

LPU

Lightning Protection Units (2-wire & 3-wire)

Summary

The iMAC LPU-2 and LPU-3 units have been specifically designed to protect iMAC modules from high voltage transients caused by nearby lightning strikes/surges.

Damage to iMAC modules is always a possibility when the modules are installed along overland conveyors. The iMAC LPU units are compact in size allowing them to be readily installed in tight places such as iMAC Pullkeys or E/stop enclosures to protect iMAC modules mounted therein. Up to three iMAC modules can be protected by a single LPU unit.

In this application the LPU units provide differential voltage protection for iMAC modules connected via the iMAC fieldbus communication line. There is no common mode protection to avoid any connection to earth.

The iMAC LPU modules are designed to operate in the following two modes:

- Minor Lightning strike/surge - The LPU Modules divert harmful energy away from the iMAC Module.
- Major Lightning strike/surge - The LPU becomes sacrificial, limiting damage to the iMAC Module.

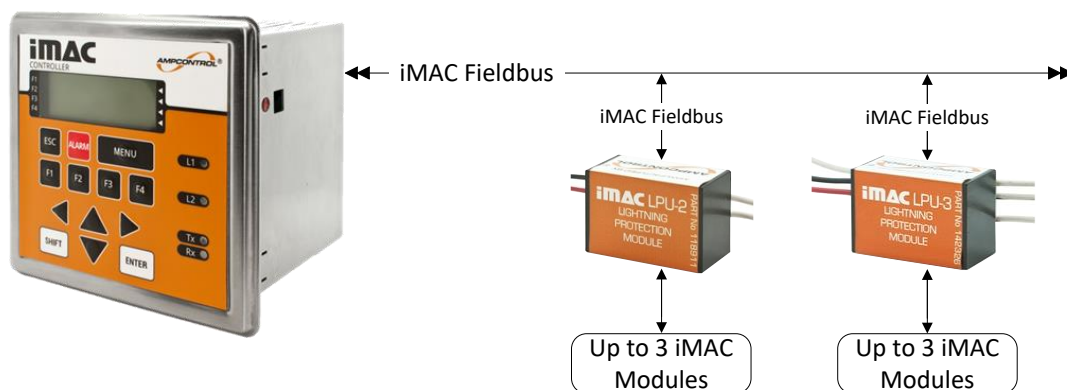
Data Register(s)

0 (none)

Features

- Protects against major and minor lightning strikes/surges
- Protects up to 3 iMAC modules
- Compact fully encapsulated design
- 2-wire and 3-wire iMAC fieldbus versions available

Minimum System



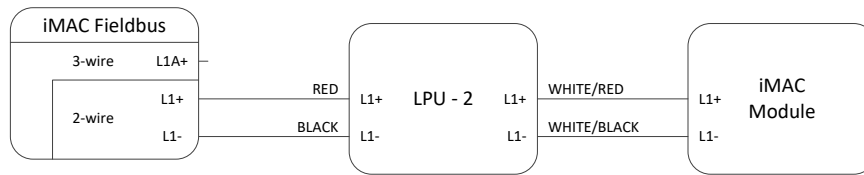
CAUTION!



Must NOT be installed in a hazardous area.

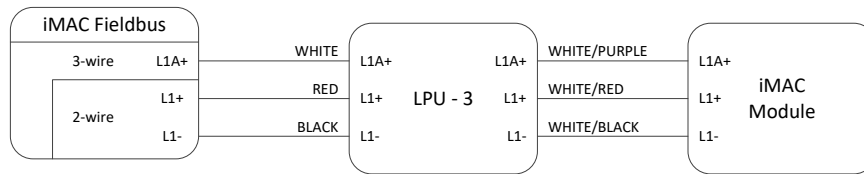
LPU units are NOT Intrinsically Safe.

Electrical Connections



Note: refer to iMACB094 – iMAC Installation Requirements

Label	Wire colour	Type	Description
L1+	Red	L1 Comms (unprotected)	iMAC Fieldbus (2 wire)
L1-	Black		
L1+	White/Red	L1 Comms (protected)	iMAC Module (2 wire)
L1-	White/Black		

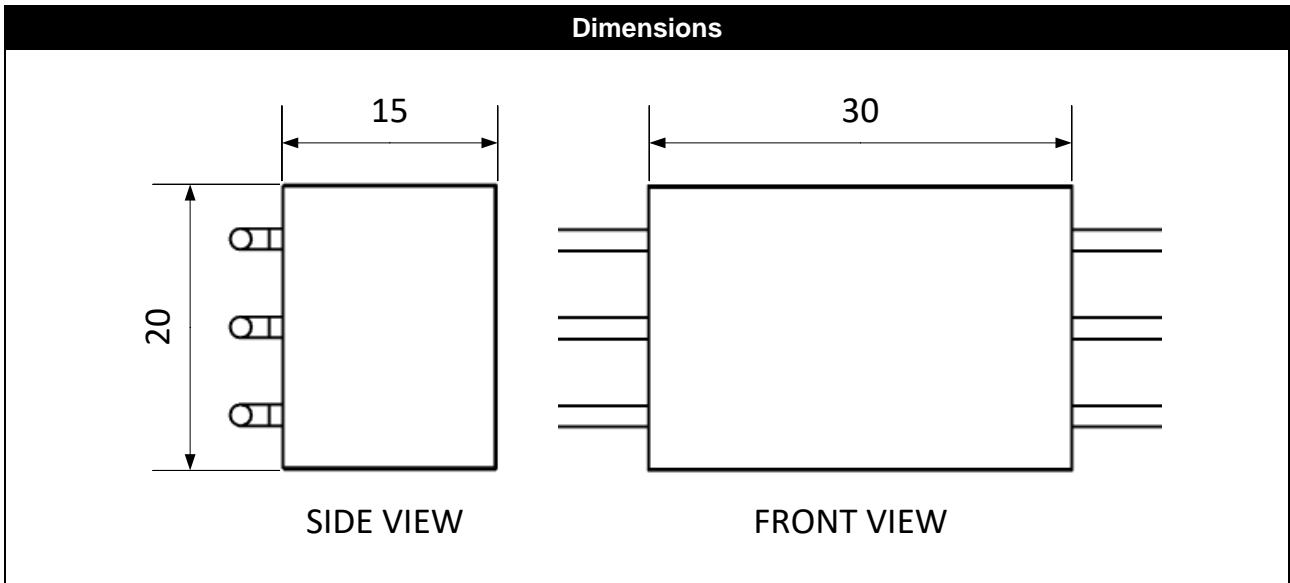


Note: refer to iMACB094 – iMAC Installation Requirements

Label	Wire colour	Type	Description
L1A+	White	L1 Comms(unprotected)	iMAC Fieldbus (3 wire)
L1+	Red		
L1-	Black		
L1A+	White/Purple	L1 Comms (protected)	iMAC Module (3 wire)
L1+	White/Red		
L1-	White/Black		

Specifications

Mechanical	
Dimensions	30mm x 20mm x 15mm (See diagram below)
Weight	60g
IP Rating	Module is fully encapsulated
Mounting	Enclosure to be mounted using double sided tape or cable ties (not supplied – e.g. 3M VHB double sided tape)
Electrical Connections	Individual 350mm flying leads (0.4mm ² PVC insulated multi-strand flexible wire with an overall outside diameter of 1.5mm)
Environmental	
Operating Temperature	-10°C to +65°C
Protection	
DC Spark	> 90VDC
Impulse Spark	< 500V spike at 100V/μs
Impulse Discharge Current	20kA
Find Out More	
For more information on this product, contact Ampcontrol Customer Service on +61 1300 267 373 or customerservice@ampcontrolgroup.com or visit the Ampcontrol website: www.ampcontrolgroup.com	



Equipment List	
Part Number	Description
118911	MODULE IMAC LPU-2 WIRE
142326	MODULE IMAC LPU-3 WIRE

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