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 monitorinng 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

CE

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

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Wilcoxon Sensing Technologies
An Amphenol Company

4-20 mA alarm module

iT401

SPECIFICATIONS

INPUT		
Front panel push buttons:	**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
	4-20 mA input	uses signal from any 4-20 mA source
	Loop load	247.5 Ω, ±5%
OUTPUT		
Alarm relay contacts, 1 form-C		(3) alarm relays
Alarm relay function		latching or non-latching
Relay contact load	**70° C (resistive)**	8 Amp, 250 VAC/30 VDC
	85° C (resistive)	5 Amp, 250 VAC/30 VDC
	Inductive	1/3 HP, 125 VAC
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 4-20 mA output		2 mA to 22 mA[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)[1], low (yellow)[1], BOV (orange)[4]
Front panel connectors		4-position removable screw terminal plugs
ENVIRONMENTAL		
Operating temperature		–40 to +85° C
Humidity, maximum		95% RH, non-condensing
Altitude, above sea level, maximum		3,000 meters (10,000 ft)
Power requirements:	**Voltage**	24 VDC nominal[2]
	Current, maximum	150 mA[3]

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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: [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 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).
[3] Current draw is determined at 24 Volts DC power.
[4] When used with an iT Series transmitter module.