CIRCULAR CONNECTORS





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THE CAMCIRC RANGE

CamCirc is the interconnect solution from CamdenBoss that can take on the elements and withstand the worst of nature. 'WEATHER' your application be military, industrial, autosport, medical or marine, CamCirc will perform where other products often fail. From the glamour of the broadcasting world, to the tough demands of the agricultural and construction machinery industries, our CamCirc range keeps you connected against the elements!

- IP68 sealed using vacuum technology
- Multiple options in various body size and types, housing contact configurations from 3 to 19 poles
- Tough high performance interconnection solution; these products will not disconnect when the cable is under physical load or stress
- Colour coded for ease of connection.
- · Ideal for harsh environments and 'glove friendly'

APPHICATIONS: BROADCASTING - MILITARY **ENERGY · MARINE · FOOD PROCESSING ·** INDUSTRIAL AUTOMOTIVE · AUTOSPORT MEDICAL · OIL & GAS RAIL · ROBOTICS · AGRICULTURAL MACHINERY - AEROSPACE -SEATRITY

The military require reliability when it matters most; needing equipment and hardware to operate in some of the world's most extreme conditions.

Desert to jungle, in the harshest conditions, CamCirc holds its own. This range of circular connectors can withstand extreme temperatures, shock, vibration and ensures the highest cable retention capabilities.

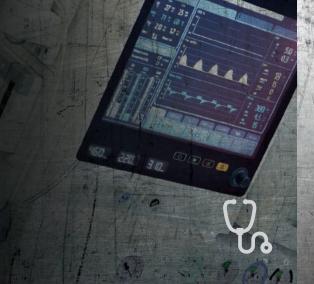
Military applications for CamCirc include target acquisition systems, battlefield laptops as well as guidance systems and GPS. Whether supplying vital power or relaying critical data, the CamCirc will connect.

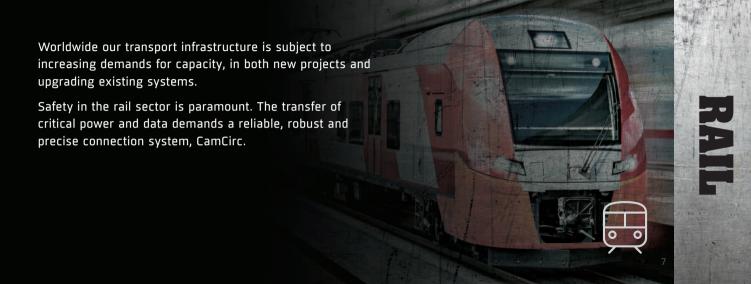


The design, development and manufacture of medical devices demands a certain level of reliability.

CamCirc provides the degree of assurance demanded by medical professionals and their manufacturers in critical care applications.

Supplied to IP68 standards preventing fluid ingress and utilising vacuum seals to stop unintended disconnection, CamCirc is the solution for surgical and diagnostic applications.





CamCirc offers reliable multipole connectors for the most arduous, 24/7, industrial applications.

Our push-pull connectors with vacuum sealing, rated to IP68 are resistant to shock, vibration and corrosion. CamdenBoss technical staff provide in-depth technical support to solution providers and maintenance engineers around the clock.



The multipole connector worthy of pole position.

The transfer of split second data allows you to provide a secure connection capable of withstanding extreme shock and vibration.

CamCirc provides the solution in all formats of motorsport, from track racing in desert conditions to sub-zero rally environments. Reliable and robust, proud to be part of winning teams.

The marine industry operates in the world's harshest environments and relies on the highest quality components.

Corrosion resistance and high levels of ingress protection are key attributes of the CamCirc range.

Vital instrumentation and systems use our circular connectors, linking data transfer and power requirements in navigation and monitoring applications.



As agriculture becomes more automated and technology driven, the utilisation of robust connectors has become vital, ensuring reliable power and data connections remain secure.

Machinery, monitoring equipment and even drones are now common place in the field. CamCirc allows engineers to 'design in' a fit for purpose, vibration and ingress resistant solution.

Connecting outdoor broadcast equipment in all weathers and keeping the broadcast live needs the level of reliability CamCirc offers as standard.

In studio, CamCirc provides flexibility, enabling the quick reconfiguration of equipment demanded by a fast moving working environment. This makes CamdenBoss the supplier of choice for broadcast components.

Whether it's harnessing nature from green energy or keeping nuclear and gas sources online, our range makes vital connections secure.

In an industry where telemetry, data logging and live data feeds are vital, CamCirc is dependable.

Hard wearing plated fittings that are IP68 rated with vacuum sealing features meet demanding requirements. Demand CamCirc.





- The push-pull connection method creates a vacuum seal and cannot be disconnected if the cable is pulled
- Disconnection is achieved by pulling back the outer sleeve of the connection
- The connectors are keyed so only the correct connection can be achieved
- · Code 1 is offered as standard



CONNECTING

 CamCirc Plugs have an outer shell, with flexible interlocks, which slides backwards and forwards along the plug body

CONNECTED

The edges of the plug end are firmly held by a groove inside the socket, creating the vacuum seal

CABLE UNDER STRESS

3. The edges of the plug are forced against the groove and outer shell, maintaining the secure connection

DISCONNECTED

4. Pulling on the outer shell releases the plug from the securing system inside the socket



Code 1 Code 2 Code 3 Receptacle Plug

		Code	Degree of protection (water)
	★	0	No protection
Code	Degree of protection (solids)	1	Protection against vertical water drop
0	No protection	2	Protection against water drops (15° from vertical)
1	Protection against large foreign bodies (diameter <50mm)	3	Protection against water spray (60° from vertical)
2	Protection against medium foreign bodies (diameter <12.5mm)	4	Protection against water spray from all directions
3	Protection against small foreign bodies (diameter <2.5mm)	5	Protection against low pressure water jets from any angle
4	Protection against small foreign bodies (diameter <1mm)	6	Protection against high pressure jets from any angle
5	Limited dust ingress protection	7	Protection against water submersion to 1m for 30 mins
6	Total dust ingress protection	8	Protection against specific pressure and submersion for long term water

IP <u>6</u> <u>8</u>

WHY CHOOSE CAMCIRC?

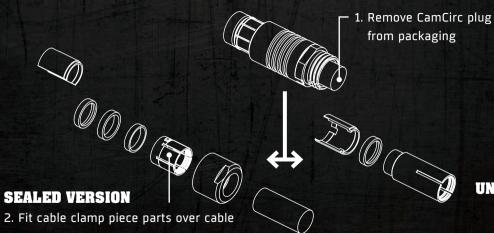
- · COMPATIBLE WITH FISCHER PRODUCTS
- PROFESSIONAL PREMIUM QUALITY PRODUCT
- TRUSTED BRAND
- · UK CUSTOMER SUPPORT
- · COMPETITIVELY PRICED

- The cable clamp sets are used to hold the cable/wire in place when the pluggable side of the connection is assembled and the contacts soldered
- · Creates the seal on the plug side
- Cable clamps come in corresponding sizes to the plugs they will fit and to the cable in use
- Cable clamps come in three types: shielded, unshielded and environmental

- In order for cable systems to be IP68 rated an environmental cable clamp is required
- Cable clamps are sold separately to the receptacles and plugs

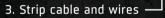
 Cable mount plugs and receptacles cannot be used without a clamp!



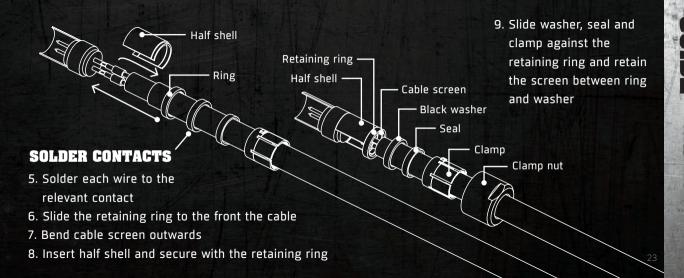


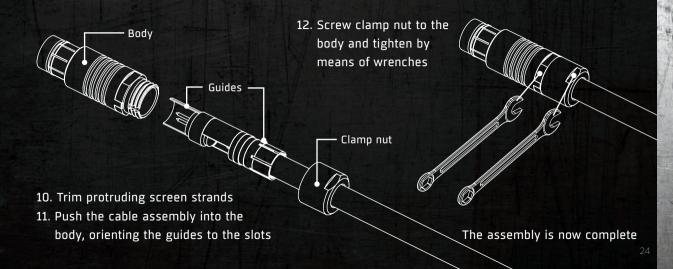
UNSEALED VERSION

Sheilded clamp



- 4. Tinning of wire strands
 - recommended to prepare for soldering















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CCB1S1/03

Panel mount Low profile 3 contacts Size 1 CCA1P1/A03

CCV1C/CC 2.0 CCV1C/CD 3.0 CCV1C/CE 3.0

2.6 - 3.1 mm 3.1 - 3.6 mm 3.6 - 4.1 mm

CCV1C/CF 4.1 - 4.3 mm







(mm)

Cable



CCB1S1/04

Panel mount Low profile 4 contacts Size 1

CCA1P1/A04

CCV1C/CC 2.6 - 3.1 mm CCV1C/CD 3.1 - 3.6 mm 3.6 - 4.1 mm CCV1C/CE CCV1C/CF 4.1 - 4.3 mm











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CCB2S1/03

Panel mount Low profile 3 contacts Size 2 CCA2P1/A03

CCV2C/CE 3.7 - 4.2 mm
CCV2C/CG 4.2 - 4.7 mm
CCV2C/CH 4.7 - 5.2 mm
CCV2C/CI 5.2 - 5.7 mm
CCV2C/CJ 5.7 - 6.2 mm











CCB2S1/04

Panel mount Low profile 4 contacts Size 2

CCA2P1/A04

CCV2C/CE 3.7 - 4.2 mm CCV2C/CG 4.2 - 4.7 mm CCV2C/CH 4.7 - 5.2 mm CCV2C/CI 5.2 - 5.7 mm CCV2C/CJ 5.7 - 6.2 mm







CCB2S1/06

Panel mount Low profile 6 contacts Size 2

CCA2P1/A06

CCV2C/CE 3.7 - 4.2 mm CCV2C/CG 4.2 - 4.7 mm CCV2C/CH 4.7 - 5.2 mm CCV2C/CI 5.2 - 5.7 mm CCV2C/CJ 5.7 - 6.2 mm

Non IP68 cable clamps also available

Cable Diameter

(mm)









CCB2S1/07

Panel mount Low profile 7 contacts Size 2

CCA2P1/A07

CCV2C/CE 3.7 - 4.2 mm CCV2C/CG 4.2 - 4.7 mm CCV2C/CH 4.7 - 5.2 mm CCV2C/CI 5.2 - 5.7 mm CCV2C/CJ 5.7 - 6.2 mm

Non IP68 cable clamps also available

Cable Diameter

(mm)









CCB2S1/08

Panel mount Low profile 8 contacts Size 2

CCA2P1/A08

CCV2C/CE 3.7 - 4.2 mm CCV2C/CG 4.2 - 4.7 mm CCV2C/CH 4.7 - 5.2 mm CCV2C/CI 5.2 - 5.7 mm CCV2C/CJ 5.7 - 6.2 mm

Non IP68 cable clamps also available

Cable Diameter

(mm)











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CCB3S1/19

Panel mount Low profile 19 contacts Size 3 CCA3P1/A19

CCN3C\C1

5.7 - 6.2 mm 6.2 - 6.7 mm

Non IP68 cable clamps also available

CCU3C/CL 6

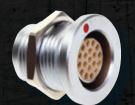
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CCM SERIES 2.5A









CCB4S1/19

Panel mount Low profile 19 contacts Size 4 CCA4P1/A19

CCU4C/CK 5.7 - 6.7 mm CCU4C/CN 6.7 - 7.7 mm CCU4C/CQ 7.7 - 8.7 mm

Non IP68 cable clamps also available

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CCD SERIES













CCD2S1/04

Panel mount Protruding for low light conditions 4 contacts Size 2 CCA2P1/A04

CCV2C/CE 3.7 - 4.2 mm
CCV2C/CG 4.2 - 4.7 mm
CCV2C/CH 4.7 - 5.2 mm
CCV2C/CI 5.2 - 5.7 mm
CCV2C/CJ 5.7 - 6.2 mm



CCE SERIES 8.2A









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CCE1S1/03

Panel mount Protruding for low light conditions 3 contacts Size 1 CCA1P1/A03

CCV1C/CC 2.6 - 3.1 mm CCV1C/CD 3.1 - 3.6 mm CCV1C/CE 3.6 - 4.1 mm CCV1C/CF 4.1 - 4.3 mm



CCE SERIES





CCE1S1/05

Panel mount Protruding for low light conditions 5 contacts Size 1

CCA1P1/A05

CCV1C/CC 2.6 - 3.1 mm CCV1C/CD 3.1 - 3.6 mm CCV1C/CE 3.6 - 4.1 mm CCV1C/CF 4.1 - 4.3 mm

Non IP68 cable clamps also available

Cable Diameter

(mm)



CCE SERIES









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CCE1S1/07

Panel mount Protruding for low light conditions 7 contacts Size 1 CCA1P1/A07

CCV1C/CC 2.6 - 3.1 mm
CCV1C/CD 3.1 - 3.6 mm
CCV1C/CE 3.6 - 4.1 mm
CCV1C/CF 4.1 - 4.3 mm



CCE SERIES













CCE2S1/07

Panel mount Protruding for low light conditions 7 contacts Size 2 CCA2P1/A07

CCV2C/CE 3.7 - 4.2 mm
CCV2C/CG 4.2 - 4.7 mm
CCV2C/CH 4.7 - 5.2 mm
CCV2C/CI 5.2 - 5.7 mm
CCV2C/CJ 5.7 - 6.2 mm



CCL SERIES



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CCL2S1/06

Panel mount Utility style 6 contacts Size 2 CCA2P1/A06

CCV2C/CE 3.7 - 4.2 mm
CCV2C/CG 4.2 - 4.7 mm
CCV2C/CH 4.7 - 5.2 mm
CCV2C/CI 5.2 - 5.7 mm
CCV2C/CJ 5.7 - 6.2 mm

Non IP68 cable clamps also available

17a



Cable Diameter









CCM1S1/03

Panel mount Thick panel type 3 contacts Size 1

CCA1P1/A03

CCV1C/CC 2.6 - 3.1 mm CCV1C/CD 3.1 - 3.6 mm 3.6 - 4.1 mm CCV1C/CE CCV1C/CF 4.1 - 4.3 mm













CCM1S1/05

Panel mount Thick panel type 5 contacts Size 1

CCA1P1/A05

CCV1C/CC CCV1C/CD CCV1C/CE CCV1C/CF

2.6 - 3.1 mm 3.1 - 3.6 mm 3.6 - 4.1 mm 4.1 - 4.3 mm





(mm)







CCM1S1/07

Panel mount Thick panel type 7 contacts Size 1

CCA1P1/A07

CCV1C/CC 2.6 - 3.1 mm CCV1C/CD 3.1 - 3.6 mm 3.6 - 4.1 mm CCV1C/CE CCV1C/CF 4.1 - 4.3 mm



Cable Diameter





CCM1S1/09

Panel mount Thick panel type 9 contacts Size 1

CCA1P1/A09

CCV1C/CC 2.6 - 3.1 mm CCV1C/CD 3.1 - 3.6 mm 3.6 - 4.1 mm CCV1C/CE CCV1C/CF 4.1 - 4.3 mm











CCM2S1/05

Panel mount Utility style 5 contacts Size 2

CCA2P1/A05

CCV2C/CE 3.7 - 4.2 mm CCV2C/CG 4.2 - 4.7 mm CCV2C/CH 4.7 - 5.2 mm CCV2C/CI 5.2 - 5.7 mm CCV2C/CJ 5.7 - 6.2 mm











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CCM2S1/07

Panel mount Utility style 7 contacts Size 2 ___ CCA2P1/A07 CCV2C/CE 3.7 - 4.2 mm
CCV2C/CG 4.2 - 4.7 mm
CCV2C/CH 4.7 - 5.2 mm
CCV2C/CI 5.2 - 5.7 mm
CCV2C/CJ 5.7 - 6.2 mm



CCM SERIES
4.5A







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CCM3S1/10

Panel mount Utility style 10 contacts Size 3 CCA3P1/A10

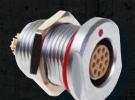
CCN3C\CT

5.7 - 6.2 mm 6.2 - 6.7 mm











CCA3P1/A12

CCU3C/CJ CCU3C/CL

5.7 - 6.2 mm 6.2 - 6.7 mm

Non IP68 cable clamps also available

Panel mount Utility style 12 contacts Size 3

CCM3S1/12









CCM4S1/16

Panel mount Utility style 16 contacts Size 4

CCA4P1/A16

CCU4C/CK CCU4C/CN CCU4C/CQ 5.7 - 6.7 mm 6.7 - 7.7 mm

7.7 - 8.7 mm



CCS SERIES

Cable Diameter

(mm)







CCS1S1/04

CCA1P1/A04

Cable mount 4 contacts Size 1

Please note, cable mount receptacles require a cable clamp

CCV1C/CC 2.6 - 3.1 mm
CCV1C/CD 3.1 - 3.6 mm
CCV1C/CE 3.6 - 4.1 mm
CCV1C/CF 4.1 - 4.3 mm



CCT SERIES 8.2A

Cable Diameter

64







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CCT1S1/03

CCA1P1/A03

Cable mount 3 contacts Size 1

Please note, cable mount receptacles require a cable clamp

CCV1C/CC 2.6 - 3.1 mm CCV1C/CD 3.1 - 3.6 mm CCV1C/CE 3.6 - 4.1 mm CCV1C/CF 4.1 - 4.3 mm









CCT1S1/05

CCA1P1/A05

Cable mount 5 contacts Size 1

Please note, cable mount receptacles require a cable clamp

CCV1C/CC 2.6 - 3.1 mm CCV1C/CD 3.1 - 3.6 mm CCV1C/CE 3.6 - 4.1 mm CCV1C/CF 4.1 - 4.3 mm

Non IP68 cable clamps also available

Cable Diameter

(mm)



CCT SERIES













CCT1S1/07

CCA1P1/A07

Cable mount 7 contacts Size 1

Please note, cable mount receptacles require a cable clamp

CCV1C/CC 2.6 - 3.1 mm CCV1C/CD 3.1 - 3.6 mm CCV1C/CE 3.6 - 4.1 mm CCV1C/CF 4.1 - 4.3 mm



CCT SERIES 6.8A





(mm)



CCT2S1/05

CCA2P1/A05

Cable mount 5 contacts Size 2

Please note, cable mount receptacles require a cable clamp

CCV2C/CE 3.7 - 4.2 mm
CCV2C/CG 4.2 - 4.7 mm
CCV2C/CH 4.7 - 5.2 mm
CCV2C/CI 5.2 - 5.7 mm
CCV2C/CJ 5.7 - 6.2 mm

Non IP68 cable clamps also available

31a



CCT SERIES







(mm)







CCT2S1/07

CCA2P1/A07

Cable mount 7 contacts Size 2

Please note, cable mount receptacles require a cable clamp

CCV2C/CE 3.7 - 4.2 mm CCV2C/CG 4.2 - 4.7 mm CCV2C/CH 4.7 - 5.2 mm CCV2C/CI 5.2 - 5.7 mm CCV2C/CJ 5.7 - 6.2 mm

These IP67 heatsink cases are designed for tough environments. Ideal for measuring equipment, industrial control, industrial camera housing, outdoor control boxes and much more.

- Die-cast end panels and heat sink aluminium extrusion body. EMC shielded as standard giving a strong heavyduty enclosure
- PCB or chassis are mounted horizontally, sliding into grooved inner body frame
- · Available in 10 sizes, silver and black colours as standard
- Designed for a tough environment; heavy duty, highly waterproof and heat resistant

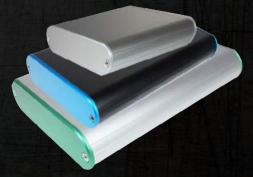
88 SERIES IP67 HEATSINK CASES



Call our sales team on 01638 716101 for more information CamdenBoss' round aluminium enclosures are ideally suited for applications such as audio amplifiers, communication devices, measurement tools and portable controllers

- The extruded case split through the centre makes for ease of access
- · PCB can slide easily into the enclosure
- Screw on end panels (coloured end panels available on request)
- Available in silver and black, with eleven sizes to choose from

85 SERIES ROUND ALUMINIUM CASES



Call our sales team on 01638 716101 for more information

These stylish aluminium cases with heat sink side panels are lightweight and easily customised, making them a great choice for a wide range of applications such as measuring devices, audio equipment, controllers and more

- Heatsink is incorporated into the side plate
- Available in 12 sizes in silver
- Easily customised and lightweight



for more information

We offer a range of high quality IP68 connectors which include junction boxes and in-line, panel mount and T-connectors.

- Simple and easy to use field joiner to link two or more cables
- A wide variety of designs to accommodate many outdoor applications

- · Integrated terminal block designs
- · Compact, robust and strong
- Colour coded screws/terminals make installation easier
- Brail points to allow installation in low light conditions

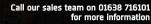
IP68 CONNECTORS











These high quality instrument cases are ideal for use in test, measurement, display and control applications

- Screwless push-fit assembly via 8x lock pins designed for quick and easy assembly
- Horizontal PCB guides in side profiles
- Ventilation slots in lid and base
- Lid and base can be dismounted independently from each other



Create your own enclosure No Tooling!

We offer complete custom enclosure solutions; with no restriction on size or quantity, from concept design through to volume production. Having your own fabricated plastic enclosure means a rapid time to market and no mould tool costs.

You can have fully custom designed plastic enclosures manufactured for minimal development costs, to suit your product's unique style and function.

Choose from a range of stock materials including UL94-Vollisted ABS.



Visit our website www.smartboxx.co.uk for more information

The design team at CamdenBoss were approached to create a case for a high security laptop. An ideal application for a custom enclosure in conjunction with CamCirc. Using flat sheet plastic technology the team were able to turn around a design and prototype in a matter of days.

Our design capabilities together with a fast turnaround, complimented by our wide range of components allow us to provide a full solution to your security, military and technological products.

Contact our sales team for a solution for your design needs!



Visit our website www.smartboxx.co.uk

for more information

CASE STUDY



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