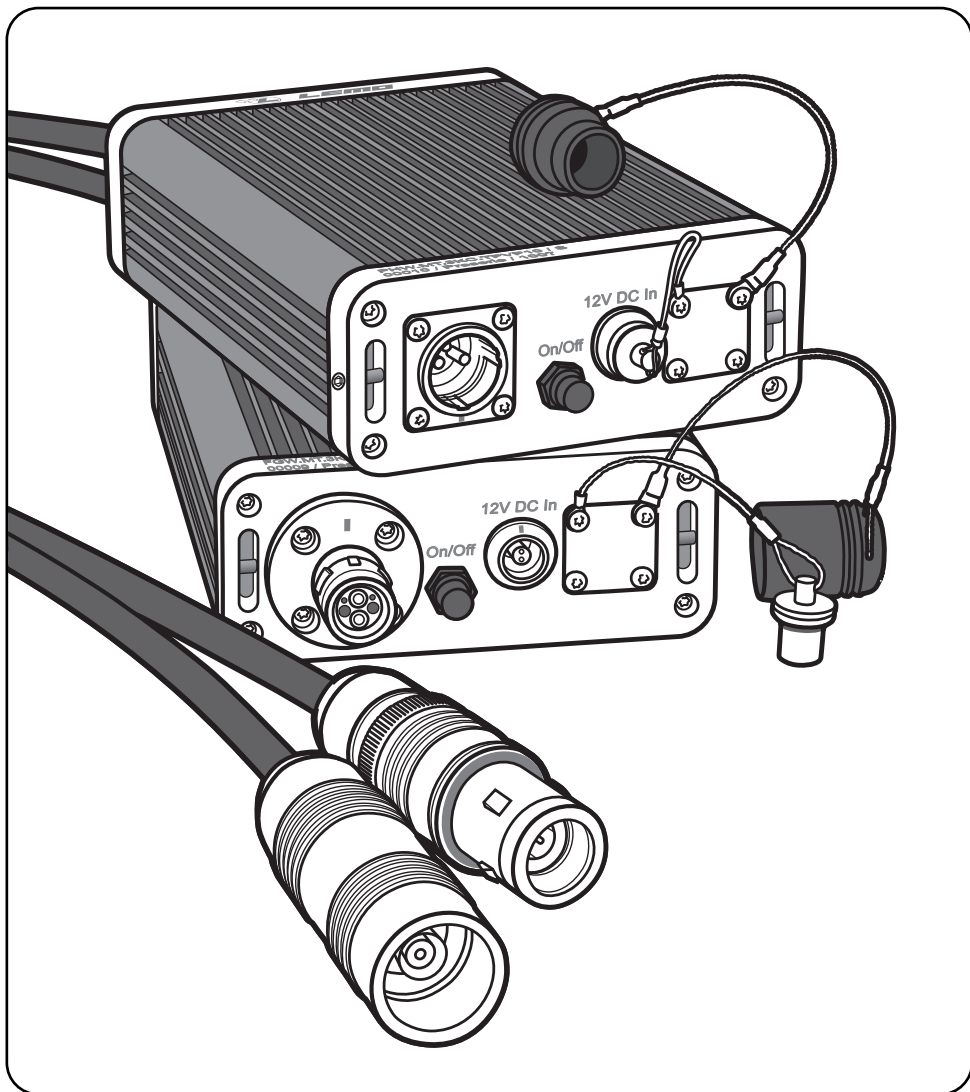
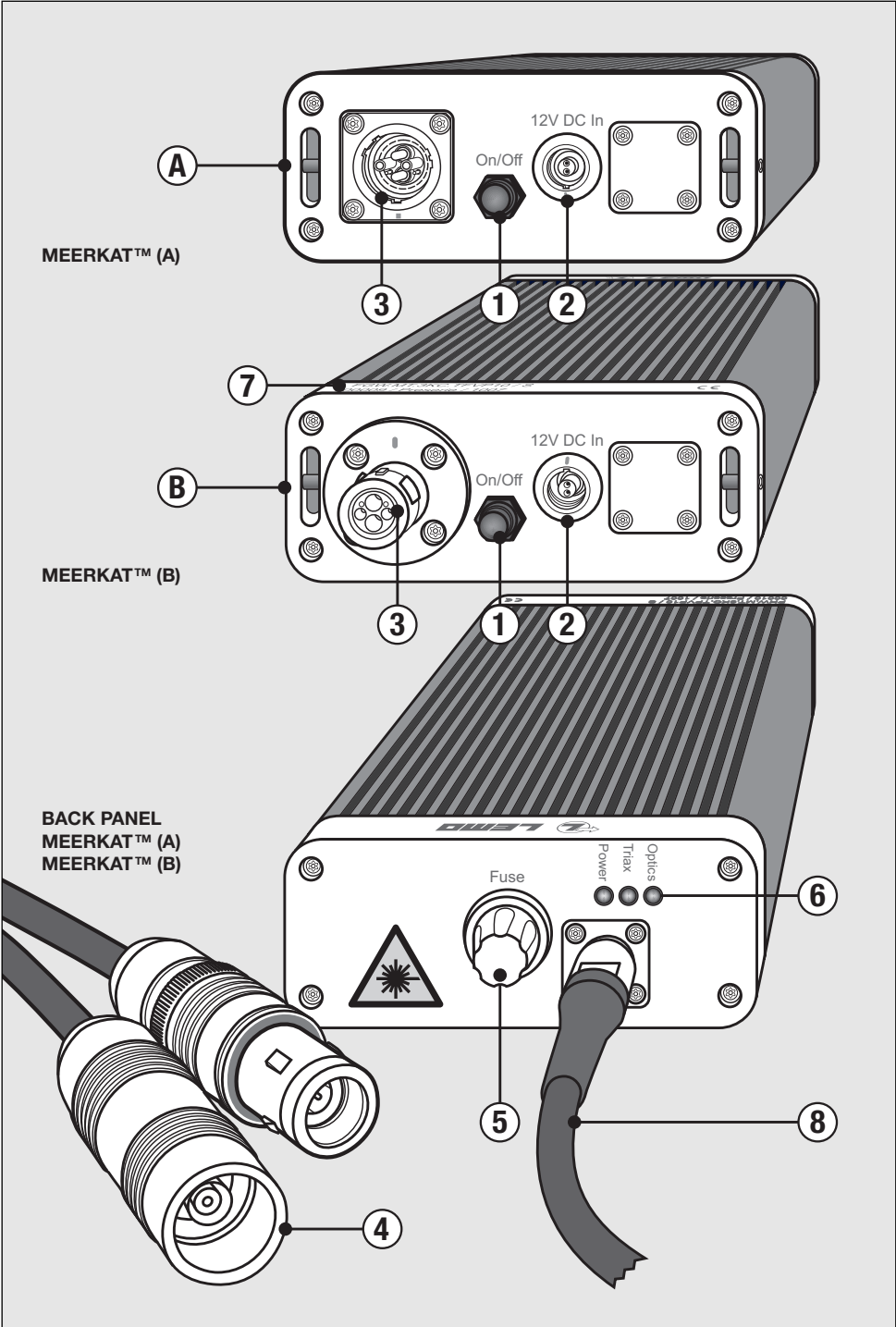


MEERKAT™ HD

FULLY DIGITAL HD TRIAX-TO-FIBRE VIDEO MEDIA CONVERTER

Instructions for use





MEERKAT™ HD FULLY DIGITAL HD TRIAX-TO-FIBRE VIDEO MEDIA CONVERTER

Instructions for use

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◀ Getting to know the MEERKAT™ (see page 2)

- ① On/Off power switch
- ② Power socket
- ③ HDTV connector (ARIB, SMPTE, EBU compatible)
- ④ Triax connector
- ⑤ Fuse
- ⑥ LED indicators
- ⑦ Part number and model
- ⑧ Triax cable

A compact solution for Sony® and Thomson® (Grass Valley™) HD camera based systems

The LEMO MEERKAT™ HD Triax media converter system is a compact “plug and play” transmission system that provides a fibre link between HD Triax cameras and their CCU’s. The LEMO Media Converter offers mobile facility providers, production centres and broadcast studios an appropriate and professional solution for long distance signal transmission.

Get more from your cables

The camera is powered via a hybrid cable from the CCU with both the camera signals and the return monitor signals being digitally encoded and transmitted over

fibre. The SMPTE 311M hybrid cable uses the well proven technology of the LEMO 3K.93C series HDTV connector. If power from the CCU/OB van is not required (i.e. local power is available), a two fibre cable using 2 x FC-PC or 2 x SC may be used for signal transmission.

Going the distance digitally

HD TRIAX	up to 1 km
SD TRIAX	2 km
Fibre (with remote power)	2 km
Fibre (with local power)	up to 20 km

Before operating the system please read the User Manual.

Warning

To prevent fire or shock hazard, do not immerse the unit in water.

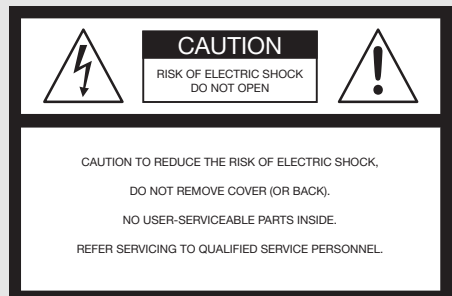
To avoid electrical shock, do not remove covers or panels.

To prevent overheating risk, ventilate the units correctly.

Only use the power supply included.

Refer servicing to qualified personnel only.

Use only fuses of the type and rating specified.



List of HD compatible cameras

Manufacturer	Camera		Triax Camera Adaptor Part Nr	Base Station	
	Part Nr	Type		Part Nr	Type
THOMSON®	LDK 3000	HD	LDK 5630	LDK 4580	HD
THOMSON®	LDK 4000	HD	LDK 5460	LDK 4502	HD
			LDK 5860	LDK 4506	
THOMSON®	LDK 6000	HD	LDK 5460	LDK 4502	HD
THOMSON®	LDK 6200	HD	LDK 5462	LDK 4506	HD
THOMSON®	LDK 8000	HD	LDK 5860	LDK 4502	HD
THOMSON®	LDK 8000 (sport)	HD	LDK 5860	LDK 4506	HD

Notes: Do not connect any camera other than those on the list above without contacting the LEMO Technical Support Group.

List of SD compatible cameras

Manufacturer	Camera		Triax Camera Adaptor Part Nr	Base Station	
	Part Nr	Type		Part Nr	Type
SONY®	BVP-E30	SD	CA590	CCU-790	SD
SONY®	BVP550	SD	CA550	CU-550	SD
SONY®	BVP950	SD	CA570	CCU-700	SD
SONY®	BVP700	SD		CCU-700	
SONY®	BVP750	SD		CCU-700	
SONY®				CCU-750	
SONY®				CCU-500	
THOMSON®	LDK20s	SD	LDK5400	LDK4053	SD
			LDK5430	LDK4501	
THOMSON®	LDK100 LDK200	SD	LDK5400	LDK4053	SD
			LDK5430	LDK5401	
THOMSON®	LDK300	SD	LDK5400		SD
			LDK5430	LDK4501SL	
THOMSON®	LDK400	SD	LDK5400		SD
			LDK5430	LDK4501SL	
THOMSON®	LDK500	SD	LDK5400		SD
			LDK5430	LDK4501SL	

Notes: Do not connect any camera other than those on the list above without contacting the LEMO Technical Support Group.

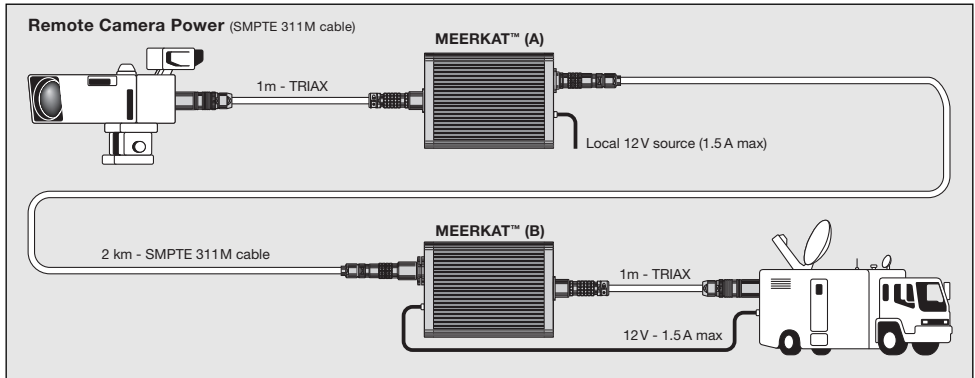
Recommended variants of SMPTE-311M Cable

Manufacturer	Part Number (camera cable)
Furukawa	2SM-9.2-37.5
Furukawa	TV-OM-AMS
Furukawa	TV-OM-HAMS
Fujikura	B-97J501
Draka	CT2987300
Belden	7804C
Mohawk	M96040
Mohawk	M95421

Specifications

Input/outputs	Connectors
I/O ports	Triaxial connector 50 Ohms / 75 Ohms LEMO 3K.93C Series, (HDTV)
DC in	LEMO 0K Series, 2pin in-line transformer
General	Values
Dimensions	125W x 270L x 50H mm
Mass (approx.)	2 Kg
Power requirements In North America, Japan and areas of South America	100 to 120 Vac, 50/60Hz
Power requirements In Europe, Africa, Australia, Scandinavia, China	220 to 240 Vac, 50/60 Hz
Power consumption	16 W
Operating voltage	12 Vdc / 1.5A max
Operating temperature	-20°C to +55°C
Humidity	up to +95%
Index protection	IP66 (when mated)
Signals	Values
Optical RX sensitivity	-3dB to -21dB
Data rate	2x2.5 GB/s
Optical Tx output	200µW (250µW max)
Transm. wavelength	1310nm /1550nm
Supplied accessories	Quantity
Fuse	4 X 4 Amp Wickmann TR5
AC/DC power supply	2 with UK, USA, Europe adaptors
User's guide	1

Operating Instructions - Remote Camera Power



Option 1 - Remote Camera Power

With the Remote Camera Power setup, the camera is powered directly through the SMPTE-311M cable. The useable cable length of the SMPTE - 311M cables is limited by the resistance of the copper power conductors and will vary between cables from different cable manufacturers. However distances of up to 2 km are achievable.

Triax connector.

Connect the Triax connector (provided with 1 metre cable lead) to the appropriate socket located on the Triax camera or the OB van. Connect Unit A to the camera and Unit B to the OB van/CCU.

HDTV connectors.

Connect the HDTV connector (LEMO 3K.93C Series) to the appropriate HDTV compatible socket or plug. Note: as with HDTV systems ensure that the HDTV (SMPTE) cable is laid in the appropriate direction - socket at the OB van / CCU end and plug at camera end.

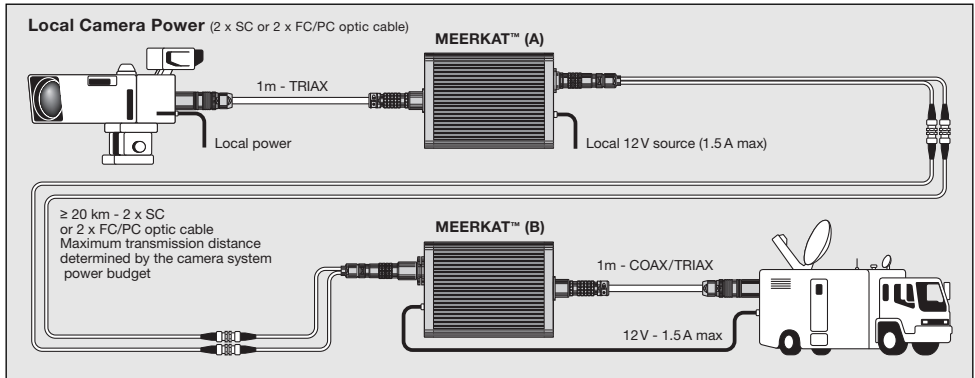
MEERKAT Power Supply.

Connect the unit to a suitable power source by using either the AC/DC adaptor (12Volts) supplied or the battery belt / power pack that is available as an optional accessory (common battery pack manufacturers).

On/Off power switch

Press the power button to turn the power on, the power LED will illuminate. The camera picture should stabilise and all the green LEDs should be illuminated, if not see chapter on troubleshooting (page 8). Pressing the power button again will turn the power off.

Operating Instructions - Local Camera Power



Option 2 - Local Camera Power

With the Local Camera Power setup, the camera is powered with its AC or DC voltage from a local source of power either - a generator or a power pack.

Triax connector.

Connect the Triax connector (provided with 1 metre cable lead) to the appropriate socket located on the Triax camera or the OB van. Connect Unit A to the camera and Unit B to the OB van/CCU.

HDTV connectors.

Connect the HDTV connector (LEMO 3K.93C Series) to the appropriate HDTV compatible socket or plug. Connect the two SC, or FC-PC connectors to the corresponding connectors on your dual channel fibre cable. Note that two cable adaptors (hybrid connector to 2x SC/FC-PC connectors) will be required.

MEERKAT Power Supply.

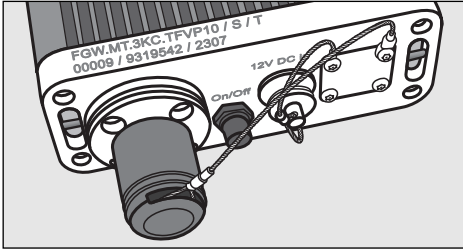
Connect the unit to a suitable power source by using either the AC/DC adaptor (12Volts) supplied or the battery belt / battery pack that is available as an optional accessory (common battery pack manufacturers).

On/Off power switch

Press the power button to turn the power on, the power LED will illuminate. The camera picture should stabilise and all the green LEDs should be illuminated, if not see chapter on troubleshooting (page 8). Pressing the power button again will turn the power off.

Part Number

The MEERKAT™ system always works as a pair. These are identified as MEERKAT™ (A) and MEERKAT™ (B) in the operating instructions. Depending on the camera brand and the triaxial connector fitted on the OB van, you will need to select a specific part number. For other configurations that are not described in the part numbers table here below, please contact your local LEMO customer support.



The part number of your purchased product is located on the top of the unit (see above).

LEMO triax connector on the camera	Part number of the MEERKAT™ (A) on the camera side	Electrical triax connector on cable
Socket 4M.650	PHW.MT.3TM.TFRP10	FGG.4M.650.CTLC90Z
Plug 4M.650	PHW.MT.3TM.TFRP10	PHG.4M.650.CTAC90Z
Socket 4E.675	PHW.MT.3TM.TFUP10	FFA.4E.675.CTAC90Z
Plug 4E.675	PHW.MT.3TM.TPUP10	PCA.4E.675.CTLC90Z
Socket 4A.675	PHW.MT.3TM.TFVP10	FXB.4A.675.CTCC85Z
Plug 4A.675	PHW.MT.3TM.TPVP10	PXA.4A.675.CTRC85Z
Socket REDEL F	PHW.MT.3TM.TFWP10	REDEL FAZ.T75.FTCC86CZ
Socket 3T.675	PHW.MT.3TM.TFTP10	FFA.3T.675.CTAY92S

LEMO triax connector on the CCU	Part number of the MEERKAT™ (B) on the CCU side	Electrical triax connector on cable
Plug 4M.650	FGW.MT.3TM.TFRP10	PHG.4M.650.CTAC90Z
Socket 4M.650	FGW.MT.3TM.TFRP10	FGG.4M.650.CTLC90Z
Plug 4E.675	FGW.MT.3TM.TFUP10	PCA.4E.675.CTLC90Z
Socket 4E.675	FGW.MT.3TM.TFUP10	FFA.4E.675.CTAC90Z
Plug 4A.675	FGW.MT.3TM.TPVP10	PXA.4A.675.CTRC85Z
Socket 4A.675	FGW.MT.3TM.TFVP10	FXB.4A.675.CTCC85Z
Plug REDEL F	FGW.MT.3TM.TPWP10	REDEL FRZ.T75.FTMC86CZ
Plug 3T.675	FGW.MT.3TM.TTTP10	PCA.3T.675.CTLY92S

Note: the units are not provided with the SMPTE 311M cables. Part number above are for Thomson HD camera.

Troubleshooting

Why doesn't it work the way I want?

This section lists some problems you might encounter during the use of the MEERKAT™. Some problems require that you call your local support, but other problems can easily be solved.

The device doesn't operate.

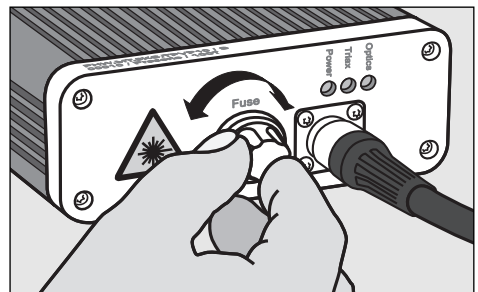
Is the power LED lit (location at the rear of the chassis)? If not check if the power supply is correctly plugged in and that the on/off button is switched on. Check the circuit protection fuse. If it has blown replace it (see chapter fuse replacement). If this fuse blows repeatedly, please contact technical support.

LED	No light	Red	Green
Optics	No data received	Bad data received	OK
Triax	Off No triax signal	Triax overdrive ¹⁾	OK
Power	Power off	-	Power On

Note: ¹⁾ Triax overdrive means that the signal experiences clipping i.e. the triax signal amplitude is too high (seek Technical Support).

Fuse replacement

To replace the fuse, first press on the On/Off button to turn off the unit, disconnect the power supply and HDTV cable. Unscrew the fuse cap located at the rear of the MEERKAT™. Carefully remove the fuse cap, there is a sealing o-ring located inside the fuse cap. Replace the blown fuse with a new one that is provided in the case. Screw the fuse cap back onto the unit.



The device gets warm.

This is normal; the units get warm during normal operation. The shell heat exchanger should be kept free of obstructing materials and not covered, in order to dissipate the heat.

Certifications and warranty

CE marking

CE marking means that the appliance or equipment bearing it complies with the protection requirements of one or several European safety directives.

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

RoHS statement

LEMO products are in compliance with the RoHS directives (2011/65/EU) of the European Parliament. This directive specifies the restrictions of the use of hazardous substances in electrical and electronic equipment marketed in Europe.

LEMO guarantees that its connectors and media converters are free of mercury, cadmium, lead, hexavalent chromium and polybromide biphenyl (PBB) or polybromide diphenyl ether (PBDE).

Design and specifications are subject to change without notice.

CAUTION Class 1 Laser Product

The MEERKAT™ is classified as a CLASS 1 LASER PRODUCT. Do not stare into the beam or view it directly with optical instruments.

Recommendations

Do not paint your product. Always treat your product with care and keep the fibre optic connectors capped when not in use.

Cleaning Instructions

It is essential that the optical interface (ferrule end faces) of the 3K.93C fibre optic contacts are clean and free from any kind of debris to ensure the correct performance and operation of the contact. It is recommended that the inspection and cleaning instructions provided by LEMO are used on the 3K.93C connector to ensure the connector performs to the specified ratings.

Technical support

We understand you may have questions regarding your new product. Should you require any assistance, our technical support and customer service is available to you. Whenever calling your LEMO support, you will need to refer to the part numbers located on the top the MEERKAT™ unit.

Europe email: mc_europe@lemo.com

Europe telephone: 0044 (0) 1903 222411

USA email: mc_usa@lemo.com

USA telephone: (+1 707) 578 88 11

Asia/Pacific email: mc_asia@lemo.com

Japan telephone: +81-3-5446-5510

China telephone: (86 21) 5899 7721

Warranty - 1 year

LEMO warrants this product to be free from defects in design, material and workmanship under normal use for the period of one (1) year from purchase date.

If during the warranty period, this product should fail under normal operation, LEMO will, at its option, replace or repair the defective part.

This warranty does not include failure caused by improper installation, operation, accident, improper connection to peripherals, software or hardware modifications outside of LEMO's control.

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