TECHNICAL

DATA SHEET

IMAC REMOTE KEYPAD (IRK)

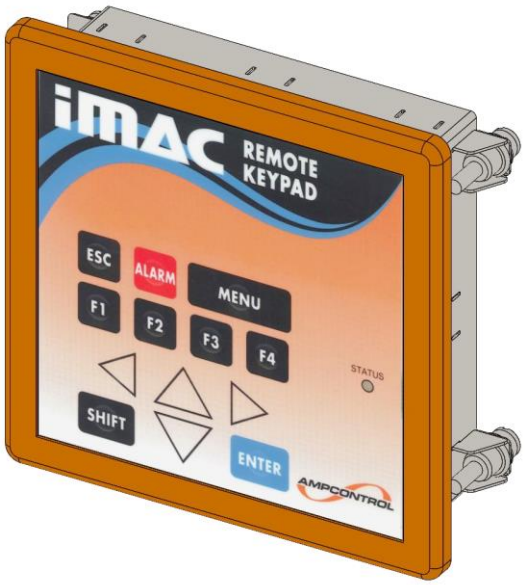
Integrated Monitoring and Control Systems Remote Keypad

Applications

The iMAC Remote Keypad is used when the iMAC Controller is installed in such a way that renders its own keypad inaccessible. For example, this would allow the iMAC Controller to be installed in a flameproof enclosure with its display visible through a window. The iMAC Remote Keypad can then be mounted outside of the enclosure, in the hazardous area.

The iMAC Remote Keypad should be installed in a location where the operator can also see the iMAC Controller Screen.

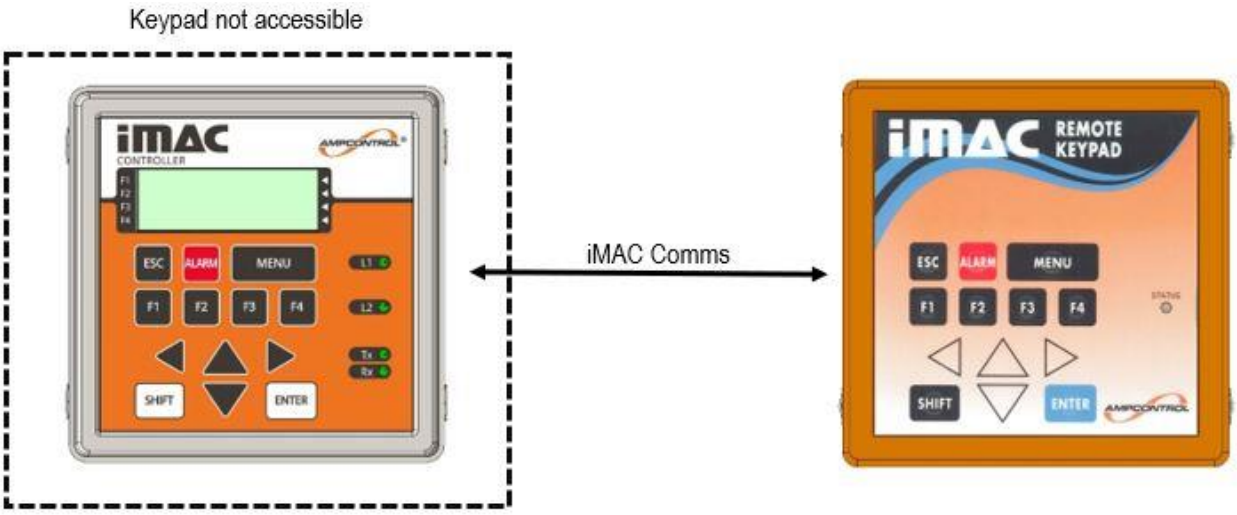
The iMAC Remote Keypad is powered by an iMAC L1 communication line and requires no external power supply.



Features

- Intrinsically Safe IECEx Ex ia Group I
- Down-line powered from the iMAC L1 Fieldbus
- Provides access to the iMAC controller keypad via iMAC L1 Fieldbus
- Remotely monitored via the iMAC Controller
- Multifunction diagnostic status LED
- Panel Mounted Compact designed
- Fully Encapsulated design

Minimum System



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CAUTION!

Modules used in Non-I.S. systems shall not be reused in I.S. systems (as the integrity of internal components upon which intrinsic safety depends may have been compromised).

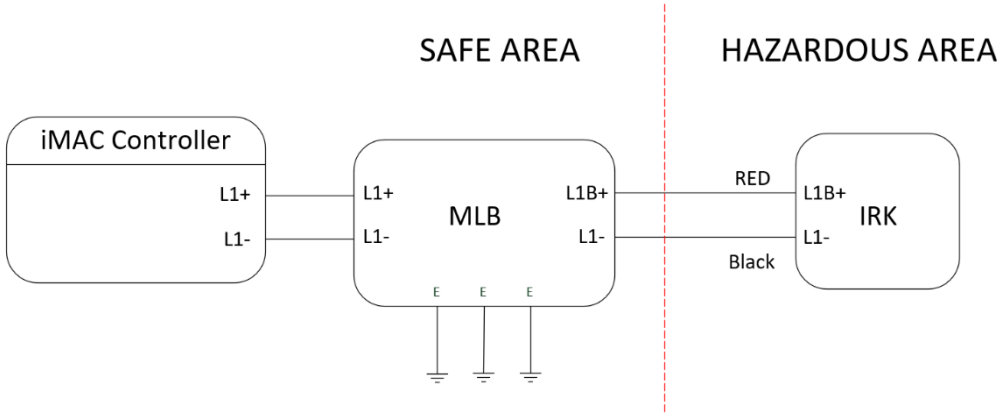
Product Operation

The keypad keys are connected to the iMAC Remote Keypad Module, which is encapsulated as part of the iMAC Remote Keypad. When a key is pressed the respective input to the Remote Keypad Module asserted.

The iMAC system issues an 8-bit command every scan (occurring approx. every 150 – 300 ms depending on communication line communication speed). Six of these eight command bits are shared with the keypad data bits. Therefore, remote key press DATA is sent frequently and cannot be delayed by other module activity connected to iMAC control line.

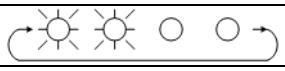
No extra SLP programming is required as the Controller system software reads the key press data with no intervention from the user program.

Electrical Connections



Label	Core	Type	Description
L1+	Red	L1 comms	iMAC Network (2 Wire)
L1-	Black		

Refer to document - IMACB094 - iMAC Installation requirements

LED Indicators		
Status LED		
Flash Sequence		**Module - iMAC Comms Status**
Off	-	Unknown (Check Connections)
Slow Flash		Healthy
2 Flashes		Healthy (Has been roll-called)

Certification / Approvals		
Type	Ex ia I - for use in zone 0, 1 or 2	
Certificate Number	IECEx ITA 07.0017X	
Module Type	GM1	
IP rating	Must be installed in an enclosure not less than IP20 (IP54 recommended)	
Other	Must be mounted in such a manner that the encapsulation is not exposed Must be connected in accordance with iMAC system drawing IMACZ032. L1+ L1- terminals must only connect to a single MLB (Master Line Barrier).	
I/O Parameters	L1+ (red), L1- (black)	Ui = 21.5V (44.65R source resistor) Ci = Negligible Li = Negligible
Ambient Temperature (Ta)	-20 °C to +40 °C (Refer to operating environment specifications)	
This table is provided for quick reference purposes only: refer to latest issue of the Certificate of Conformity for all system designs.		

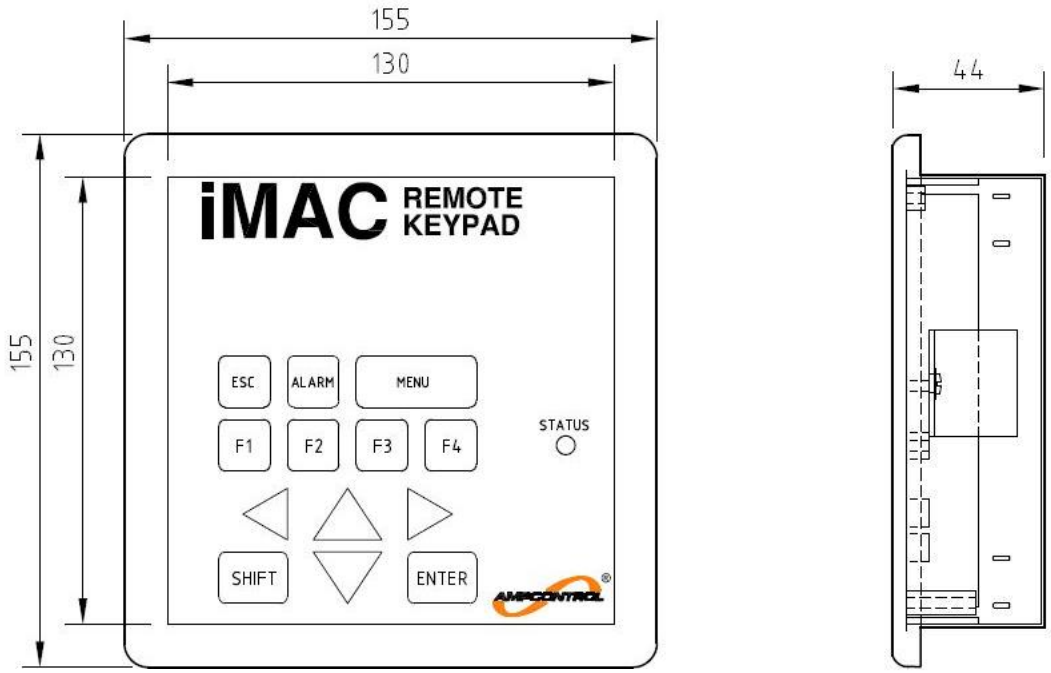
Specifications	
Mechanical	
Cutout Dimensions (H x W)	130 x 130 mm
Product Dimensions (H x W x D)	155 x 155 x 45 mm (See diagram below)
Weight	800 g
IP Rating	IP65 (once mounted)
Mounting	4x Retaining Clips for panel mounting. Keypad Must be panel mounted in an earthed conductive enclosure, with at least 10 mm surround
Electrical Connections	2x Core Screened Blue Sheathed Cable (Individual Core size are 0.75mm2 coloured Red and Black)
Environment	
Operating Temperature	-10 °C to +60 °C
Communications (iMAC L1)	
Hardware interface	2/3 wire (+/-18 V DC I.S. via MLB barrier or +/-21 V DC non-I.S. iMAC Fieldbus)
Line speed	300 - 1000 baud
Bit protocol	iMAC proprietary
Isolation	None
L1 line loading (baud)	0.62 mA (300) / 0.74 mA (500) / 1.50 mA (1000)

Uncontrolled Copy - Refer to Ampcontrol Website for Latest Version

WARNING!

Warning – Potential Electrostatic Charging Hazard (Must be panel mounted in an earthed conductive enclosure, with at least 10 mm surround. Refer to specifications)

Dimensions	
Front	Side



Equipment List	
Part Number	Description
142084	iMAC Remote Keypad IECEx
178124	Kit Clips Panel Mount

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

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