

FAST FIBRE

Patch Cords - Pigtails - Connectors - Adaptors



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more information

View more of our extensive range on our website www.wrenuk.com

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About Wren Electronics

Wren Electronics Limited, a fibre optic manufacturing company founded in 1991 in Godalming, UK. Wren quickly became established as a leading cable assembly facility offering a fast, reliable and adaptable service for the telecommunications market, including manufacturing high quality fibre patchcords and assemblies in partnership with Diamond SA, Switzerland through Diamond Wren (UK) Limited.

To complement its bespoke cable assembly capabilities, Wren designed and manufactured a complete range of cable management systems from single patch panels to optical distribution frame systems for the telecommunications market, offering a “complete solution” to many important customers including;

- Virgin Media
- Sony
- BskyB
- BT Sport
- Cable & Wireless

Today Wren’s capabilities are focused on fast-turnaround manufacture of bespoke and custom fibre optic cable assemblies and fibre management products such as;

- High performance patchcords and custom assemblies
- Pre-terminated multi-fibre cables, including harsh environment and re-deployable solutions
- Repair and re-termination
- Optical distribution frames
- Splice management solutions
- Patch panels, wall boxes and cable management products

Applications for Wren’s products include;

- Telecoms – central office and node/cabinets cabling, patching and fibre management solutions.
- Enterprise/Datacoms – campus between building, backbone and horizontal LAN links, high density fibre interconnections between and within data centre racks and meet-me points at in-house and cloud/co-location data centres.
- Broadcast – re-deployable solutions for outside/temporary broadcast applications, studio builds and permanent broadcast data infrastructure.
- Specialist – armouring, ruggedizing and pre-installing of cables into flexible conduits for specialist applications including external and harsh environments.



i Manufacturing complete solutions

Our values include;

Customer service:

Founded on quick response and solutions that meet customers need, Wren prides itself on excellent customer service.

Quality:

Dedicated to value and continues improvement, Wren aims to offer the highest quality products.

Global logistics:

Able to access both volume and quick response manufacturing facilities, Wren can deliver to its customers requirements worldwide.

Quick response:

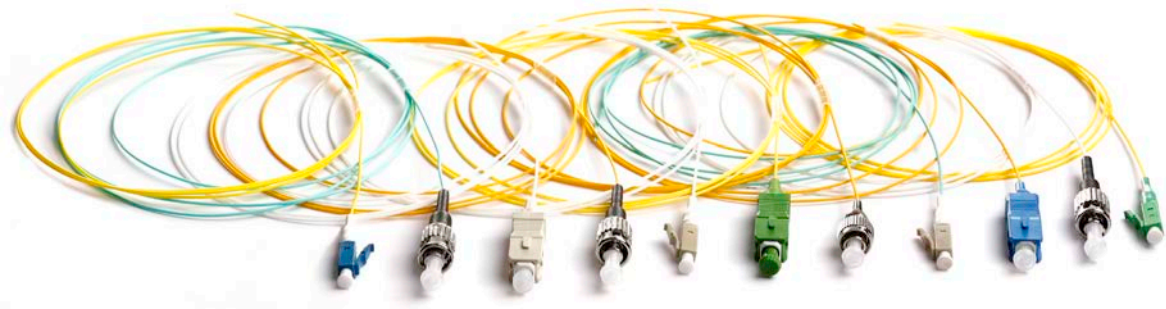
Wren aims to provide price and delivery information immediately and to fulfil orders to demanding lead times.

Comprehensive range:

Wren offers an extensive range of standard and bespoke fibre optic and structured cabling solutions.

Technical support:

Wren offers comprehensive technical pre and post sales support.



Quick-response manufacture of fibre optic assemblies and fibre management configuration in the UK

OS2 9/125 Duplex Fibre Optic Patch Cords

OS2 singlemode fibre optic patch cords are used to connect longer distance networks, between buildings and campuses and in long-distance metropolitan and access telecoms and CATV networks. All assemblies are fully tested prior to delivery and supplied with test results. Most common connector types, configurations and lengths are available from stock, using 3mm (for additional ruggedising) or 2mm diameter cable on request. OS2 singlemode patch cords are supplied with a yellow LSZH cable jacket as standard. Non-stocked configurations (length, colour, connectors and cable type) can be manufactured to meet specific requirements.

Applications

- Data centres
- LAN/Enterprise
- Metropolitan and access networks
- FTTH
- CATV
- Transmission, switch and test equipment

Features

- SC, LC, ST, FC, MU and E2000 as standard. Other connectors available
- LSZH - Low smoke zero halogen, yellow jacket
- Simplex and Duplex assemblies
- 900µm tight buffer, 3mm simplex and duplex cable (2mm cable on request)
- Available in other colours
- Armoured, round duplex and flat twin patch cords also available
- Uniboot and short boot patch cords also available
- All patch cords come with UPC or APC polished connector end face as standard
- OS2 fibre conforms to or exceeds all relevant ISO/IEC, TIA/EIA and ITU standards



LC - LC Singlemode 9/125 OS2 Duplex

Part Number	Description
LCLC9D0010	Patch Cord LC - LC 9/125 Duplex 1M
LCLC9D0020	Patch Cord LC - LC 9/125 Duplex 2M
LCLC9D0030	Patch Cord LC - LC 9/125 Duplex 3M
LCLC9D0050	Patch Cord LC - LC 9/125 Duplex 5M
LCLC9D0100	Patch Cord LC - LC 9/125 Duplex 10M



LC - SC Singlemode 9/125 OS2 Duplex

Part Number	Description
LCSC9D0010	Patch Cord LC - SC 9/125 Duplex 1M
LCSC9D0020	Patch Cord LC - SC 9/125 Duplex 2M
LCSC9D0030	Patch Cord LC - SC 9/125 Duplex 3M
LCSC9D0050	Patch Cord LC - SC 9/125 Duplex 5M
LCSC9D0100	Patch Cord LC - SC 9/125 Duplex 10M



LC - ST Singlemode 9/125 OS2 Duplex

Part Number	Description
LCST9D0010	Patch Cord LC - ST 9/125 Duplex 1M
LCST9D0020	Patch Cord LC - ST 9/125 Duplex 2M
LCST9D0030	Patch Cord LC - ST 9/125 Duplex 3M
LCST9D0050	Patch Cord LC - ST 9/125 Duplex 5M
LCST9D0100	Patch Cord LC - ST 9/125 Duplex 10M



SC - SC Singlemode 9/125 OS2 Duplex

Part Number	Description
SCSC9D0010	Patch Cord SC - SC 9/125 Duplex 1M
SCSC9D0020	Patch Cord SC - SC 9/125 Duplex 2M
SCSC9D0030	Patch Cord SC - SC 9/125 Duplex 3M
SCSC9D0050	Patch Cord SC - SC 9/125 Duplex 5M
SCSC9D0100	Patch Cord SC - SC 9/125 Duplex 10M

OS2 9/125 Duplex Fibre Optic Patch Cords



SC - ST Singlemode 9/125 OS2 Duplex

Part Number	Description
SCST9D0010	Patch Cord SC - ST 9/125 Duplex 1M
SCST9D0020	Patch Cord SC - ST 9/125 Duplex 2M
SCST9D0030	Patch Cord SC - ST 9/125 Duplex 3M
SCST9D0050	Patch Cord SC - ST 9/125 Duplex 5M
SCST9D0100	Patch Cord SC - ST 9/125 Duplex 10M



ST - ST Singlemode 9/125 OS2 Duplex

Part Number	Description
STST9D0010	Patch Cord ST - ST 9/125 Duplex 1M
STST9D0020	Patch Cord ST - ST 9/125 Duplex 2M
STST9D0030	Patch Cord ST - ST 9/125 Duplex 3M
STST9D0050	Patch Cord ST - ST 9/125 Duplex 5M
STST9D0100	Patch Cord ST - ST 9/125 Duplex 10M



SC/APC - SC/APC Singlemode 9/125 OS2 Duplex

Part Number	Description
SCASCA9D0010	Patch Cord SCA - SCA 9/125 Duplex 1M
SCASCA9D0020	Patch Cord SCA - SCA 9/125 Duplex 2M
SCASCA9D0030	Patch Cord SCA - SCA 9/125 Duplex 3M
SCASCA9D0050	Patch Cord SCA - SCA 9/125 Duplex 5M
SCASCA9D0100	Patch Cord SCA - SCA 9/125 Duplex 10M



SC/APC - SC Singlemode 9/125 OS2 Duplex

Part Number	Description
SCASC9D0010	Patch Cord SCA - SC 9/125 Duplex 1M
SCASC9D0020	Patch Cord SCA - SC 9/125 Duplex 2M
SCASC9D0030	Patch Cord SCA - SC 9/125 Duplex 3M
SCASC9D0050	Patch Cord SCA - SC 9/125 Duplex 5M
SCASC9D0100	Patch Cord SCA - SC 9/125 Duplex 10M



SC/APC - LC Singlemode 9/125 OS2 Duplex

Part Number	Description
SCALC9D0010	Patch Cord SCA - LC 9/125 Duplex 1M
SCALC9D0020	Patch Cord SCA - LC 9/125 Duplex 2M
SCALC9D0030	Patch Cord SCA - LC 9/125 Duplex 3M
SCALC9D0050	Patch Cord SCA - LC 9/125 Duplex 5M
SCALC9D0100	Patch Cord SCA - LC 9/125 Duplex 10M

OS2 9/125 Simplex Fibre Optic Patch Cords



SC - SC Singlemode 9/125 OS2 Simplex

Part Number	Description
SCSC9S0010	Patch Cord SC - SC 9/125 Simplex 1M
SCSC9S0020	Patch Cord SC - SC 9/125 Simplex 2M
SCSC9S0030	Patch Cord SC - SC 9/125 Simplex 3M
SCSC9S0050	Patch Cord SC - SC 9/125 Simplex 5M



LC - SC Singlemode 9/125 OS2 Simplex

Part Number	Description
LCSC9S0010	Patch Cord LC - SC 9/125 Simplex 1M
LCSC9S0020	Patch Cord LC - SC 9/125 Simplex 2M
LCSC9S0030	Patch Cord LC - SC 9/125 Simplex 3M
LCSC9S0050	Patch Cord LC - SC 9/125 Simplex 5M



LC - LC Singlemode 9/125 OS2 Simplex

Part Number	Description
LCLC9S0010	Patch Cord LC - LC 9/125 Simplex 1M
LCLC9S0020	Patch Cord LC - LC 9/125 Simplex 2M
LCLC9S0030	Patch Cord LC - LC 9/125 Simplex 3M
LCLC9S0050	Patch Cord LC - LC 9/125 Simplex 5M



E2000/APC - E2000/APC Singlemode 9/125 OS2 Simplex

Part Number	Description
E2AE2A9S0010	Patch Cord E2A - E2A 9/125 Simplex 1M
E2AE2A9S0020	Patch Cord E2A - E2A 9/125 Simplex 2M
E2AE2A9S0030	Patch Cord E2A - E2A 9/125 Simplex 3M
E2AE2A9S0050	Patch Cord E2A - E2A 9/125 Simplex 5M



E2000/APC - LC Singlemode 9/125 OS2 Simplex

Part Number	Description
E2ALC9S0010	Patch Cord E2A - LC 9/125 Simplex 1M
E2ALC9S0020	Patch Cord E2A - LC 9/125 Simplex 2M
E2ALC9S0030	Patch Cord E2A - LC 9/125 Simplex 3M
E2ALC9S0050	Patch Cord E2A - LC 9/125 Simplex 5M

OS2 9/125 Simplex Fibre Optic Patch Cords



E2000/APC - SC Singlemode 9/125 OS2 Simplex

Part Number	Description
E2ASC9S0010	Patch Cord E2A - SC 9/125 Simplex 1M
E2ASC9S0020	Patch Cord E2A - SC 9/125 Simplex 2M
E2ASC9S0030	Patch Cord E2A - SC 9/125 Simplex 3M
E2ASC9S0050	Patch Cord E2A - SC 9/125 Simplex 5M



E2000/APC - SC/APC Singlemode 9/125 OS2 Simplex

Part Number	Description
E2ASCA9S0010	Patch Cord E2A - SCA 9/125 Simplex 1M
E2ASCA9S0020	Patch Cord E2A - SCA 9/125 Simplex 2M
E2ASCA9S0030	Patch Cord E2A - SCA 9/125 Simplex 3M
E2ASCA9S0050	Patch Cord E2A - SCA 9/125 Simplex 5M



E2000/APC - E2000 Singlemode 9/125 OS2 Simplex

Part Number	Description
E2AE29S0010	Patch Cord E2A - E2 9/125 Simplex 1M
E2AE29S0020	Patch Cord E2A - E2 9/125 Simplex 2M
E2AE29S0030	Patch Cord E2A - E2 9/125 Simplex 3M
E2AE29S0050	Patch Cord E2A - E2 9/125 Simplex 5M

i See page 21 for more detail on our smart loaded panels, which can save on installation time.



OS2 9/125 Simplex Fibre Optic Patch Cords



E2000 - E2000 Singlemode 9/125 OS2 Simplex

Part Number	Description
E2E29S0010	Patch Cord E2 - E2 9/125 Simplex 1M
E2E29S0020	Patch Cord E2 - E2 9/125 Simplex 2M
E2E29S0030	Patch Cord E2 - E2 9/125 Simplex 3M
E2E29S0050	Patch Cord E2 - E2 9/125 Simplex 5M



E2000 - LC Singlemode 9/125 OS2 Simplex

Part Number	Description
E2LC9S0010	Patch Cord E2 - LC 9/125 Simplex 1M
E2LC9S0020	Patch Cord E2 - LC 9/125 Simplex 2M
E2LC9S0030	Patch Cord E2 - LC 9/125 Simplex 3M
E2LC9S0050	Patch Cord E2 - LC 9/125 Simplex 5M



E2000 - SC Singlemode 9/125 OS2 Simplex

Part Number	Description
E2SC9S0010	Patch Cord E2 - SC 9/125 Simplex 1M
E2SC9S0020	Patch Cord E2 - SC 9/125 Simplex 2M
E2SC9S0030	Patch Cord E2 - SC 9/125 Simplex 3M
E2SC9S0050	Patch Cord E2 - SC 9/125 Simplex 5M

Fibre Specification

Attenuation (db / km)	$\leq 0.32 @ 1310\text{nm} / \leq 0.18 @ 1550\text{m}$
Chromatic Dispersion (ps/nm-km)	$1285 - 1340 \geq -3.4 \leq 3.4$
	$1550\text{nm} \leq 18$
	$1625\text{nm} \leq 22$
Zero Dispersion Wavelength (nm)	1312 ± 22

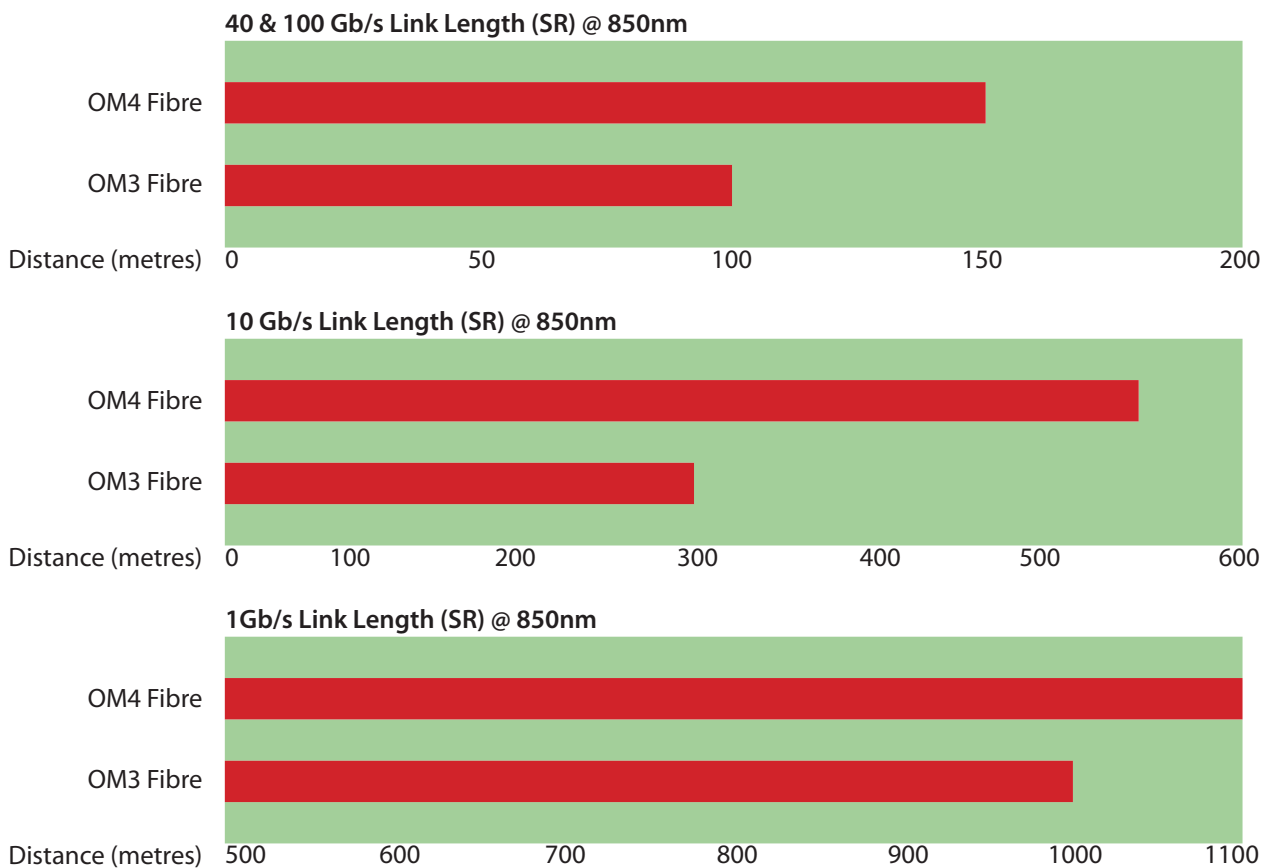
Cable Specification

	Simplex	Duplex
Cable Material	LSZH	LSZH
Strength Member	Aramid	Aramid
Crush (N/100mm)	1000	1000
Tensile (N)	120	120
Operating Temperature (°C)	-20 to 60	-20 to 60

Connector Specification

	UPC	APC
IL Max/Master (db) (Acceptance)	≤ 0.25	≤ 0.25
Av./Random (db)	≤ 0.20	≤ 0.20
Return Loss (db)	≥ 55	≥ 65

OM3 and OM4 Multimode Fibre : A Comparison



OM3 @ 850nm (SR) (Assuming maximum attenuation OM3 fibre of 3.5 db/km)

Application	Distance (m)	Max channel loss/ connector loss	Fibre attenuation	Theoretical max number connector assuming losses per connector of:		
				0.2 db	0.25 db	0.35 db
10 Gb/s	300	2.6 db /-	1.05 db	7	6	4
40 Gb/s	100	1.9 db / 1.5 db	0.35 db	7	6	4

OM4 @ 850nm (SR) (Assuming maximum attenuation OM4 fibre of 3.0 db/km)

Application	Distance (m)	Max channel loss/ connector loss	Fibre attenuation	Theoretical max number connector assuming losses per connector of:		
				0.2 db	0.25 db	0.35 db
10 Gb/s	400	2.9 db /-	1.20 db	6	4	3
40 Gb/s	150	1.5 db / 1.5 db	0.45 db	5	4	2

Longer lengths than those shown above on OM3 and OM4 fibre may be possible and actual maximum number of connectors permissible in the link may vary depending on the actual attenuation of the fibre used, the design of the data centre link, the numbers and type of splices, adaptors, pre-connectorised modules, cassettes and pre-terminated fibre assemblies used and compliance with good installation and testing practices and network standards.

OM4 50/125 Duplex Fibre Optic Patch Cords

Manufactured using 50µm multimode fibre optimised for the use with 850nm VCSELS (vertical cavity surface emitting lasers), OM4 multimode patch cords are used particularly in 10, 40 and 100 Gb/s applications, where the transmission distances and higher bandwidth requirements have dictated a need for a higher performance but cost-effective multimode system. Although not a replacement of OM3 systems, OM4, which is backward compatible with OM3 systems, provides an additional insertion loss margin to help compensate for less than ideal cabling installations and a greater reach at higher bandwidths at an overall cost that remains less than OS2 singlemode systems. All assemblies are fully tested prior to delivery and supplied with test results. Most common connector types, configurations and lengths are available from stock, using 3mm (for additional ruggedising) or 2mm diameter cable on request. OM4 multimode patch cords are supplied with an aqua LSZH cable jacket as standard. Non-stocked configurations (length, colour, connectors and cable type) can be manufactured to meet specific requirements.

Applications

- Data centres
- Storage area networks
- LAN/Enterprise
- High performance computing centres
- Central offices
- For use in 40 -100 Gb/s networks >100m indicative link length at 850nm (SR) wavelength
- For use in 10 Gb/s networks >300m indicative link length at 850nm (SR) wavelength
- For use in 1 Gb/s networks >1000m indicative link length at 850nm (SX) wavelength

Features

- 850nm laser optimised
- SC, LC, and ST connectors as standard, other connectors available
- LSZH - Low smoke zero halogen, aqua jacket
- 900µm tight buffer, 3mm simplex and duplex cable (2mm cable on request)
- Available in other colours
- Armoured, round duplex and flat twin patch cords also available
- OM4 fibre conforms to or exceeds all relevant ISO/IEC, TIA/EIA and ITU standards
- All patch cords come with a UPC polished connector end face as standard



LC - LC Multimode 50/125 OM4 Duplex

Part Number	Description
LCLC4D0010	Patch Cord LC - LC 50/125 Duplex 1M
LCLC4D0020	Patch Cord LC - LC 50/125 Duplex 2M
LCLC4D0030	Patch Cord LC - LC 50/125 Duplex 3M
LCLC4D0050	Patch Cord LC - LC 50/125 Duplex 5M
LCLC4D0100	Patch Cord LC - LC 50/125 Duplex 10M
LCLC4D0120	Patch Cord LC - LC 50/125 Duplex 12M
LCLC4D0150	Patch Cord LC - LC 50/125 Duplex 15M
LCLC4D0120	Patch Cord LC - LC 50/125 Duplex 20M
LCLC4D0250	Patch Cord LC - LC 50/125 Duplex 25M
LCLC4D0300	Patch Cord LC - LC 50/125 Duplex 30M
LCLC4D0400	Patch Cord LC - LC 50/125 Duplex 40M
LCLC4D0500	Patch Cord LC - LC 50/125 Duplex 50M



LC - SC Multimode 50/125 OM4 Duplex

Part Number	Description
LCSC4D0010	Patch Cord LC - SC 50/125 Duplex 1M
LCSC4D0020	Patch Cord LC - SC 50/125 Duplex 2M
LCSC4D0030	Patch Cord LC - SC 50/125 Duplex 3M
LCSC4D0050	Patch Cord LC - SC 50/125 Duplex 5M
LCSC4D0100	Patch Cord LC - SC 50/125 Duplex 10M



LC - ST Multimode 50/125 OM4 Duplex

Part Number	Description
LCST4D0010	Patch Cord LC - ST 50/125 Duplex 1M
LCST4D0020	Patch Cord LC - ST 50/125 Duplex 2M
LCST4D0030	Patch Cord LC - ST 50/125 Duplex 3M
LCST4D0050	Patch Cord LC - ST 50/125 Duplex 5M
LCST4D0100	Patch Cord LC - ST 50/125 Duplex 10M

OM4 50/125 Duplex Fibre Optic Patch Cords



SC - SC Multimode 50/125 OM4 Duplex

Part Number	Description
SCSC4D0010	Patch Cord SC - SC 50/125 Duplex 1M
SCSC4D0020	Patch Cord SC - SC 50/125 Duplex 2M
SCSC4D0030	Patch Cord SC - SC 50/125 Duplex 3M
SCSC4D0050	Patch Cord SC - SC 50/125 Duplex 5M
SCSC4D0100	Patch Cord SC - SC 50/125 Duplex 10M



ST - SC Multimode 50/125 OM4 Duplex

Part Number	Description
STSC4D0010	Patch Cord ST - SC 50/125 Duplex 1M
STSC4D0020	Patch Cord ST - SC 50/125 Duplex 2M
STSC4D0030	Patch Cord ST - SC 50/125 Duplex 3M
STSC4D0050	Patch Cord ST - SC 50/125 Duplex 5M
STSC4D0100	Patch Cord ST - SC 50/125 Duplex 10M



ST - ST Multimode 50/125 OM4 Duplex

Part Number	Description
STST4D0010	Patch Cord ST - ST 50/125 Duplex 1M
STST4D0020	Patch Cord ST - ST 50/125 Duplex 2M
STST4D0030	Patch Cord ST - ST 50/125 Duplex 3M
STST4D0050	Patch Cord ST - ST 50/125 Duplex 5M
STST4D0100	Patch Cord ST - ST 50/125 Duplex 10M

Fibre Specification

Attenuation (db/km)	$\leq 2.4 @ 850\text{nm} / \leq 0.6 @ 1300\text{nm}$
Overfilled Modal Bandwidth (MHz x km)	$\geq 3500 @ 850\text{nm} / \geq 500 @ 1300\text{nm}$
Effective Modal Bandwidth (MHz x km)	$\geq 4700 @ 850\text{nm}$
Application Support Distance on:	
40 and 100 Gigabit Ethernet -SR (m)	150 @ 850nm
10 GBase - SR (m)	550 @ 850nm
1000 Base - SX (m)	1100 @ 850nm

Cable Specification

	Simplex	Duplex
Cable Material	LSZH	LSZH
Strength Member	Aramid	Aramid
Crush (N/100mm)	1000	1000
Tensile (N)	120	120
Operating Temperature (°C)	-20 to 60	-20 to 60

Connector Specification

IL Max/Master (db) (Acceptance)	≤ 0.25
Av./Random (db)	≤ 0.20



OM3 50/125 Duplex Fibre Optic Patch Cords

Manufactured using 50µm multimode fibre optimised for the use with 850nm VCSELS (vertical cavity surface emitting lasers), OM3 multimode patch cords are used particularly in 1 Gb/s, 10Gb/s and higher bandwidth applications over shorter distances. Compatible with higher performance OM4 systems, OM3 provides additional insertion loss margins while remaining cost effective for less-demanding applications. All assemblies are fully tested prior to delivery and supplied with test results. Most common connector types, configurations and lengths are available from stock, using 3mm (for additional ruggedising) or 2mm diameter cable on request. OM3 multimode patch cords are supplied with an aqua LSZH cable jacket as standard. Non-stocked configurations (length, colour, connectors and cable type) can be manufactured to meet specific requirements

Applications

- Data centres
- Storage area networks
- LAN/Enterprise
- High performance computing centre
- Central offices
- For use in 40 -100 Gb/s networks <100m indicative link length at 850nm (SR) wavelength
- For use in 10 Gb/s networks <300m indicative link length at 850nm (SR) wavelength
- For use in 1 Gb/s networks <750m indicative link length at 850nm (SX) wavelength

Features

- 850nm laser optimised
- SC, LC, and ST connectors as standard, other connectors available
- LSZH - Low smoke zero halogen, aqua jacket
- 900µm tight buffer, 3mm simplex and duplex cable (2mm cable on request)
- Available in other colours
- Armoured, round duplex and flat twin patch cords also available
- OM3 fibre conforms to or exceeds all relevant ISO/IEC, TIA/EIA and ITU standards
- All patch cords come with a UPC polished connector end face as standard



LC - LC Multimode 50/125 OM3 Duplex

Part Number	Description
LCLC3D0010	Patch Cord LC - LC 50/125 Duplex 1M
LCLC3D0020	Patch Cord LC - LC 50/125 Duplex 2M
LCLC3D0030	Patch Cord LC - LC 50/125 Duplex 3M
LCLC3D0050	Patch Cord LC - LC 50/125 Duplex 5M
LCLC3D0100	Patch Cord LC - LC 50/125 Duplex 10M
LCLC3D0120	Patch Cord LC - LC 50/125 Duplex 12M
LCLC3D0150	Patch Cord LC - LC 50/125 Duplex 15M
LCLC3D0200	Patch Cord LC - LC 50/125 Duplex 20M
LCLC3D0250	Patch Cord LC - LC 50/125 Duplex 25M
LCLC3D0300	Patch Cord LC - LC 50/125 Duplex 30M
LCLC3D0400	Patch Cord LC - LC 50/125 Duplex 40M
LCLC3D0500	Patch Cord LC - LC 50/125 Duplex 50M



LC - ST Multimode 50/125 OM3 Duplex

Part Number	Description
LCST3D0010	Patch Cord LC - ST 50/125 Duplex 1M
LCST3D0020	Patch Cord LC - ST 50/125 Duplex 2M
LCST3D0030	Patch Cord LC - ST 50/125 Duplex 3M
LCST3D0050	Patch Cord LC - ST 50/125 Duplex 5M
LCST3D0100	Patch Cord LC - ST 50/125 Duplex 10M



LC - SC Multimode 50/125 OM3 Duplex

Part Number	Description
LCSC3D0010	Patch Cord LC - SC 50/125 Duplex 1M
LCSC3D0020	Patch Cord LC - SC 50/125 Duplex 2M
LCSC3D0030	Patch Cord LC - SC 50/125 Duplex 3M
LCSC3D0050	Patch Cord LC - SC 50/125 Duplex 5M
LCSC3D0100	Patch Cord LC - SC 50/125 Duplex 10M

OM3 50/125 Duplex Fibre Optic Patch Cords



SC - SC Multimode 50/125 OM3 Duplex

Part Number	Description
SCSC3DX010	Patch Cord SC - SC 50/125 Duplex 1M
SCSC3DX020	Patch Cord SC - SC 50/125 Duplex 2M
SCSC3DX030	Patch Cord SC - SC 50/125 Duplex 3M
SCSC3DX050	Patch Cord SC - SC 50/125 Duplex 5M
SCSC3DX100	Patch Cord SC - SC 50/125 Duplex 10M



ST - SC Multimode 50/125 OM3 Duplex

Part Number	Description
STSC3D0010	Patch Cord ST - SC 50/125 Duplex 1M
STSC3D0020	Patch Cord ST - SC 50/125 Duplex 2M
STSC3D0030	Patch Cord ST - SC 50/125 Duplex 3M
STSC3D0050	Patch Cord ST - SC 50/125 Duplex 5M
STSC3D0100	Patch Cord ST - SC 50/125 Duplex 10M



ST - ST Multimode 50/125 OM3 Duplex

Part Number	Description
STST3D0010	Patch Cord ST - ST 50/125 Duplex 1M
STST3D0020	Patch Cord ST - ST 50/125 Duplex 2M
STST3D0030	Patch Cord ST - ST 50/125 Duplex 3M
STST3D0050	Patch Cord ST - ST 50/125 Duplex 5M
STST3D0100	Patch Cord ST - ST 50/125 Duplex 10M

Fibre Specification

Attenuation (db/km)	$\leq 2.4 @ 850\text{nm} / \leq 0.6 @ 1300\text{nm}$
Overfilled Modal Bandwidth (MHz x km)	$\geq 1500 @ 850\text{nm} / \geq 500 @ 1300\text{nm}$
Effective Modal Bandwidth (MHz x km)	$\geq 2000 @ 850\text{nm}$
Application Support Distance on:	
40 and 100 Gigabit Ethernet -SR (m)	100 @ 850nm
10 GBase - SR (m)	300 @ 850nm
1000 Base - SX (m)	1000 @ 850nm

Cable Specification

	Simplex	Duplex
Cable Material	LSZH	LSZH
Strength Member	Aramid	Aramid
Crush (N/100mm)	1000	1000
Tensile (N)	120	120
Operating Temperature (°C)	-20 to 60	-20 to 60

Connector Specification

IL Max/Master (db) (Acceptance)	≤ 0.25
Av./Random (db)	≤ 0.20



OM2 50/125 Duplex Fibre Optic Patch Cords

OM2 multimode patch cords are used in 1Gb/s networks common in LAN applications and 10Gb/s applications over shorter distances. All assemblies are fully tested prior to delivery and supplied with test results. Most common connector types, configurations and lengths are available from stock, using 3mm (for additional ruggedising) or 2mm diameter cable on request. OM2 multimode patch cords are supplied with an orange LSZH cable jacket as standard. Non-stocked configurations (length, colour, connectors and cable type) can be manufactured to meet specific requirements

Applications

- LAN/Enterprise and legacy networks
- For use in 10 Gb/s networks <150m indicative link length at 850nm (SR) wavelength
- For use in 1 Gb/s networks >750M indicative link length at 850nm (SX) wavelength

Features

- SC, LC, and ST connectors as standard, other connectors available
- LSZH - Low smoke zero halogen, orange jacket
- 900µm tight buffer, 3mm simplex and duplex cable (2mm cable on request)
- Available in other colours
- Armoured, round duplex and flat twin patch cords also available
- OM2 fibre conforms to or exceeds all relevant ISO/IEC, TIA/EIA and ITU standards
- All patch cords come with a UPC polished connector end face as standard



LC - LC Multimode 50/125 OM2 Duplex

Part Number	Description
LCLC2D0010	Patch Cord LC - LC 50/125 Duplex 1M
LCLC2D0020	Patch Cord LC - LC 50/125 Duplex 2M
LCLC2D0030	Patch Cord LC - LC 50/125 Duplex 3M
LCLC2D0050	Patch Cord LC - LC 50/125 Duplex 5M
LCLC2D0100	Patch Cord LC - LC 50/125 Duplex 10M



LC - SC Multimode 50/125 OM2 Duplex

Part Number	Description
LCSC2D0010	Patch Cord LC - SC 50/125 Duplex 1M
LCSC2D0020	Patch Cord LC - SC 50/125 Duplex 2M
LCSC2D0030	Patch Cord LC - SC 50/125 Duplex 3M
LCSC2D0050	Patch Cord LC - SC 50/125 Duplex 5M
LCSC2D0100	Patch Cord LC - SC 50/125 Duplex 10M



LC - ST Multimode 50/125 OM2 Duplex

Part Number	Description
LCST2D0010	Patch Cord LC - ST 50/125 Duplex 1M
LCST2D0020	Patch Cord LC - ST 50/125 Duplex 2M
LCST2D0030	Patch Cord LC - ST 50/125 Duplex 3M
LCST2D0050	Patch Cord LC - ST 50/125 Duplex 5M
LCST2D0100	Patch Cord LC - ST 50/125 Duplex 10M



SC - SC Multimode 50/125 OM2 Duplex

Part Number	Description
SCSC2D0010	Patch Cord SC - SC 50/125 Duplex 1M
SCSC2D0020	Patch Cord SC - SC 50/125 Duplex 2M
SCSC2D0030	Patch Cord SC - SC 50/125 Duplex 3M
SCSC2D0050	Patch Cord SC - SC 50/125 Duplex 5M
SCSC2D0100	Patch Cord SC - SC 50/125 Duplex 10M

OM2 50/125 Duplex Fibre Optic Patch Cords



ST - SC Multimode 50/125 OM2 Duplex

Part Number	Description
SCST2D0010	Patch Cord SC - ST 50/125 Duplex 1M
SCST2D0020	Patch Cord SC - ST 50/125 Duplex 2M
SCST2D0030	Patch Cord SC - ST 50/125 Duplex 3M
SCST2D0050	Patch Cord SC - ST 50/125 Duplex 5M
SCST2D0100	Patch Cord SC - ST 50/125 Duplex 10M



ST - ST Multimode 50/125 OM2 Duplex

Part Number	Description
STST2D0010	Patch Cord ST - ST 50/125 Duplex 1M
STST2D0020	Patch Cord ST - ST 50/125 Duplex 2M
STST2D0030	Patch Cord ST - ST 50/125 Duplex 3M
STST2D0050	Patch Cord ST - ST 50/125 Duplex 5M
STST2D0100	Patch Cord ST - ST 50/125 Duplex 10M

Fibre Specification

Attenuation (db/km)	≤ 2.4 @ 850nm / ≤ 0.6 @ 1300nm
Overfilled Modal Bandwidth (MHz x km)	≥ 700 @ 850nm / ≥ 500 @ 1300nm
Effective Modal Bandwidth (MHz x km)	≥ 950 @ 850nm
Application Support Distance on:	
40 and 100 Gigabit Ethernet -SR (m)	N/A
10 GBase - SR (m)	150 @ 850nm
1000 Base - SX (m)	750 @ 850nm

Cable Specification

	Simplex	Duplex
Cable Material	LSZH	LSZH
Strength Member	Aramid	Aramid
Crush (N/100mm)	1000	1000
Tensile (N)	120	120
Operating Temperature (°C)	-20 to 60	-20 to 60

Connector Specification

IL Max/Master (db) (Acceptance)	≤ 0.25
Av./Random (db)	≤ 0.20

i Fibre patch cords are also available in colours - Red, Blue, Green, Yellow, Orange, Aqua, Purple, Pink, Black, White, Grey, Erika Violet.

OM1 62.5/125 Duplex Fibre Optic Patch Cords

OM1 multimode patch cords are used in legacy 1000Base networks common in LAN applications. All assemblies are fully tested prior to delivery and supplied with test results. Most common connector types, configurations and lengths are available from stock, using 3mm (for additional ruggedising) or 2mm diameter cable on request. OM1 multimode patch cords are supplied with a grey LSZH cable jacket as standard. Non-stocked configurations (length, colour, connectors and cable type) can be manufactured to meet specific requirements.

Applications

- LAN/Enterprise and legacy networks
- For use in 1GB/s networks over >275M indicative link length at 850nm (SX) wavelength

Features

- SC, LC, and ST connectors as standard, other connectors available
- LSZH - Low smoke zero halogen, grey jacket
- 900µm / 600µm tight buffer, 3mm simplex and duplex cable (2mm cable on request)
- Available in other colours
- Armoured, round duplex and flat twin patch cords also available
- OM1 fibre conforms to or exceeds all relevant ISO/IEC, TIA/EIA and ITU standards
- All patch cords come with a UPC polished connector end face as standard



LC - LC Multimode 62.5/125 OM1 Duplex

Part Number	Description
LCLC6DGY0010	Patch Cord LC - LC 62.5/125 Duplex 1M
LCLC6DGY0020	Patch Cord LC - LC 62.5/125 Duplex 2M
LCLC6DGY0030	Patch Cord LC - LC 62.5/125 Duplex 3M
LCLC6DGY0050	Patch Cord LC - LC 62.5/125 Duplex 5M
LCLC6DGY0100	Patch Cord LC - LC 62.5/125 Duplex 10M



LC - SC Multimode 62.5/125 OM1 Duplex

Part Number	Description
LCSC6DGY0010	Patch Cord LC - SC 62.5/125 Duplex 1M
LCSC6DGY0020	Patch Cord LC - SC 62.5/125 Duplex 2M
LCSC6DGY0030	Patch Cord LC - SC 62.5/125 Duplex 3M
LCSC6DGY0050	Patch Cord LC - SC 62.5/125 Duplex 5M
LCSC6DGY0100	Patch Cord LC - SC 62.5/125 Duplex 10M



ST - LC Multimode 62.5/125 OM1 Duplex

Part Number	Description
LCST6DGY0010	Patch Cord LC - ST 62.5/125 Duplex 1M
LCST6DGY0020	Patch Cord LC - ST 62.5/125 Duplex 2M
LCST6DGY0030	Patch Cord LC - ST 62.5/125 Duplex 3M
LCST6DGY0050	Patch Cord LC - ST 62.5/125 Duplex 5M
LCST6DGY0100	Patch Cord LC - ST 62.5/125 Duplex 10M



SC - SC Multimode 62.5/125 OM1 Duplex

Part Number	Description
SCSC6DGY0010	Patch Cord SC - SC 62.5/125 Duplex 1M
SCSC6DGY0020	Patch Cord SC - SC 62.5/125 Duplex 2M
SCSC6DGY0030	Patch Cord SC - SC 62.5/125 Duplex 3M
SCSC6DGY0050	Patch Cord SC - SC 62.5/125 Duplex 5M
SCSC6DGY0100	Patch Cord SC - SC 62.5/125 Duplex 10M

OM1 62.5/125 Duplex Fibre Optic Patch Cords



ST - SC Multimode 62.5/125 OM1 Duplex

Part Number	Description
STSC6DGY0010	Patch Cord ST - SC 62.5/125 Duplex 1M
STSC6DGY0020	Patch Cord ST - SC 62.5/125 Duplex 2M
STSC6DGY0030	Patch Cord ST - SC 62.5/125 Duplex 3M
STSC6DGY0050	Patch Cord ST - SC 62.5/125 Duplex 5M
STSC6DGY0100	Patch Cord ST - SC 62.5/125 Duplex 10M



ST - ST Multimode 62.5/125 OM1 Duplex

Part Number	Description
STST6DGY0010	Patch Cord ST - ST 62.5/125 Duplex 1M
STST6DGY0020	Patch Cord ST - ST 62.5/125 Duplex 2M
STST6DGY0030	Patch Cord ST - ST 62.5/125 Duplex 3M
STST6DGY0050	Patch Cord ST - ST 62.5/125 Duplex 5M
STST6DGY0100	Patch Cord ST - ST 62.5/125 Duplex 10M

Fibre Specification

Attenuation (db/km)	≤ 2.7 @ 850nm / ≤ 0.6 @ 1300nm
Overfilled Modal Bandwidth (MHz x km)	≥ 200 @ 850nm / ≥ 500 @ 1300nm

Cable Specification

	Simplex	Duplex
Cable Material	LSZH	LSZH
Strength Member	Aramid	Aramid
Crush (N/100mm)	1000	1000
Tensile (N)	120	120
Operating Temperature (°C)	-20 to 60	-20 to 60

Connector Specification

IL Max/Master (db) (Acceptance)	≤ 0.25
Av./Random (db)	≤ 0.20

i Fibre patch cords are also available in colours - Red, Blue, Green, Yellow, Orange, Aqua, Purple, Pink, Black, White, Grey, Erika Violet.

? Did you know



Wren have an extensive range of fibre optic cleaning products to complement today's installers tool kit, see page 33 for a selection of this range.

Fibre Optic Pigtails

Fibre optic pigtails, suitable for common splicing applications are standardly available in 1 metre lengths on 900µm tight buffered fibre cable. Longer lengths, easy-strip and reduced diameter fibre variants are available on request. All assemblies are fully tested prior to delivery and supplied with test results. Most common connector types and fibre modes are available in stock. OS2 singlemode pigtails are supplied with a yellow jacket, OM4 and OM3 multimode pigtails are supplied with an aqua jacket, OM2 multimode pigtails are supplied with an orange jacket and OM1 multimode pigtails are supplied with a white jacket as standard. Non stocked configurations (length, connector, colour and fibre type), multiple packs and coloured pigtail sets can be manufactured to meet specific requirements.

Applications

- Telecom, CATV and LAN applications
- On-site termination
- Patch panels, wall boxes, ODF's and splice cassettes, dome and inline splicing enclosures

Features

- SC, LC, ST, FC and E2000 connectors as standard, other connectors available
- LSZH - Low smoke zero halogen, 900µm tight buffered fibre
- UPC and APC polished connector end faces as standard
- Available in other colours, manufactured coloured pigtail sets
- Fibre conforms to or exceeds all relevant ISO/IEC, TIA/EIA and ITU standards
- Bend insensitive variants available

Pigtail Singlemode 9/125 OS2

Part Number	Description
FC9PT010	Pigtail FC 9/125 1M
LC9PT010	Pigtail LC 9/125 1M
SC9PT010	Pigtail SC 9/125 1M
ST9PT010	Pigtail ST 9/125 1M
E29PT010	Pigtail E2000 9/125 1M

Pigtail Singlemode 9/125 OS2 APC


Part Number	Description
FCA9PT010	Pigtail FC/APC 9/125 1M
LCA9PT010	Pigtail LC/APC 9/125 1M
SCA9PT010	Pigtail SC/APC 9/125 1M
STA9PT010	Pigtail ST/APC 9/125 1M
E2A9PT010	Pigtail E2000/APC 9/125 1M

Pigtails Multimode 50/125 OM4

Part Number	Description
FC4PT010	Pigtail FC 50/125 1M
LC4PT010	Pigtail LC 50/125 1M
SC4PT010	Pigtail SC 50/125 1M
ST4PT010	Pigtail ST 50/125 1M
E24PT010	Pigtail E2000 50/125 1M

Pigtails Multimode 50/125 OM3

Part Number	Description
FC3PT010	Pigtail FC 50/125 1M
LC3PT010	Pigtail LC 50/125 1M
SC3PT010	Pigtail SC 50/125 1M
ST3PT010	Pigtail ST 50/125 1M
E23PT010	Pigtail E2000 50/125 1M

 Multiple coloured pigtail sets available

Fibre Optic Pigtails

Pigtails Multimode 50/125 OM2

Part Number	Description
FC2PT010	Pigtail FC 50/125 1M
LC2PT010	Pigtail LC 50/125 1M
SC2PT010	Pigtail SC 50/125 1M
ST2PT010	Pigtail ST 50/125 1M
E22PT010	Pigtail E2000 50/125 1M

Pigtails - Multimode 62.5/125 OM1

Part Number	Description
FC6PT010	Pigtail FC 62.5/125 1M
LC6PT010	Pigtail LC 62.5/125 1M
SC6PT010	Pigtail SC 62.5/125 1M
ST6PT010	Pigtail ST 62.5/125 1M
E26P0010	Pigtail E2000 62.5/125 1M

OS2 Fibre Specification

Attenuation (db / km)	$\leq 0.32 @ 1310\text{nm} / \leq 0.18 @ 1550\text{m}$
Chromatic Dispersion (ps/nm-km)	$1285 - 1340 \geq -3.4 \leq 3.4$
	$1550\text{nm} \leq 18$
	$1625\text{nm} \leq 22$
Zero Dispersion Wavelength (nm)	1312 ± 22

OM4 Fibre Specification

Attenuation (db/km)	$\leq 2.4 @ 850\text{nm} / \leq 0.6 @ 1300\text{nm}$
Overfilled Modal Bandwidth (MHz x km)	$\geq 3500 @ 850\text{nm} / \geq 500 @ 1300\text{nm}$
Effective Modal Bandwidth (MHz x km)	$\geq 4700 @ 850\text{nm}$

OM3 Fibre Specification

Attenuation (db/km)	$\leq 2.4 @ 850\text{nm} / \leq 0.6 @ 1300\text{nm}$
Overfilled Modal Bandwidth (MHz x km)	$\geq 1500 @ 850\text{nm} / \geq 500 @ 1300\text{nm}$
Effective Modal Bandwidth (MHz x km)	$\geq 2000 @ 850\text{nm}$

OM2 Fibre Specification

Attenuation (db/km)	$\leq 2.4 @ 850\text{nm} / \leq 0.6 @ 1300\text{nm}$
Overfilled Modal Bandwidth (MHz x km)	$\geq 700 @ 850\text{nm} / \geq 500 @ 1300\text{nm}$
Effective Modal Bandwidth (MHz x km)	$\geq 950 @ 850\text{nm}$

OM1 Fibre Specification

Attenuation (db/km)	$\leq 2.7 @ 850\text{nm} / \leq 0.6 @ 1300\text{nm}$
Overfilled Modal Bandwidth (MHz x km)	$\geq 200 @ 850\text{nm} / \geq 500 @ 1300\text{nm}$

Cable Specification

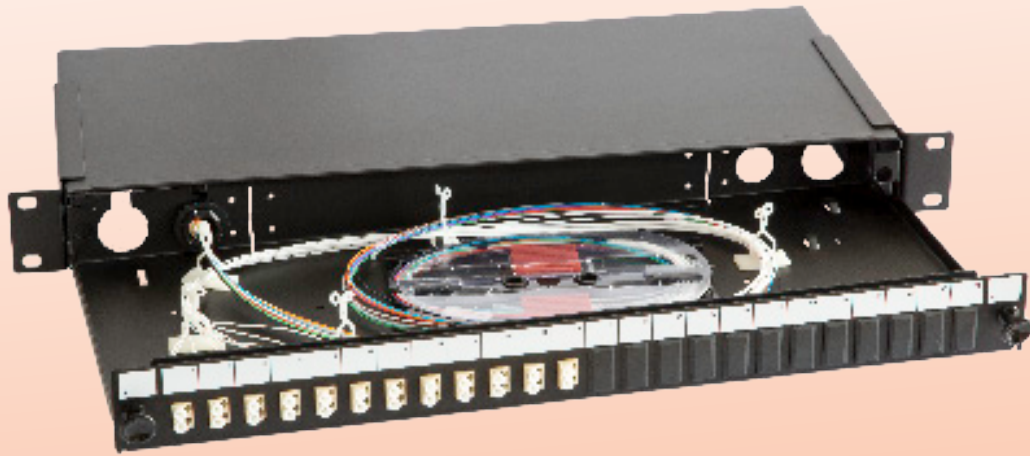
	Units	
Crush	N/100mm	500
Operating Temperature	°C	-20 to +60
Nominal Buffer Diameter	µm	900 +50
Max Tensile Load	N	6

Connector Specification

	Singlemode		Multimode
	PC	APC	
IL Max/Master (db) (Acceptance)	≤ 0.25	≤ 0.25	≤ 0.25
Av./Random (db)	≤ 0.30	≤ 0.20	≤ 0.20
Return Loss (db)	≥ 55	≥ 65	



Pre-Configured Fibre Optic Patch Panels



i Fibre management solutions ready to install



- Robust yet lightweight sliding patch panel suitable for pre-terminated cables or splicing on site.
- Multiple adaptor options including LC (simplex, duplex and quad), SC (simplex and duplex), FC and ST.
- Up to 96 fibres in 1U if using an LC quad adaptor.
- Recessed adaptors to maximise front of panel clearance for patching.
- Individually labelled ports and panel identification fields.
- Multiple splice tray options.
- 10° inspection and 45° open working angles.
- Accepts loose tube, tight buffered and pre-terminated cables with left and right slotted cable glands of two sizes and knock-out section in rear.
- Adjustable mounting arms.

Phone +44 (0)1908 951000

Email sales@wrenuk.com



Pre-Terminated Optical Fibre Cables

i SOLUTIONS READY TO INSTALL

When pre-terminated cable assemblies come ready to go, making installation of optical fibre links easy, and with no need to perform terminations on-site.

When supply a complete range of pre-terminated made to order fibre cable assemblies, to suit both indoor and outdoor applications.

Features

- Plug n play terminations
- Reduced installation time, with no infield splicing to be done
- Less waste - order exact materials required
- Saves overheads on fusion splicing technology or third party contractors
- Delivered ready to go
- Pulling sock, copex tubing and reeling solutions

Made to order

- Customisations include:
- Fibre mode
- Cable application and type
- Core count
- Connector type
- Cable length
- Breakout length
- 100% machine polished and factory terminated

i FIELD RE-DEPLOYABLE SOLUTIONS AVAILABLE

Phone +44 (0)1908 951000

Email sales@wrenuk.com

SC Connectors

The SC connector known for its locking mechanism which gives an audible click when inserted or removed. A push-pull design prevents variation in performance through rotational misalignment. With a high end finish as standard, giving reduced back reflection and superior insertion loss performance, SC connectors are available in singlemode for both PC and APC and in multimode variants. The connectors come with standard boots suitable for 900µm, 2mm and 3mm cable diameters. The SC connector is available in simplex and duplex options. The SC connector is available in standard colours including blue (singlemode-PC), green (singlemode-APC) and beige (multimode).

Applications

- Data centres, premise installations, telecommunication and CATV networks
- Active device and test equipment
- Ethernet, LAN, and WAN

Features

- A push-pull coupling mechanism for easy insertion and stable results
- A 2.5mm outer diameter zirconia ceramic ferrule with high end finish
- Low insertion loss and back reflection
- RoHS, REACH SvHC compliant
- Designed to conform to or exceed all relevant ISO/IEC and TIA/EIA standards
- Premium performance connectors, alternative ferrule outer and inner diameter sizes, ferrule finishes and boot variations available

Mechanical Properties	Criteria	Effect		
Mechanical endurance	500 matings	<0.2 db change		
Vibration	10-55Hz, 0.75 amplitude	<0.2 db change		
Drop	Drop height 1M, 5 drops	<0.2 db change		
Cable retention	Magnitude 90 N	<0.2 db change		
Cable torsion	1.5kg - 2.5kg for 2mm-3mm cable diameter	<0.2 db change		
Operating temperature (°C)	-25 to +70, 12 cycles	<0.2 db change		
Cold (°C)	-25 for 96 hrs	<0.2 db change		
Dry Heat (°C)	+70 for 96 hrs	<0.2 db change		
Performance	Multimode	Singlemode-PC	Singlemode-APC	
Insertion loss (typ) (db)	0.30	0.25	0.25	
Insertion loss (97%) (db)	0.40	0.40	0.40	

SC Connectors



SC Singlemode Simplex PC Connectors

Part Number	Description
CSCS9S	SC PC Singlemode 900µm Simplex Connector
CSCS2S	SC PC Singlemode 2mm Simplex Connector
CSCS3S	SC PC Singlemode 3mm Simplex Connector



SC Singlemode Duplex PC Connectors

Part Number	Description
CSCS2D	SC PC Singlemode 2mm Simplex Connector
CSCS3D	SC PC Singlemode 3mm Simplex Connector



SC Singlemode Simplex APC Connectors

Part Number	Description
CSCAS9S	SC APC Singlemode 900µm Simplex Connector
CSCAS2S	SC APC Singlemode 2mm Simplex Connector
CSCAS3S	SC APC Singlemode 3mm Simplex Connector



SC Singlemode Duplex APC Connectors

Part Number	Description
CSCAS2D	SC APC Singlemode 2mm Duplex Connector
CSCAS3D	SC APC Singlemode 3mm Duplex Connector



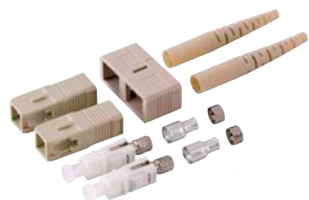
SC Multimode Simplex PC Connectors

Part Number	Description
CSCM9S	SC PC Multimode 900µm Simplex Connector
CSCM2S	SC PC Multimode 2mm Simplex Connector
CSCM3S	SC PC Multimode 3mm Simplex Connector



SC Multimode Duplex PC Connectors

Part Number	Description
CSCM2D	SC PC Multimode 2mm Duplex Connector
CSCM3D	SC PC Multimode 3mm Duplex Connector



LC Connectors

LC connector is a small form factor fibre optic connector using a 1.25 outer ferrule, which is half the diameter of a standard ferrule. As a result the LC connector helps to reduce space on panels or outlets by 50%. A common connects within data applications, it is a cost effective choice, simplifying movement additions and modifications. LC connectors are available in singlemode PC and multimode PC. The connectors come with standard boots suitable for 900um, 2mm and 3mm cable diameters. The LC connector are also available in simplex and duplex (with clips) options. The LC connector is available in standard colours including blue (singlemode-PC), green (singlemode-APC), and beige (multimode).

Applications

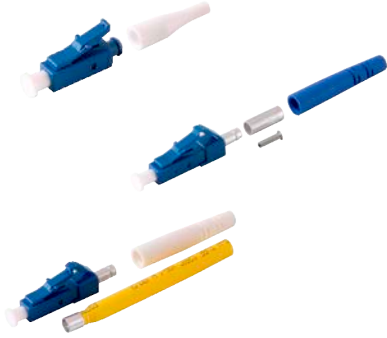
- Data centres, premise installations, CATV, telecommunications networks
- Ethernet, LAN, and WAN

Features

- Low insertion loss and back reflection
- A 1.25mm outer diameter zirconia ceramic ferrule with high end finish
- RoHS, REACH SvHC compliant
- Designed to conform to or exceed all relevant ISO/IEC and TIA/EIA standards
- Premium performance connectors, alternative boot variations (red & black) and switchable uniboot with integrated latching mechanisms available
- APC variants also available

Mechanical Properties	Criteria	Effect		
Mechanical endurance	500 matings	<0.2 db change		
Vibration	10-55Hz, 0.75 amplitude	<0.2 db change		
Drop	Drop height 1M, 5 drops	<0.2 db change		
Cable retention	Magnitude 90 N	<0.2 db change		
Cable torsion	1.5kg - 2.5kg for 2mm-3mm cable diameter	<0.2 db change		
Operating temperature (°C)	-25 to +70, 12 cycles	<0.2 db change		
Cold (°C)	-25 for 96 hrs	<0.2 db change		
Dry Heat (°C)	+70 for 96 hrs	<0.2 db change		
Performance	Multimode	Singlemode-PC	Singlemode-APC	
Insertion loss (typ) (db)	0.30	0.25	0.25	
Insertion loss (97%) (db)	0.40	0.40	0.40	

LC Connectors



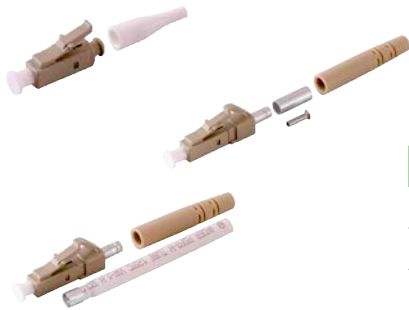
LC Singlemode Simplex PC Connectors

Part Number	Description
CLCS9S	LC PC Singlemode 900µm Simplex Connector
CLCS2S	LC PC Singlemode 2mm Simplex Connector
CLCS3S	LC PC Singlemode 3mm Simplex Connector



LC Singlemode Duplex PC Connectors

Part Number	Description
CLCS2D	LC PC Singlemode 2mm Duplex Connector
CLCS3D	LC PC Singlemode 3mm Duplex Connector



LC Multimode Simplex PC Connectors

Part Number	Description
CLCM9S	LC PC Multimode 900µm Simplex Connector
CLCM2S	LC PC Multimode 2mm Simplex Connector
CLCM3S	LC PC Multimode 3mm Simplex Connector



SC Multimode Duplex PC Connectors

Part Number	Description
CLCM2D	LC PC Multimode 2mm Duplex Connector
CLCM3D	LC PC Multimode 3mm Duplex Connector

ST Connectors

The ST connector has a bayonet-style housing and a spring-loaded 2.5mm outer diameter ferrule. ST connectors are commonly used in networking applications. ST connectors are available in singlemode PC and multimode PC. Although one of the older generation of fibre optic connectors, the ST connector is still commonly found in local area networking applications in buildings and campuses. They are also often found in field deployable, video and broadcast networks. The connectors come with standard boots suitable for 900µm, 2mm and 3mm cable diameters. The ST connector is available in standard colours yellow (singlemode-PC) and red and black (multimode).

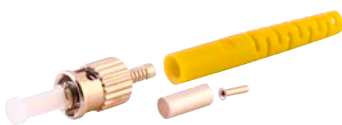
Applications

- Local area networks
- Premises distribution
- Active device and test equipment
- Field deployable, video and broadcast

Features

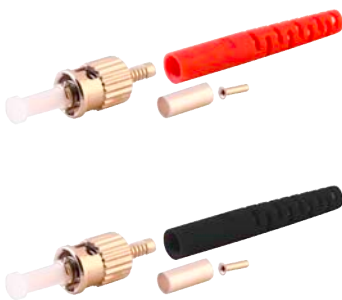
- Low insertion loss and back reflection
- Bayonet style housing
- A 2.5mm outer diameter zirconia ceramic ferrule with high end finish
- RoHS, REACH SvHC compliant
- Designed to conform to or exceed all relevant ISO/IEC and TIA/EIA standards
- APC variants also available

Mechanical Properties	Criteria	Effect
Mechanical endurance	500 matings	<0.2 db change
Vibration	10-55Hz, 0.75 amplitude	<0.2 db change
Drop	Drop height 1M, 5 drops	<0.2 db change
Cable retention	Magnitude 90 N	<0.2 db change
Cable torsion	1.5kg - 2.5kg for 2mm-3mm cable diameter	<0.2 db change
Operating temperature (°C)	-25 to +70, 12 cycles	<0.2 db change
Cold (°C)	-25 for 96 hrs	<0.2 db change
Dry Heat (°C)	+70 for 96 hrs	<0.2 db change
Performance	Multimode	Singlemode-PC
Insertion loss (typ) (db)	0.30	0.25
Insertion loss (97%) (db)	0.40	0.40



ST Singlemode PC Connectors

Part Number	Description
CSTS9	ST PC Singlemode 900µm Connector
CSTS2	ST PC Singlemode 2mm Connector
CSTS3	ST PC Singlemode 3mm Connector



ST Multimode PC Connectors

Part Number	Description
CSTM9	ST PC Multimode 900µm Connector
CSTM2B	ST PC Multimode 2mm Black Connector
CSTM3B	ST PC Multimode 3mm Black Connector
CSTM2R	ST PC Multimode 2mm Red Connector
CSTM3R	ST PC Multimode 3mm Red Connector

FC Connectors

FC connector has a threaded coupling body designed to provide a secure connection in high vibration environments and consistent results when testing. FC connectors are available in singlemode PC and multimode PC. FC connectors are available in standard colours blue (singlemode-PC) and black (multimode).

Applications

- CATV and telecommunications networks
- Local area networks
- Premises distribution
- Active device and test equipment

Features

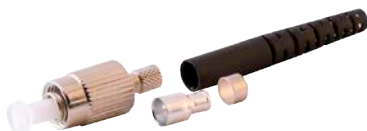
- Low insertion loss and back reflection
- Precision anti rotation key
- A 2.5mm outer diameter zirconia ceramic ferrule with high end finish
- RoHS, REACH SvHC compliant
- Designed to conform to or exceed all relevant ISO/IEC and TIA/EIA standards
- APC variants also available

Mechanical Properties	Criteria	Effect
Mechanical endurance	500 matings	<0.2 db change
Vibration	10-55Hz, 0.75 amplitude	<0.2 db change
Drop	Drop height 1M, 5 drops	<0.2 db change
Cable retention	Magnitude 90 N	<0.2 db change
Cable torsion	1.5kg - 2.5kg for 2mm-3mm cable diameter	<0.2 db change
Operating temperature (°C)	-25 to +70, 12 cycles	<0.2 db change
Cold (°C)	-25 for 96 hrs	<0.2 db change
Dry Heat (°C)	+70 for 96 hrs	<0.2 db change
Performance	Multimode	Singlemode-PC
Insertion loss (typ) (db)	0.30	0.25
Insertion loss (97%) (db)	0.40	0.40



FC Singlemode PC Connectors

Part Number	Description
CFCS9	FC PC Singlemode 900µm Connector
CFCS2	FC PC Singlemode 2mm Connector
CFCS3	FC PC Singlemode 3mm Connector



FC Multimode PC Connectors

Part Number	Description
CFCM9	FC PC Multimode 900µm Connector
CFCM2B	FC PC Multimode 2mm Connector
CFCM3B	FC PC Multimode 3mm Connector

SC Adaptors

SC fibre optic adaptors are available in singlemode for both PC and APC and multimode PC, all with ceramic sleeves as standard. The adaptors come in simplex and duplex options. The SC adaptor is available in standard colours including blue (singlemode PC), green (singlemode APC), and beige or aqua (multimode). Flange-less and shuttered options available.

Applications

- Data centres, premise installations, CATV telecommunication networks,
- Ethernet, LAN, and WAN

Features

- Low insertion loss
- Available in simplex and duplex
- High precision ceramic alignment sleeves as standard
- RoHS, REACH SvHC compliant
- Designed to conform to or exceed all relevant ISO/IEC and TIA/EIA standards
- Flange-less and shuttered variants available

	Ceramic Sleeve
Insertion Loss (Typ) (db)	0.1db
Mating Durability	500
Receptacle Retention force	2N - 5.9N
Operating temperature (°C)	-25 to +70, 12 cycles



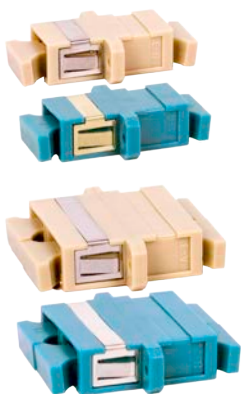
SC Singlemode PC Adaptors

Part Number	Description
ASCSS	SC PC Singlemode Simplex Adaptor
ASCSD	SC PC Singlemode Duplex Adaptor



SC Singlemode APC Adaptors

Part Number	Description
ASCASS	SC APC Singlemode Simplex Adaptor
ASCASD	SC APC Singlemode Duplex Adaptor



SC Singlemode PC Adaptors

Part Number	Description
ASCMSB	SC PC Multimode Simplex Beige Adaptor
ASCMSA	SC PC Multimode Simplex Aqua Adaptor
ASCMDB	SC PC Multimode Duplex Beige Adaptor
ASCMDA	SC PC Multimode Duplex Aqua Adaptor

LC Adaptors

LC fibre optic adaptors are available in singlemode for both PC and APC and multimode PC, all with ceramic sleeves as standard. The adaptors come in duplex and quad options. The LC adaptor is available in standard colours including blue (singlemode PC), green (singlemode APC), and beige or aqua (multimode).

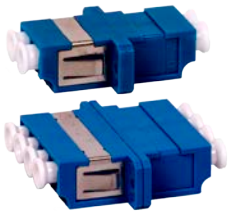
Applications

- Data centres, premise installations, CATV and telecommunication networks,
- Ethernet, LAN, and WAN

Features

- Low insertion loss
- Available in simplex and duplex
- High precision ceramic alignment sleeves as standard
- RoHS, REACH SvHC compliant
- Designed to conform to or exceed all relevant ISO/IEC and TIA/EIA standards

	Ceramic Sleeve
Insertion Loss (Typ) (db)	0.1db
Mating Durability	500
Receptacle Retention force	2N - 5.9N
Operating temperature (°C)	-25 to +70, 12 cycles



LC Singlemode PC Adaptors

Part Number	Description
ALCSD	LC PC Singlemode Duplex Adaptor
ALCSQ	LC PC Singlemode Quad Adaptor



LC Singlemode APC Adaptors

Part Number	Description
ALCASD	LC APC Singlemode Duplex Adaptor
ALCASQ	LC APC Singlemode Quad Adaptor



LC Singlemode PC Adaptors

Part Number	Description
ALCMDB	LC PC Multimode Duplex Beige Adaptor
ALCMDA	LC PC Multimode Duplex Aqua Adaptor
ALCMQB	LC PC Multimode Quad Beige Adaptor
ALCMQA	LC PC Multimode Quad Aqua Adaptor

ST Adaptors

ST fibre optic adaptors are available as singlemode PC and multimode PC, both with ceramic sleeves as standard. The ST adaptor is available with coloured dust caps as requested. The housing has a D-hole profile. Duplex ST adaptors, set in a plastic rectangular housing are also available.

Applications

- Local area networks
- Premise installations
- Active device and test equipment
- Field deployable, video and broadcast

Features

- Low insertion loss
- High precision ceramic alignment sleeves as standard
- RoHS, REACH SvHC compliant
- Designed to conform to or exceed all relevant ISO/IEC and TIA/EIA standards

	Ceramic Sleeve
Insertion Loss (Typ) (db)	0.1
Mating Durability	500
Receptacle Retention force	2N - 5.9N
Operating temperature (°C)	-25 to +70, 12 cycles



ST PC Adaptors

Part Number	Description
ASTS	ST PC Singlemode Adaptor
ASTM	ST PC Multimode Adaptor



i Duplex ST adaptors available

FC Adaptors

FC fibre optic adaptors are available as singlemode PC and multimode PC, both with ceramic sleeves as standard. The FC adaptor is available with coloured dust caps as requested. The housing has a D-hole profile. Duplex FC adaptors, set in a plastic rectangular housing are also available.

Applications

- CATV, telecommunications networks
- Local area networks
- Premise installations
- Active device and test equipment

Features

- Low insertion loss
- High precision ceramic alignment sleeves as standard
- RoHS, REACH SvHC compliant
- Designed to conform to or exceed all relevant ISO/IEC and TIA/EIA standards

	Ceramic Sleeve
Insertion Loss (Typ) (db)	0.1
Mating Durability	500
Receptacle Retention force	2N - 5.9N
Operating temperature (°C)	-25 to +70, 12 cycles

FC PC Adaptors

Part Number	Description
AFCS	FC PC Singlemode Adaptor
AFCM	FC PC Multimode Adaptor



E2000 Adaptors

E2000 adaptors have an in-built spring loaded shutter and high precision ceramic alignment sleeves to accept E2000 singlemode PC and APC and multimode PC connectors. E2000 adaptors have an SC footprint as standard. E2000 adaptors are simplex as standard with duplex and flangless options. The E2000 adaptors are available in standard colours including blue (singlemode PC), green (singlemode APC) and beige (multimode).

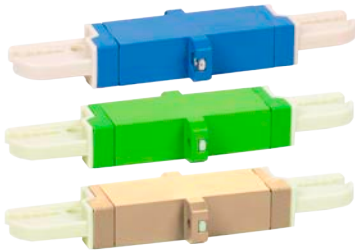
Applications

- CATV and telecommunications networks
- Suitable for high power laser applications
- Active device and test equipment

Features

- Low insertion loss
- High precision ceramic alignment sleeves as standard
- RoHS, REACH SvHC compliant
- Designed to conform to or exceed all relevant ISO/IEC and TIA/EIA standards

	Ceramic Sleeve
Insertion Loss (Typ) (db)	0.1
Mating Durability	500
Receptacle Retention force	2N - 5.9N
Operating temperature (°C)	-25 to +70, 12 cycles



E2000 Simplex Adaptors

Part Number	Description
AE2SS	E2000 PC Singlemode Simplex Adaptor
AE2ASS	E2000 APC Singlemode Simplex Adaptor
AE2MS	E2000 PC Multimode Simplex Adaptor

Hybrid Adaptors

Hybrid adaptors offer solutions to applications where one type of connector needs to be interconnected with another. Hybrid adaptors are available in singlemode and multimode variants and many different connector type configurations.

Applications

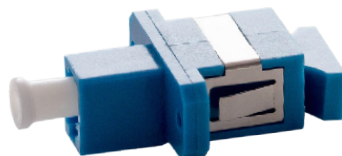
- CATV and telecommunications networks
- Local area networks
- Active devices and test equipment

Features

- Low insertion loss
- High precision alignment sleeves
- RoHS, REACH SvHC compliant
- Designed to conform to or exceed all relevant ISO/IEC and TIA/EIA standards



FC Female
SC Female
APC



LC Female
SC Female



ST Female
SC Female



Many other versions available please call +44 (0)1908 951000 with your requirement

Consumables



Isopropyl alcohol is used on lint free wipes to remove grease and dirt from optical fibres during splicing and termination. It is recommended that the fluid is decanted into fluid dispensers before use.

Description	Part Number
Isopropyl Alcohol (IPA) - 1 Litre	IA-IPA1

i IPA is highly flammable and should be used only in well ventilated areas.



High temperature epoxy adhesive, is a fast curing version of the industry standard adhesive for "pot and polish" fibre optic connections.

Description	Part Number
High Temperature Epoxy Adhesive - 5 Sachet Pack	EP-153F



Low lint tissues are primarily used to clean bare fibre as part of the termination and splicing process.

Description	Part Number
Lint Free Wipes - Pack of 100	LFW-100



Disposal bins should be used to store fibre ends after cleaving and general cable preparation, with sealable lid.

Description	Part Number
Disposal Bin	CB-645ml



Alcohol dispensing bottle has a pump action feature. By pressing a wipe into the top alcohol will be brought up into the wipe, allowing easy, one touch access.

Description	Part Number
Dispensing Bottle, IPA	DB-IPA

Individual syringe and needle for injecting epoxy in fibre terminations.

Description	Part Number
Syringe and Needle	SN-001

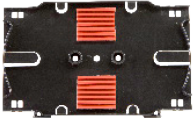


Consumables



12 Way fibre management cassette is the ideal choice for general use splicing, its unique design is versatile enough for almost every fibre optic application.

Description	Part Number
12 Way Fibre Management Cassette	12F-SCG



This tray provides a low cost solution for protecting and managing splices within a patch panel. The kit includes a splice holder, tray and lid.

Description	Part Number
12 Way Fibre Management Cassette	12F-SCB



The splice bridge provides a protection enclosure for splice protectors to be housed an adhesive pad ensures that the splice bridge is secured.

Description	Part Number
12 Way Splice Bridge c/w Lid	12F-SBL1



A compact 12 way splice bridge, store upto 12 fusion splice protectors.

Description	Part Number
12 Way Splice Bridge - Compact	12F-SBC



Fibre optic panel blanks

Description	Part Number
ST Blank Plug (also used for FC)	ST-Blank
SC Simplex Blank Plug	SCS-Blank
SC Duplex Blank Plug	SCD-Blank



Within a patch panel it is important to maintain good management of the routed fibres. These self adhesive bunny clips allow the installer to manage fibre according to their requirements

Description	Part Number
Bunny Clip with peel-off Adhesive	BC-17-20

Consumables



Self adhesive fibre optic warning label

Description	Part Number
Fibre Optic Warning Label	FOL-001



A cable gland offering good protection for incoming cables.

Description	Part Number
Cable Gland c/w Lock Nut - 20mm	Gland-M20
Cable Gland c/w Lock Nut - 25mm	Gland-M25
Cable Gland c/w Lock Nut - 32mm	Gland-M32



Inserting a panel into rack is easy when a cage nut is used. The captive nut clips into the rack, then the screw is easily inserted without the need to hold the nut.

Description	Part Number
Cage Nuts - Bag of 50	CN-001



Heat shrinkable splice protectors used to protect fusion splices, they are available in various lengths. Different lengths, colours and mechanical splices available.

Description	Part Number
Splice Protectors - 60mm	SP-060
Splice Protectors - 45mm	SP-045

The One-Click™ connector cleaning tools are designed to clean a wide variety of connector types (e.g. SC, ST, FC, LC, MU, E2000, MPO/MTP, MTRJ, Duplex LC, ODC, LEMO 3K.93C series connectors, etc) either directly, when mounted in an adapter or a receptacle, all with a simple single-action cleaning system (push/release). This handy tool is effective with a variety of contaminants and with over 500 cleaning cycles per unit it also has a remarkably low cost per clean.



Description	Part Number
One-Click™ Cleaner MU/LC	TL-Click-1.25
One-Click™ Cleaner SC	TL-Click-2.5

Visit www.wrenuk.com to see our range of products:

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