organised. The management rail has two large openings at the rear allowing for cable entry and exit. The cover easily slides on and off for easy additions and management of your patch leads. It consists of a base with management rings and cover, and comes with a clip-on cover to keep your cables neat and organised.

- Simple cable management
- Separate entry and exit openings from rear
- Includes slide on cover
- Hides cables, ensuring a neat and tidy appearance
- Includes mounting fasteners






PART NO.	DESCRIPTION	
TC400CMR1	1RU 19" rack mount cable management rail, 65mm deep x 485mm wide, mild steel, black	
TC400CMR2	2RU 19" rack mount cable management rail, 65mm deep x 485mm wide, mild steel, black	

## 1RU / 2RU, 19" blanking panel rack mountable

Fill up unused RU's rack units in your server racks with the 1RU / 2RU 19" rack mounted blanking panels. Made from powder coated steel.

- Protect equipment from dust ingress
- Cabinets look neat with no gaps
- Robust metal construction
- Includes mounting fasteners
- Main use for blanking panels is to seal airflow for hot / cold aisles
- Increase energy efficiency



PART NO.	DESCRIPTION	
TC402BP	1RU blanking panel, rack mountable 19", 485mm wide, plastic, black	
TC400BP1	1RU blanking panel, rack mountable 19", 485mm wide, mild steel, black	
TC400BP2	2RU blanking panel, rack mountable 19", 485mm wide, mild steel, black	

## 1RU, 19" patch cord guide unit - 5 ring

The 1RU, 5 ring cable management panel is typically used to guide and locate various cables going to rack mounted transmission equipment. This lightweight and strong design can safely and neatly hold many cords in the five, openable style, guiding/securing clips provided. The Guide Unit ensures maximum space is available in the rack for the cooling air stream. The guide unit fits a 19" rack. However, extension brackets, for 21" and 23" mount are available separately. If required, hook and loop style ties available separately.

- Easy cabling management
- Separate entry and exit openings
- Includes metal management rings and cover
- Hides cables, to allow for a clean cut look
- Includes mounting equipment



PART NO.	DESCRIPTION	
TC400RLP102	1RU, cable management guiding unit, 482mm wide x 44mm high x 91mm deep, mild steel & class filled nylon, black	



# Copper tools and accessories

## Mounting rail adaptor

The DIN rail mount adaptor allows for specialized mounting of HY Series RJ45 jacks and couplers. It is a practical solution where DIN mounting rails are present and is easy to install.

- Accepts HY Series RJ45 modular jacks and couplers
- DIN rail mount
- Steel construction

PART NO.	DESCRIPTION
66222027	DIN mounting rail adaptor for RJ45 jacks and couplers



## Cable stripping & terminating tool

The HY series terminating tool allows for easy cable preparation and connector termination of HypaConnect HY series jacks. Easy to use and lightweight, this tool simplifies network deployment.

- Proprietary tool for HY termination
- Allows termination for HY jacks – category 6A, category 6
- Equipped with blade to strip the cable
- Measurement scale for correct stripping



PART NO.	DESCRIPTION
62X35	HypaConnect cable stripping & terminating tool

## Cut & termination tools for Category 6A/6 Jacks

PART NO.	DESCRIPTION
62x45	EZ Termination Keystone Jack Tool



## Parallel crimping tool for Category 6A/6 jacks

Parallel Crimping Pliers provide the convenience, efficiency and harmlessness approach to crimp the toolless RJ45 Keystone Jack, Terminal Field Plug and familiar type connectors on the cable, help installer to make sure IDCs are surely connected with wires.

The installer can get the excellent quality and easy to use this Parallel Crimping Pliers, just need to hold the handle and press to successfully clamp the wire and the connectors tightly together and save installation effort and cost.

This Parallel Crimping Pliers are designed with patent and it is welcomed by professional installers who could install quite a number of tool-less jacks and plugs in one project.



PART NO.	DESCRIPTION
62x44	Parallel Crimping Pliers for RJ45 Keystone Jacks, RoHS compliant.

# TC273 series FTPs (1RU, 2RU, 3RU)

12-144 fibres, Fibre optic splice & patch or patch only, slide out trays

**These 1RU, 2RU and 3RU rack mount fibre enclosures (FOBOT's) provide an effective and economical means of splicing and patching incoming cables, pigtails and patch cords.**

Made from high quality steel, and featuring sturdy sliding rails, multiple cable entry locations, as well as the necessary labelling and accessories, these FOBOT's are an effective solution for any high speed optical network.

All optical connectivity feature high grade / specification optics, with guaranteed low loss performance.

The HypaConnect splice and patch FOBOTs, are provided as a complete solution, including:

- Rack mount, sliding enclosure FOBOT
- 19" mounting brackets for rear or front mounting
- Adaptor plates with pre-installed fibre optic through adaptors
- 12F pigtail kits
- Heatshrink splice protectors
- Various splice tray options to suit each configuration
- Labelling kit with optional front management tray
- Velcro wrap and other accessories
- Optional rear cable management bracket
- Products can be supplied as a kit, or fully assembled and fibred



**1RU:**

- Sliding type drawer, splice/patch function
- Fibre capacity ranging from 12F to 48F per RU, splice and patch
- Interchangeable front adapter plates and panels; angled or straight options, available with SC, FC, ST or LC connectors
- Splice trays, pigtails, adaptors and installation accessories (heatshrinks and mounting, etc) included with splice/patch versions
- Optional front-mounted cable management tray, with swing-down front member (P/N TC2731-03)\*
- Designed to accept both OSP loose tube and internal distribution trunk cables
- Sliding Fibre tray with integrated sliding rails
- Standard 262mm depth and narrow depth 212mm options available
- Rear angled mounting plate included with most units
- Singlemode OS1/2 and Multimode OM1, OM3 and OM4 options available

**TC2731SAA1SPL027SH shown**

PART NO.	DESCRIPTION
TC2731SPL005	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 12 fibre LC/A, singlemode
TC2731SPL001	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 12 fibre LC, singlemode
TC2731SPL501	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 12 fibre LC, multimode OM3 aqua
TC2731SPL601	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 12 fibre LC, multimode OM1 biege
TC2731SPL002	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 24 fibre LC, singlemode
TC2731SPL502	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 24 fibre LC, multimode OM3 aqua
TC2731SPL602	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 24 fibre LC, multimode OM1 biege
TC2731SPL009	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 12 fibre SC, singlemode
TC2731SPL505	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 12 fibre SC, multimode OM3 aqua
TC2731SPL605	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 12 fibre SC, multimode OM1 biege
TC2731SPL013	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 12 fibre SC/A, singlemode
TC2731SPL017	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 12 fibre ST, singlemode
TC2731SPL609	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 12 fibre ST, multimode
TC2731SPL014	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 24 fibre SC/A, singlemode
TC2731SPL021	1RU sliding fibre optic patch panel - (1 row) splice & patch, 24 fibre LC, singlemode
TC2731SPL022	1RU sliding fibre optic patch panel - (1 row) splice & patch, 24 fibre LC/A, singlemode
TC2731SPL024	1RU sliding fibre optic patch panel - (1 row) splice & patch, 24 fibre SC/A, singlemode
TC2731ASPL024	1RU sliding fibre optic patch panel - (1 row, angled adaptor plate) - splice & patch, 24 fibre SC/A, singlemode - assembled
TC2731AASPL024A	1RU sliding fibre optic patch panel - (1 row, angled adaptor plate) - splice & patch, 24 fibre SC/A, singlemode - assembled
TC2731AASPL024CMA	1RU sliding fibre optic patch panel - (1 row, angled adaptor plate & cable management access.) - Splice & patch, 24 fibre SC/A, singlemode - assembled
TC2731AASPL021SH	1RU sliding fibre optic patch panel - (1 row, angled adaptor plate) - splice & patch, 24 fibre LC, singlemode
TC2731SAA1SPL021SH	1RU fip 24 LC, splice / patch, angled plate LC, sliding tray (19" rack mount, includes all pigtails, adaptors and accessories.) - Short version 212mm deep. Rear angled cable entry
TC2731AASPL022SH	1RU sliding fibre optic patch panel - (1 row, angled adaptor plate) - splice & patch, 24 fibre LC/A, singlemode
TC2731SASPL024SH	1RU sliding fibre optic patch panel slim (212mm) angled adaptor plate, splice & patch 24 fibre SC/A
TC2731SAA1SPL027SH	1RU sliding fibre optic patch panel slim (212mm, 1 row, angled adaptor plate), splice & patch 48f LC singlemode

PART NO.	DESCRIPTION
TC2731SAAASPL021SH	1RU sliding fibre optic patch panel slim (212mm, 1 row, angled adaptor plate), splice & patch 24f LC singlemode
TC2731SAAASPL022SH	1RU sliding fibre optic patch panel slim (212mm, 1 row, angled adaptor plate), splice & patch 24f LC/A singlemode
TC2731SPL010	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 24 fibre SC, singlemode
TC2731SPL506	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 24 fibre SC, multimode OM3 aqua
TC2731SPL606	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 24 fibre SC, multimode OM1 biege
TC2731SPL027	1RU sliding fibre optic patch panel - (1 row) splice & patch, 48 fibre LC, singlemode
TC2731SPL028	1RU sliding fibre optic patch panel - (1 row) splice & patch, 48 fibre LC/A, singlemode
TC2731SPL516	1RU sliding fibre optic patch panel - (1 row) splice & patch, 48 fibre LC, multimode OM3 aqua
TC2731SPL616	1RU sliding fibre optic patch panel - (1 row) splice & patch, 48 fibre LC, multimode OM1 biege
TC2731SPL016	1RU sliding fibre optic patch panel - (1 row) splice & patch, 48 fibre SC/A, singlemode
TC2731SPL521	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 12 fibre LC, multimode OM4 aqua
TC2731SPL520	1RU sliding fibre optic patch panel - (3 slot) splice & patch, 24 fibre LC, multimode OM4 aqua
TC2731SPL522	1RU sliding fibre optic patch panel - (1 row) splice & patch, 48 fibre LC, multimode OM4 aqua
TC2731POL001	1RU sliding fibre optic patch panel - (3 slot) patch only, 12 fibre LC, singlemode
TC2731POL501	1RU sliding fibre optic patch panel - (3 slot) patch only, 12 fibre LC, multimode aqua
TC2731POL601	1RU sliding fibre optic patch panel - (3 slot) patch only, 12 fibre LC, multimode beige
TC2731POL002	1RU sliding fibre optic patch panel - (3 slot) patch only, 24 fibre LC, singlemode
TC2731POL502	1RU sliding fibre optic patch panel - (3 slot) patch only, 24 fibre LC, multimode aqua
TC2731POL602	1RU sliding fibre optic patch panel - (3 slot) patch only, 24 fibre LC, multimode beige
TC2731POL009	1RU sliding fibre optic patch panel - (3 slot) patch only, 12 fibre SC, singlemode
TC2731POL505	1RU sliding fibre optic patch panel - (3 slot) patch only, 12 fibre SC, multimode aqua
TC2731POL605	1RU sliding fibre optic patch panel - (3 slot) patch only, 12 fibre SC, multimode beige
TC2731POL013	1RU sliding fibre optic patch panel - (3 slot) patch only, 12 fibre SC/A, singlemode
TC2731POL017	1RU sliding fibre optic patch panel - (3 slot) patch only, 12 fibre ST, singlemode
TC2731POL609	1RU sliding fibre optic patch panel - (3 slot) patch only, 12 fibre ST, multimode
TC2731POL027	1RU sliding fibre optic patch panel - (1 row) patch only, 48 fibre LC, singlemode
TC2731POL519	1RU sliding fibre optic patch panel - (1 row) patch only, 48 fibre LC, multimode aqua
TC2731POL619	1RU sliding fibre optic patch panel - (1 row) patch only, 48 fibre LC, multimode beige

## 2RU:

- Sliding type drawer, splice/patch function
- Fibre capacity ranging from 24F to 96F
- Interchangeable front adapter plates and panels; angled or straight options, available with SC, FC, ST or LC connectors
- Splice trays, pigtails, adaptors and installation accessories (heatshrinks and mounting, etc) included
- Optional front-mounted cable management tray, with swing-down front member (P/N TC2731-03)\*
- Designed to accept both OSP loose tube and internal distribution trunk cables
- Sliding Fibre tray with integrated sliding rails
- Rear angled mounting plate included with most models
- Singlemode OS1/2 and Multimode OM1, OM3 and OM4 options available

## TC2732ASPL031SH shown



PART NO.	DESCRIPTION
TC2732AASPL024CMA	2RU sliding fibre optic patch panel - (1 row, angled adaptor plate, with cable management) splice & patch, 48 fibre SC/A, singlemode - assembled
TC2732ASPL024A	2RU sliding fibre optic patch panel - (1 row, angled adaptor plate) splice & patch, 48 fibre SC/A, singlemode - assembled
TC2732ASPL025A	2RU sliding fibre optic patch panel (1 row, angled adaptor plate.)-SP, 72f SC/A G657A1,SM - WB splice trays
TC2732ASPL025SH	2RU sliding fibre optic patch panel (1 row, angled adaptor plate)-SP, 72f SC/A G657A1,SM
TC2732SPL004	2RU sliding fibre optic patch panel - (1 row) splice & patch, 72 fibre LC/A, singlemode
TC2732SPL010	2RU sliding fibre optic patch panel - (1 row) splice & patch, 72 fibre LC/A/A, singlemode
TC2732SPL504	2RU sliding fibre optic patch panel - (1 row) splice & patch, 72 fibre LC/A, multimode aqua
TC2732SPL019	2RU sliding fibre optic patch panel - (6 slot) splice & patch, 48 fibre SC/A, singlemode
TC2732SPL001	2RU sliding fibre optic patch panel - (6 slot) splice & patch, 36 fibre LC/A, singlemode
TC2732SPL002	2RU sliding fibre optic patch panel - (6 slot) splice & patch, 48 fibre LC/A, singlemode
TC2732SPL509	2RU sliding fibre optic patch panel - (6 slot) splice & patch, 48 fibre LC/A, multimode aqua
TC2732SPL602	2RU sliding fibre optic patch panel - (6 slot) splice & patch, 48 fibre LC/A, multimode beige
TC2732SPL608	2RU sliding fibre optic patch panel - (6 slot) splice & patch, 36 fibre SC, multimode OM1 biege
TC2732SPL609	2RU sliding fibre optic patch panel - (6 slot) splice & patch, 48 fibre SC, multimode OM1 biege
TC2732SPL013	2RU sliding fibre optic patch panel - (6 slot) splice & patch, 24 fibre SC, singlemode
TC2732SPL507	2RU sliding fibre optic patch panel - (6 slot) splice & patch, 24 fibre SC, multimode OM3 aqua

PART NO.	DESCRIPTION
TC2732SPL607	2RU sliding fibre optic patch panel - (6 slot) splice & patch, 24 fibre SC, multimode OM1 biege
TC2732SPL017	2RU sliding fibre optic patch panel - (6 slot) splice & patch, 24 fibre SC/A, singlemode
TC2732SPL021	2RU sliding fibre optic patch panel - (6 slot) splice & patch, 24 fibre ST, singlemode
TC2732ASPL031SH	2RU sliding fibre optic patch panel - (1 row, angled adaptor plate) splice & patch, 96 fibre LC, singlemode
TC2732POL002	2RU sliding fibre optic patch panel - (6 slot) patch only, 48 fibre LC, singlemode
TC2732POL502	2RU sliding fibre optic patch panel - (6 slot) patch only, 48 fibre LC, multimode aqua
TC2732POL602	2RU sliding fibre optic patch panel - (6 slot) patch only, 48 fibre LC, multimode beige
TC2732POL004	2RU sliding fibre optic patch panel - (6 slot) patch only, 72 fibre LC, singlemode
TC2732POL010	2RU sliding fibre optic patch panel - (6 slot) patch only, 72 fibre LC/A, singlemode
TC2732POL504	2RU sliding fibre optic patch panel - (6 slot) patch only, 72 fibre LC, multimode aqua
TC2732POL013	2RU sliding fibre optic patch panel - (6 slot) patch only, 24 fibre SC, singlemode
TC2732POL507	2RU sliding fibre optic patch panel - (6 slot) patch only 24 fibre SC, multimode aqua
TC2732POL607	2RU sliding fibre optic patch panel - (6 slot) patch only, 24 fibre SC, multimode beige
TC2732POL017	2RU sliding fibre optic patch panel - (6 slot) patch only, 24 fibre SC/A, singlemode
TC2732POL021	2RU sliding fibre optic patch panel - (6 slot) patch only, 24 fibre ST, singlemode
TC2732POL611	2RU sliding fibre optic patch panel - (6 slot) patch only, 24 fibre ST, multimode

### 3RU:

- Sliding type drawer, splice/patch function
- Capacities range from 96F to 192F. Most common usage is 144F in 3RU
- Interchangeable front adapter plates and panels; angled or straight options, available with SC, FC, ST or LC connectors
- Splice trays, pigtails, adaptors and installation accessories (heatshrinks and mounting, etc ) included
- Designed to accept both OSP loose tube and internal distribution trunk cables
- Sliding Fibre tray with integrated sliding rails
- Singlemode OS1/2 and Multimode OM1, OM3 and OM4 options available

### TC2733ASPL002SH shown



PART NO.	DESCRIPTION
TC2733ASPL001A	3RU sliding fibre optic patch panel - (1 row, angled adaptor plate) splice & patch, 96F SC/A, singlemode - assembled
TC2733ASPL002A	3RU sliding fibre optic patch panel (1row, angled adaptor plate) - splice / patch, 144F (LC duplex), singlemode, assembled
TC2733ASPL002SH	3RU sliding fibre optic patch panel (1row, angled adaptor plate) - splice / patch, 144F (LC duplex), singlemode
TC2733ASPL003A	3RU sliding fibre optic patch panel (1row, angled adaptor plate) - splice / patch, 144F SC/A G657A1,SM

PART NO.	DESCRIPTION
TC2733ASPL003SH	3RU sliding fibre optic patch panel (1row, angled adaptor plate) - splice / patch, 144F SC/A G657A1,SM
TC2733SPL002SH	3RU sliding fibre optic patch panel (1row, flat adaptor plate), splice / patch, 144F LC, singlemode pigtails
TC2733ASPL004SH	3RU sliding fibre optic patch panel - splice & patch, 192F LC, splice / patch, angled plate LC, sliding tray (19" rack mount, includes all pigtails, adaptors and accessories.)

### Accessories

PART NO.	DESCRIPTION
63101394Z	Optical fibre pigtail kit - 12 fibre - LC singlemode
63101395Z	Optical fibre pigtail kit - 12 fibre - LC/A singlemode
63200458T	Optical fibre pigtail kit - 12 fibre - LC multimode aqua OM4
63200483Z	Optical fibre pigtail kit - 12 fibre - LC multimode aqua OM3
63200484Z	Optical fibre pigtail kit - 12 fibre - LC multimode beige OM3
63101396Z	Optical fibre pigtail kit - 12 fibre - SC singlemode
63200485Z	Optical fibre pigtail kit - 12 fibre - SC multimode aqua OM3
63200486Z	Optical fibre pigtail kit - 12 fibre - SC multimode beige OM1
63101397Z	Optical fibre pigtail kit - 12 fibre - SC/A singlemode
63101398Z	Optical fibre pigtail kit - 12 fibre - ST singlemode
63200488Z	Optical fibre pigtail kit - 12 fibre - ST multimode OM1



# DIN Rail mounted fibre enclosures

The DIN rail mounted fibre enclosures feature a slim and compact design, whilst providing maximum fibre density.

Can be installed in control cabinets, indoor / outdoor cabinets, or directly onto DIN mounting rails, and are an ideal solution for either industrial, mining, power or other harsh environment telecom networks. Enclosures also feature a rigid metal construction and openable side panels. Depending on the selected model, distribution cable generally enters from the bottom of the enclosure and connections are then presented on the front patching plate in either LC, LC/A, ST, SC or SC/A adaptors.



## MTP®/MPO preterm (plug and play) fibre enclosure

- 12 fibre SC, SC/A and LC, LC/A (features 1 x 12F MTP®/MPO connection point)
- 24 fibre LC and LC/A capacity (features 2 x 12F MTP®/MPO connection points)
- Singlemode and multimode fibre options
- Quick connection via pre-terminated cables
- Other customizable options available, including stub cables
- Fully enclosed

PART NO.	DESCRIPTION
TC4028D001	12F LC - 1 X 12F MTP/MPO, OM4 aqua
TC4028D051	12F LC - 1 X 12F MTP/MPO, singlemode
TC4028D502	12F LC - 1 X 12F MTP/MPO, singlemode, with 1m tail
TC4028D053	12F LC/A - 1 X 12F MTP/MPO, singlemode
TC4028D003	12F SC - 1 X 12F MTP/MPO, OM4 aqua
TC4028D055	12F SC - 1 X 12F MTP/MPO, singlemode
TC4028D057	12F SC/A - 1 X 12F MTP/MPO, singlemode
TC4028D002	24F LC - 2 X 12F MTP/MPO, OM4 aqua
TC4028D052	24F LC - 2 X 12F MTP/MPO, singlemode
TC4028D501	24F LC - 2 X 12F MTP/MPO, singlemode, with 1m tail
TC4028D054	24F LC/A - 2 X 12F MTP/MPO, singlemode

## Splice and patch fibre enclosure

- 6 fibre LC, SC, LC/A, SC/A and ST capacity
- 12 fibre LC, SC, LC/A, SC/A and ST capacity
- 24 fibre LC and LC/A capacity
- Singlemode and multimode fibre options
- Internal splice tray for splicing fibres onto pigtails
- Pigtails and through adaptors included
- Cable entry via secure cable gland

PART NO.	DESCRIPTION
TC4028D101	6F LC, multimode aqua OM3/4, splice/patch
TC4028D151	6F LC, singlemode, splice/patch
TC4028D152	6F LC/A, singlemode, splice/patch
TC4028D102	6F SC, multimode aqua OM3/4, splice/patch
TC4028D153	6F SC, singlemode, splice/patch
TC4028D154	6F SC/A, singlemode, splice/patch
TC4028D155	6F ST, singlemode, splice/patch
TC4028D103	12F LC, multimode aqua OM3/4, splice/patch
TC4028D156	12F LC, singlemode, splice/patch
TC4028D157	12F LC/A, singlemode, splice/patch
TC4028D104	12F SC, multimode aqua OM3/4, splice/patch
TC4028D158	12F SC, singlemode, splice/patch
TC4028D159	12F SC/A, singlemode, splice/patch
TC4028D107	12F ST, multimode aqua OM3/4, splice/patch
TC4028D160	12F ST, singlemode, splice/patch
TC4028D105	24F LC, multimode aqua OM3/4, splice/patch
TC4028D161	24F LC, singlemode, splice/patch
TC4028D162	24F LC/A, singlemode, splice/patch
TC4028D108	24F ST, multimode aqua OM3/4, splice/patch
TC4028D165	24F ST, multimode aqua OM3/4, splice/patch
TC4028D172	48F LC, multimode aqua OM3/4, splice/patch (dual DIN)
TC4028D171	48F LC, singlemode, splice/patch (dual DIN)

## Patch only fibre enclosure (preterm cables)

- 6 fibre LC, SC, LC/A, SC/A and ST capacity
- 12 fibre SC and LC capacity
- 24 fibre LC and LC/A capacity
- Singlemode and multimode fibre options
- Suitable for pre-terminated multifiber cable
- Cable entry via secure split cable gland
- Some models provided with preinstalled stub cable

PART NO.	DESCRIPTION
TC4028D201	6F LC, multimode aqua OM3/4, patch only
TC4028D251	6F LC, singlemode, patch only
TC4028D252	6F LC/A, singlemode, patch only
TC4028D202	6F SC, multimode aqua OM3/4, patch only
TC4028D253	6F SC, singlemode, patch only
TC4028D254	6F SC/A, singlemode, patch only
TC4028D255	6F ST, singlemode, patch only
TC4028D355	6F LC, singlemode, with tactical cable, 12m stub, patch only
TC4028D356	6F LC, singlemode, with tactical cable, 17m stub, patch only
TC4028D354	6F LC, singlemode, with tactical cable, 9m stub, patch only
TC4028D203	12F LC, multimode aqua OM3/4, patch only
TC4028D256	12F LC, singlemode, patch only
TC4028D204	12F SC, multimode aqua OM3/4, patch only
TC4028D260	12F SC, singlemode, patch only
TC4028D259	12F ST, singlemode, patch only
TC4028D205	24F LC, multimode aqua OM3/4, patch only
TC4028D257	24F LC, singlemode, patch only
TC4028D352	24F LC singlemode, with IP connector tail cable
TC4028D351	24F LC singlemode, with tail cable
TC4028D258	24F LC/A, singlemode

# TC4025 Series - Multi User Telecommunication outlets (MUTO's)

Multi User Telecommunications outlets (MUTO's) provide a secure and discreet connection interface in and around workstation areas. These MUTO's are suitable for use in secure workstation areas, such as Defence and Government facilities.

## MTSQ Series MUTO

Secure fibre network enclosure

### Benefits & features:

- Small, compact size; Suitable for limited space installation
- Colour variations for different uses (Blue, Red, Pink, White, etc)
- Suitable for splicing or preterm LC/SC solution
- RJ45 copper ports can be configured upon request
- Single Perspex cover
- Connectors on outside of MUTO
- Visible cable routings and connections for added security
- Proven solution in Defence enterprise network
- 4, 6, 8, 12 and 24 port density options
- 150mm(W) x 45mm (H) x 290mm (D)



## MTRT Series MUTO (flex)

Secure fibre network enclosure

### Benefits & features:

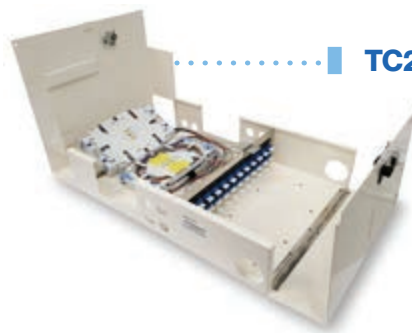
- Small, compact size; Suitable for limited space installation
- Colour variations for different uses (Blue, Red, Pink, White, etc)
- Suitable for splicing, preterm MTP/MPO, preterm LC/SC
- Segregation of trunk cabling and patch cabling. 2x separate clear perspex top covers; Isolated access to either the trunk cables or the front patch connections.
- MTP/MPO MUTO supplied with pre-installed MTP connectivity
- Visible cable routings and connections for added security
- Swing-down front panel for easy patching access during service and installation
- Proven solution in Defence enterprise network
- 4, 6, 8, 12 and 24 port density options



# Customer premises optical fibre wall boxes and outlets

## TC2994 series optic fibre wall boxes lockable, 12 -48 fibres, indoor

These wall mounted optical fibre termination units with 2 lockable swing-out doors provide isolation for both customer side and provider. Each side cover has a full-length hinge. The units are fitted with up to four 12-fibre capacity splice trays and patch panel. The patch panel is used as a divider between the provider & customer sides. Patch cord storage (about 1.5m for each fibre) is provided on the customer side. The unit can be supplied with various locking arrangements to cater for different levels of security and entry methods.



..... ■ TC2994CA48LCDAP shown



PART NO.	SPECIFICATIONS	SIZE (W X H X D)
TC2994CA12DPSC	12 fibres, SC duplex adaptors	440mm x 310mm x 100mm
TC2994CA12SC	12 fibres, SC adaptors	
TC2994CA24FCAP	24 fibres, FC adaptors & pigtails	
TC2994CA24SCAPS	24 fibres, SC adaptors & pigtails	
TC2994CA48FCAP	48 fibres, FC adaptors & pigtails	
TC2994CA48SCAPS	48 fibres, SC adaptors & pigtails	
TC2994CA48LCDAP	48 fibres, LC duplex adaptors & pigtails	

## TC4025 series optic fibre wall boxes lockable, 12 – 144 fibres

These wall mounted optical fibre termination units with 2 lockable swing-out doors provide isolation for both customer side and provider.

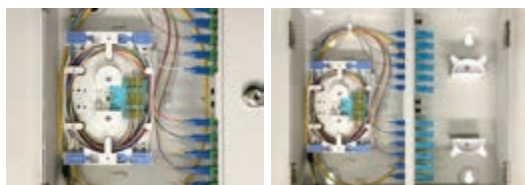
- Various size options
- Singlemode splice/patch applications
- Choice of connector type and fibre density
- Other models available upon request



..... ■ TC4025SP12 shown



PART NO.	SPECIFICATIONS	SIZE (L X W X H)
TC4025SP108	Splice/patch, Indoor, 108 Fibre, SC Duplex, Singlemode	500mm x 130mm x 485mm
TC4025SP12	Splice/patch, Indoor, 12 Fibre, SC, Singlemode	300mm x 300mm x 85mm
TC4025SP12LCD	Splice/patch, Indoor, 12 Fibre, LC, Singlemode	300mm x 300mm x 85mm
TC4025SP144LCD	Splice/patch, Indoor, 144 Fibre, LC, Singlemode	500mm x 130mm x 485mm
TC4025SP24LCD	Splice/patch, Indoor, 24 Fibre, LC, Singlemode	320mm x 90mm x 380mm
TC4025SP48LCD	Splice/patch, Indoor, 48 Fibre, LC, Singlemode	320mm x 90mm x 380mm
TC4025SP60	Splice/patch, Indoor, 60 Fibre, SC Duplex, Singlemode	320mm x 90mm x 380mm
TC4025SP72	Splice only, Indoor, 72 Fibre, SC Duplex, Singlemode	320mm x 90mm x 380mm
TC4025SPB12	Splice/patch, Indoor, 12 Fibre, SC/A, Singlemode	300mm x 300mm x 85mm



## TC2993 series optic fibre wall boxes lockable, 12 fibres, indoor

These single compartment wall mounted optical fibre termination units with a lockable and removable cover are fitted with two 6-fibre capacity splice trays and patch panel.

Some room is available for patch cord storage. Top and bottom entry is available for both optical fibre cable and patch cords.



PART NO.	SPECIFICATIONS	SIZE (W X H X D)
TC2993E12SCK	12 fibres, SC adaptors	235mm x 265mm x 95mm
TC2993E6LCDK	12 fibres, LC duplex adaptors	



## TC4020 series wall mount termination & splicing enclosures indoor/outdoor

**Dimensions** 370mm x 495mm x 143mm

These modules are used to terminate optical fibre cables in indoor/outdoor environments. Each wall box contains necessary splice trays and accessories.

Pole mount kit for TC4020 Series enclosures - TC4020MKIT

TC4020E6SO can be used as a fibre wallbox in a high rise building network. It can accept up to 312F cable which can be ringbarked, with individual fibre cores removed from the cable sheath and spliced onto floor distribution cable.



TC4020E12SC shown

PART NO.	SPECIFICATIONS	APPLICATION	IP RATING	
TC4020E12SC	12 SC splice / patch	Indoor/outdoor splicing	IP65	
TC4020E24SC	24 SC splice /patch	Indoor/outdoor splicing	IP65	
TC4020E24LC	24 splice /patch	Indoor/outdoor splicing	IP65	
TC4020E6SO	Termination enclosure w/6 small splice trays	Indoor, splice only. For distribution and ring barking of trunk cable. Splice distribution of feeder fibres	N/A	

## TC4025 series FTTH customer boxes 4 - 12 fibres, indoor

An indoor dust resistant splice & patch compact enclosure for up to 12 individual services each on a single optical fibre. Has a pivot open, clip on/off cover for easy access and a pivot tray inside for fibre cord storage. Allows for line testing.

Pigtails, through adaptors and heat shrink splice protectors available separately.

*\* Other connector and capacity options are available upon request. Through adaptors and pigtails need to be purchased separately.*

### TC4025WB4SCP shown



PART NO.	SPECIFICATIONS
TC4025WB4SCP	4 x SC (SC/A version is also available)

## TC4025 series customer wall box outlet 1 fibre, indoor

This FTTP wall outlet houses a single SC/A connector for a single fibre service. The outlet can be wall mounted and is fully compatible with standard GPO mounting components. Includes SC/A shuttered through adaptor.



TC4025WB1SAAL shown



PART NO.	SPECIFICATIONS	SIZE (W X H X D)
TC4025WB1SAAL	1x SC/A	73mm x 115mm x 18mm

## Fibre optic dome splice closures

- May be used for cut, uncut and taut sheath applications
- Suitable for underground, aerial strand-mount, polemount, and wall-mount applications
- May be used for all fibre optic cable
- Sheath retention & central strength member fasten system included
- Ribbed closure construction and lightweight plastic provides strength and resistance to chemical and UV attack
- Up to 6 trays (each tray for 12 or 24 splices)
- 1 oval port + 4 round ports
- Installation and re-entry with a minimum of tools
- All hardware included
- Closure can be flash tested
- Protection class: IP68
- RoHS compliant



TC2720 series shown



PART NO.	FIBRE COUNT	MAX. CABLE DIAMETER
TC2720-804-1	24 fibres	
TC2720-804-2	48 fibres	1 oval port: for one looped cable with max. 22mm diameter
TC2720-804-3	72 fibres	
TC2720-804-4	96 fibres	
TC2720-804-5	120 fibres	4 round ports: each port for one cable with max. 17.5mm diameter
TC2720-804-6	144 fibres	

## Fibre optic inline splice closures

- Holds 24 to 192 splices
- Easy to re-enter
- 3 cable entry position at each end
- Termination and splice kit included
- Integrated seal, airtight and waterproof
- Ideal for cable repair
- RoHS compliant
- Can be used in through, branch or mid span splice locations
- Suitable for aerial, underground duct or direct burial applications
- IP 68 up to 1.5m water depth

TC2720 series shown



PART NO.	FIBRE COUNT	
TC2720-806-1	24 fibres	
TC2720-806-2	48 fibres	
TC2720-806-3	72 fibres	
TC2720-806-4	96 fibres	
TC2720-807-1	120 fibres	
TC2720-807-2	144 fibres	
TC2720-807-3	192 fibres	

# Fibre optic cable

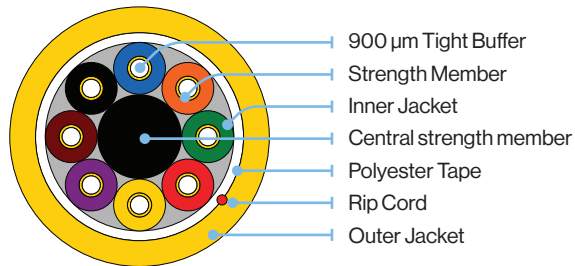
**Warren & Brown optical fibre cable (LAN cable) variations: non-metallic direct burial cable, double jacket cable, single jacket cable, Single loose tube STA fibre optic cable, multi loose tube cable, tight buffered distribution cable, multicord.**

## Breakout fibre optic cable (1 - 24 fibres)

- Application**
- Internal cable for installation in trunking, under floor or ceiling spaces
  - Short run external links between buildings
  - High strength aramid yarn strength member
  - Fibre backbones in riser and horizontal configurations
  - Pre-terminated cable assemblies

- Options**
- Singlemode G652D or G657A2  
- 1, 2, 4, 6, 8, 12, 24 fibres
- Multimode OM2, OM3 or OM4  
- 1, 2, 4, 6, 8, 12, 24 fibres

WBT breakout cables are constructed of up to 24, 2mm simplex cables stranded around a central strength member. Each simplex cable has its own aramid yarn strength member and jacket. These sub units are wrapped in a polyester tape and sheathed in LSZH.



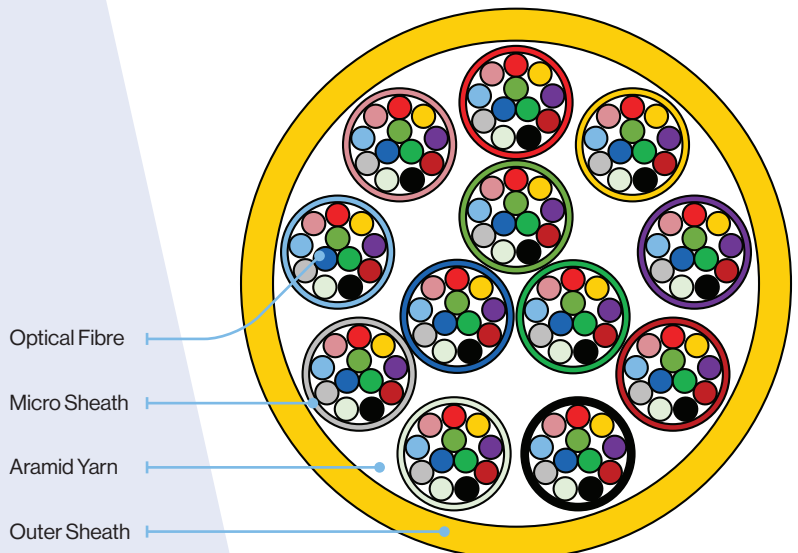
PART NO.	SPECIFICATIONS
112x09	Singlemode G652D, 2.0mm, 1 fibres, yellow
112x27	Singlemode G652D, 2.0mm, 2 fibres, duplex, yellow
112x164	Singlemode G652D, 2.0mm, 2 fibres, yellow
112x156	Singlemode G652D, 2.0mm, 4 fibres, yellow
112x152	Singlemode G652D, 2.0mm, 6 fibres, yellow
112x153	Singlemode G652D, 2.0mm, 8 fibres, yellow
112x154	Singlemode G652D, 2.0mm, 12 fibres, yellow
112x155	Singlemode G652D, 2.0mm, 24 fibres, yellow
112x59	Multimode OM3, 2.0mm, 1 fibres, aqua
112x136	Multimode OM2, 2.0mm, 1 fibres, aqua
112x60	Multimode OM3, 2.0mm, 2 fibres, duplex, aqua
112x26	Multimode OM2, 2.0mm, 2 fibres, duplex, aqua
112x157	Multimode OM3, 2.0mm, 2 fibres, aqua
112x163	Multimode OM3, 2.0mm, 4 fibres, aqua
112x160	Multimode OM3, 2.0mm, 8 fibres, aqua
112x161	Multimode OM3, 2.0mm, 12 fibres, aqua
112x162	Multimode OM3, 2.0mm, 24 fibres, aqua

## Micro core trunk cable (12 - 144 fibres)

Distribution cable consists of multiple tight-buffered fibres bundled in a LSZH jacket with a strength member. Typically, these cables may also form sub cables within a larger distribution cable.

Generally used with MTP/MPO trunk cable assemblies, these cables contain a reduced diameter cable construction, saving space in cable pathways.

- 12F, 24F, 36F, 48F, 72F, 96F and 144F core count options
- Small 4.5mm OD for 12 and 24F cable, with 3mm sub-units
- Singlemode G657A2, and Multimode Aqua or Violet OM4 options
- Custom colour options black, red, pink, blue are available upon request
- LSZH outer sheath



## Tight buffered distribution/riser cable (4 - 24 fibres)

### Application

- Internal cable for installation in trunking, under floor or ceiling spaces
- Short run external links between buildings
- Fibre backbones in riser and horizontal configurations
- Pre-terminated cable assemblies

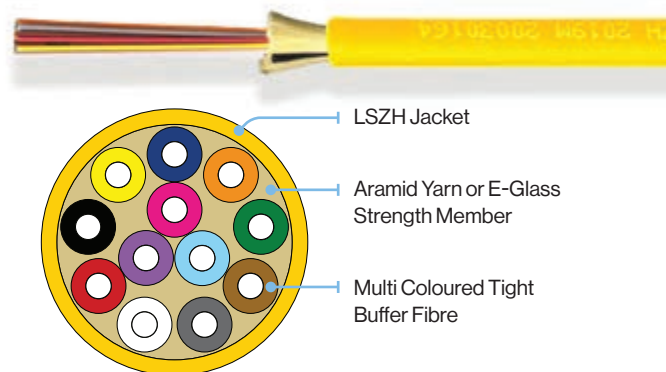
### Options

Singlemode G657A2 - 6, 12, 24 fibres  
Multimode OM3 or OM4 - 4, 6, 12, 24 fibres

These tight buffered riser, internal / external distribution cables are constructed of 900µm buffered fibres surrounded by aramid yarn or e-glass strength members jacketed in an LSZH outer jacket.

### Features & benefits:

- Colour coded fibres
- High strength aramid yarn strength member
- Easy to strip
- LSZH jacket
- Cut to length
- Other colours available - Blue, pink, black, red



PART NO.	SPECIFICATIONS
112x301	Singlemode G657A2, 6 fibres, yellow
112x224	Singlemode G657A2, 12 fibres, yellow
112x302	Singlemode G657A2, 24 fibres, yellow
112x158	Multimode OM3, 4 fibres, aqua
112x133	Multimode OM3, 6 fibres, aqua
112x233	Multimode OM3, 12 fibres, aqua
112x131	Multimode OM3, 24 fibres, aqua
112x300	Multimode OM4, 6 fibres, aqua
112x171	Multimode OM4, 12 fibres, aqua
112x172	Multimode OM4, 24 fibres, aqua
112x214	Multimode OM4, 12 fibres, violet
112x215	Multimode OM4, 24 fibres, violet



## Outdoor multi loose tube fibre optic cable (6 - 144 fibres)

**Application**

- Suitable for internal or external applications in ducts or intra-building links in campus environments

**Options**

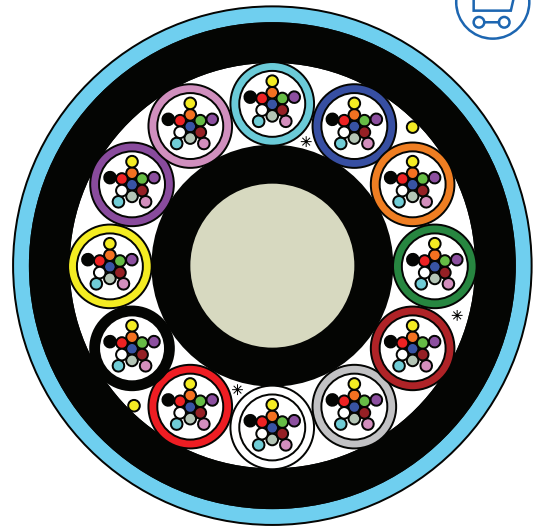
Singlemode G652D: 6, 12, 24, 48, 72, 96, 144 fibres  
Multimode OM3: 6, 12, 24 fibres

The multi loose tube cable construction consists of up to 144, 250µm optical fibres in 12 fibre gel filled loose tubes with fillers where appropriate, SZ stranded around a fibre reinforced plastic (FRP) central strength member with water swellable threads and water swellable tape.

### Features & benefits:

- Colour coded fibres
- Choice of PE or LSZH jacket

PART NO.	SPECIFICATIONS
112x303	Singlemode G652D, 6 fibres, blue
112x304	Singlemode G652D, 12 fibres, blue
112x305	Singlemode G652D, 24 fibres, blue
112x306	Singlemode G652D, 48 fibres, blue
112x307	Singlemode G652D, 72 fibres, blue
112x308	Singlemode G652D, 96 fibres, blue
112x309	Singlemode G652D, 144 fibres, blue
112x310	Multimode OM3, 6 fibres, blue
112x311	Multimode OM3, 12 fibres, blue
112x312	Multimode OM3, 24 fibres, blue



## Direct buried double jacket fibre optic cable (6 - 144 fibres)

**Application**

- Direct buried
- Used in application with high mechanical loads

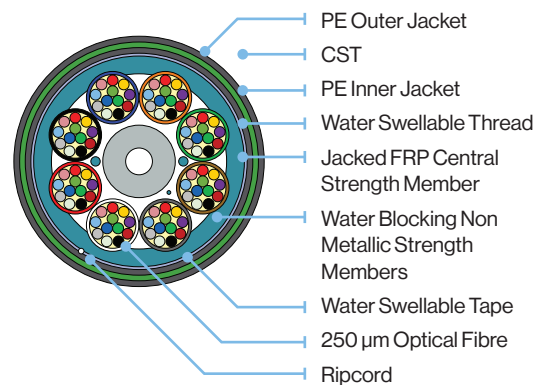
**Options**

Singlemode G652D: 6, 12, 24, 36, 48, 72, 96, 144 fibres  
Multimode OM3 or OM4: 6, 12, 24, 36, 48, 72, 96, 144 fibres

The WBT multi element multi loose tube cable construction consists of up to 144, 250µm optical fibres in 12 fibre gel filled loose tubes with fillers where appropriate, SZ stranded around a fibre reinforced plastic (FRP) central strength member with water swellable threads and water swellable tape.

### Features & benefits:

- Single layer stranded construction (up to 144 fibres)
- Corrugated steel tape as protection against rodents and mechanical damage
- Particularly robust cable, filled loose tube
- Inner and outer jacket are made of PE jacket
- Wrapped in water swellable tape



## Custom cables

For custom cable requirements, please discuss your requirements with a WBT sales team member, as many other cable construction options are available.

# Pre-terminated fibre optic cable assemblies

## Multi-fibre custom made solutions

**WBT pre-terminated fibre optic cable assemblies are an ideal solution for overcoming on site splicing constraints or where field termination is impractical and overly time consuming.**

Furthermore, factory terminated cable assemblies are fully tested and inspected, providing guaranteed reliability. WBT pre-terminated fibre optic cables can be manufactured with any connector type, and with a wide variety of fibre core counts, indoor and outdoor cable, and to any specified length.

Multi-fibre optic cable assemblies are a true, high quality, time and cost saving solution, supplied with various optical fibre types to meet the demands of different applications, including singlemode OS1a/OS2 fibres (G657A2 bend insensitive or G652D optical fibre) and multimode OM3/OM4 optical fibre.

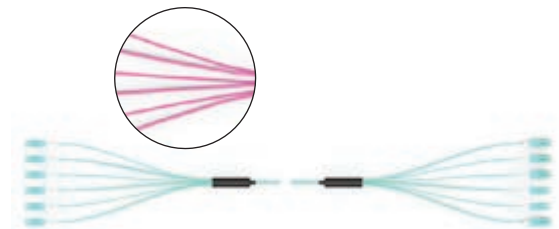
Other customizable options can also be provided, including heavy duty hauling socks, staggered connectors, as well as customized breakouts.

## Features & benefits:

- Fast manufacturing and delivery with local Australian made content
- Factory-terminated and tested to international standards
- Indoor/outdoor pre-terminated cable assemblies
- Pre-terminated fibre optic cable assemblies can also be provided for loose tube, SWA, Milspec and other specialized cables
- Optional staggered terminations
- Optional hauling/pulling sock mechanism. High strength
- 900 micron fibre breakouts or optional 2mm oversleeving

## Multimode optical fibre cable harness assemblies

- Available in multimode OM3/OM4
- Standard breakout length - 700mm or custom
- Staggered breakouts available
- Any choice of connectors
- Can also be used as a ruggedised patch cord. More flexible cable options are available in this instance for 2 and 4 fibres, as well as higher fibre counts
- 2F, 4F, 6F, 8F, 12F, 24F cable assemblies generally utilize tight buffered distribution/riser cable - 900 micron breakouts
- 48F, 72F, 96F and 144F assemblies generally utilize microcore cable - 2mm breakouts



## Singlemode optical fibre cable harness assemblies

- Available in singlemode OS1a/OS2, G657A2 or G652D fibre
- Standard breakout length - 700mm or custom
- Staggered breakouts available
- Any choice of connectors
- Can also be used as a ruggedised patch cord. More flexible cable options are available in this instance for 2 and 4 fibres, as well as higher fibre counts
- 2F, 4F, 6F, 8F, 12F, 24F cable assemblies generally utilize tight buffered distribution/riser cable - 900 micron breakouts
- 48F, 72F, 96F and 144F assemblies generally utilize microcore cable - 2mm breakouts



# Fibre connectivity

**Every connector assembly supplied by WBT is made using quality parts in a high quality termination facility, according to recognised and approved international standards.**

The quality and inspection procedures employed, ensure only high quality, individually inspected and approved pigtailed and patch cords are supplied. Therefore, customers can have confidence knowing that the product supplied will perform reliably to a high standard in the telecommunications and data networks for many years. Each patch cord is individually inspected and tested at the time of production.

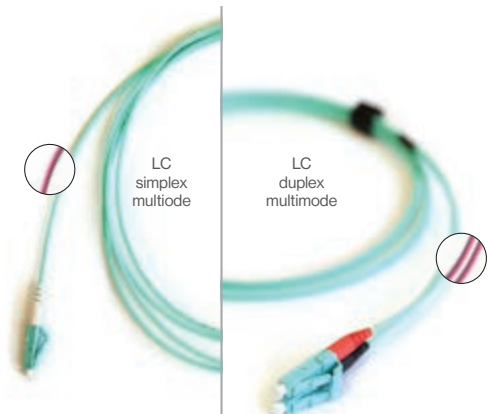
- Singlemode G657A2, G652D or multimode OM4 fibre options
- Simplex, duplex as well as multi-fibre patch cord options
- LSZH sheath
- Complies with ANSI, Bellcore, TIA / EIA, IEC standards
- Factory terminated and tested
- Choice of connector types - LC, LC duplex, SC/UPC, SC/APC, etc
- Reduced diameter LC duplex uniboot patch cord options
- Various patch cord lengths
- Fast delivery and stock availability

## T99 series patch cords multimode OM4

- Connector types - LC, LC duplex, SC, SC duplex, ST, FC
- OM4 fibre as standard (OM3 also available)
- Low loss connectors for high performance and reliability
- Multi-fibre patch cord options available
- Available colours - Aqua, Violet

### Multimode connectors performance information:

	SC	ST	FC	LC
<b>FERRULE</b>	2.5 mm dia Zirconia	2.5 mm dia Zirconia	2.5 mm dia Zirconia	1.25 mm dia Zirconia
<b>STANDARD POLISH</b>	UPC	UPC	UPC	UPC
<b>INSERTION LOSS</b>	0.2 dB typ 0.3 dB max	0.2 dB typ 0.4 dB max	0.2 dB typ 0.3 dB max	0.2 dB typ 0.3 dB max
<b>RETURN LOSS</b>	35 dB	35 dB	35 dB	35 dB
<b>TERMINATIONS</b>	>500	>500	>500	>500
<b>SERVICE TEMP. °C</b>	-20 to +60	-20 to +60	-20 to +60	-20 to +60

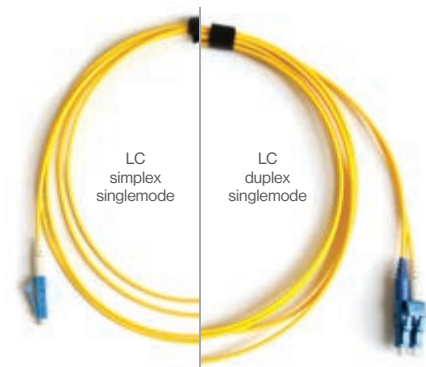


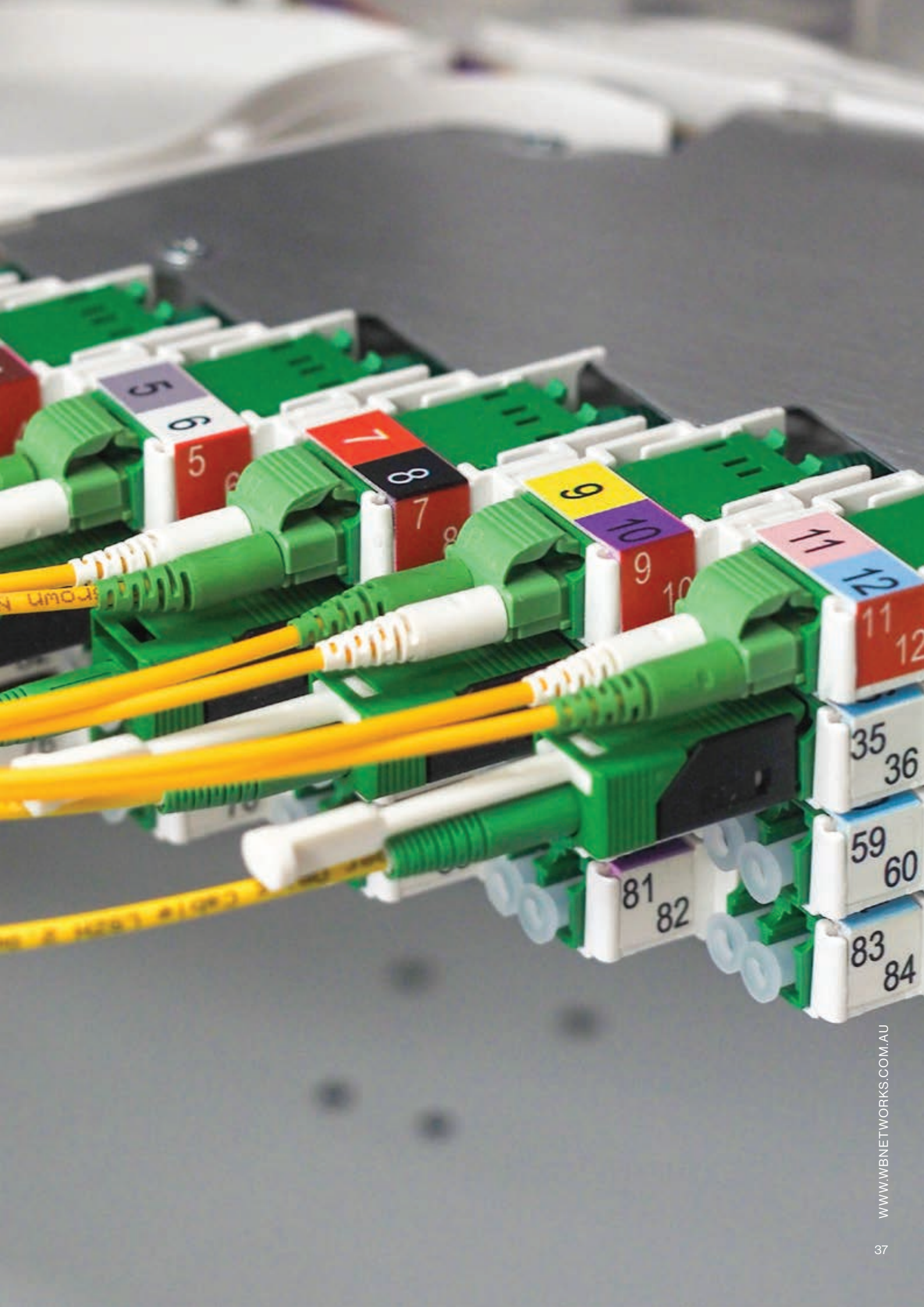
## T99 series patch cords singlemode

- Connector types - LC, LC duplex, LC/A, SC, SC duplex, SC/A, SC/A duplex, ST, FC
- Bend insensitive G657A2 fibre as standard (G652D also available)
- Low loss connectors for high performance and reliability
- Extreme low loss Grade A connector options available
- Multi-fibre patch cord options available

### Multimode connectors performance information:

	SC	ST	FC	LC	LC/A	SC/A
<b>FERRULE</b>	2.5 mm dia Zirconia	2.5 mm dia Zirconia	2.5 mm dia Zirconia	1.25 mm dia Zirconia	1.25 mm dia Zirconia end angle 8°	2.5 mm dia Zirconia end angle 8°
<b>STANDARD POLISH</b>	UPC	UPC	UPC	UPC	APC	APC
<b>INSERTION LOSS</b>	0.2 dB typ 0.3 dB max	0.2 dB typ 0.4 dB max	0.2 dB typ 0.3 dB max	0.2 dB typ 0.3 dB max	0.2 dB typ	0.2 dB typ
<b>RETURN LOSS</b>	≤50-55 dB	≤50-55 dB	≤50-55 dB	≤50-55 dB	≤60-65 dB	≤60-65 dB
<b>TERMINATIONS</b>	>500	>500	>500	>500	>500	>500
<b>SERVICE TEMP. °C</b>	-20 to +70	-20 to +70	-20 to +70	-20 to +70	-20 to +70	-20 to +70







## Singlemode Grade A connectors performance information:

	INSERTION LOSS	INSERTION LOSS (MEAN OF 20 RANDOM MATING)	RETURN LOSS (MATED OR NOT)	INPUT POWER CAPABILITY
<b>A/SC ANGLED CONNECTOR</b>	(1260-1625 nm) (dB) Max 0.15	(1260-1625 nm) (dB) Avg 0.07	(1260-1625 nm) (dB) Max $\geq 65$	(dBm) Max +27**
<b>SC UPC</b>	(1260-1625 nm) (dB) Max 0.15	(1260-1625 nm) (dB) Avg 0.07	(1260-1625 nm) (dB) Max $\geq 50$	(dBm) Max +27**
<b>FC UPC</b>	(1260-1625 nm) (dB) Max 0.15	(1260-1625 nm) (dB) Avg 0.07	(1260-1625 nm) (dB) Max $\geq 50$	(dBm) Max +27**
<b>E2000 UPC</b>	(1260-1625 nm) (dB) Max 0.15	(1260-1625 nm) (dB) Avg 0.07	(1260-1625 nm) (dB) Max $\geq 50$	(dBm) Max +27**
<b>LC APC</b>	(1260-1625 nm) (dB) Max 0.15	(1260-1625 nm) (dB) Avg 0.07	(1260-1625 nm) (dB) Max $\geq 65$	(dBm) Max +27**
<b>LC UPC</b>	(1260-1625 nm) (dB) Max 0.15	(1260-1625 nm) (dB) Avg 0.07	(1260-1625 nm) (dB) Max $\geq 50$	(dBm) Max +27**
<b>DIN 47256***</b>	(1310-1550 nm) (dB) Max 0.4	(1310-1550 nm) (dB) Avg 0.2	(1310 nm) (dB) Max $\geq 50-55$	



**SC UPC Grade A connector shown**

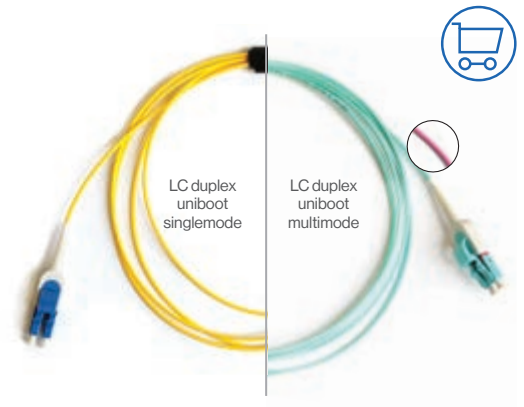
### Note

- \* Grade A connectors have not yet been ratified by the standard bodies
- \*\* Max. input power can only be applied, if connector end faces are absolutely clean
- \*\*\* DIN47256 connector is not to be used as Grade A\* connector

## T99 series patch cords

### LC-LC duplex uniboot, reversible polarity

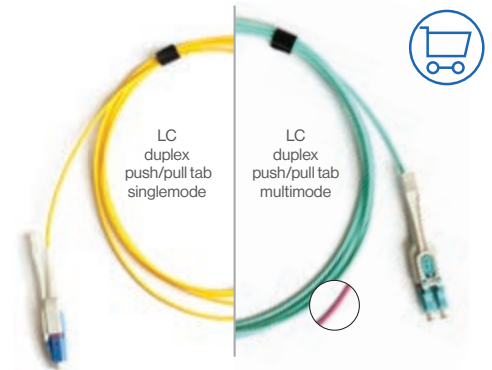
- LC duplex uniboot connectors
- Singlemode G657A2 or multimode OM4 aqua or violet fibre options
- LSZH sheath
- Uniboot, slim cable design. 2mm OD for duplex cable
- Complies with ANSI, Bellcore, TIA / EIA, IEC standards



## T99 series patch cords

### LC-LC duplex uniboot, reversible polarity push/pull tab

- LC duplex uniboot connectors
- Singlemode (G657A2) or multimode OM4 aqua or violet fibre options
- LSZH sheath
- Uniboot, slim cable design 2mm OD for duplex cable
- Push/pull tab allows for easy connection and disconnection around congested patching areas
- Complies with ANSI, Bellcore, TIA / EIA, IEC standards



## Pigtails

Optical fibre pigtails are generally installed into splice tray subracks and plug into patch panel through adaptors.

### Features & benefits:

- Singlemode or multimode fibre (OM1, OM2, OM3)
- Any connector type - SC, SC/A, LC, etc
- Available in various lengths
- Breakout lengths can be custom specified



63100051-12 shown

PART NO.	CONNECTOR TYPE	FIBRE TYPE
63100088T	LC	Singlemode G652D
63200458T	LC	Multimode OM4
63100858T	LC/A	Singlemode G652D
63100021-12	SC	Singlemode G652D
63100021AT	SC	Singlemode G652D
63200480T	SC	Multimode OM4
63101006-12	SC/A	Singlemode G652D, Grade A
63100051-12	SC/A	Singlemode G652D
63100051AT	SC/A	Singlemode G652D
63100093	ST	Singlemode G657A1
63100093P	ST	Singlemode G652D
63101394Z	LC	Singlemode
63101395Z	LC/A	Singlemode
63200483Z	LC	Multimode aqua OM3
63200484Z	LC	Multimode beige OM3
63101396Z	SC	Singlemode
63200485Z	SC	Multimode aqua OM3
63200486Z	SC	Multimode beige OM1
63101397Z	SC/A	Singlemode
63101398Z	ST	Singlemode
63200488Z	DT	Multimode OM1

900 micron pigtail kit, 1 fibre (pack of 12)

## Through adaptors

The optical fibre through adaptor is mounted in a patch panel of an optical fibre termination unit, or OFDF and allows a pigtail to be connected to a patch cord. A through adaptor allows the optical transmission system connection to be quickly made and broken, as required.



109x065 shown



109x026 shown

PART NO.	CONNECTOR TYPE	FIBRE TYPE
109x031	DIN	Singlemode, simplex, flange
109x038	LC	Singlemode, simplex, blue, short flange
109x037	LC	Singlemode, quad, blue, flange
109x063	LC	Singlemode, duplex, blue, shuttered
109x091	LC	Singlemode, quad, blue, short flange
109x109	LC	Singlemode, duplex, blue, short flange
109x504	LC Grade A	Singlemode, duplex, blue, short flange
109x504	LC Grade A	Singlemode, duplex, blue, short flange
109x040	LC/A	Singlemode, quad, green, short flange
109x053	LC/A	Singlemode, duplex, green, flange
109x210	LC/A	Singlemode, quad, green, short flange
109x104	MU	Singlemode, simplex, blue
109x011	SC	Singlemode, simplex, blue, flange
109x012	SC	Singlemode, duplex, blue, flange
109x035	SC	Singlemode, simplex, blue, short flange
109x003	SC/A	Singlemode, simplex, green, flange
109x013	SC/A	Singlemode, duplex, green, flange
109x036	SC/A	Singlemode, simplex, green, short flange
109x065	SC/A	Singlemode, simplex, green, short flange

PART NO.	CONNECTOR TYPE	FIBRE TYPE
109x126	SC/A	Singlemode, duplex, green, short flange
109x503	SC/A Grade A	Singlemode, simplex, green, flange
109x500	SC/A Grade A	Singlemode, simplex, green, short flange
109x029	LC	Multimode, duplex, beige, flange
109x092	LC	Multimode, quad, aqua, short flange
109x094	LC	Multimode, quad, violet, short flange
109x095	LC	Multimode, quad, violet, flange
109x131	LC	Multimode, duplex, violet, short flange
109x022	SC	Multimode, simplex, beige, flange
109x027	SC	Multimode, duplex, beige, flange
109x064	SC	Multimode, simplex, beige, short flange
109x071	SC	Multimode, simplex, aqua, flange
109x049	SC	Multimode, simplex, aqua, short flange
109x112	MTP/MPO	SM/MM, simplex, black - key up to key down (Polarity A), MTP standard
109x124	MTP/MPO	SM/MM, simplex, black - key up to key down (Polarity A), flange, MTP standard
109x125	MTP/MPO	SM/MM, simplex, black - key up to key up (Polarity B), flange, MTP standard

## Field assembly optical connector

### 0.25 - 0.90 SC/A soft boot

The SC/APC Soft type Field Assembly Optical Connector (FAOC) is designed with a compact size in order to fit small size terminal box or fibre distribution frame, terminated with bare fibre or 0.9mm jacket cable. The FAOC is made with high precision and quality zirconia ferrule and provides a highly reliable connection in most fibre optic network applications.

#### Features & benefits:

- Fibre Optic Cable Distribution network
- Fibre To The Home (FTTH) network
- Highly stable and reliable performance
- Intermateability IEC 61754-4
- EU regulation: RoHS
- Flammability Grade: UL94 V-0
- High Success Rate design and technology
- Reusable termination capability (up to 5x)

## Attenuators

#### Features & benefits:

- Fixed attenuation values of 5, 10 & 15 dB (other values available)
- Accuracy + 12% @ 1300 and 1550 nm wavelengths
- Return loss: SPC >40 dB; UPC >55 dB; APC >60dB
- Optical performance 100% factory tested
- Climatic range: -25C to + 75C, and 10% to 90% humidity
- Various connectors and finishes available, eg UPC and APC, etc
- Polarisation insensitive
- Compact design fits in existing connections or patch panels
- Convenience and ease of handling
- Rating > + 20 dBm

#### PDL (Polarisation Dependant Loss):

LOSS VALUE	1310NM WAVELENGTH	1550NM WAVELENGTH
5dB	0.05dB	0.01dB
10dB	0.1dB	0.05dB
15dB	0.2dB	0.1dB
20dB	0.3dB	0.2dB

#### PMD (Polarisation Mode Dispersion):

For attenuators in the range 1 to 25

dB – Value is < 0.2 ps



65932005  
shown

PART NO.	CONNECTOR TYPE
65932005	Field assembly optical connector 0.25 - 0.90 SC/A soft boot



SC/APC  
attenuator



LC/UPC  
attenuator



SC/UPC  
attenuator

PART NO.	CONNECTOR TYPE	DB*
116x01x05		5 dB ± 0.8
116x01x10	SC/UPC	10 dB ± 1.2
116x01x20		20 dB ± 1.2
116x02x01		1 dB ± 0.3
116x02x02		2 dB ± 0.4
116x02x03		3 dB ± 0.5
116x02x05	SC/APC	5 dB ± 0.8
116x02x10		10 dB ± 1.2
116x02x15		15 dB ± 1.7
116x02x20		20 dB ± 2.2
116x07x02		2 dB ± 0.4
116x07x03		3 dB ± 0.5
116x07x05		5 dB ± 0.8
116x07x08	LC/UPC	8 dB ± 0.8
116x07x10		10 dB ± 1.2
116x07x15		15 dB ± 1.7
116x07x20		20 dB ± 2.2

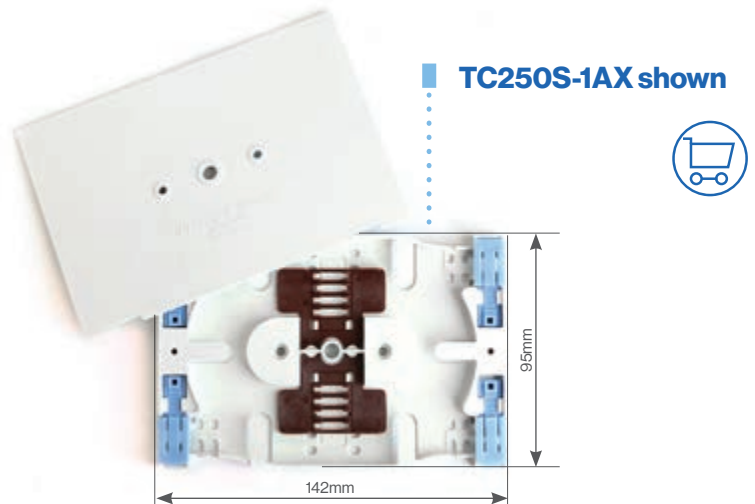
Note: \* Attenuation accuracy between: 1260 to 1360nm and 1480 to 1580nm wavelengths. Other Attenuator options are available

## TC250 series small splice trays

### Features & benefits:

- Typically used for 6 spliced optical fibres. Included are 2 heat shrink splice protector holder clips. Can also be used for up to 12 spliced optical fibres, using alternative clips
- Loose tube clamps incorporated in the tray design
- Other splice protector clips, available separately
- Heat shrink splice protector, 40mm long also available separately

PART NO.	DESCRIPTION
TC250S-1AX	Splice tray assembly small, with lid
TC250S-2AX	Two splice tray assembly, small, one lid

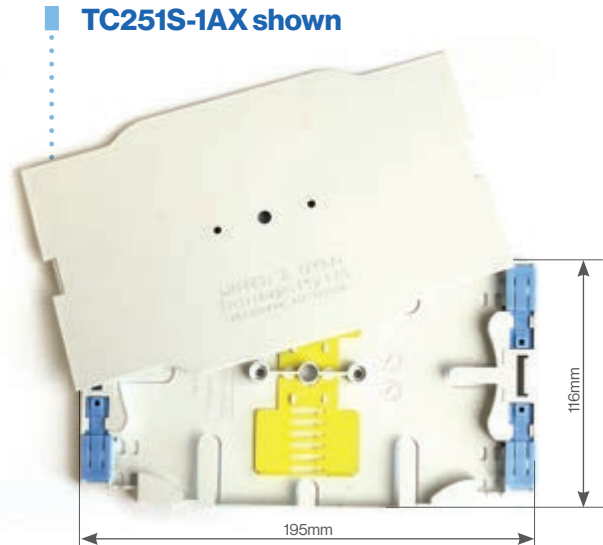


## TC251 series universal splice trays

### Features & benefits:

- Accepts either 12 or 24 spliced fibres
- Two heat shrink splice protector clip holders included
- Loose tube clamps incorporated in the tray design
- Other splice protector clips, available separately, specify requirements
- Heat shrink splice protector, 40mm long also available separately

PART NO.	DESCRIPTION
TC251S-1AX	Universal splice tray assembly with cover
TC251S-1EX	Universal splice tray assembly, stackable with cover; options to create various height stacks, with different splice protector holder clips
TC251S-MKIT	Splice tray mounting bracket kit
TC251S-5	Cover, universal splice tray



## Splice trays accessories

PART NO.	DESCRIPTION
TC250S-2	Splice/shrink protector holder, 6 holders, black
TC250S-4	Coupler/splitter holder, blue
TC250S-10	Splice/shrink protector holder, 6 holders, yellow
TC250S-12	Splice/shrink protector holder, 12 holders, secor metal wafer
TC250S-13	Splice/shrink protector holder, 12 holders, 2.6mm dia, blue
TC250S-14	Splice/shrink protector holder, 12 holders, 2.8mm dia, orange
TC250S-30	Splice/shrink protector holder, 4 holders, brown



# Fibre optic tools and accessories

## MTP®/MPO connector cleaner, bulkhead type

The MTP®/MPO cleaner is a high-performance device designed for cleaning the ferrule end faces of MTP®/MPO connectors. This tool cleans the fibre end face without the use of alcohol, cleaning all 12 fibres at once.

- Cleans male and female MTP®/MPO ferrules
- Simple dial turn engagement is easy to operate
- Nozzle is keyed for precise alignment of the cleaning tip to the fibre array
- Alignment cap lid opens for cleaning the unmated connectors, intermateability with FOCIS-5 (MPO)
- Capable of cleaning MPO ferrules inside or outside an MPO adaptor, ferrules with or without guide pins
- 500 cleanings

## Fibre optic connector cleaner

Warren & Brown one click fibre optic connector cleaning pens utilise a novel dry cleaning strand to gently sweep and lift away dust and residues from the connector end face.

The fibre optic cleaning pens have been developed to work with the LC, SC, FC, and ST connectors; these instruments clean the ferrule end faces removing dust, oil, and other debris without nicking or scratching the end face. The fibre optic connector cleaning pens allow for substantial labour savings over conventional, high volume applications and have been adopted by manufacturers and carriers worldwide.

## Cletop-S cleaning unit

Hand sized, lever operated, cassette for cleaning SC (ø2.50mm) or LC (ø1.25mm) connector ends. Quickly cleans connectors thoroughly, of foreign material e.g. dust, alcohol residue, etc. Reel material can clean up to 400 connectors. Cleaning reels are replaceable.

### Features & benefits:

- Tape exchange type
- Pre-eminent for cost performance
- Cleans per reel - more than 400 times
- There is a shutter in the cleaning window
- Automatic opening and closing with tape sent automatically

## LC connector extraction tool

When using standard LC duplex patch cords in densely populated patching fields, it may be difficult removing patch cords.

In order to remove LC patch cords without disturbing other connectors, the LC extraction/insertion tool can be used to remove patch cords in these difficult to reach areas.

### 65900423 shown



PART NO.	DESCRIPTION	
65900212	MTP®/MPO connector cleaning tool - US Conec	
65900423	MTP®/MPO connector cleaning tool - WBT	

### 65900421 shown



### 65900420 shown



PART NO.	DESCRIPTION	
65900420	SC fibre cleaner pen - one click 2.5mm	
65900421	LC fibre cleaner pen - one click 1.25mm	

### 65900229 shown



### 65900230 shown



PART NO.	DESCRIPTION	
65900230	Cletop cleaning unit, SC connector	
65900229	Cletop cleaning unit, LC connector	

### 62X005 shown



PART NO.	DESCRIPTION	
62X005	LC connector extraction tool	

## SC connector extraction tool

This tool is used to extract either SC, A/SC or LC Duplex through adaptors from densely populated patch panels. It is made from stainless steel to ensure a long service life. The tool has two small magnets attached to its back, which enable it to be stored in any convenient place on a steel rack or subrack. The tool is also designed to unplug WBT style through adaptor dust caps, with a central hole, from densely populated patch panels.

PART NO.	DESCRIPTION
62X006	SC connector extraction tool



## Optical fibre connector cleaning kit

This kit (Part No. 65900200) contains a complete set of items that enable optical fibre connectors and through connectors/adaptors to be quickly cleaned in a safe and effective manner. Replacement items are available separately.

### Kit includes:

PART NO.	DESCRIPTION
70x004	Cleaning fluid iso-propyl alcohol (50ml bottle)
88x002	Solvent dispenser
81x002	Sachets, iso-propyl alcohol (100 per box)
56x019	Gloves either nitrile rubber or poly (min 20 per bag)
100x030	Cleaning stick
81x003	Swab, lint-free paper (pack)
86x003	Set of instructions
60x017	Plastic box



### 65900200 shown

PART NO.	DESCRIPTION
65900200	Optical fibre connector cleaning kit
51300176	PF Cleaning wipes, bucket

## Other miscellaneous items available separately

Other miscellaneous items are cable tags, heat shrink & splice protectors, cable ties, tapes, tubes, velcro ties, etc.

Please discuss any other requirements with our sales team.

### 65404004 shown



### 97000104 shown



PART NO.	DESCRIPTION
97000104	Plastic PVC ID tag for cables
65404001	Heat shrink splice protectors - 44mm x 2.4-2.5mm (pack of 120)
100X121	Heat shrink splice protector for 8 or 12 fibre, ribbon fibre (pack of 100)
100X080	Heat shrink splice protector (pack of 100)
85x15x20	Cable ties for securing entering cables (pack of 20)
65061012	PVC electrical tape - Black (1 roll)
43300009	Butyl rubber tape 3.05 metres

PART NO.	DESCRIPTION
14100281	Fibre warning tape 48mm wide
51300053	Tape (aluminium foil) for wrapping around trunk cable for heat shrinking
54300339	Cold shrink tube 1/2"-11/2" .25m
35300688	Velcro tape, back to back 25mm x 22.8m, black
35300685	Velcro tape, back to back 50mm x 22.8m, black
35300627	Fastener, velcro back to back 25 x 200mm, black
35300628	Fastener, velcro hook & loop 25mm x 25m, black

# Cabling standards - structured cabling systems

**As with any smart design and smooth operation of a cabling network, planning is the key. The structured approach to cabling involves designing cable runs and connections to facilitate easy identification and troubleshooting of cable paths and to plan for future upgrades and changes.**

A structured cabling approach is generally defined by the leading industry standards groups.

Industry cabling standards are designed to protect the end user. They provide the building blocks of ensuring and maintaining high levels of cabling performance. Worldwide cabling standards generally think forward several years which ensures that future needs for increase capacity can be designed into the network.

## The Australian SCS standards mainly follow and refer the ISO / IEC International Cabling standards

ISO/IEC 11801-1	Information Technology - Generic cabling for customer premises	Part 1: General requirements
ISO/IEC 11801-2	Information Technology - Generic cabling for customer premises	Part 2: Office premises
ISO/IEC 11801-3	Information Technology - Generic cabling for customer premises	Part 3: Industrial premises
ISO/IEC 11801-4	Information Technology - Generic cabling for customer premises	Part 4: Single-tenant homes
ISO/IEC 11801-5	Information Technology - Generic cabling for customer premises	Part 5: Data centres
ISO/IEC 11801-6	Information Technology - Generic cabling for customer premises	Part 6: Distributed building services

These standards can assist cabling network operators in ensuring their cabling network adheres to industry best practices.

## Comparison of optical fibre cable types

The information contained in this section highlights the performance characteristics of the various cable types. These are minimum industry standards, however most high quality products such as the WBT fibre optic and copper connectivity solutions will exceed these minimum standards.

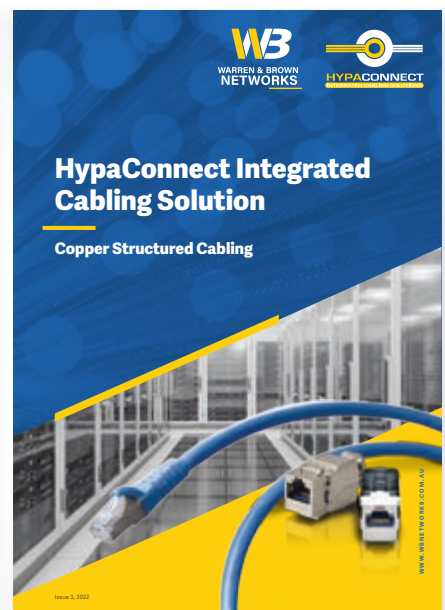
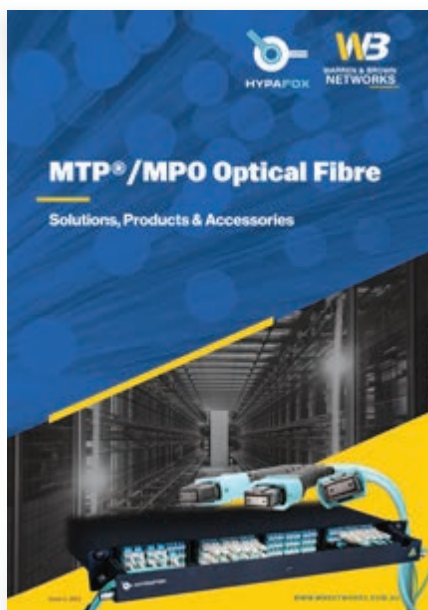
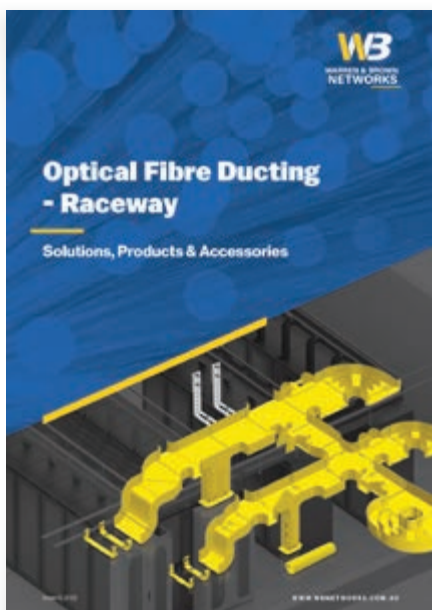
MEDIUM	STANDARD	MAXIMUM RATE	MAXIMUM DISTANCE	MAXIMUM BANDWIDTH	COMMON CONNECTORS	COMMON APPLICATIONS
<b>MMF (62.5/125 microns)</b>	OM1	1 Gbit/sec	300m	200 MHz	LC, SC, ST, MPO	FDDI, Ethernet
<b>MMF (50/125 microns)</b>	OM2	1 Gbit/sec	500m	500 MHz	LC, SC, ST, MPO	SANs, High Speed Ethernet
<b>MMF Laser Optimized (50/125 microns)</b>	OM3	10 Gbit/sec	300m	2000 MHz	LC, SC, ST, MPO	SANs, High Speed Ethernet
		40 Gbit/sec	100m	2000 MHz		
		100 Gbit/sec	100m	2000 MHz		
<b>MMF Laser Optimized (50/125 microns)</b>	OM4	10 Gbit/sec	550m	4700 MHz	LC, SC, ST, MPO	SANs, High Speed Ethernet
		40 Gbit/sec	150m	4700 MHz		
		100 Gbit/sec	150m	4700 MHz		
<b>SMF (9/125 microns)</b>	OS1a / OS2	10 Gbit/sec	40 km	Infinite	LC, SC, ST, FC, MPO	SANs, WANs, Telco



# At Warren & Brown, we listen, we respect and we deliver.

**Warren & Brown provides leading optical fibre and copper cabling products and solutions for various markets.**

Our designers and engineers are constantly looking for ways to improve customer offerings and by working closely with our customers, the company is able to achieve continual improvement.





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