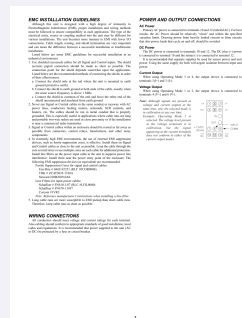


FIELD INSTALLATION QUICK GUIDE

Installation Instructions

IFMA0035

signal converter



PRODUCT	IFMA0035
FAMILY	signal converter
FUNCTION	signal converter
STATUS	Verify exact installed equipment

Prepared by Amikon Limited from RED LION documentation. This guide supplements the complete manufacturer manual and site procedure.

01

CONFIRM THE ORDERED CONFIGURATION

Device Function	Signal converter
Input Signal	Industrial process signal
Output Signal	Conditioned analog signal
Isolation	Signal isolation
Diagnostics	Status indication
Mounting Context	Control panel

02

PREPARATION AND CONNECTION

- Confirm the complete IFMA0035 article number and installed revision.
- Isolate applicable electrical and process energy using the approved site procedure.
- Record every connector, cable, terminal, shield and protective-earth connection before removal.
- Install without forcing keyed parts, then secure terminals, latches, fasteners and cable supports.

OFFICIAL INSTALLATION REFERENCE

EMC INSTALLATION GUIDELINES

Although this unit is designed with a high degree of immunity to ElectroMagnetic Interference (EMI), proper installation and wiring methods must be followed to ensure compatibility in each application. The type of the electrical noise, source or coupling method into the unit may be different for various installations. The unit becomes more immune to EMI with fewer I/O connections. Cable length, routing, and shield termination are very important and can mean the difference between a successful installation or troublesome installation.

Listed below are some EMC guidelines for successful installation in an industrial environment.

1. Use shielded (screened) cables for all Signal and Control inputs. The shield (screen) pigtail connection should be made as short as possible. The connection point for the shield depends somewhat upon the application. Listed below are the recommended methods of connecting the shield, in order of their effectiveness.
 - a. Connect the shield only at the rail where the unit is mounted to earth ground (protective earth).
 - b. Connect the shield to earth ground at both ends of the cable, usually when the noise source frequency is above 1 MHz.
 - c. Connect the shield to common of the unit and leave the other end of the shield unconnected and insulated from earth ground.
2. Never run Signal or Control cables in the same conduit or raceway with AC power lines, conductors feeding motors, solenoids, SCR controls, and heaters, etc. The cables should be run in metal conduit that is properly grounded. This is especially useful in applications where cable runs are long and portable two-way radios are used in close proximity or if the installation is near a commercial radio transmitter.
3. Signal or Control cables within an enclosure should be routed as far away as possible from contactors, control relays, transformers, and other noisy components.
4. In extremely high EMI environments, the use of external EMI suppression devices, such as ferrite suppression cores, is effective. Install them on Signal and Control cables as close to the unit as possible. Loop the cable through the core several times or use multiple cores on each cable for additional protection. Install line filters on the power input cable to the unit to suppress power line interference. Install them near the power entry point of the enclosure. The following EMI suppression devices (or equivalent) are recommended:

Ferrite Suppression Cores for signal and control cables:

Fair-Rite # 0443167251 (RLC #FCOR0000)

TDK # ZCAT3035-1330A

Steward #28B2029-0A0

Line Filters for input power cables:

Schaffner # FN610-1/07 (RLC #LFIL0000)

Schaffner # FN670-1.8/07

Corcom #1VR3

Note: Reference manufacturer's instructions when installing a line filter.
5. Long cable runs are more susceptible to EMI pickup than short cable runs. Therefore, keep cable runs as short as possible.

WIRING CONNECTIONS

All conductors should meet voltage and current ratings for each terminal. Also cabling should conform to appropriate standards of good installation, local codes and regulations. It is recommended that power supplied to the unit (AC or DC) be protected by a fuse or circuit breaker.

POWER AND OUTPUT CONNECTIONS

AC Power

Primary AC power is connected to terminals 10 and 12 (labeled AC). For best results, the AC Power should be relatively "clean" and within the specified variation limits. Drawing power from heavily loaded circuits or from circuits that also power loads that cycle on and off, should be avoided.

DC Power

The DC power is connected to terminals 10 and 12. The DC plus (+) power is connected to terminal 10 and the minus (-) is connected to terminal 12.

It is recommended that separate supplies be used for sensor power and unit power. Using the same supply for both will negate isolation between input and power.

Current Output

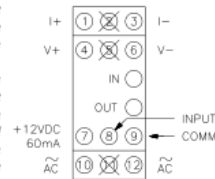
When using Operating Mode 3 or 4, the output device is connected to terminals 1(I+) and 3(I-).

Voltage Output

When using Operating Mode 1 or 2, the output device is connected to terminals 4 (V+) and 6 (V-).

Note: Although signals are present at voltage and current outputs at the same time, only the selected mode is in calibration at any one time.

Example: Operating Mode 2 is selected. The voltage level present at the voltage terminals is in calibration, but the signal appearing at the current terminals does not conform to either of the current output modes.



04

COMMISSIONING CHECKS

- 01 Confirm product identity and mechanical seating.
- 02 Verify the documented supply before energising.
- 03 Inspect polarity, shielding and protective-earth connections.
- 04 Restore power in the approved sequence and observe status indications.
- 05 Test each connected input, output or communication path.
- 06 Record diagnostics and functional-test results before return to service.

05

CONTROLLED DOCUMENT

Official source	Red Lion IFMA official instruction manual
Product record	IFMA0035
Manufacturer	RED LION
Warranty	12 months from AMIKON
Support	INFO@AMIKON.CN

AMIKON PRODUCT SUPPORT

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