

Model *iT401* 4-20mA Alarm Module



The *iT401* is the first alarm module designed to work with any 4-20mA Loop-Powered device and/or the *iT*-series sensor signal-conditioning modules, providing easily-programmable relay activation for use in condition-based monitoring or process control.

Digital technology, along with simple face-panel push-buttons and a bright digital display means never having to open the unit to alter setpoints. Memory allows user to decide to keep changes permanently, or restore manufacturer defaults.

FEATURES:

- 35 mm DIN rail mount
- Front-panel tactile membrane switches
- Front-panel 7-segment LED displays
- TBUS connection to *iT*-Series modules
- Digital Processing
- Relays have over 2,000 VAC isolation
- Mounts adjacent to *iT*-Series transmitter modules
- External alarm contacts for signal or BOV faults
- Alternate direct 4-20mA signal input

BENEFITS:

- No need to make external wiring connections to other *iT*-Series modules
- Front-panel switches give access to all settings
- No need to open case to change alarm settings
- Alarm relays can directly control AC or DC loads
- Relay high voltage isolation protects module circuits
- Front panel digital display of input loop level during running conditions
- Front panel digital display of alarm setpoints during programming setup
- Can be used with any 4-20mA loop signal or sensor
- Has capability to activate/reset any relay based on errors (such as loss of 4-20mA signal or *iT*-Series communication)
- LED displays operate faster than LCD (liquid-crystal) displays, are brighter, and operate over entire industrial temperature range



Due to continued research and development, Wilcoxon Research reserves the right to amend this specification without notice.

INPUT

Front Panel Pushbuttons:

Mode/Reset	Controls mode for programming or reset of latched relays
Increase/Decrease	Changes programming parameters
Reset Input, terminal connection	Contact closure for reset of latched relays
Input signal:	
TBUS connector	Direct connect to vibration transmitter
4-20mA input	Uses signal from any 4-20mA source
Loop Load	247.5 ± 5%Ω

OUTPUT

Alarm Relay Contacts, 1Form-C	(3) Alarm Relays
Alarm Relay Function	Latching or Non-Latching
Relay Contact Load:	
@70°C (resistive)	8 Amp, 250VAC/30VDC
@85°C (resistive)	5 Amp, 250VAC/30VDC
Inductive	1/3 HP, 125VAC
Alarm Trip (each alarm)	High or low setpoint ¹
Alarm Action Delay (each alarm)	0 to 99 seconds
Alarm Setpoint (each alarm):	
Vibration Signal	0 to 99% of full scale, in 1% increments
Bias Voltage	0 to 18V in 1V Steps ⁴
Redundant 4-20mA output	2mA to 22mA ⁴

PHYSICAL

Mounting	35 mm DIN "T" rail
Width	22.5 mm
Depth, front of panel to back of DIN rail	127 mm
Height	100 mm
Front Panel Switches	Tactile Membrane
Front Panel Digital Display	Dual 7-segment yellow LED, 0.3"
Front Panel Alarm LED Display	High (red), Low (yellow) ¹ , BOV(Orange) ⁴
Connectors	4-position removable screw terminal plugs

ENVIRONMENTAL

Operating Temperature	-40°C to 85°C
Humidity, maximum	95% RH, Non-condensing
Altitude, above seal level, maximum	3,000 Meters (10,000 feet)
Power Requirements:	
Voltage	24 VDC Nominal ²
Current, maximum	150 mA ³

ACCESSORIES SUPPLIED:

- (1) *iT* 032 TBUS Connector for *iT* 401 module
- (4) *iT* 042 4-Position Wire Connectors

OPTIONAL ACCESSORIES:

- iT* 042 4-position spare wire connector for *iT*401 module
- iT* 033, *iT* 034, *iT* 035 TBUS (power) wiring connectors for use with non-*iT* 100/200/300 series transmitter modules

NOTES:

- ¹ The three front panel alarm status LED displays are tri-color, red, yellow and orange; are illuminated when that alarm is "On" with color indicating whether it was set as a "high" alarm, "low" alarm, or BOV alarm.
- ² Power for the *iT* 401 is supplied via TBUS connector inside DIN-Mount from either *iT*-Series Transmitter (using *iT* 031 and *iT* 032) or external power supply (using *iT* 032 and *iT* 033/034/035 connectors).
- ³ Current draw is determined at 24 Volts DC power.
- ⁴ When used with an *iT-series* transmitter module.

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