

# 4-20 mA alarm module

## iT401



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.

### Key features

- 35 mm DIN rail mount
- Front-panel tactile membrane switches give access to all settings
- 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 4-20 mA signal input

### Certifications



Note: Due to continuous process improvement, specifications are subject to change without notice. This document is cleared for public release.

Wilcoxon Sensing Technologies  
20511 Seneca Meadows Parkway  
Germantown, MD 20876  
info@wilcoxon.com

Tel: (301) 330 8811  
Fax: (301) 330 8873  
www.wilcoxon.com

**Wilcoxon Sensing Technologies**  
An Amphenol Company

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### SPECIFICATIONS

#### INPUT

|                                  |   |  |
|----------------------------------|---|--|
| <b>Front panel push buttons:</b> | <b>Mode/reset</b>                       | controls mode for programming or reset of latched relays |
|                                  | <b>Increase/decrease</b>                | changes programming parameters                           |
|                                  | <b>Reset input, terminal connection</b> | contact closure for reset of latched relays              |
| <b>Input signal:</b>             | <b>TBUS connector</b>                   | direct connect to vibration transmitter                  |
|                                  | <b>4-20 mA input</b>                    | uses signal from any 4-20 mA source                      |
|                                  | <b>Loop load</b>                        | 247.5 $\Omega$ , $\pm 5\%$                               |

#### OUTPUT

|  |                          |  |
|--|--------------------------|--|
| <b>Alarm relay contacts, 1 form-C</b>  |                          | (3) alarm relays                         |
| <b>Alarm relay function</b>            |                          | latching or non-latching                 |
| <b>Relay contact load</b>              | <b>70° C (resistive)</b> | 8 Amp, 250 VAC/30 VDC                    |
|  | <b>85° C (resistive)</b> | 5 Amp, 250 VAC/30 VDC                    |
|  | <b>Inductive</b>         | 1/3 HP, 125 VAC                          |
| <b>Alarm trip (each alarm)</b>         |                          | high or low setpoint <sup>1</sup>        |
| <b>Alarm action delay (each alarm)</b> |                          | 0 to 99 seconds                          |
| <b>Alarm setpoint (each alarm):</b>    | <b>Vibration signal</b>  | 0 to 99% of full scale, in 1% increments |
|  | <b>Bias voltage</b>      | 0 to 18V in 1V steps <sup>4</sup>        |
| <b>Redundant 4-20 mA output</b>        |                          | 2 mA to 22 mA <sup>4</sup>               |

#### PHYSICAL

|  |   |
|--|---|
| <b>Mounting</b>                                  | 35 mm DIN "T" rail  |
| <b>Width</b>                                     | 22.5 mm   |
| <b>Depth, front of panel to back of DIN rail</b> | 127 mm  |
| <b>Height</b>                                    | 100 mm  |
| <b>Front panel switches</b>                      | tactile membrane  |
| <b>Front panel digital display</b>               | dual 7-segment yellow LED, 0.3"   |
| <b>Front panel alarm LED display</b>             | high (red) <sup>1</sup> , low (yellow) <sup>1</sup> , BOV (orange) <sup>4</sup> |
| <b>Front panel connectors</b>                    | 4-position removable screw terminal plugs                                       |

#### ENVIRONMENTAL

|   |                             |
|---|-----------------------------|
| <b>Operating temperature</b>              | -40 to +85° C               |
| <b>Humidity, maximum</b>                  | 95% RH, non-condensing      |
| <b>Altitude, above sea level, maximum</b> | 3,000 meters (10,000 ft)    |
| <b>Power requirements:</b>                | <b>Voltage</b>              |
|   | 24 VDC nominal <sup>2</sup> |
|   | <b>Current, maximum</b>     |
|   | 150 mA <sup>3</sup>         |

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### Contact

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#### Accessories supplied:

- (1) iT032 TBUS connector for iT401 module
- (4) iT042 4-position wire connectors

#### Optional accessories:

iT042 4-position spare wire connector for iT401 module; iT033, iT034, iT035 TBUS (power) wiring connectors for use with non-iT 100/200/300 series transmitter modules

Notes: <sup>1</sup> 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.

<sup>2</sup> Power for the iT401 is supplied via TBUS connector inside DIN-mount from either iT Series transmitter (using iT031 and iT032) or external power supply (using iT032 and iT033/034/035 connectors).

<sup>3</sup> Current draw is determined at 24 Volts DC power.

<sup>4</sup> When used with an iT Series transmitter module.