

Other parts we make which can be used in
Cabinets & Enclosures.

JACK SOCKETS - MANY TYPES & STYLES.

KNOBS - 99,000 VARIANTS POSSIBLE.

TERMINALS - 15A, 30A, 60A.

XLR CONNECTORS - METAL & PLASTIC.

**CLIFFCON TOUCHPROOF PLUG & SOCKETS
- 4 POLE & 8 POLE.**

SWITCHES - PUSH / TOGGLE / ROCKER.

POTENTIOMETERS - ROTARY & SLIDER.

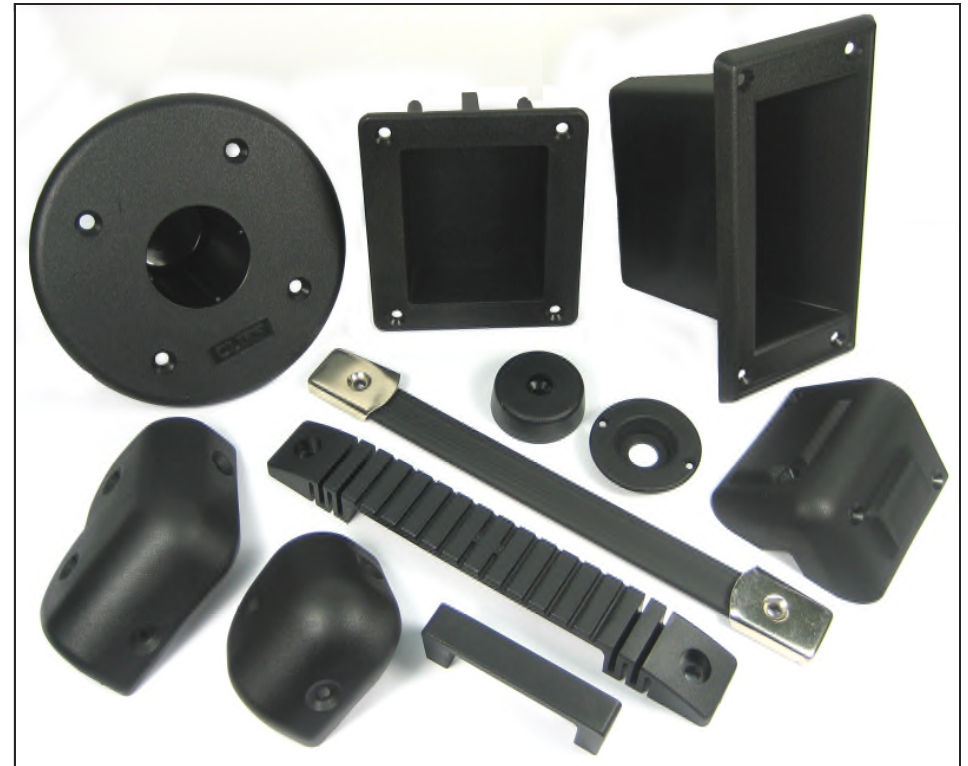
These products are shown on our website

www.cliffuk.co.uk

Our Registered Trademarks



Cabinet Accessories from **Cliff UK**



Cliff Electronic Components Limited

76 Holmethorpe Avenue,
Holmethorpe Industrial Estate,
Redhill, Surrey RH1 2PF. United Kingdom.

Tel: +44 (0)1737 771375

Fax: +44 (0)1737 766012

E-mail: sales@cliffuk.co.uk

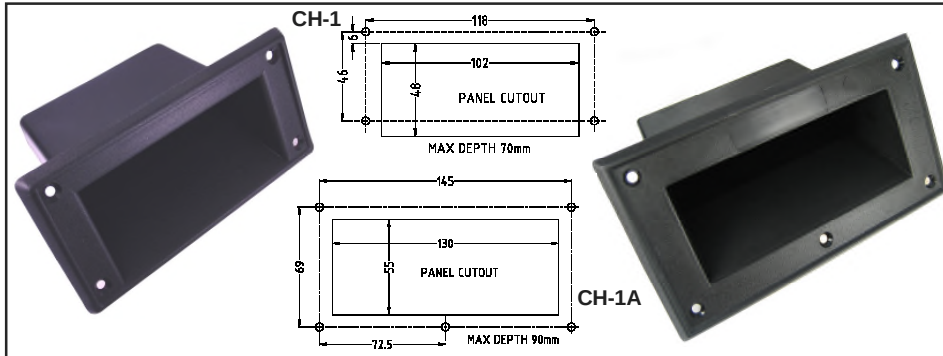
CLIFF

HANDLES

Our range of handles is intended for use on wood, MDF, chipboard or metal enclosures. Manufactured from a range of material including ABS, Glass Reinforced Nylon and PP, they are designed to enhance the appearance and functionality of any equipment to which they are fitted. Some parts can be custom branded.

CH-1 Pocket Handle

CH-1A Pocket Handle



CH-1 & CH-1A are for use on cabinets up to 19mm thick, or metal enclosures. For wood use screw No. 6, and for metal use Ø4mm bolts or pop rivets. The support flange behind the front upper face should ideally make contact with the top face of the cutout, so that all the weight is not on the fixing screw. Standard colour black (PP).

CH-1A is much larger than CH-1.

Part No. **CH-1** - [CL1910](#) Weight 9.8Kg./250 Part No. **CH-1A** - [FCR6878](#) Weight 8Kg./100

CH-2 Large Cabinet Handle



CH-2 is a heavy duty bar handle designed for use on larger, heavier wood or metal cabinets. It comprises a front and a back plate which snap together. This two part assembly gives a reduction in storage space compared to one-part handles. The mounting flange is provided with a moulded sealing rib which will give a good airtight seal on cloth or plastic covered cabinets. For watertight seal - use sealing compound under flange. A moulded recess in the bar can accommodate a name plate or logo. Vertical / Horizontal Pull Strength (on 19mm. chipboard cabinet) >300Kg
Fixing Screws - Select suitable length for cabinet, with 90° head taper. 8 screws required.
Max Depth: 50mm.
Max Front Protrusion: 8.0mm.

Weight 17Kg./100 pcs.

Front Part No. [CL19122](#)

Back Part No. [CL19123](#)

Drawings available on request. Contact sales@cliffuk.co.uk

CLIFF

CABINET CORNERS

Interlocking Corners / Feet (For Stacking Cabinets)

CF-1



CF-1 is a general purpose, tough cabinet corner. Its style matches WCF-1 and together they can be used when making wedge type speaker boxes. Weight 15Kg./1000
Part No. [CF-1 Corner](#) - [CL19169](#)

CF-3



CF-3 is a low cost moulding designed for use on speaker and amplifier cabinets. The design incorporates raised sections which act as stand-off feet and interlock when identical size cabinets are stacked on each other. The 12mm. all round internal radius gives a snug wraparound fit to completely conceal joints and avoid cloth finishing. For use with 19mm. ply or chipboard enclosures. Fixing by No.7 CSK screws. Weight 16.2Kg./1000
Part No. [CF-3 Corner](#) - [CL19170](#)

CF-4



CF-4 is a more rugged version of CF-3 and can accommodate a ribbed plastic extrusion, to provide a protective / decorative edge on the top and bottom of the cabinet. Fixing by No.7 CSK screws. Supplied in Pairs - left and right hand fitting. Extrusion supplied in 2 metre lengths. Weight 30Kg./1000 (500 pairs) Extrusion 35Kg./100 mts.
Part No. [CF-4 Corner \(Pair\)](#) - [CL19173](#)
Part No. [CF-4 Extrusion](#) - [OD6562](#)

CF-5



CF-5 extends the concept of CF-4 to allow a specially designed extrusion to be used all round the edges of the cabinet. It permits use of cabinets with square unfinished edges - thereby reducing production costs. It has a rugged appearance and gives good protection to the cabinet corners / edges. Fixing by No.7 CSK screws. We suggest extrusion is fixed by small nails or black staples on long runs. A small groove is provided. Extrusion is supplied in 2 metre lengths. Weight 25Kg./1000 Extrusion 18.5Kg./100 mts.
Part No. [CF-5 Corner](#) - [OD6595](#) [CF-5 Extrusion](#) - [OD6596](#)

WCF-1



WCF-1 is a rugged corner designed especially for making wedge type speaker boxes. It can be used with CF-1 which has a similar matching styling. Weight 25.25Kg./1000
Part No. [WCF-1 Corner](#) - [CL19172](#)

RECESS PLATES

SRP-1



SRP-1 is moulded in black (std), white or grey plastic, designed to allow flush mounting on the front of a cabinet for our S2 and S4 type jack sockets. This recess plate can also be used for lamps, switches etc. for enhancing the external appearance of cabinets and entertainment equipment. Made with a matt non reflective surface finish.

Part No. [CL1396](#) Weight 2.8kg./1000

SRP-2A



This mounting plate is designed to accommodate a wide variety of input / output connectors. The basic version includes a pair of holes on 19.05mm centres with allow fitting of 1 pair of insulated terminals e.g. our TPP/3, 4 or 5. The mounting distance is 24mm, so any suitable PCB mounting components can be used. It is possible to fit Jack Sockets, XLR, Cliffcon or phono connectors with or in place of terminals. The plate can also be punched or drilled if necessary.

There are many other possible options, contact our Sales department to discuss your requirement.

HI-FI TERMINAL PLATE



This terminal plate is useable in all types of Hi-Fi speakers cabinets. Features include :

- Tough airtight construction
- Solid brass gold plated terminals. Rated 30A. min.
- Crossover can be mounted at the rear. Vertical or Horizontal.
- Versatile rear tag. PC mounting or 1/4" push on receptacle.
- Terminals are flush with surface.
- Gold plated links option.
- Other types of CLIFF terminal can be fitted.

Part Nos.

Hi-Fi Recess Plate [HFRP01 w/o biamp strips](#) - [CL2150](#)

Hi-Fi Recess Plate [HFRP02 with biamp strips](#) - [CL2151](#)

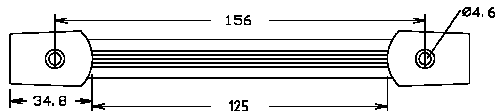
CLIFF

HANDLES

Rack and Strap Handles



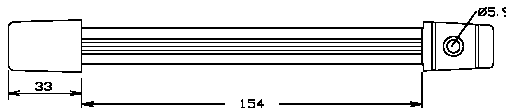
E Ends shown



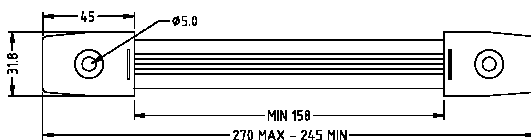
CH-5E 6" long strap handle. Black vinyl handle with steel insert. Visible screws. Weight 3.1Kg./100
CH-5D has snap-on screw covers. Weight 3.8Kg./100
CH-5 strap only (OD65632)
D ends (pair) (OD65638) E ends (pair) (OD65636)



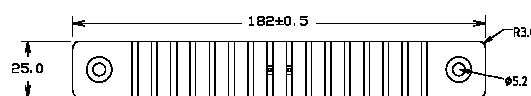
D Ends shown



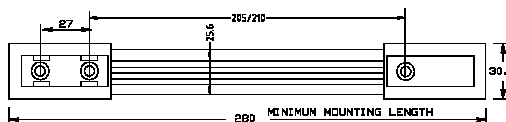
CH-6E 8" long strap handle. Black vinyl handle with steel insert. Visible screws. Weight 3.5Kg./100
CH-6D has snap-on screw covers. Weight 4.2Kg./100
CH-6 strap only (OD65634)
D ends (pair) (OD65638) E ends (pair) (OD65636)



CH-7DC 10" long strap handle. Tough extruded vinyl handle with steel insert. Visible screws. Weight 10.5Kg./100
CH-7DC strap (FM6878)
CH-7DC ends (FM68787)



CH-8 7" long, elegant one piece moulded handle. Matt black finish. Useable for static loads up to 15Kgs.
Weight 3.5Kg./100
CH-8 (CL19135)



CH-10 10" long strap handle. Tough extruded vinyl handle with steel insert. Matt black plastic screw end covers.
Weight 6.5Kg./100
CH-10 strap (FM6878) CH-10 ends (FCR68787)

Drawings available on request. Contact sales@cliffuk.co.uk

CABINET FEET



PF-1 (CL1914) Moulded plastic foot. Ø37mm. Tough and durable. Fixing is by woodscrew size No. 8 or 10. Standard colour black. Weight 7.2kg./1000
PF-1GFN (CL19145) Special heat resisting version used for laboratory equipment.
RF-1 (CL1916) Same as PF-1 but made from synthetic rubber, for non-slip applications. Weight 9.6kg./1000

'TOP HAT' MOUNTING PLATE



This product is designed for fixing into the bottoms of speaker cabinets, or lighting assemblies to enable these enclosures to be mounted onto stands. Made from reinforced nylon - they perform the same as metal, but are much lower cost. Breaking strength >500Kg.

TH1 - CL19176 for 1 1/4" (31.7mm.) diameter mounting posts.
TH2 - CL19177 for 1 1/8" (28.6mm.) diameter mounting posts.
TH3 - CL19178 for 1 3/8" (34.9mm.) diameter mounting posts.
TH4 - CL19179 for 1 1/2" (38.1mm.) diameter mounting posts.

CASTER CUP



Caster Cup is designed for use on stacking cabinet systems which have casters fitted. The caster recess will accept most wheels in common use. The cabinet should be recessed just enough to clear the wheel recess, to give best shock resistance. OEM logo can be applied.
Part No. FCR68590 Weight 20Kg./1000

PCB SPACERS - PCS Series



9 different sizes are available. These give a rigid mounting for PCB's or similar assemblies. Fixing by self-tapping screw size No.6 or 8, which are screwed into each end of the post. The centre flat section can be gripped to prevent rotation while fixing. Pop rivets 1/8" Ø are suitable for fixing to metal chassis.

TYPE	LENGTH
PCS-025	1/4" (6.35mm)
PCS-05	1/2" (12.5mm)
PCS-075	3/4" (19.0mm)
PCS-100	1" (25.4mm)
PCS-125	1 1/4" (31.7mm)
PCS-137	1 3/8" (34.9mm)
PCS-150	1 1/2" (38.1mm)
PCS-200	2" (50.8mm)
PCS-250	2 1/2" (63.5mm)

For further information, contact sales@cliffuk.co.uk

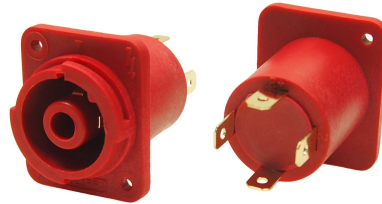
CLIFF

CLIFFCON[®] CONNECTORS

Our Cliffcon[®] 4 pole connectors are intended for any application where a reliable locking touch proof connector system is required. Incorporating a tough, durable construction with gold plated touch proof contacts, easy locking / unlocking mechanism and integral cable clamp, Cliffcon[®] is the ideal connector for many different applications. Sockets are available for chassis and PCB mounting. Specific, non-compatible versions for low (LV) and high (HV) voltage applications.



FCR2068 - 4PC/S/LV
FCR20681 - 4PC/S/PC/LV



FCR2069 - 4PC/S/HV
FCR20691 - 4PC/S/PC/HV



FCR2066 - 4PC/P/LV



FCR2067 - 4PC/P/HV



FCR20663 - 4PC/P90/LV



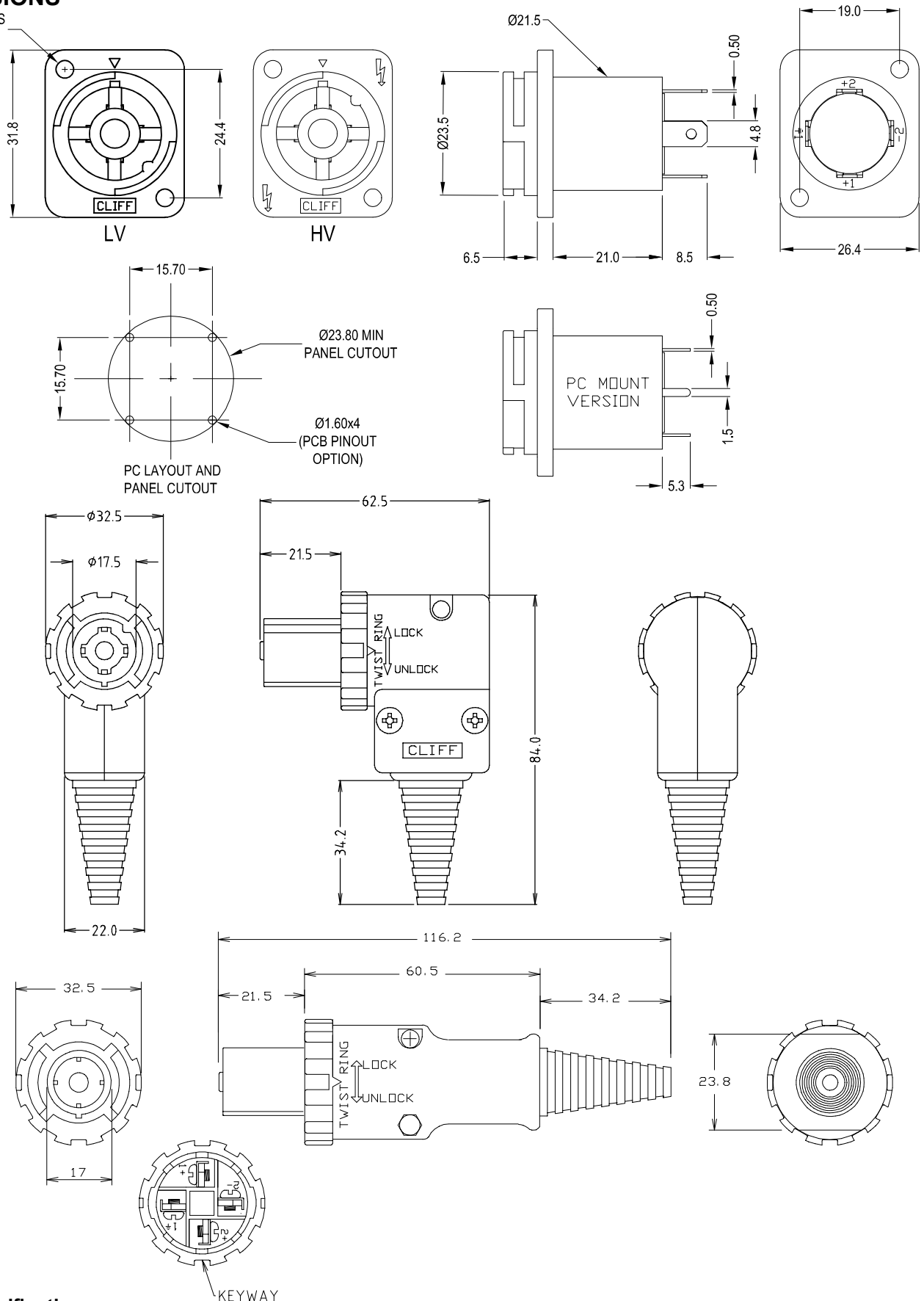
FCR20673 - 4PC/P90/HV

Significant Features

- Safety leading ground pin - makes first, breaks last to prevent damage from arcing if disconnected under load
- Combination Faston quick disconnect and screw connections with clearly marked pin identification inside the line connectors.
- Colour coded system - Blue for 120VAC, Red for 250VAC with different mechanical keying to avoid the possibility of intermating.
- Integral cable clamp for 6mm to 15mm diameter cable.

DIMENSIONS

Ø2.40 HOLES
(SELF TAP)



Specification

- 1) Safety leading ground pin - makes first, breaks last.
- 2) Rated Voltage - Blue (LV) 120V, Red (HV) 250V AC max *
- 3) Rated Current: 4 pin 20A RMS @ 80°C, 30A RMS @ 20°C (5% duty cycle)
- 4) Inrush Current: >30A / 20mS
- 5) Contact Resistance: <3mΩ
- 6) Insulation Resistance: >20MΩ @ 4000V
- 7) Operating Temp: -20°C to +80°C
- 8) Max wire size: 6mm² / 10AWG solid, 4mm² / 12AWG stranded

* Connectors identical electrically, only the designation is LV and HV

CLIFF

COMBI-JACK

COMBINED JACK / XLR IN ONE BODY



The hybrid Jack / XLR offers space saving opportunities in designs where jacks and XLR may be not used simultaneously, or where space available is inadequate to use separate components.

FEATURES:

- Panel mounting by self tap screws.
- XLR with retention spring.
- Optional push latch for all models.
- Optional grounding switch on XLR.
- Optional mono unswitched jack.
- Optional stereo unswitched jack.
- Optional stereo switched jack.
- Optional horizontal PCB mounting.
- Optional vertical PCB mounting.
- Optional solder tag wiring.
- UL94 Approved materials.

SPECIFICATION - XLR

Insertion force : 0.3~4.0 kgf

Contact Resistance:

Initial: Max 30mΩ

SPECIFICATION - JACK SOCKET

Insertion force : 0.3~3.0 kgf

Contact Resistance:

Initial: Max 30mΩ

Cliff Electronic Components, Ltd.

76 Holmethorpe Avenue, Holmethorpe Ind. Est.

Redhill, Surrey RH1 2PF. England

Tel: +44 (0) 1737 771375

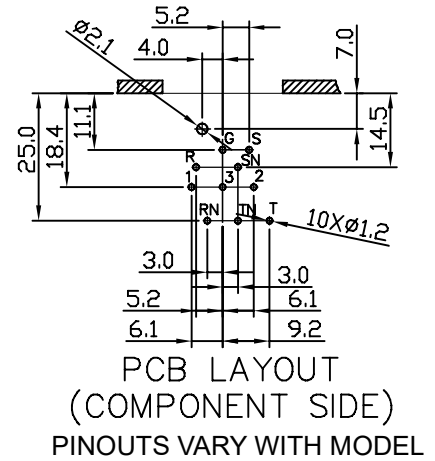
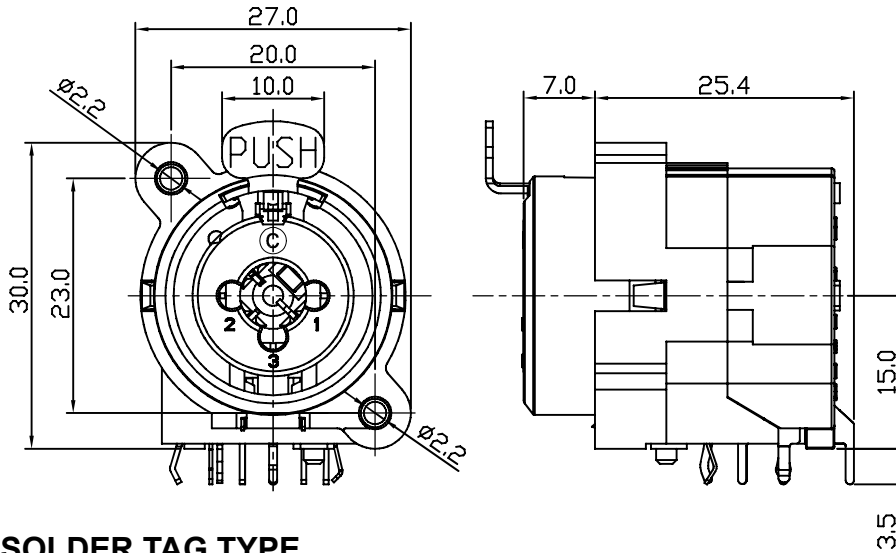
Fax: +44 (0) 1737 766012

Email: sales@cliffuk.co.uk

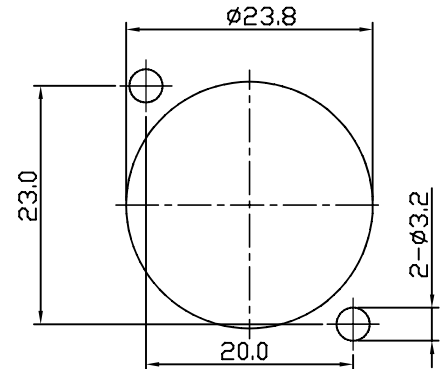
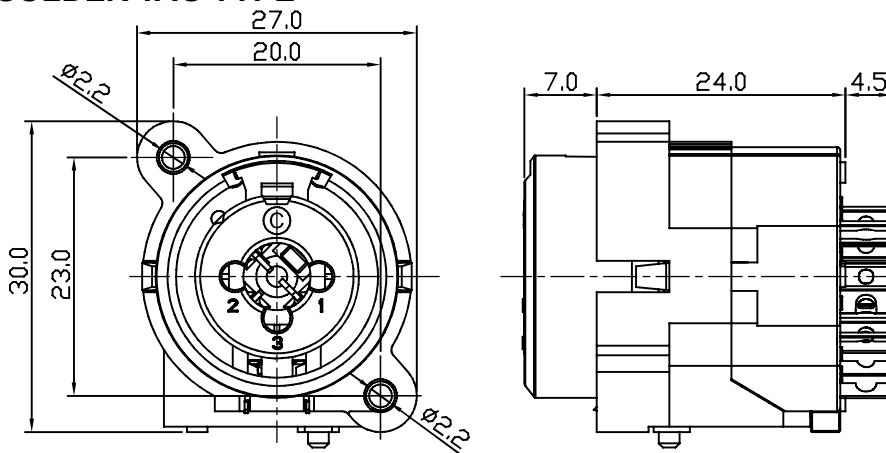
www.cliffuk.co.uk



GENERAL DIMENSIONS 90° PCB WITH LATCH

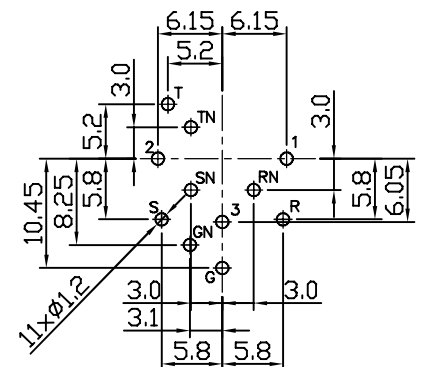
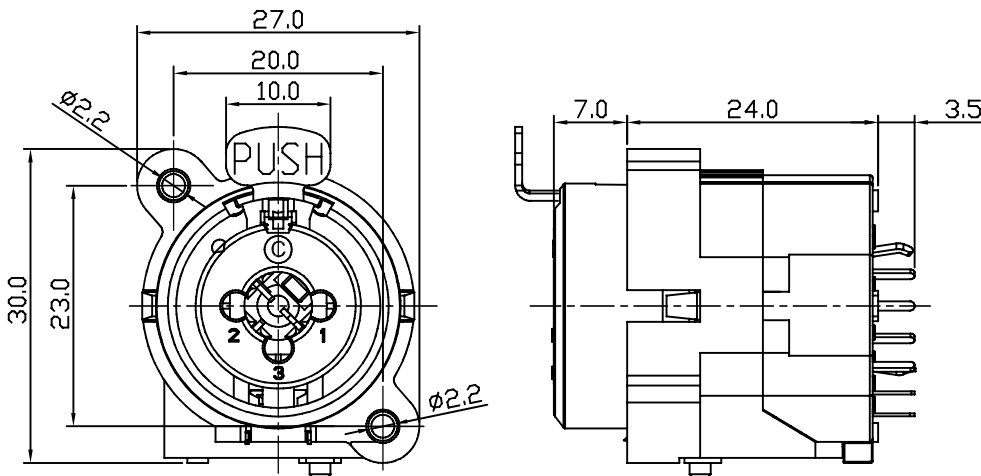


SOLDER TAG TYPE



PANEL CUTOUT
(FRONT SIDE)
SAME FOR ALL MODELS

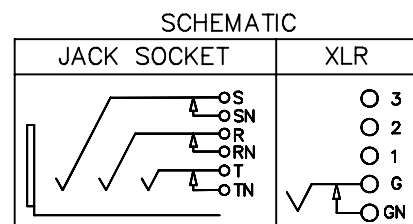
VERTICAL PCB WITH LATCH



PCB LAYOUT
(TOP VIEW)
PINOUTS VARY WITH MODEL

VARIANTS	STEREO JACK UNSCREENED	STEREO JACK SCREENED
90° PCB		
WITHOUT XLR GROUND SCREEN	FC2410	FC2420
WITH XLR GROUND SCREEN		FC2430
VERTICAL PCB		
WITHOUT XLR GROUND SCREEN	FC2440	FC2450
WITH XLR GROUND SCREEN		FC2460
SOLDER TAGS		
WITHOUT XLR GROUND SCREEN		FC2480
WITH XLR GROUND SCREEN		FC2490

For Push latch version - Add L to P/No. e.g. FC2410L



PINOUTS VARY WITH MODEL

CLIFF

DUAL USB SOCKETS WITH EARTH IN XLR SHELL

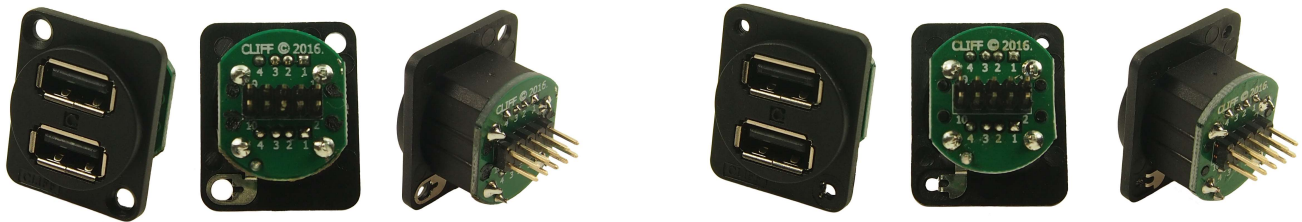
Dual USB2 & USB3.0 compliant sockets are mounted in a single space-saving universal XLR receptacle, chosen to allow industry standard panel cutouts and maximum panel mounting density. Output connection header pins are configured to facilitate either direct soldering to PCBs or connection by header cable. We are happy to provide customers with standard or custom designed header cables to meet individual system requirements.

Front or back mounted versions are available.

This is part of Cliff's programmed series of USB and other data connectors, primarily in XLR and other industry standard shells.

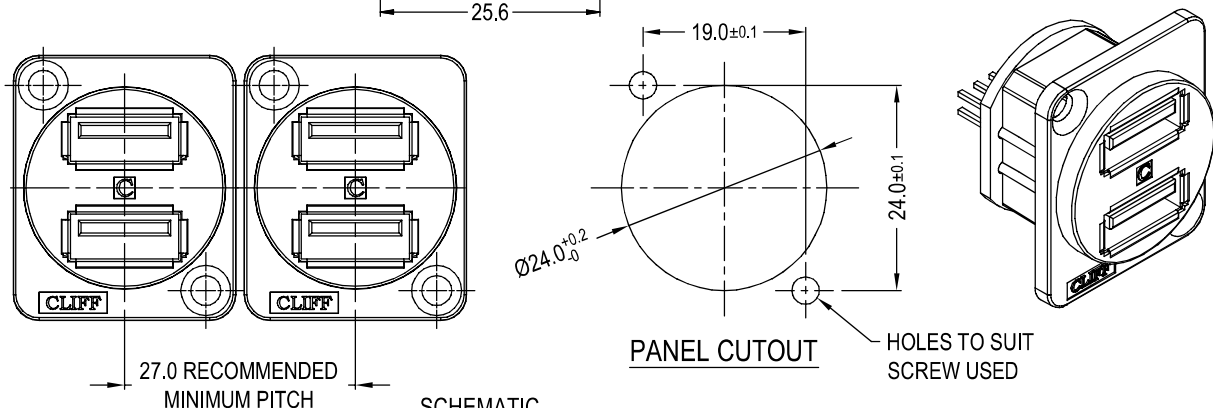
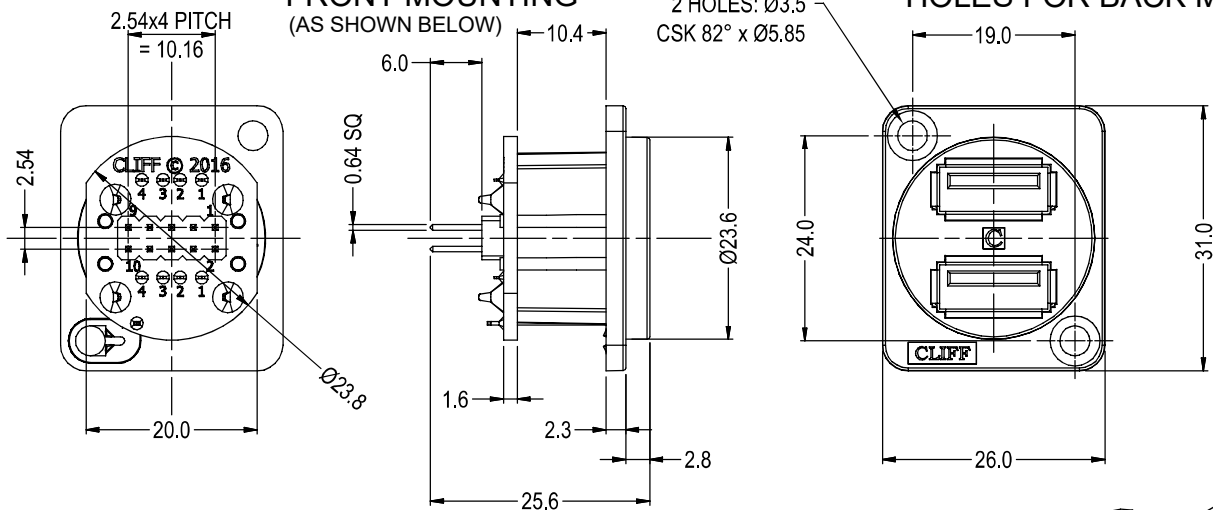
Enquire to Sales for customised USB connector variants to suit end users applications.

DUAL USB2 WITH EARTH

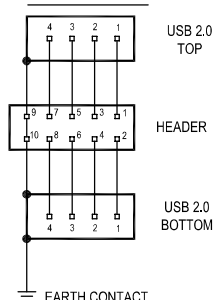


PART No. **CP30100** - WITH CSK HOLES FOR FRONT MOUNTING (AS SHOWN BELOW)

PART No. **CP30100X** - WITH Ø2.5mm PLAIN HOLES FOR BACK MOUNTING



SCHEMATIC



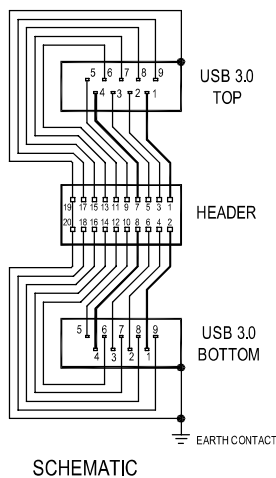
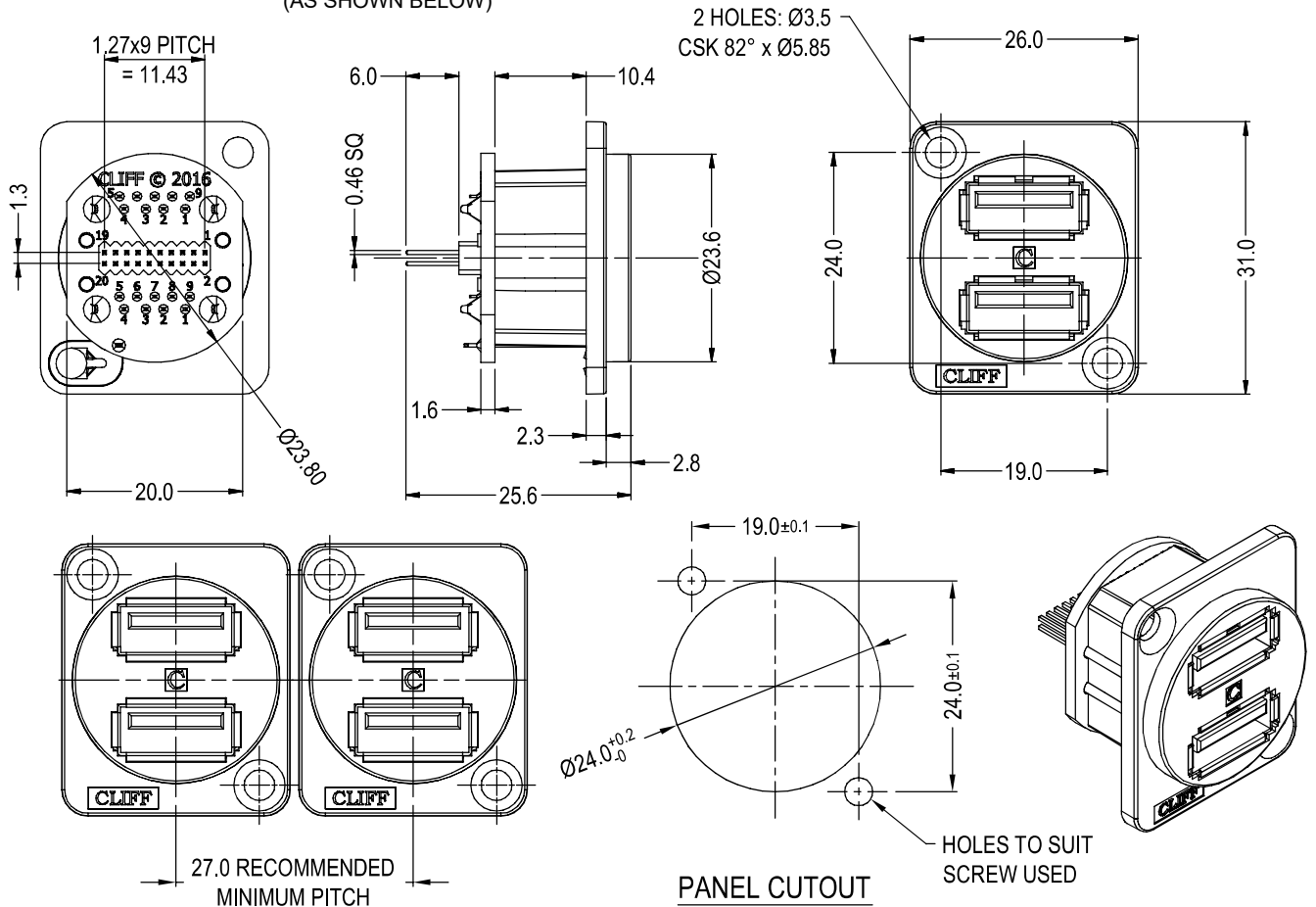
	Pin No.		Header Pin
Top USB	1	Vcc	1
	2	Data -	3
	3	Data +	5
	4	Ground	7
Bottom USB	USB Body		9
	1	Vcc	2
	2	Data -	4
	3	Data +	6
	4	Ground	8
	USB Body		10

DUAL USB3.0 WITH EARTH



PART No. **CP30105** - WITH CSK HOLES FOR FRONT MOUNTING
(AS SHOWN BELOW)

PART No. **CP30105X** - WITH Ø2.5mm PLAIN HOLES FOR BACK MOUNTING



	Pin No.		Header Pin
Top USB	1	VBUS	1
	2	D-	3
	3	D+	5
	4	GND	7
	5	StdA_SSRX-	9
	6	StdA_SSRX+	11
	7	GND_DRAIN	13
	8	StdA_SSTX-	15
	9	StdA_SSTX+	17
Bottom USB	USB Body + Panel Earth		
	1	VBUS	2
	2	D-	4
	3	D+	6
	4	GND	8
	5	StdA_SSRX-	10
	6	StdA_SSRX+	12
	7	GND_DRAIN	14
	8	StdA_SSTX-	16
	9	StdA_SSTX+	18
	USB Body + Panel Earth		
	20		20

CLIFF

Fibre Optic Cleaner



For best optical performance it is important that all optical fibre connections are clean and free of contaminants. **CLIFF** have two fibre optic pen cleaner tools for use with all common types of fibre connectors and adaptors. Convenient and easy to use push click action and robust sturdy construction, the pens have a dry cleaning strand that gently sweeps and removes harmful contaminants from the connector without damaging the connector end face.

Features

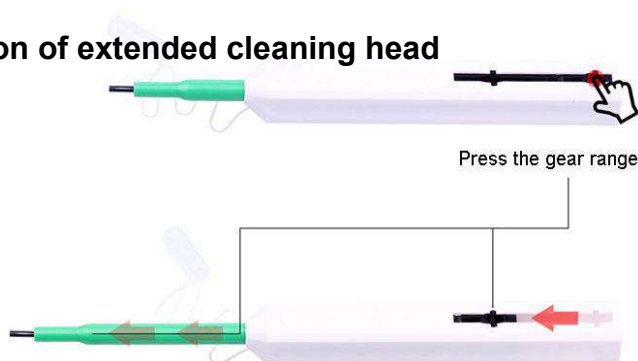
- Push click handheld cleaner tool
- 800 clean cycles
- 2.5mm cleaner for use with FC, SC & ST connectors
- 1.25mm cleaner for use with MU & LC connectors
- Cleans UPC and APC connector ferrules (with guide cover in place) and adaptors (with guide cover removed).
- Extendable cleaning head for hard to reach situations

Part Nos:

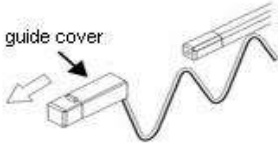
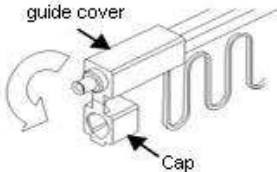
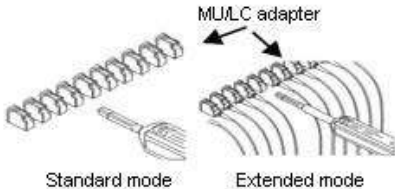
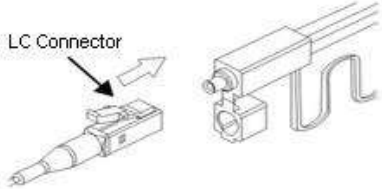
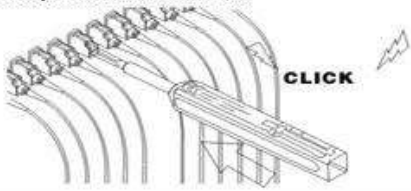
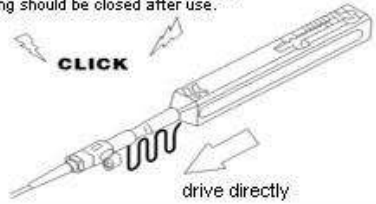
FCR300125 - Fibre Optic cleaning pen 1.25mm (for MU and LC connectors)

FCR300250 - Fibre Optic cleaning pen 2.50mm (for FC, SC and ST connectors)

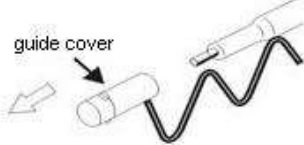
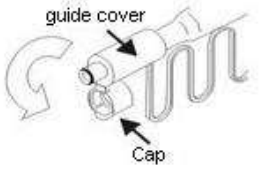
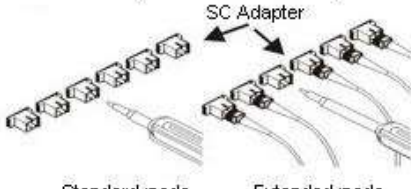
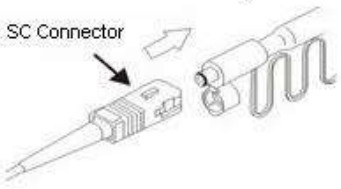
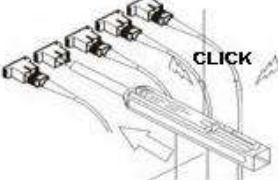
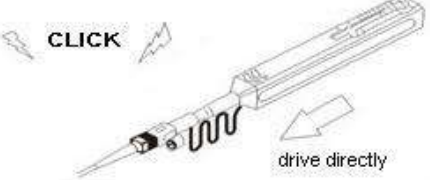
Illustration of extended cleaning head



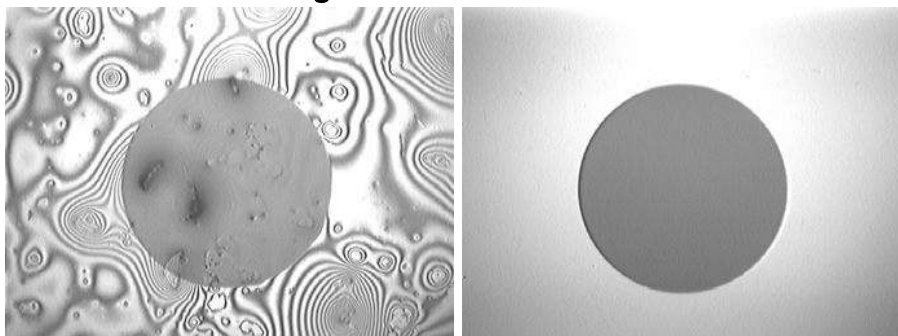
MU/LC Cleaning Pen Application

1.Remove the guide cover from the product 	1.Open guide cover 
1.Insert the cleaning head into the MU/LC adapter 	2.Insert the MU/LC Connector into the guide cover 
3.Push the housing to start cleaning the end of the adapter. A sound of click means that the cleaning process is over. The housing should be closed after use. 	3.Push the housing to start cleaning the end of the connector. A sound of click means that the cleaning process is over. The housing should be closed after use. 

FC/SC/ST Cleaning Pen Application

1.Remove the guide cover from the product 	1.Open guide cover 
2. Insert the cleaning head into the SC adapter 	2. Insert the SC Connector into the guide cover 
3.Push the housing to start cleaning the end of the adapter. A sound of click means that the cleaning process is over. The housing should be closed after use. 	3.Push the housing to start cleaning the end of the connector. A sound of click means that the cleaning process is over. The housing should be closed after use. 

Comparison before and after cleaning end face



CLIFF

2.5mm, 3.5mm and ¼" (6.35mm) Mono and Stereo Jack Plugs

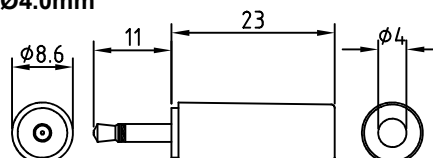
The **CLIFF®** range of professional quality mono and stereo Jack Plugs are designed for use in many applications including audio, computer, military and industrial uses. Our Jack Plugs are manufactured from solid nickel-plated brass with high temperature Phenolic / PBT insulators and either metal or tough ABS covers. Some models are available with plastic covers in seven standard colours for easy identification. All versions feature a cable clamp, which is an integral part of the ground screen contact, and clamps firmly without damaging the cable.



JP025 2.5mm mono unscreened Jack Plug. Black plastic body. Careful assembly required.

JP025 - FC6814

Maximum cable Ø4.0mm

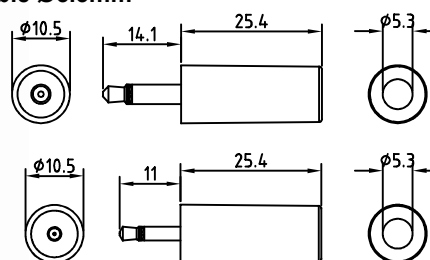


2.5mm and 3.5mm mono unscreened Jack Plug. Allows larger cable use. Black plastic body.

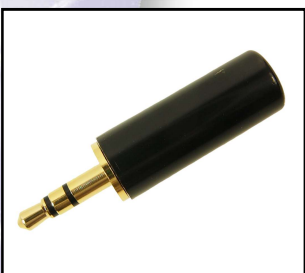
3.5mm model.
P6C-A - FC1066A

2.5mm model.
P6C-D - FC1066D

Maximum cable Ø5.3mm



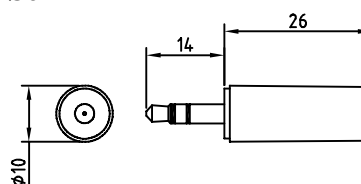
Also available subject to minimum quantity are models with low profile barrel and strain relief. Refer to Sales.



JPS35G 3.5mm stereo unscreened Jack Plug. Black plastic body. Gold plated.

JPS35G - FT6301

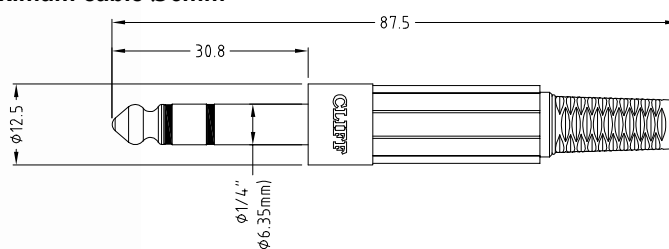
Maximum cable Ø5mm



P2C/P4C ¼" unscreened Jack Plug. Plastic body with cable strain relief.

Mono Jack Plug
P2C - FM1022
Stereo Jack Plug
P4C - FM1026

Maximum cable Ø6mm



Cliff Electronic Components, Ltd.

76 Holmethorpe Avenue, Holmethorpe Ind. Est.

Redhill, Surrey RH1 2PF. England

Tel: +44 (0) 1737 771375

Fax: +44 (0) 1737 766012

Email: sales@cliffuk.co.uk

www.cliffuk.co.uk

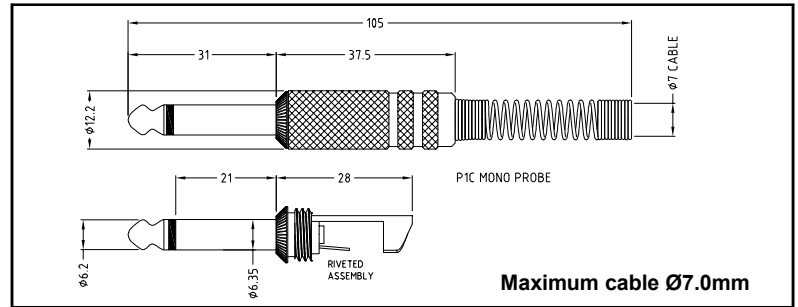


2.5mm, 3.5mm and 1/4" (6.35mm) Mono and Stereo Jack Plugs



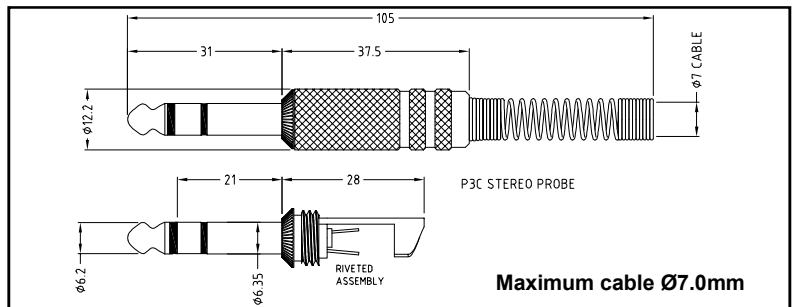
P1C
1/4" screened Jack Plug. Metal body. Rivetted construction

Mono Jack Plug
P1C - FM1002



P3C
1/4" screened Jack Plug. Metal body. Rivetted construction

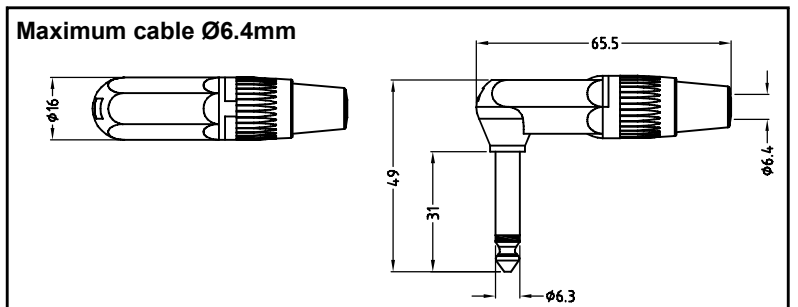
Stereo Jack Plug
P3C - FM1003



SEP/1C Professional
1/4" mono screened right angle Jack Plug. Metal body with black plastic cover. Stereo version SEP/3C also available. Rivetted construction.

SEP1C - FM1088
SEP3C - FM1098

Maximum cable Ø6.4mm



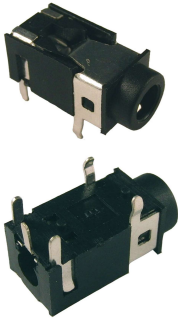
- 2.5mm Jack Leads
- 3.5mm Jack Leads
- 1/4" Jack Leads
- XLR Leads
- DMX Leads
- DIN Leads
- DC Jack Leads
- Optical Leads
- Bantam Jack Leads

CLIFF® offer a complete service to design and manufacture Custom Moulded cable assemblies according to your specific requirements. Assembled cables include audio cables such as Jack, XLR, DIN (MIDI), Bantam and Optical, DMX cables for the professional Lighting Industry and power and interconnect cables for Computer Peripherals, Medical and Test Equipment. Please contact our Sales office for more details.

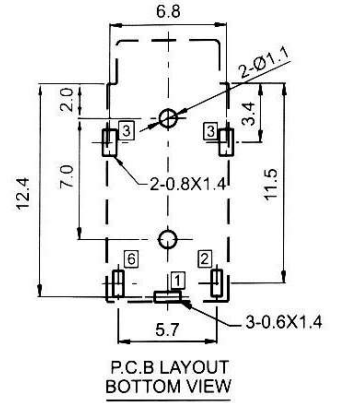
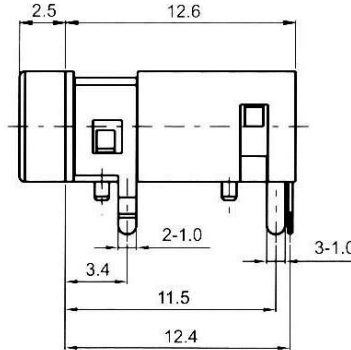
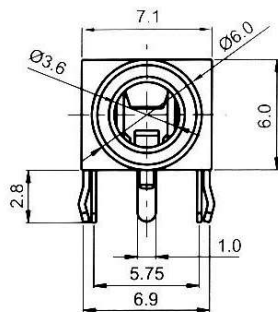
CLIFF

3.5mm 4 Pole Jack Sockets & Plugs

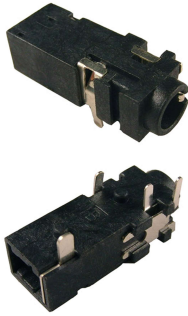
FC68125



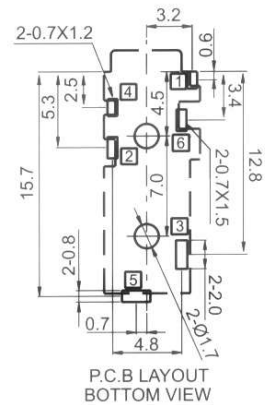
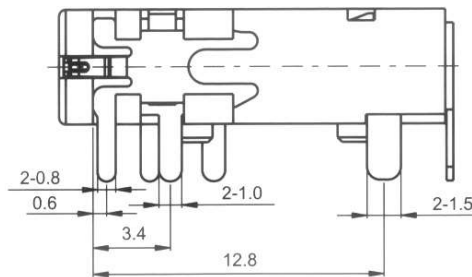
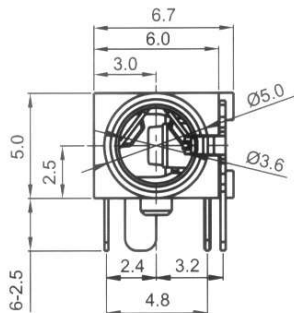
Model No.	FC68125
Schematic	



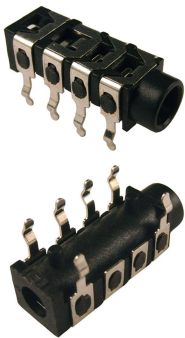
FC68126, FC68127



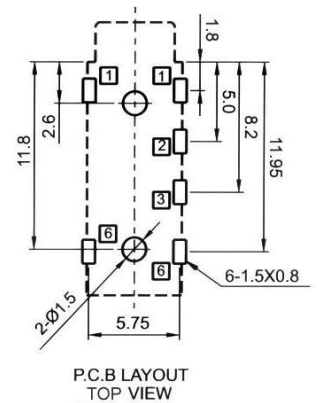
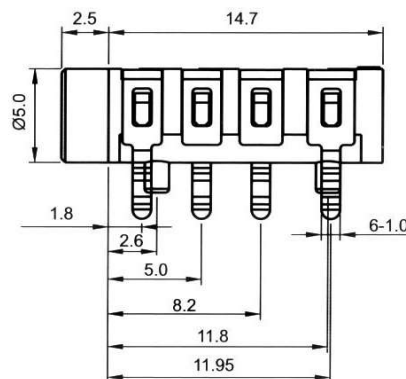
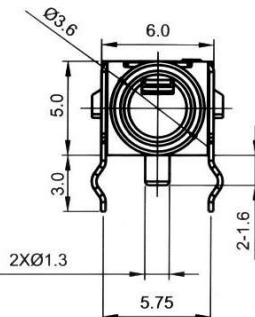
Model No.	Schematic
FC68126	
FC68127	



FC68128



Model No.	FC68128
Schematic	

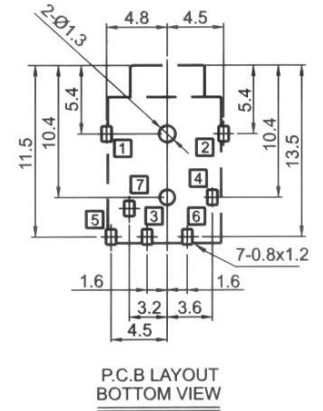
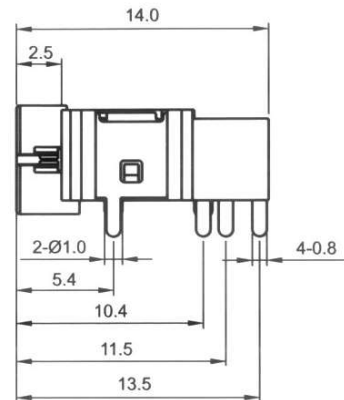
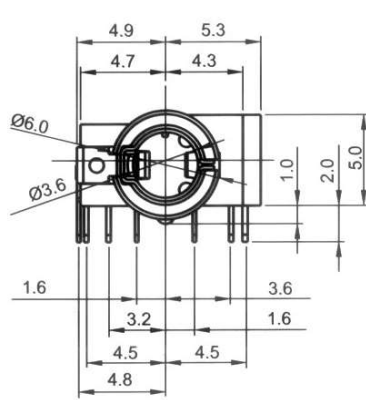
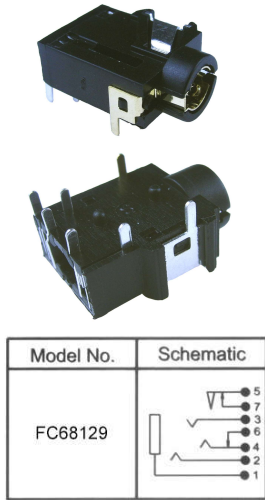


Not compatible with plug FC68124 or FC68124M. Suitable only for Jack plug cable FC68122C.

CLIFF

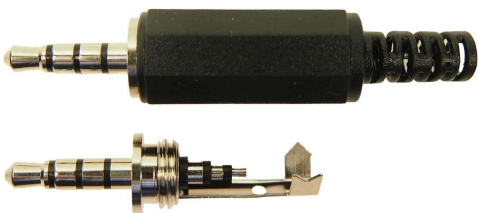
3.5mm 4 Pole Jack Sockets & Plugs

FC68129

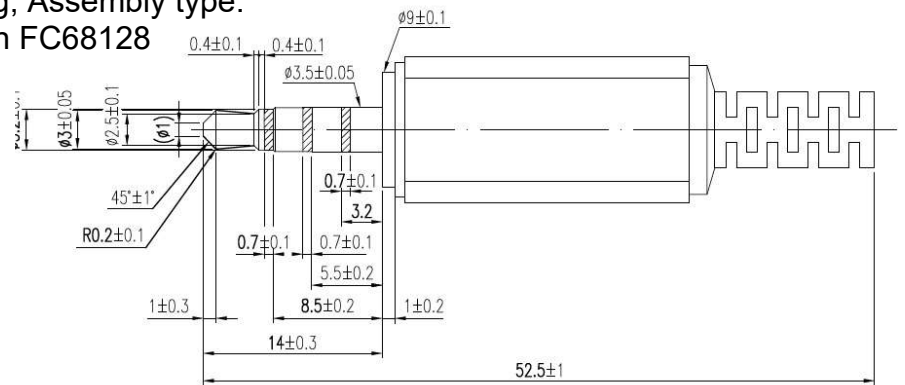


FC68124 - 3.5mm 4 pole Jack Plug, Assembly type.

Note: This plug is not to be used with FC68128



Max. cable diameter Ø4mm

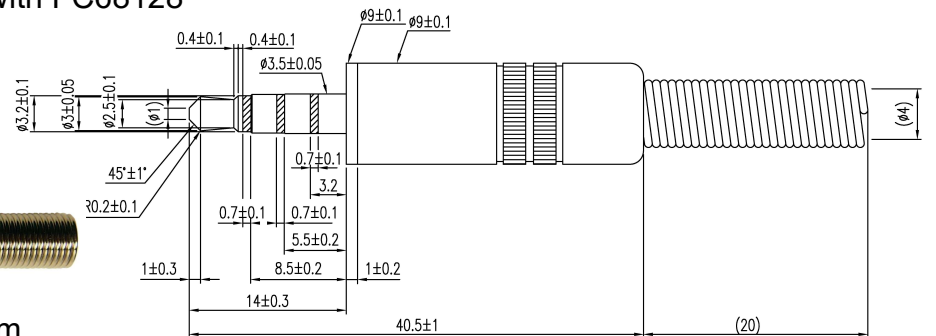


FC68124M - RFI Shielded 3.5mm 4 pole Jack Plug, Assembly type.

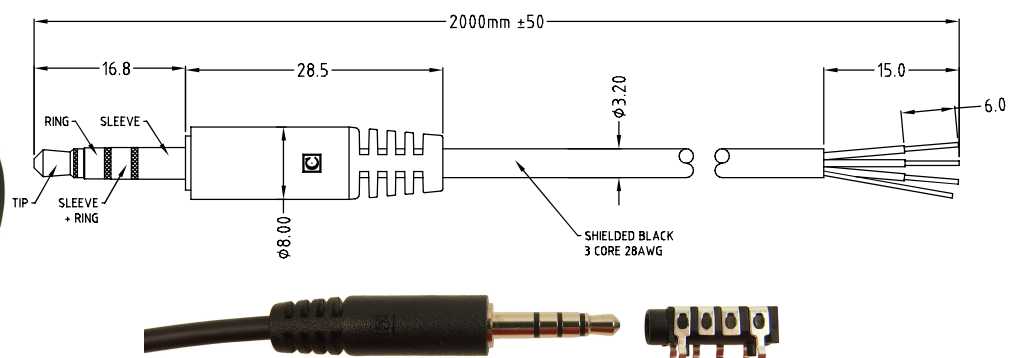
Note: This plug is not to be used with FC68128



Max. cable diameter Ø4mm



FC68122C



For use with FC68128

CLIFF

CLIFFCON™ JUMBOJACK

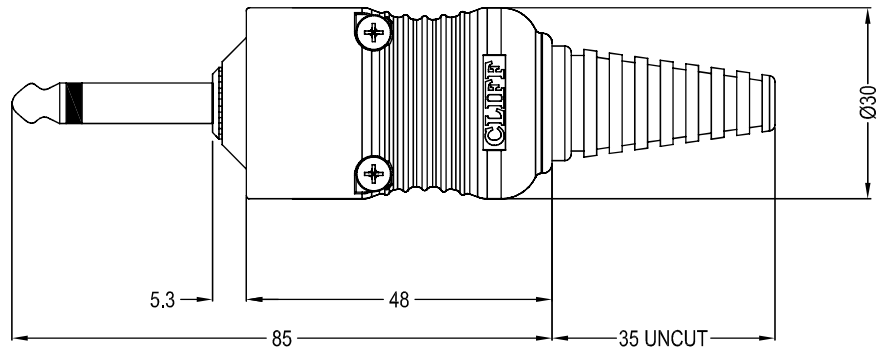
Cliffcon™ Jumbojack offers a solution to the problem of connecting large section cables to conventional ¼" jack plugs.

There are applications in professional sound installations, where it is necessary to link equipment with low resistance cables. Such cables tend to have large cross section conductors, and can have diameters up to 15mm. Connecting such cables to conventional jack plugs is difficult, due to the mismatch of size.

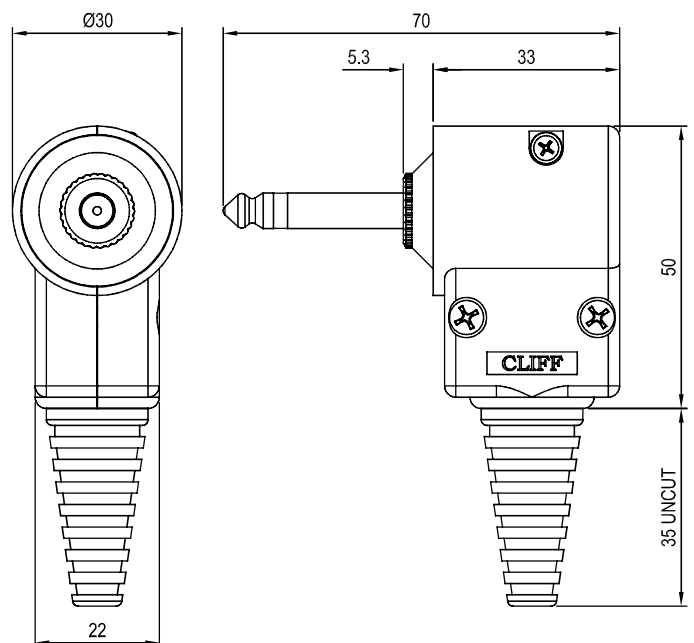
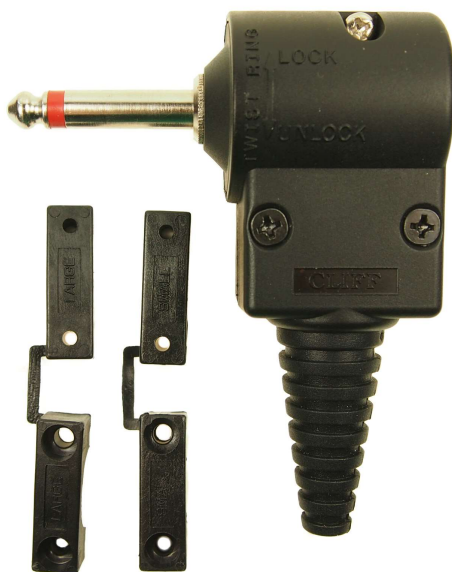
Cliffcon™ Jumbojack addresses this problem. It allows large diameter cable to be connected to conventional ¼" jack plug contacts, and has large / secure screw type cable clamps, to keep the cable in place. The cable grommet is useable up to Ø12.5mm. For Ø15mm, discard the grommet.



Mono Straight Type - CL2075
Stereo Straight Type - CL2075S



Mono 90° Type - CL2076
Stereo 90° Type - CL2076S



CLIFF

METAL XLR CONNECTORS

Our metal series XLR connectors will meet the most severe specifications. All contact parts are silver plated to give low noise levels. Available in Nickel or Black finish. Large solder bucket contacts are used to make wiring easy.



FC6100 - 3 PIN FEMALE XLR 3ACF/M. RATED 16A.
FC6101 - 3 PIN FEMALE XLR 3ACF/BM. RATED 16A.



FC6120 - 4 PIN FEMALE XLR 4ACF/M. RATED 9A.
FC6121 - 4 PIN FEMALE XLR 4ACF/BM. RATED 9A.



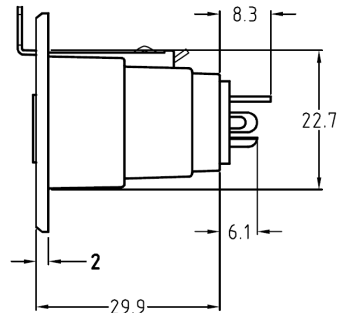
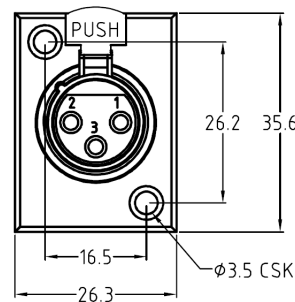
FC6170 - 5 PIN FEMALE XLR 5ACF/M. RATED 7.5A
FC6171 - 5 PIN FEMALE XLR 5ACF/BM. RATED 7.5A.



FC6187 - 7 PIN FEMALE XLR 7ACF/M. RATED 5A.

Specification

Contact Resistance: $\leq 5\text{m}\Omega$
 Insulation Resistance: $\geq 5000\text{M}\Omega$
 Withstand Voltage: 1400V
 Durability(Mating & Unmating): ≥ 2000
 Temperature range: -20°C to $+80^{\circ}\text{C}$



ACF TYPICAL DIMENSIONS



FC6105 - 3 PIN MALE XLR 3ACM/M. RATED 16A.
FC6106 - 3 PIN MALE XLR 3ACM/BM. RATED 16A.



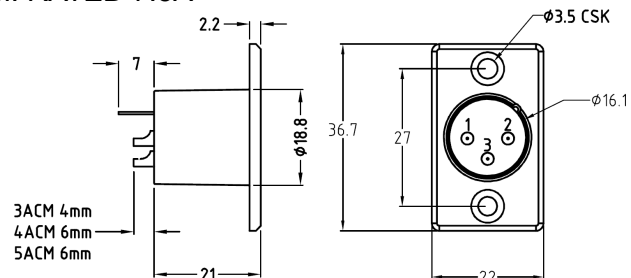
FC6125 - 4 PIN MALE XLR 4ACM/M. RATED 9A.
FC6126 - 4 PIN MALE XLR 4ACM/BM. RATED 9A.



FC6175 - 5 PIN MALE XLR 5ACM/M. RATED 7.5A
FC6176 - 5 PIN MALE XLR 5ACM/BM. RATED 7.5A



FC6185 - 7 PIN MALE XLR 7ACM/M. RATED 5A.



ACM TYPICAL DIMENSIONS

CLIFF

METAL XLR CONNECTORS



FC6140 - 3 PIN FEMALE XLR 3APF/M. RATED 16A.
FC6141 - 3 PIN FEMALE XLR 3APF/BM. RATED 16A.



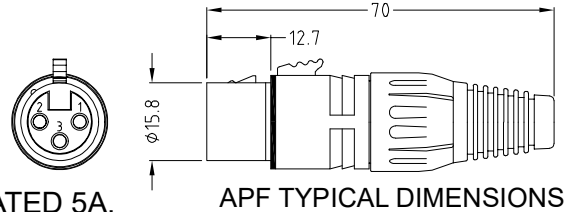
FC6150 - 4 PIN FEMALE XLR 4APF/M. RATED 10A.
FC6151 - 4 PIN FEMALE XLR 4APF/BM. RATED 10A.



FC6165 - 5 PIN FEMALE XLR 5APF/M. RATED 7.5A.
FC6166 - 5 PIN FEMALE XLR 5APF/BM. RATED 7.5A.



FC6182 - 7 PIN FEMALE 7APF/M. RATED 5A.



APF TYPICAL DIMENSIONS



FC6130 - 3 PIN MALE XLR 3APM/M. RATED 16A.
FC6131 - 3 PIN MALE XLR 3APM/BM. RATED 16A.



FC6155 - 4 PIN MALE XLR 4APM/M. RATED 10A.
FC6156 - 4 PIN MALE XLR 4APM/BM. RATED 10A.



FC6160 - 5 PIN MALE XLR 5APM/M. RATED 7.5A.
FC6161 - 5 PIN MALE XLR 5APM/BM. RATED 7.5A.



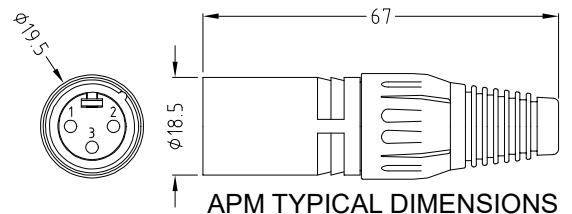
FC6180 - 7 PIN MALE PLUG 7APM/M. RATED 5A.

Specification

Contact Resistance:	3 pole <5mΩ 4-7 pole <7mΩ
Insulation Resistance:	>5000MΩ
Withstand Voltage:	1400V
Capacitance:	<4 Pf

Max cable size

3 pole	- 2.5mm ²
4 pole	- 1.0mm ²
5 pole	- 1.0mm ²
7 pole	- 1.0mm ²



APM TYPICAL DIMENSIONS

CLIFF

MS-3 Series Fused Power Input Connectors



MS-3 Printed Fuse Carriers



MS-3 with Voltage Selector



MS-3X Snap-in



MS-3 with Fuse Carrier

The **CLIFF** MS-3 series Power Input Connectors are produced from heat resistant plastic with solid brass nickel-plated metal parts. Parts for soldering are tin plated. The MS-3 is a composite design incorporating an input, fuseholder and voltage selector. The fuse carrier is available printed with various voltage combinations. Two terminal options are available - Solder Tag and Quick Connect. All products are produced in accordance to IEC320 / EN60-320 and have various safety approvals. The standard colour is Black, however some products are available in other colours, subject to a reasonable order quantity. For voltage selector options, refer to drawing number CL19262. Supplied without fuse fitted.

Significant features include:

- Compact, space saving design.
- MS-3 DPS version available where 'L Pin' is not connected to the fuseholder and permits double pole switching.
- MS-3X Snap-in version also available (without voltage selector option).
- European approvals
- Cost effective, rapid installation.

Cliff Electronic Components, Ltd.

76 Holmethorpe Avenue, Holmethorpe Ind. Est.

Redhill, Surrey RH1 2PF. England

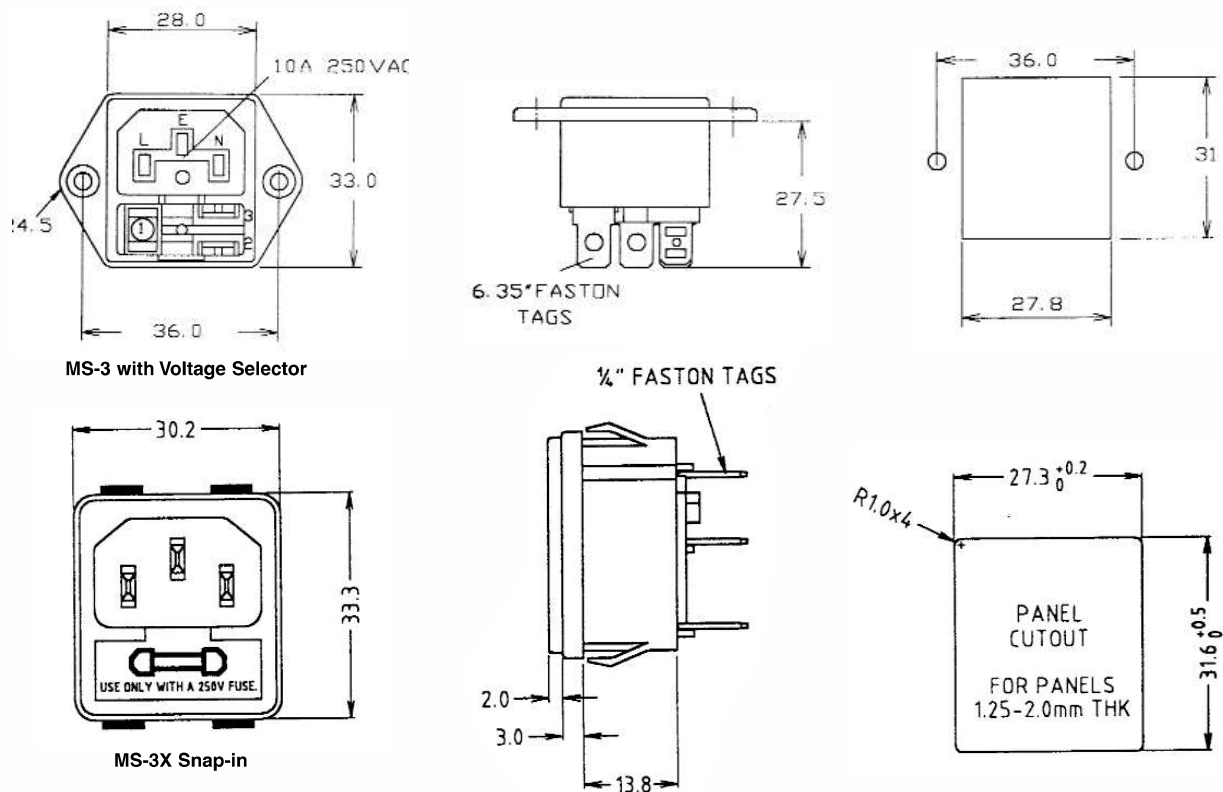
Tel: +44 (0) 1737 771375

Fax: +44 (0) 1737 766012

Email: sales@cliffuk.co.uk

Visit us online at:

www.cliffuk.co.uk



Specification:

Rated Current: 10A maximum. (MS-3X 6A maximum).

Rated Voltage: 250Vac.

Temperature Rating: -10°C to +85°C

Minimum Flammability Rating: UL 94-HB.

Approvals:

SPEC \ TYPE	BS4491 COLD	BS4491 HOT	CE22 IEC320	CB-1
MS-3	N	N	O	●
MS-3DPS	N	N	O	●
MS-3X	N	N	O	●

N: Not approved O: Conforms ●: Approved

VARIANTS

CL1927RB - MS3 captive fuse holder.

CL1927 - MS3. Without fuse carrier.

CL19268 - XMS3 for self tap fixing. Without fuse carrier.

CL19271 - MS3-DPS double pole switching. Without fuse carrier.

CL192711 - XMS3-DPS double pole switching for self tap fixing. Without fuse carrier.

FC681378 - MS3X captive fuse holder.

CLIFF

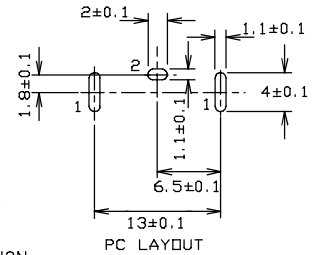
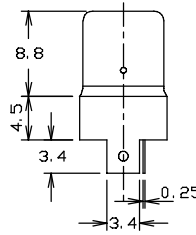
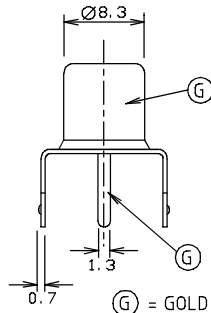
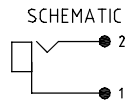
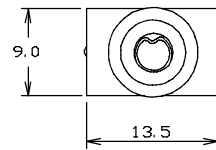
RCA PHONO CONNECTORS



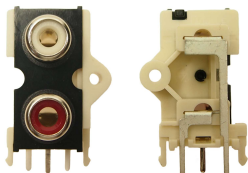
Part No: **FC68402G**



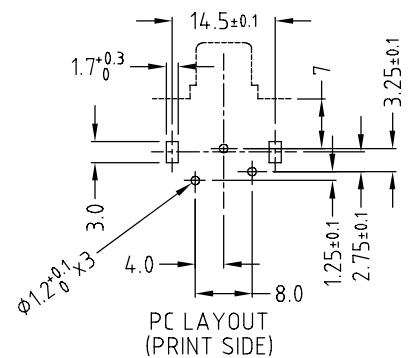
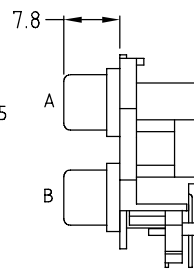
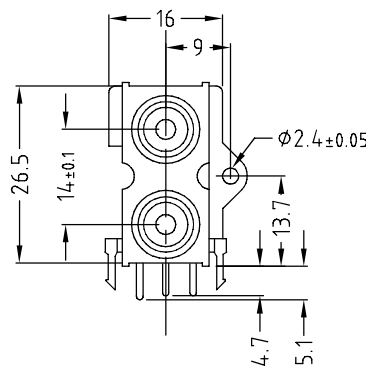
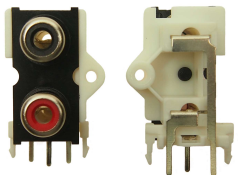
Part No: **FC68403**



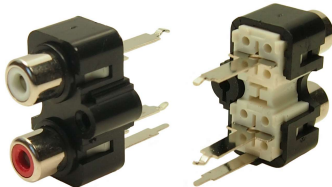
(G) = GOLD PLATED PARTS IN 'G' VERSION



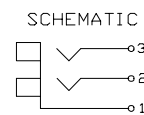
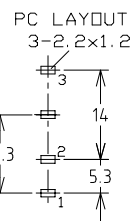
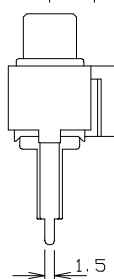
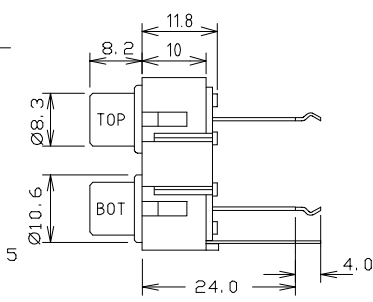
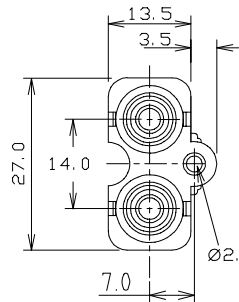
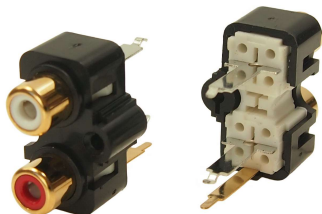
Part No: **FC68405**



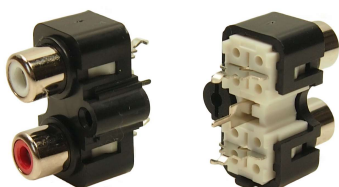
Part No: **FC684052**



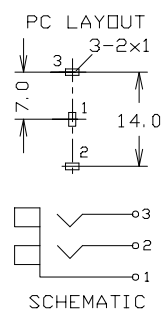
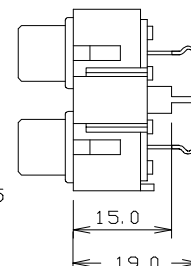
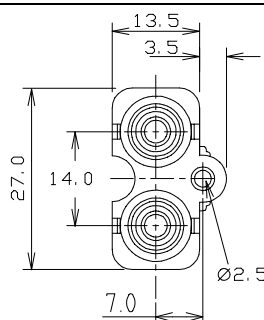
Part No: **FW6190**



Part No: **FW6192**

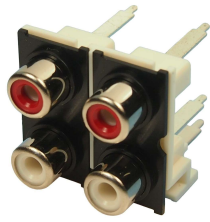


Part No: **FW6195**

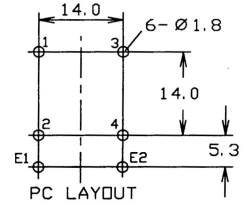
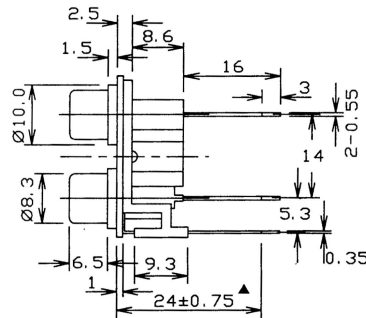
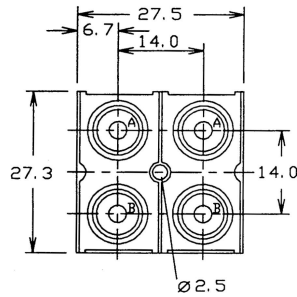


CLIFF

RCA PHONO CONNECTORS



Part No: **FC684056**



Electrical Specifications

Contact Resistance: 30mΩ max.@ AC 100mA max. 1kHz.

Dielectric Withstand: 500Vac @ 60 Hz for 1 minute.

Insulation Resistance: <100mΩ min. @ 500 Vdc.

Mechanical Specifications

Insertion Life (Minimum): >4000 insertions and removals.

Insertion Force: 0.03~3.0Kg.

Extraction Force: 0.03~3.0Kg.

For further information, contact sales@cliffuk.co.uk

Cliff Electronic Components Limited,
76 Holmethorpe Avenue, Holmethorpe Ind. Estate,
Redhill, Surrey RH1 2PF U.K.
Tel: +44 (0)1737 771375 Fax: +44 (0)1737 766012

www.cliffuk.co.uk



CLIFF

RCD and Loop Test Leads

UK 13amp Plug 240V Mains Test Leadsets with 3 flying leads

Conforms to IEC 61010.

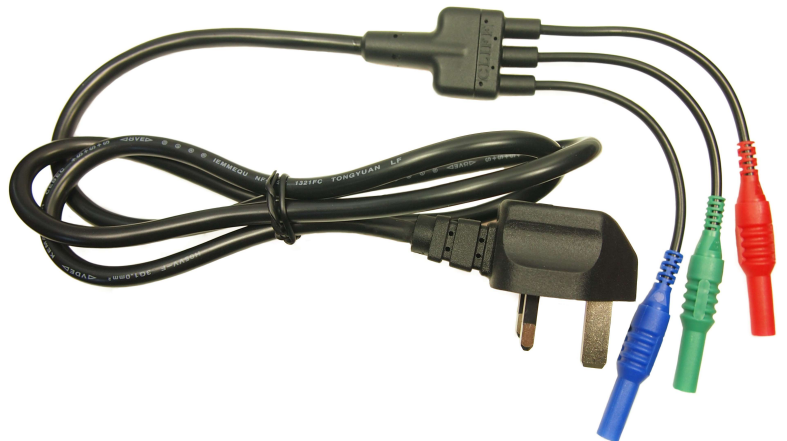
CAT RATINGS MARKED ON COMPONENTS AND CABLES.

All 4mm Plugs shrouded and touchproof. Hot Condition variants available.



CIH29930

UK Mains Plug to 3x4mm Plugs (Blue / Green / Brown). Black flying leads. Length : 1.4m



CIH29931

UK Mains Plug to 3x4mm Plugs (Blue / Green / Red). Black flying leads. Length : 1.4m



CIH29940

UK Mains Plug to 3x4mm Plugs (Black / Green / Red). Black flying leads. Length : 1.4m

CLIFF

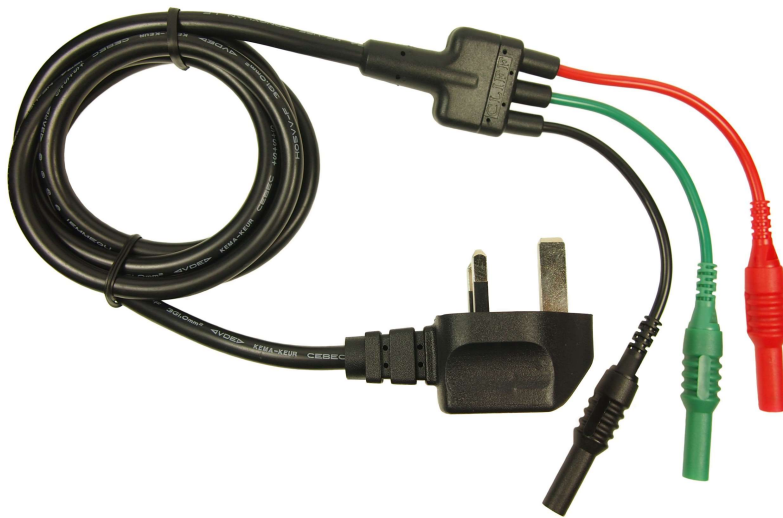
RCD and Loop Test Leads

UK 13amp Plug 240V Mains Test Leadsets with 3 flying leads

Conforms to IEC 61010.

CAT RATINGS MARKED ON COMPONENTS AND CABLES.

All 4mm Plugs shrouded and touchproof. Hot Condition variants available.



FCR29940

UK Mains Plug to 3x4mm Plugs (Black / Green / Red). Coloured flying leads
Length : 1.5m
Packed in poly bag.

Safety Information

Key Features / Product Overview

- UK BS1363 3-pin 13A Mains Plug 10A Fused Adaptor Lead – Over Voltage 300V CAT II
- Universal 4mm plugs compatible with all instruments that accept standard 4 mm shrouded banana plugs
- IEC Measurement Category II - CAT II equipment is designed for measurements performed on circuits directly connected to the low-voltage installation.

Technical Specifications

- Over Voltage 300V CAT II CAT II  (Double Insulated), 10A
- Fuse Rating 10A 250VAC (BS1362)
- Environmental ratings: -10 °C to 40 °C (14 °F to 104 °F), altitude: 2000 m (6,562 ft)

Warnings and Description of Markings

Double Insulation 

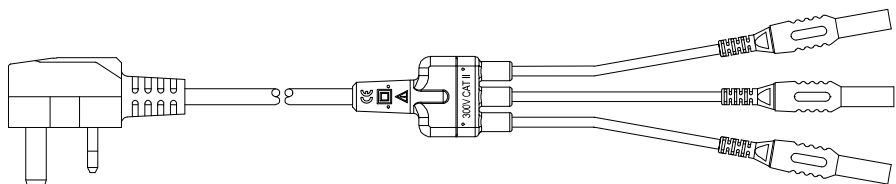
Caution 

UK Conformity Assessed

Conformité Européenne



Alternating Current 



To prevent electric shock or personal injury:

- The MEASUREMENT CATEGORY of a combination of a probe assembly and an accessory is the LOWER of the MEASUREMENT CATEGORIES of the probe assembly AND of the accessory.
- It is the end user's responsibility to ensure this device is used in a safe manner to ensure no injury is caused to operators. Failure to follow these instructions or use this equipment in a manner not specified by the manufacturer, could impair the safety of the equipment.
- Protect the leads and accessories from damage, e.g., cuts and abrasions. Keep clean and dry.
- Before use check the assembly for damage - If in doubt DO NOT USE.
- Leads should be inspected and tested regularly during their life to ensure the integrity of the insulation and that their continuity has not been compromised. If in doubt, contact the manufacturer for advice.
- Check the protection features, fusing and safety ratings of the test meter itself are compatible before using with these test leads.
- Clean with a soft towel moistened with water and mild detergent. (DO NOT IMMERSE in liquid).
- To change fuse,
 - o disconnect from equipment and circuits
 - o Remove fuse carrier from the BS1363 plug
 - o Replace fuse
 - o Replace fuse and carrier
 - o Check Lead is safe to use
- The assembly does not contain any serviceable parts. If in doubt please contact the manufacturer,
- DO NOT attempt to service the probe assembly.
- DO NOT USE in wet or damp locations.
- DO ENSURE that the test leads are firmly connected to the instrument and other accessories.
- DO NOT USE above the maximum ratings.

CLIFF

SPRING TERMINALS

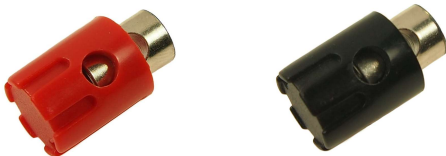
Our family of spring terminals are made from ABS / Brass with a Nickel plated finish.



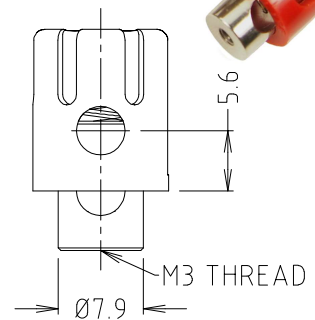
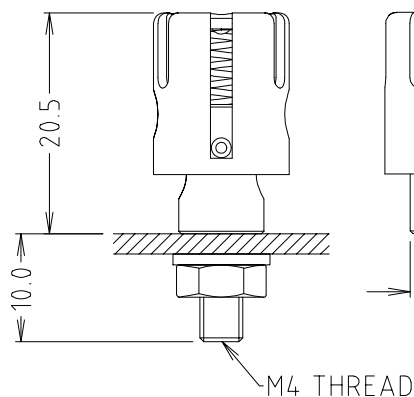
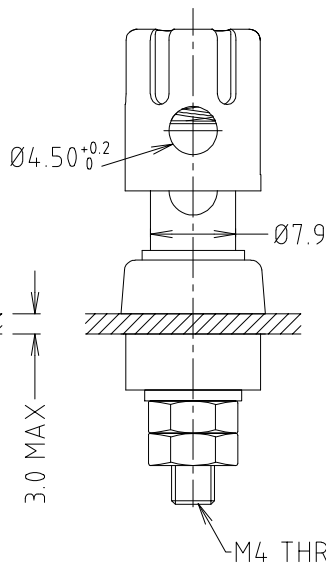
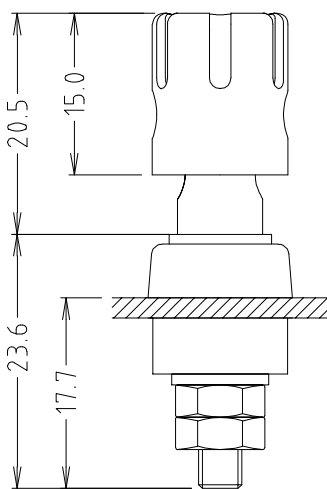
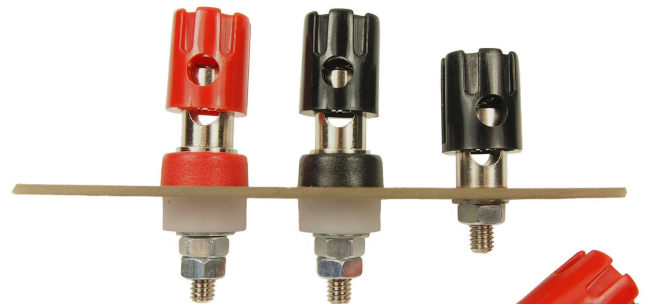
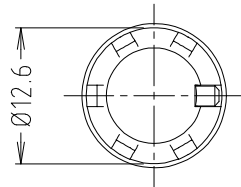
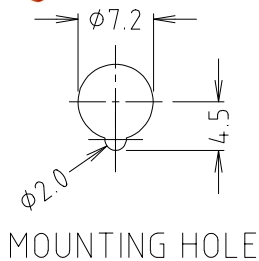
- CL681560** SPRING TERMINAL M4L SPT3 RED
- CL681561** SPRING TERMINAL M4L STP3 BLACK
- CL681562** SPRING TERMINAL M4L STP3 BLUE
- CL681563** SPRING TERMINAL M4L STP3 GREEN
- CL681564** SPRING TERMINAL M4L STP3 WHITE
- CL681565** SPRING TERMINAL M4L STP3 YELLOW



- CL681570** SPRING TERMINAL M4S SPT2 RED
- CL681571** SPRING TERMINAL M4S STP2 BLACK



- CL681580** SPRING TERMINAL SPT1 RED
- CL681581** SPRING TERMINAL STP1 BLACK



Rated: 48V, 15A. max.

CLIFF

SLIDER KNOBS

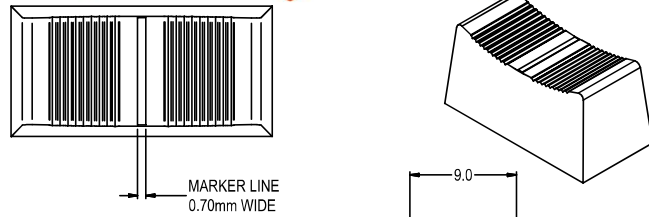
Ten different designs are produced. 3 types have option of 4mm. 6/8mm shaft fitting. All knobs have matt non reflective finish to match our K9-K12 series and C18. Standard colour - Black. Electrically conductive models available.

CS1 Length 23mm. Width 11mm. Height 11mm. An electrically conductive version is available.



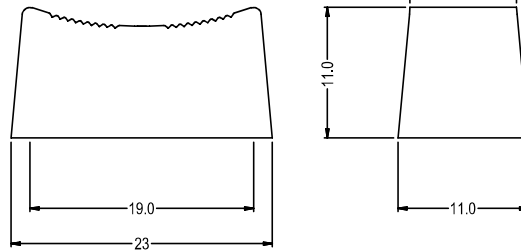
CS1 - Shaft 6/8mm

CP3155 - Black
CP3160 - Blue
CP3165 - Green
CP3170 - Grey
CP3175 - Red
CP3180 - White
CP3185 - Yellow



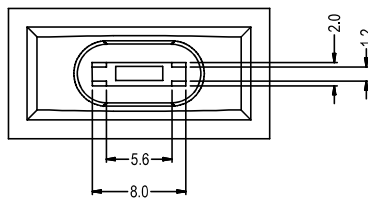
CS1A - Shaft 4mm

CP3260 - Black
CP3265 - Blue
CP3270 - Green
CP3272 - Grey
CP3275 - Red
CP3280 - White

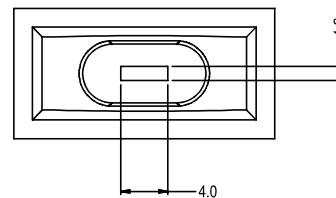


CS1B - Shaft 4mm

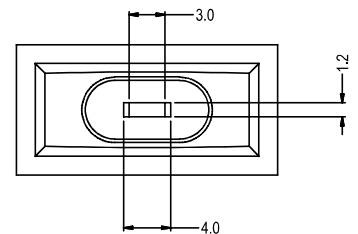
CP3261 - Black
CP3273 - Grey
CP3276 - Red



CS1 6/8mm SHAFT

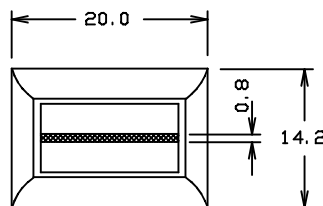
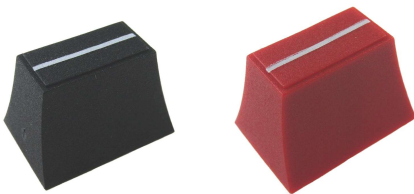


CS1A 4mm SHAFT



CS1B 4mm SHAFT

CS2 Length 20mm. Width 14mm. Height 13mm.



CS2 - Shaft 6/8mm

CP3190 - Black

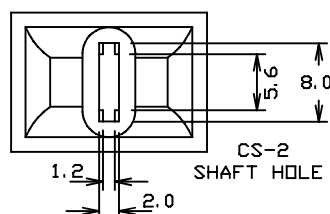
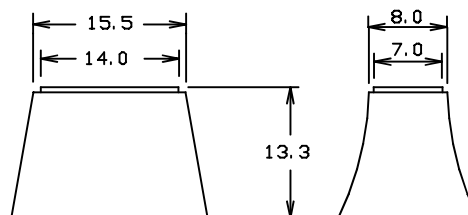
CS2A - Shaft 4mm

CP3250 - Black

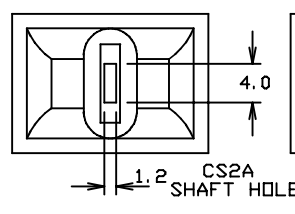
CS2B - Shaft 4mm

CP3193 - Black

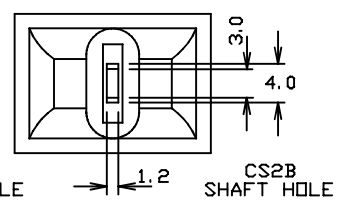
CP3195 - Red



CS-2
SHAFT HOLE



CS2A
SHAFT HOLE

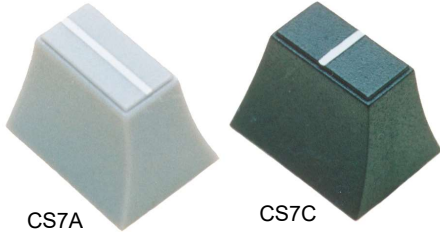


CS2B
SHAFT HOLE

CLIFF

SLIDER KNOBS

CS7 Length 12mm. Width 9mm. Height 9mm.



CS7A

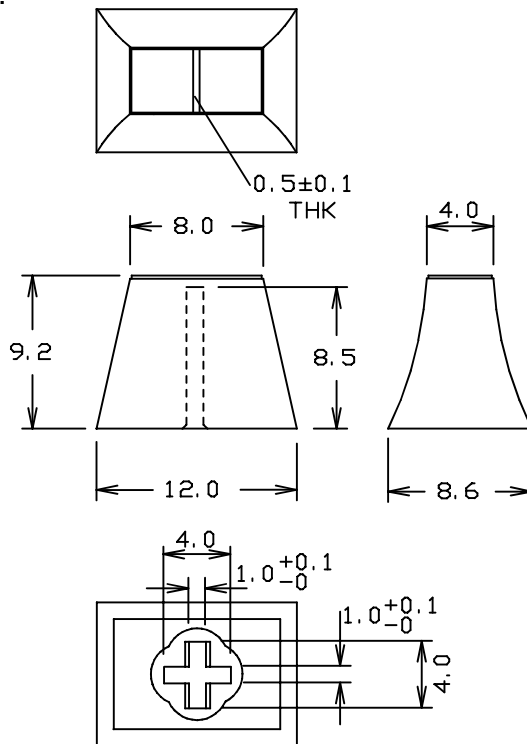
CS7C

CS7A - Shaft 4mm Parallel marker line

CP3290 - Black with White ML
 CP3295 - Grey with White ML
 CP3296 - Grey with Black ML
 CP3300 - White with Black ML

CS7C - Shaft 4mm 90° marker line

CP3301 - Black with White ML
 CP33041 - Grey with White ML
 CP33043 - Anthracite Grey with White ML

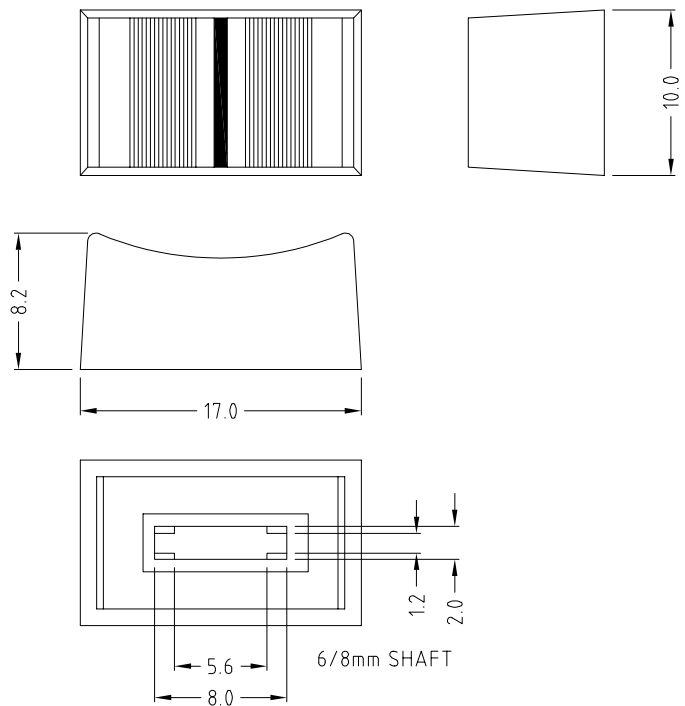


CS8 Length 17mm. Width 10mm. Height 8mm.



CS8 - Shaft 6/8mm

CP3305 - Black
 CP3320 - Red
 CP3325 - White



CLIFF

SLIDER KNOBS

CS9 Length 27mm. Width 16mm. Height 9mm.

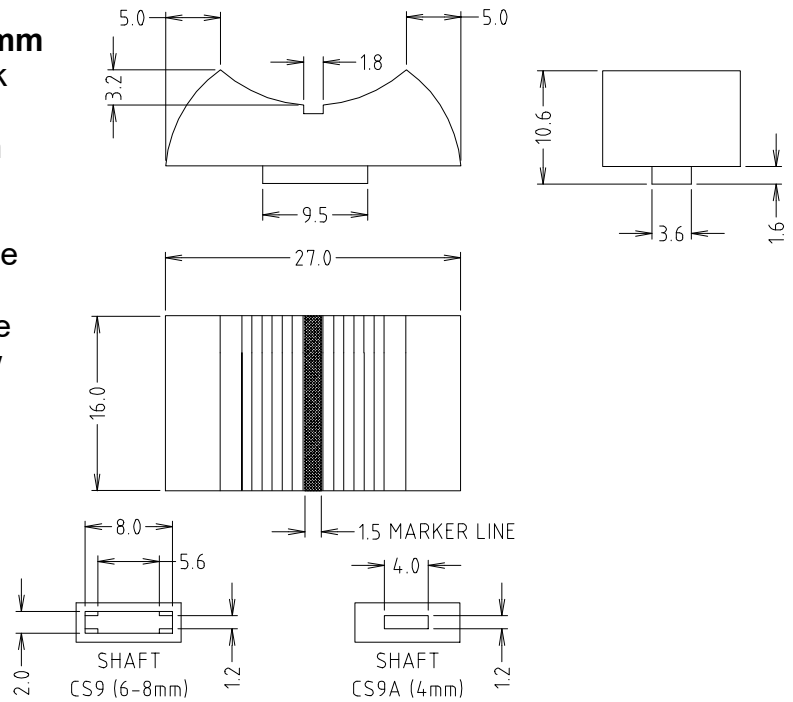


CS9 - Shaft 6/8mm

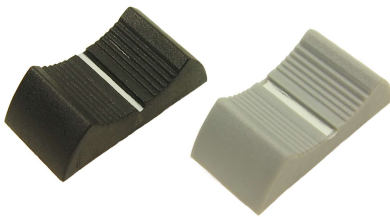
CP3335 - Black
CP3340 - Blue
CP3345 - Brown
CP3350 - Green
CP3355 - Grey
CP3357 - Orange
CP3360 - Red
CP3365 - White
CP3370 - Yellow

CS9A - Shaft 4mm

CP33350 - Black
CP3341 - Blue
CP3346 - Brown
CP3351 - Green
CP3356 - Grey
CP3358 - Orange
CP3361 - Red
CP33650 - White
CP3371 - Yellow

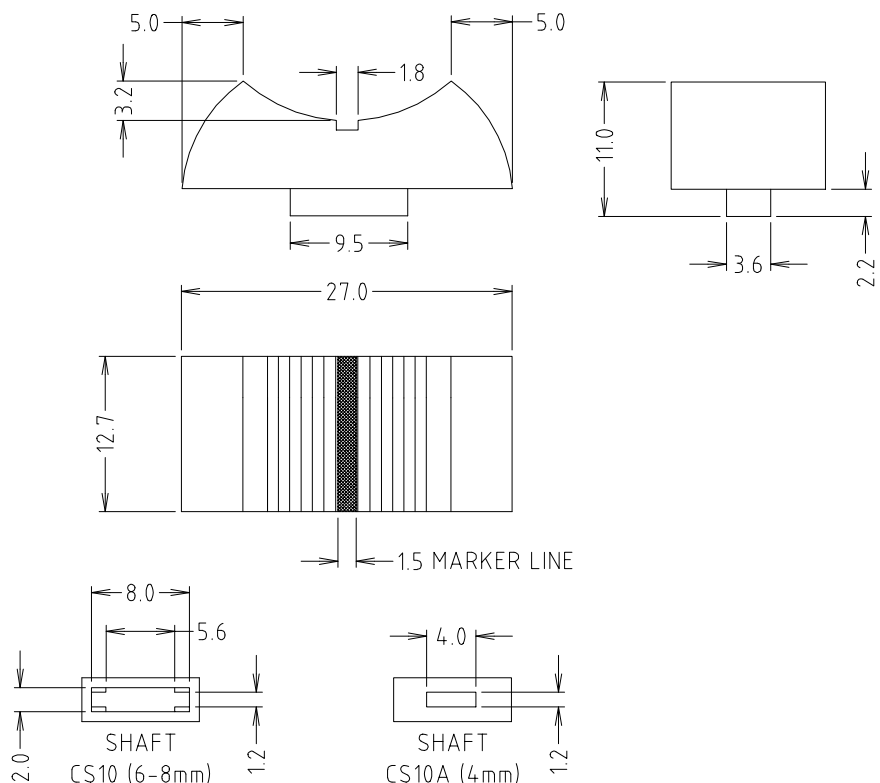


CS10 Length 27mm. Width 13mm. Height 8mm.



CS10 - Shaft 6/8mm

CP3375 - Black NO ML
CP33764 - Grey with White ML
CP33765 - Grey with Black ML
CP33766 - Red NO ML
CP3377 - White No ML

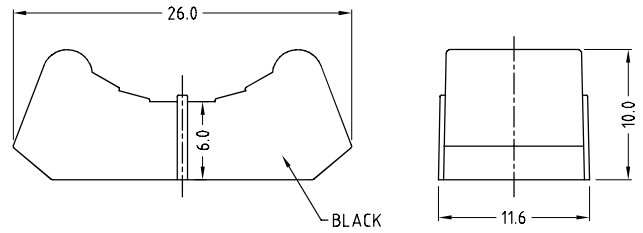


For further information, contact sales@cliffuk.co.uk

CLIFF

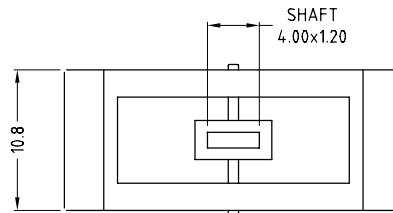
SLIDER KNOBS

CS10R Length 26mm. Width 12mm. Height 10mm.
Soft-touch finish.

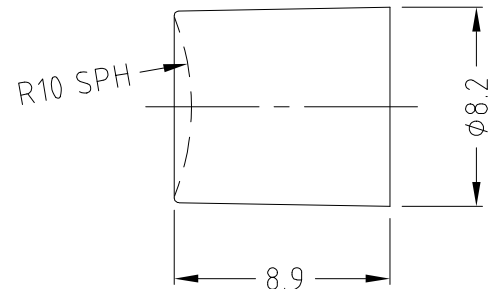
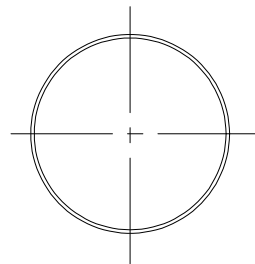


CS10R - Shaft 4mm

FC72621 - Black with moulded white marker line
FC72622 - Black with moulded red marker line
FC72623 - Black with moulded blue marker line
FC72624 - Black with moulded green marker line
FC72625 - Black with moulded yellow marker line
FC72626 - Black with moulded grey marker line



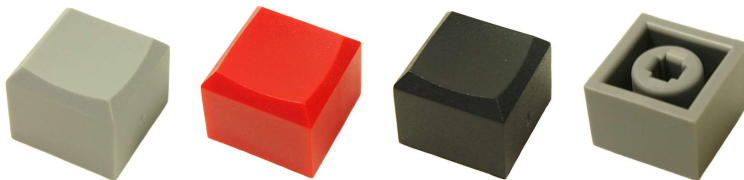
CS11 Diameter 8mm. Height 8mm.
Designed to fit a square shaft of push-button switches and 4mm or 6mm slider shafts.



CS11

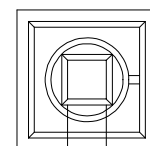
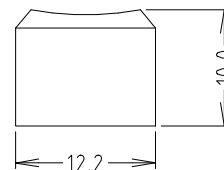
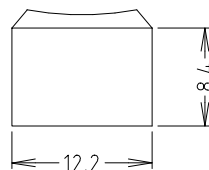
CP3400 - Black
CP3405 - White
CP3410 - Grey
CP3411 - Red

CS12 Length 12.2mm. Width 12.2mm. Height 10mm. Designed to fit a 3.3mm shaft of push-button switches.



CS12 - Shaft 3.3mm

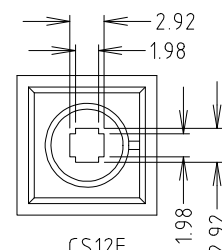
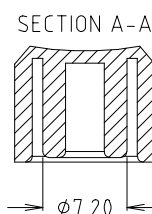
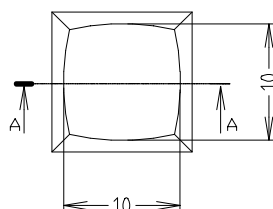
CP3427 - Grey
CP3431 - Red
CP3433 - Black
CP3435 - Opaque



SHAFT 3.32x3.32±0.05

CS12F - Shaft 3x2mm

CP3428 - Grey



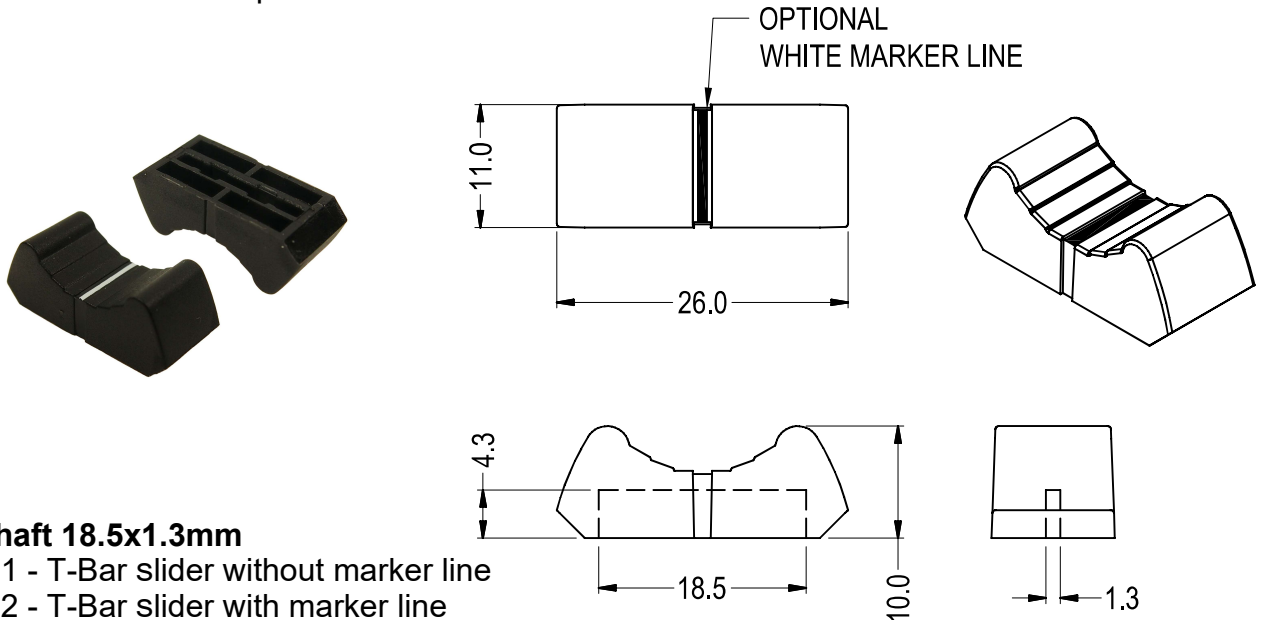
CS12F

TO FIT 3mm X 2mm RECTANGULAR SHAFT

CLIFF

SLIDER KNOBS

CS13 Length 26mm. Width 11mm. Height 10mm.
 Conductive version available in black ONLY. Surface resistivity 10^3 Ohms/SQ.
 Non conductive version is available in black as standard. Other colours available subject to minimum order quantities.



CS13 - shaft 18.5x1.3mm

CP343601 - T-Bar slider without marker line

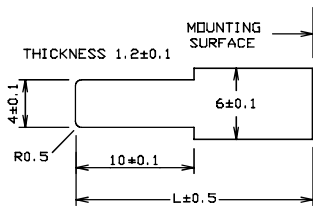
CP343602 - T-Bar slider with marker line

CP343611 - conductive T-Bar slider without marker line

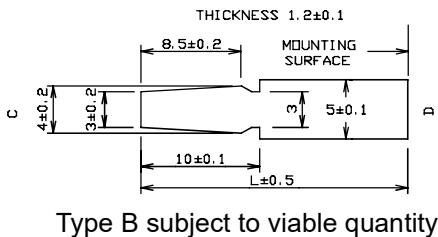
CP343612 - conductive T-Bar slider with marker line

Shaft Details (Typical)

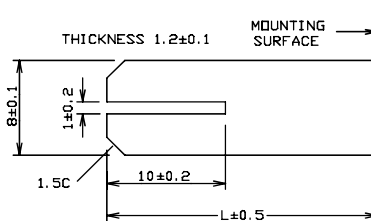
4mm TYPE 'A' (std)



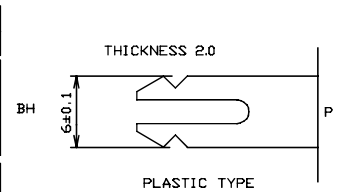
4mm TYPE 'B' (special)



8mm TYPE



6mm TYPE



CLIFF

SMD DC SOCKETS



Designed for surface mounting assembly.
Available as discrete or taped / reeled parts.
Characteristics are similar to our versions with through hole legs. Supplied loose (STD) or taped in 1000 / Reel (to order).

Specification (All models)

Insertion / Withdrawal force: 0.3 - 2.0 kgf

Contact Resistance:

(4 terminal method 1KHz @ <100mA)

Initial - Plug / Contact <50mΩ

Contact / Shunt <30mΩ

After life test - Plug / Contact <100mΩ

Contact / Shunt <60mΩ

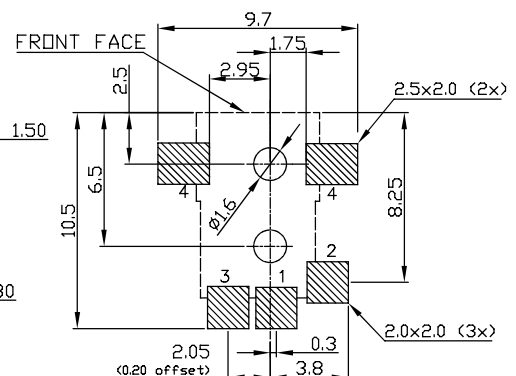
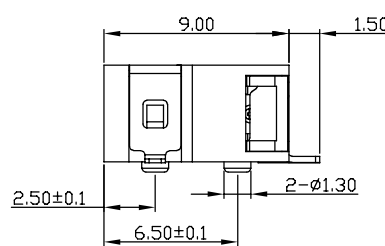
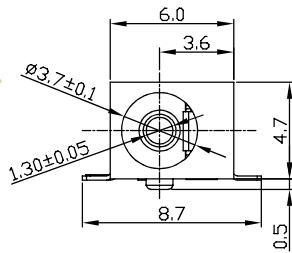
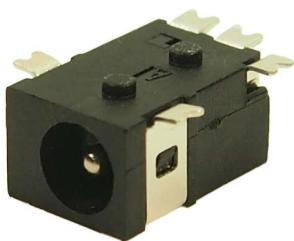
Electrical Rating: DC10 - 2A / 12V

DC8 - 1A / 12V

DC-8S 1.3mm Pin

Part No. FC68145S

Taped FC68145ST



PCB LAYOUT
TOP VIEW

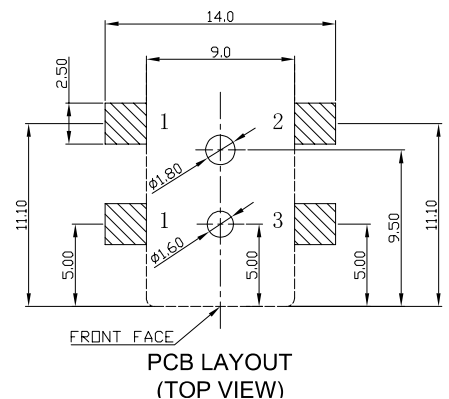
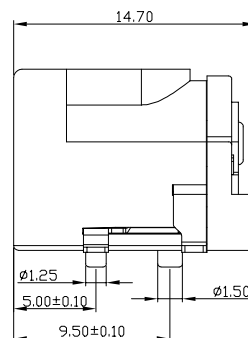
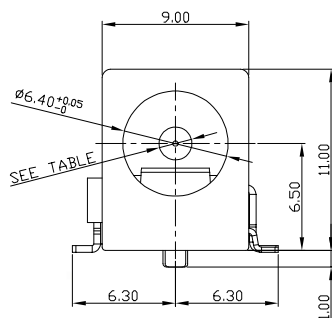
DC-10AS 2.1mm Pin

Part No. FC68148S

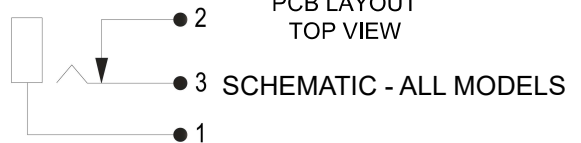
Taped FC68148ST

DC-10BS 2.5mm Pin

Part No. FC68149S

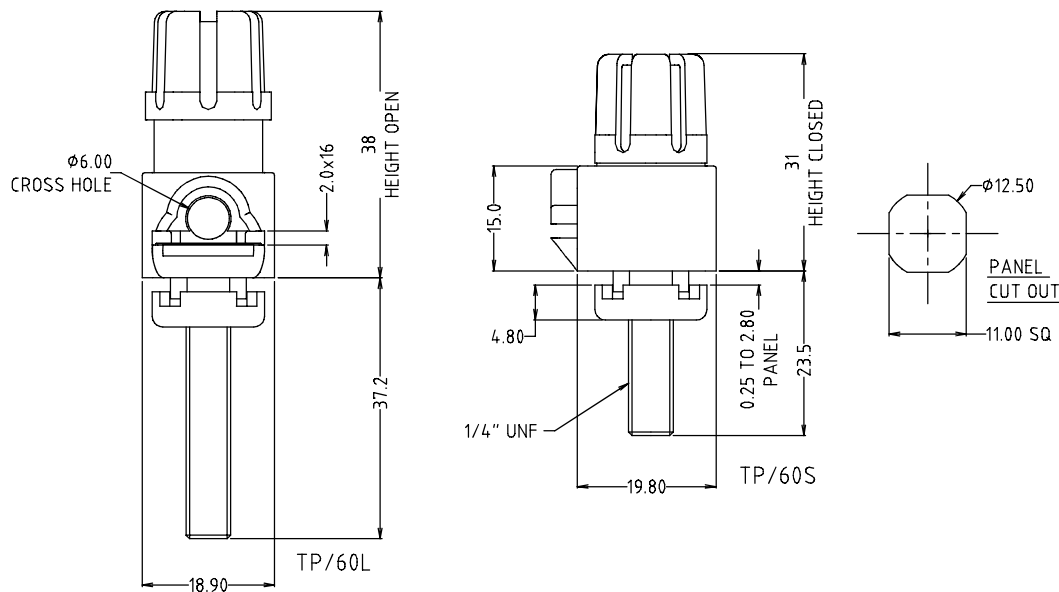


PCB LAYOUT
(TOP VIEW)

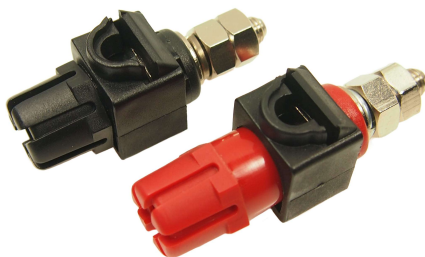


CLIFF

60A. TERMINAL TP60



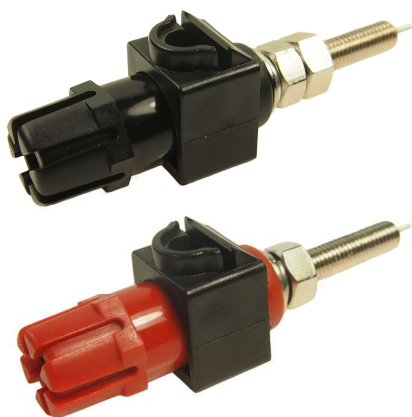
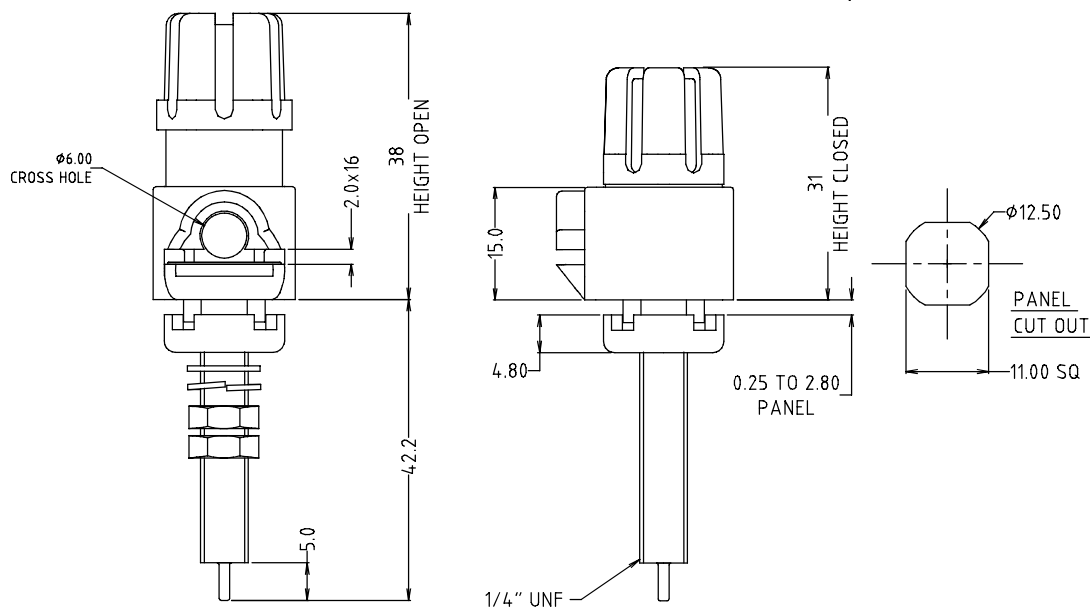
TP60L - 37.2mm spindle length
CL159791 - TP60L Black Nickel Plated
CL159793 - TP60L Red Nickel Plated



TP60S - 23.5mm spindle length
CL159797 - TP60S Black Nickel Plated
CL159798 - TP60S Red Nickel Plated



TP60C/SG - 23.5mm spindle length, 3mm slot
CL159801 - TP60C/SG Clear/Red Gold Plated
CL159802 - TP60C/SG Clear/Black Gold Plated



TP60P - PC Mounting

CL159791P - TP60P Black Nickel Plated

CL159791PA - T60P Black Nickel. Suppled assembled

CL159791PG - TP60P Black Gold Plated

CL159793P - TP60P Red Nickel Plated

CL159793PA - T60P Red Nickel. Suppled assembled.

CL159793PG - TP60P Red Gold Plated

Specification

Maximum Current: 60A.

Contact Resistance: Nickel <30mΩ, Gold <20mΩ

Temperature Rating: -20°C to +80°C

Flammability: Minimum UL 94HB

For further information, contact sales@cliffuk.co.uk

Cliff Electronic Components Limited,

76 Holmethorpe Avenue, Holmethorpe Ind. Estate,
Redhill, Surrey RH1 2PF U.K.

Tel: +44 (0)1737 771375 Fax: +44 (0)1737 766012

www.cliffuk.co.uk



CLIFF

XRP CUSTOMIZABLE RECESSED SOCKET PLATES

This range of recess plates allow users to produce custom solutions by mounting items in a standard XLR Ø24mm cutout. They are available in 2 depth of recess, 3mm and 12mm. Plastic version has countersunk or plain hole. Metal versions are nickel plated or black. Mounting hole is countersunk or M3 type. They also have a drill / punch guide. Plates can be front or rear mounted in panels.

XRP3 - 3mm RECESS PLATE



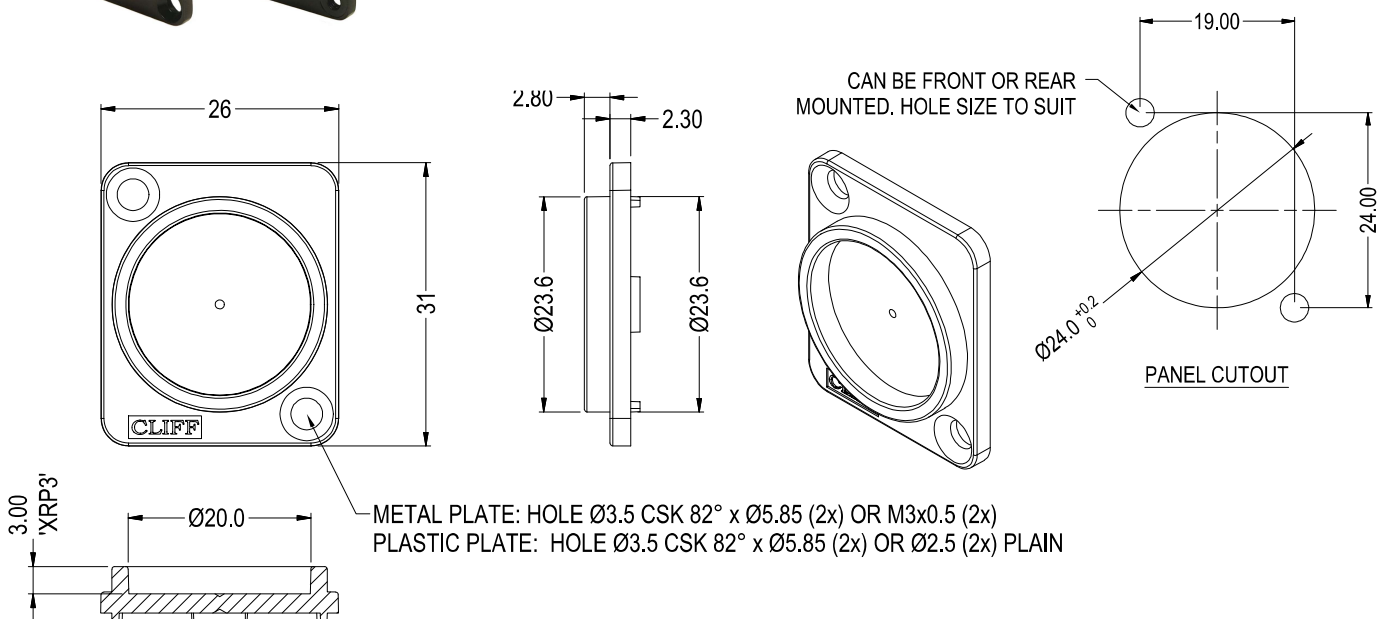
CP30300 XRP3 PLASTIC PLATE CSK HOLE
CP30300X XRP3 PLASTIC PLATE PLAIN HOLE



CP30300M XRP3 METAL PLATE CSK HOLE
CP30300M3 XRP3 METAL PLATE M3 HOLE



CP30300MB XRP3 BLACK METAL PLATE CSK HOLE
CP30300MB3 XRP3 BLACK METAL PLATE M3 HOLE



CLIFF

XRP CUSTOMIZABLE RECESSED SOCKET PLATES

XRP12 - 12mm RECESS PLATE



CP30400
CP30400X

XRP12 PLASTIC PLATE CSK HOLE
XRP12 PLASTIC PLATE PLAIN HOLE



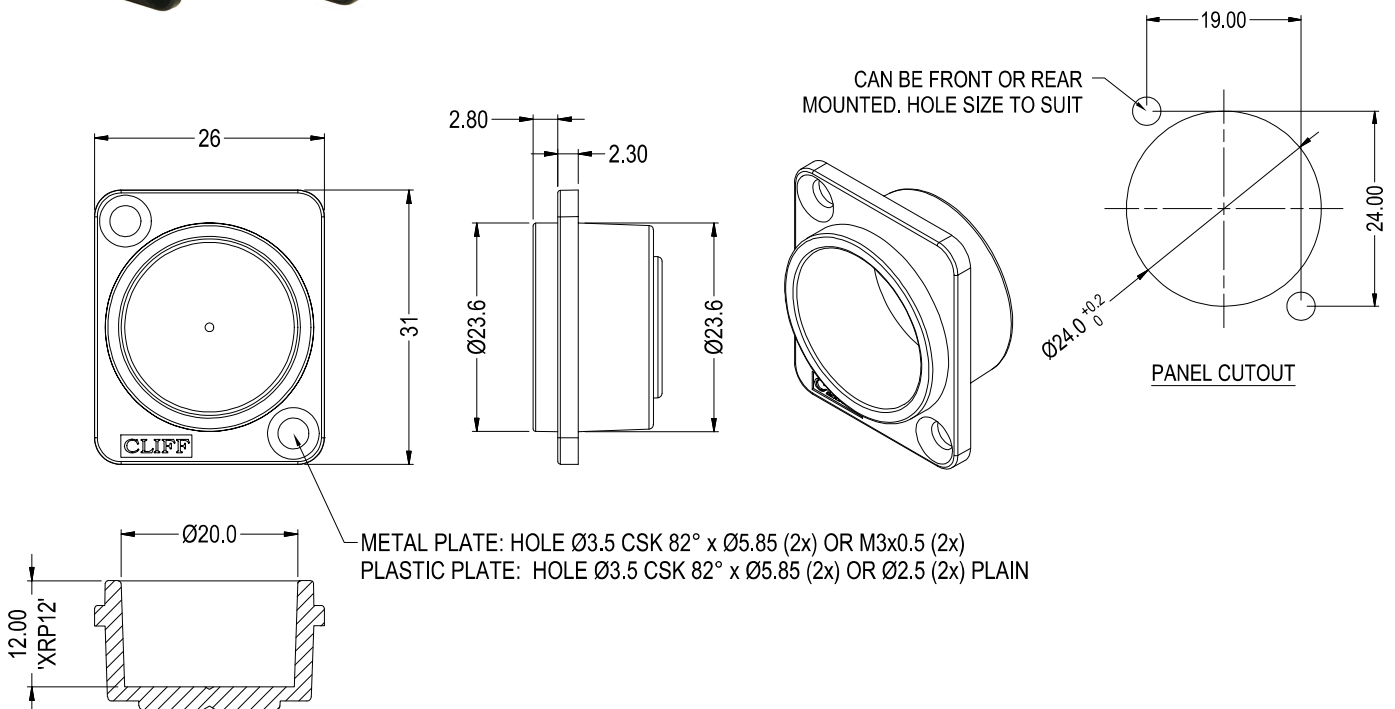
CP30400M
CP30400M3

XRP12 METAL PLATE CSK HOLE
XRP12 METAL PLATE M3 HOLE



CP30400MB
CP30400MB3

XRP12 BLACK METAL PLATE CSK HOLE
XRP12 BLACK METAL PLATE M3 HOLE



For further information, contact sales@cliffuk.co.uk

Cliff Electronic Components Limited,
76 Holmethorpe Avenue, Holmethorpe Ind. Estate,
Redhill, Surrey RH1 2PF U.K.
Tel: +44 (0)1737 771375 Fax: +44 (0)1737 766012

www.cliffuk.co.uk

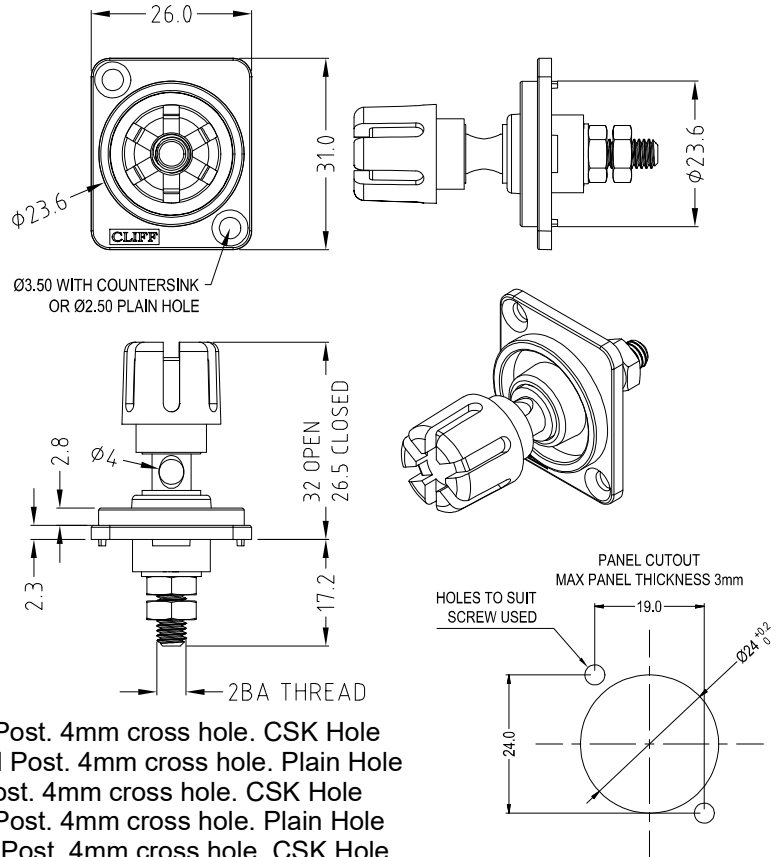


CLIFF

XRP RECESS PLATES

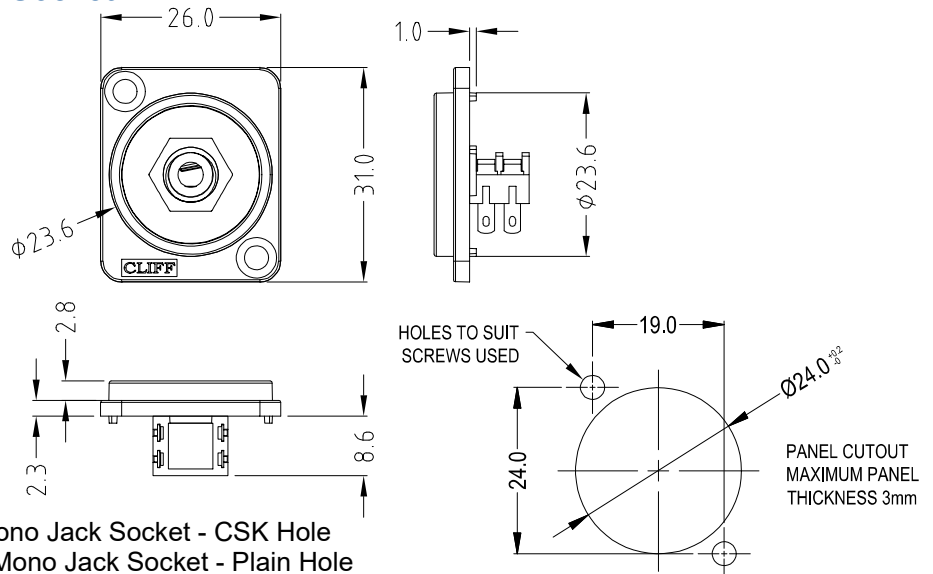
The Cliff range of XLR Recess plates enable the easy mounting of components into panels, using standard Ø24mm XLR panel cutout. Plates can be front or rear mounted. Plate material is Nylon.

Plate mounted with 30A. Terminal Post



- CP303010** - XRP3 with Black 30A. TP6 Terminal Post. 4mm cross hole. CSK Hole
- CP303010X** - XRP3 with Black 30A. TP6 Terminal Post. 4mm cross hole. Plain Hole
- CP303011** - XRP3 with Red 30A. TP6 Terminal Post. 4mm cross hole. CSK Hole
- CP303011X** - XRP3 with Red 30A. TP6 Terminal Post. 4mm cross hole. Plain Hole
- CP303015** - XRP3 with Green 30A. TP6 Terminal Post. 4mm cross hole. CSK Hole
- CP303015X** - XRP3 with Green 30A. TP6 Terminal Post. 4mm cross hole. Plain Hole

Plate mounted with 3.5mm Jack Socket

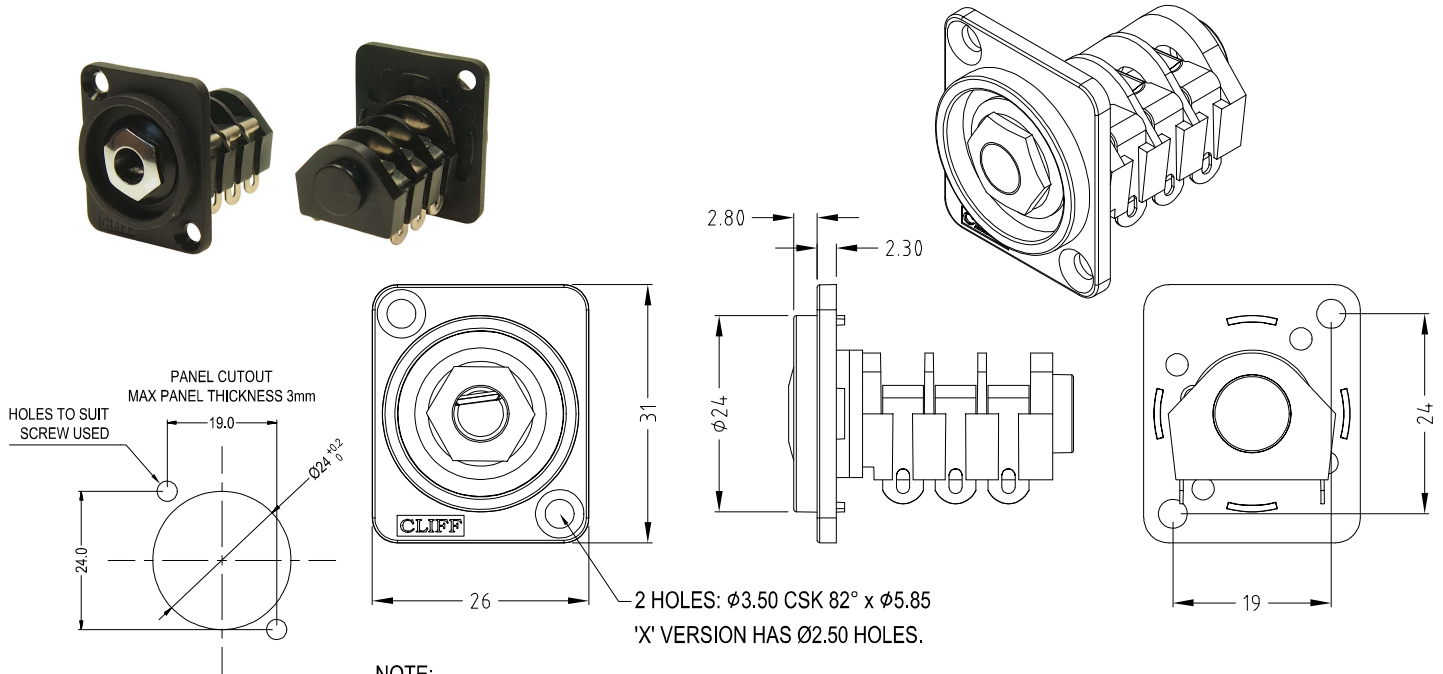


- CP303075** - XRP3 with S6/BB 3.5mm Mono Jack Socket - CSK Hole
- CP303075X** - XRP3 with S6/BB 3.5mm Mono Jack Socket - Plain Hole

CLIFF

XRP RECESS PLATES

Plate mounted with 6.35mm Stereo Jack Socket



NOTE:-

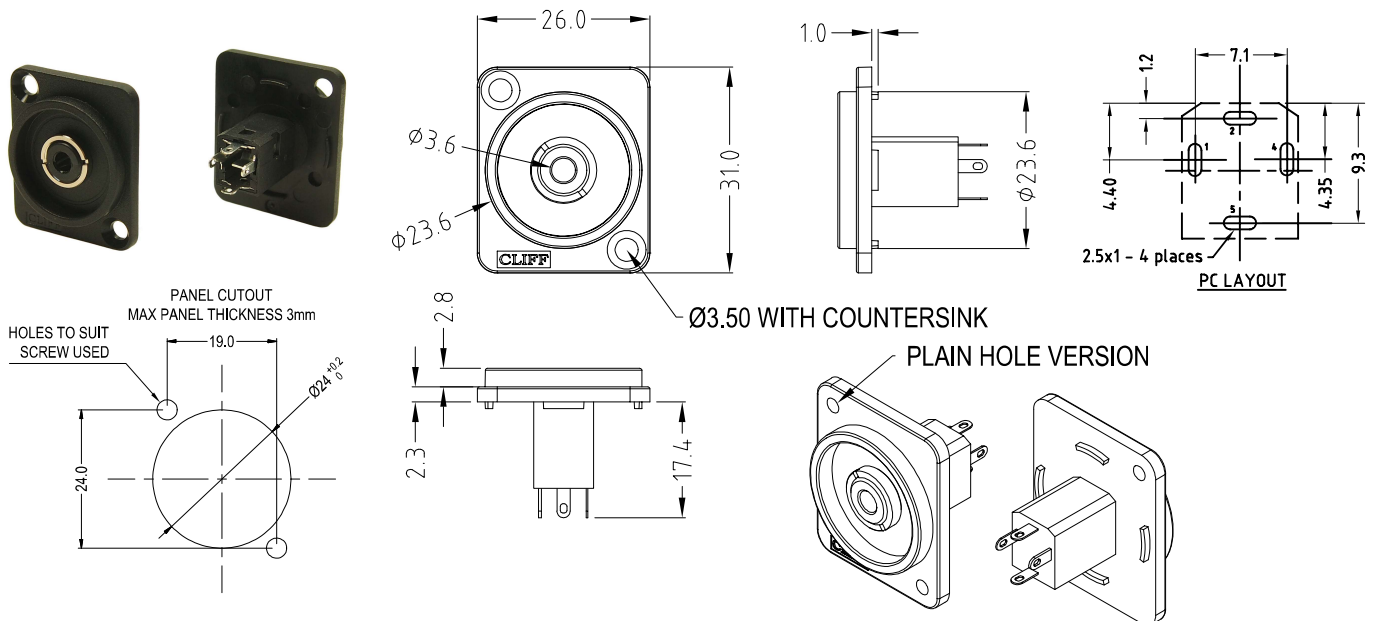
FOR FRONT MOUNT USE SCREWS 7mm MAXIMUM LENGTH.

FOR BACK MOUNT USE SCREWS 7mm + PANEL THICKNESS MAXIMUM LENGTH.

CP303080 - XRP3 with S4/BBB 6.35mm Stereo Jack Socket - CSK Hole

CP303080X - XRP3 with S4/BBB 6.35mm Stereo Jack Socket - Plain Hole

Plate mounted with 3.5mm Vertical Stereo Jack Socket, PC Mount.



CP303100 - XRP3 with 3.5mm Vertical Stereo Jack Socket - PC Mounting, CSK Hole

CP303100X - XRP3 with 3.5mm Vertical Stereo Jack Socket - PC Mounting, Plain Hole

Cliff Electronic Components Limited,
76 Holmethorpe Avenue, Holmethorpe Ind. Estate,
Redhill, Surrey RH1 2PF U.K.
Tel: +44 (0)1737 771375 Fax: +44 (0)1737 766012

www.cliffuk.co.uk

