

ABTECH MV Terminal

Instructions for installation, operation and maintenance

Marking

ATEX:	ABTECH Ltd.	⊕ II 2 G D	CML 15ATEX3096U
IECEX:	ABTECH Ltd.	Ex eb IIC Gb	IECEX CML 15.0051U

Maximum voltage = up to 6.6kV (see *limitations below*)

Maximum conductor size = up to 240mm² (see *limitations below*)

NOTE: The ABTECH MV terminal is delivered as an assembly for securing inside an Ex e component certified enclosure. The only removable parts are the crimp lug securing studs, nuts and washers and the current bar. The stud thread size is M8 with nuts which are 13mm across flats. Crimp lugs must be suitable for this stud size. The removal or disassembly of any other parts may render the certification void.

Equipment

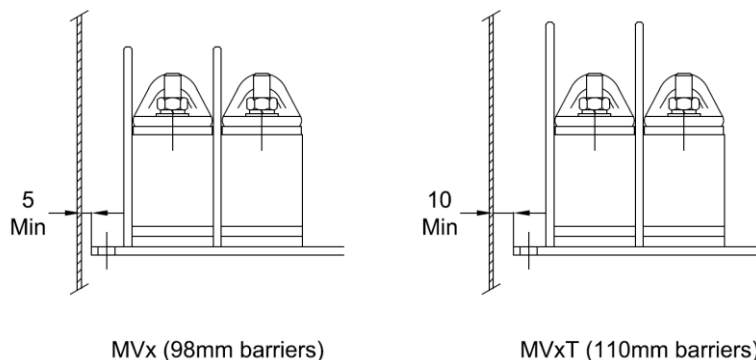
Crimp lugs suitable for the conductor size, with palm hole suitable for M8 studs.

A socket, suitable for use with nuts which are 13mm across flats.

A socket driving device with torque measurement including the range 6Nm to 12Nm.

Installation Instructions

1. Ensure that the selected crimp lugs have a palm hole suitable for a stud size of M8.
2. The terminal assembly must be secured using 4 off M8 machine screws through the holes provided at the corners of the base plate. It may be secured to a flat chassis plate, either metallic or non-metallic, or located over accurately positioned studs.
3. The MVx assembly base plate must not be mounted closer than 5mm from the enclosure wall. For MVxT (tall barrier) assemblies the minimum permitted distance is 10mm.

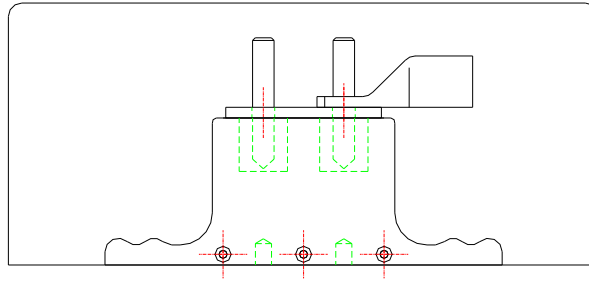


4. Once secured, prepare the cable conductors by stripping the insulation to suit the crimp lug and then crimp the lug securely to the conductor. Take care to orientate the crimp lug with the intended terminal stud current bar to minimise externally applied torque.

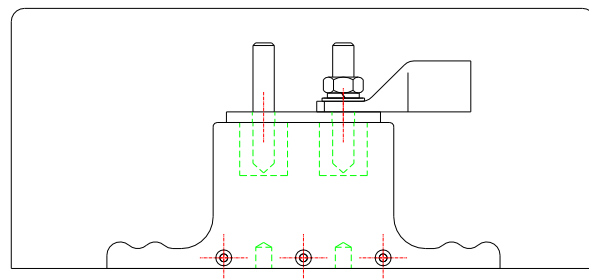
Note: the crimping device and die set must be suitable for use with the selected crimp lugs. It is the installer's responsibility to ensure that the completed crimp meets the requirements of BS EN 61238-1:2003 (or IEC 61238-1:2003 or equivalent local national standard) by the use of appropriate equipment. Remove the terminal stud nut and washers, but NOT the current bar, and locate the crimp lug over the stud, placing it on top of the current bar.

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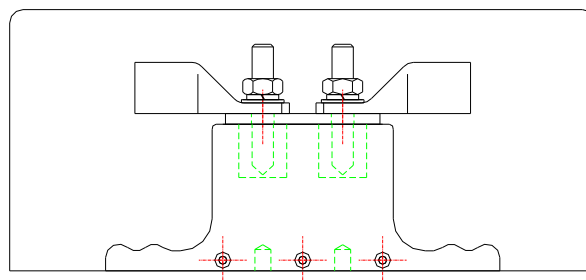
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5. Replace the flat washer, then the spring washer and then the nut, initially tightening by hand.
6. Using the socket and driving device, secure the retaining nut to a minimum torque of 6Nm, maximum torque depends on stud material: Copper = 7Nm, Brass = 9Nm, S/S = 12Nm.



7. Repeat from point 4, above, for all remaining conductors.



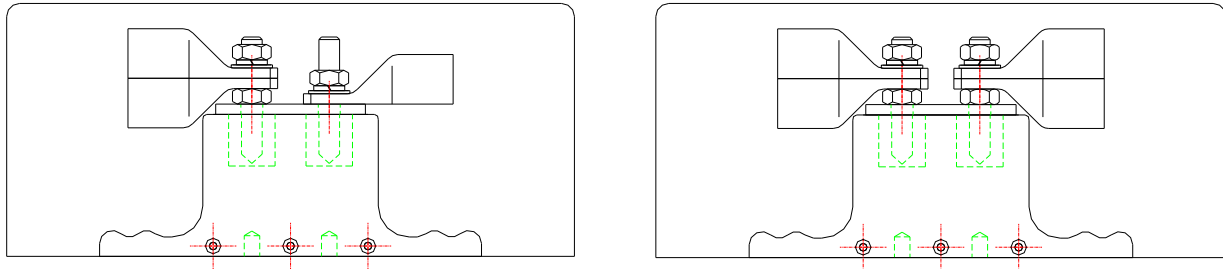
8. The maximum operating voltage is limited by the conductor size as follows:

Maximum conductor size (mm ²)	Maximum operating voltage (kV) MVx (98mm barriers)	Maximum operating voltage (kV) MVxT (110mm barriers)
240	3.52	5.50
≤185	4.40	6.60

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9. In the event that two cables are to be connected to the same stud the arrangements shown below are permitted.



10. When such stacked lug arrangements are used further limits on the maximum permitted voltage apply as follows:

Maximum conductor size (mm ²)	Maximum operating voltage (kV) MVx (98mm barriers)	Maximum operating voltage (kV) MVxT (110mm barriers)
240	2.20	4.40
185	2.75	4.40
150	3.52	5.50
120	3.52	5.50
95	3.52	5.50
≥70	4.40	6.60

Applicable standards

ATEX: EN 60079-0:2012:A11:2013, EN 60079-7:2015, EN 60079-31:2014

IECEX: IEC 60079-0:2011, IEC 60079-7:2015, IEC 60079-31:2013

Chemical attack

The following materials are used to manufacture the ABTECH MV Terminal range – GRP, brass, tinned copper and 316 stainless steel. Consideration should be given to the environment in which the unit is to be used to determine the suitability of these materials to withstand any corrosive agents that may be present.