TECHNICAL INFORMATION

EOL & MEOL
End of Line Modules

IECEx ITA 07.0017X

Description

The core function of the iMAC System is the End of Line Monitoring and the conditioning of the Control Relay (CR) with 'Signal Line Healthy'. This is the **key safety feature** of this relay that is located in the iMAC Controller. 'Signal Line Healthy' is generated if and only if the End of Line Module has successfully communicated with the Controller over eight (8) scans. The scan time is approximately 300mS. The End of Line Module has a unique serial number that the Controller continually checks.

The End of Line Module EOL forms part of the two wire monitoring, two/three wire emergency stop and three wire remote isolation systems.

The iMAC-MEOL Module is used when the application calls for remote isolation or continuous monitoring using a three-wire system. The module has a unique 16-bit serial number similar to the iMAC-EOL Module. The iMAC-MEOL connects to the B line in 3-wire systems.

The iMAC-MEOL Modules are approved to Intrinsically Safe Standards and are powered from the iMAC L1 communication line. No external power supply is required.

There should only be one EOL Module per communication line. If two modules are inadvertently connected the Controller will report an end of line error and the signal line is then treated as an open circuit line condition. If two MEOL Modules are inadvertently connected the Controller will report an address clash.

The End of Line (EOL) and (MEOL) Modules must be connected at the extreme end of the communication line. If this is not observed any control switches not observed between the iMAC-EOL Module and the Controller will be inoperative.

Features

- Compact Design
- Encapsulated, robust, reliable electronics
- Din Rail mounted
- The end of line data is located in a separate part of the communication protocol to the 'user data' so that it cannot be corrupted by erroneous input addresses. The 'Signal Line Healthy' message is applied to the Control Relay unconditionally and cannot be corrupted or overridden by the user programmable sections.

LED Status Indication

A red high intensity LED mounted on the front of the modules indicates the module's status.
Slow flash healthy
Two flash when module is roll called.
Fast flash checksum error (for 5 seconds)

Data Mapping

The iMAC EOL Module is assigned an address of 0 that cannot be altered.

The iMAC MEOL Module is assigned an address of 96 that cannot be altered.

Programming Procedures

Programming not necessary

Specifications

Power Supply:
Down line powered
Communication:
500 to 1000 baud

Dimensions:

75 H x 23 W x 98 D mm

Operating Environment:

0 to 50ºC

Equipment List

121905	iMAC EOL I.S.
121908	iMAC MEOL I.S. MONITORING EOL

Connection Diagram

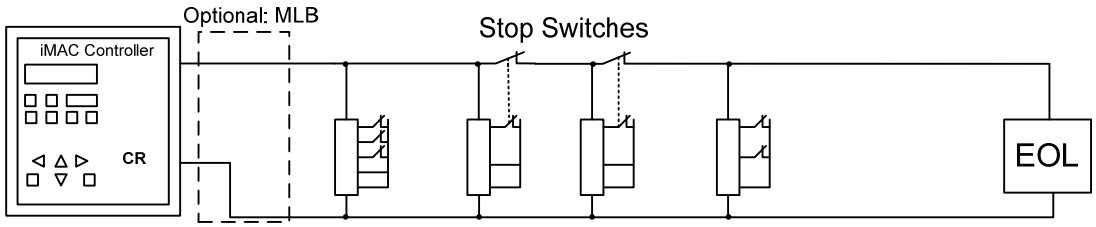

Figure 1: Two Wire Configuration

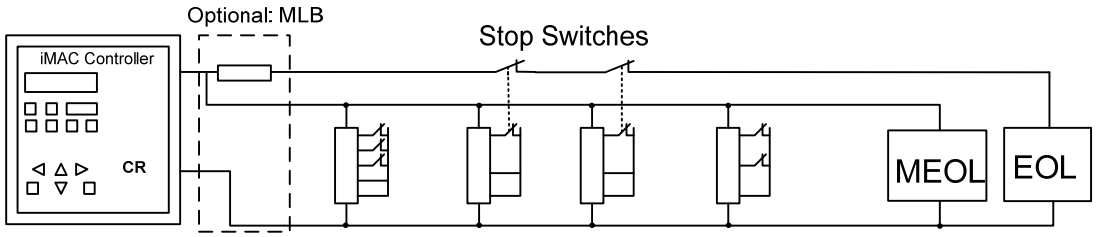

Figure 2: Three Wire Configuration

General Arrangement

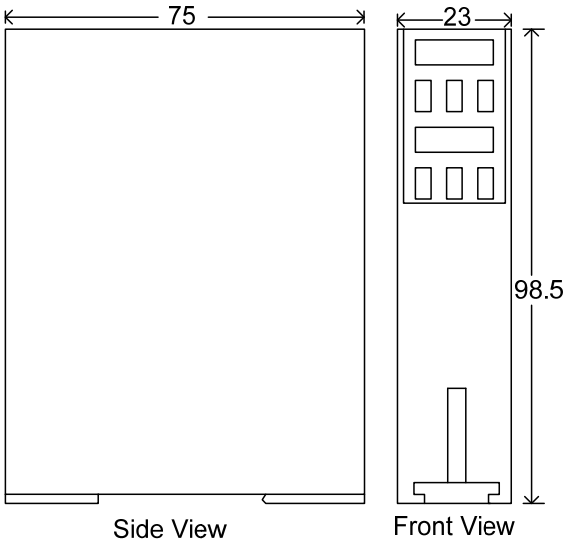

Figure 3: EOL and MEOL General Arrangement

Technical Support

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