TMO2D

Display and control module

Applications

A display/controller for use with:

- XMO2 thermoparamagnetic oxygen transmitter
- OXY.IQ galvanic fuel cell oxygen transmitter
- XMTC thermal-conductivity hydrogen/gas transmitter
- Any other 4 to 20 mA output transmitter

Features

- Two-line x 24-character backlit LCD
- Single or dual isolated, 4 to 20 mA outputs
- Up to four field-configurable process alarms
- Automatic calibration relays

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Display and control module

The TMO2D is an optional display and control module that enhances the performance and operation of transmitters such as the XMO2, XMTC or OXY.IQ. It provides a two-line x 24-character backlit LCD display, display and option programming via keyboard, recorder outputs, alarm relays, and relays for driving sample system solenoids for automatic zero and span calibration, as well as a 24 VDC power supply for the transmitter.

Autoverification/autocalibration

The TMO2D provides long-term, hands-off operation with this optional feature. When initiated, the TMO2D controls solenoid valves in the sample system to bring zero and span gases to the transmitter. Then TMO2D software compares the calibration gas readings with factory data to verify proper calibration. If an adjustment is necessary, the TMO2D makes corrections automatically and notifies the user via the front panel display and alarm contacts.
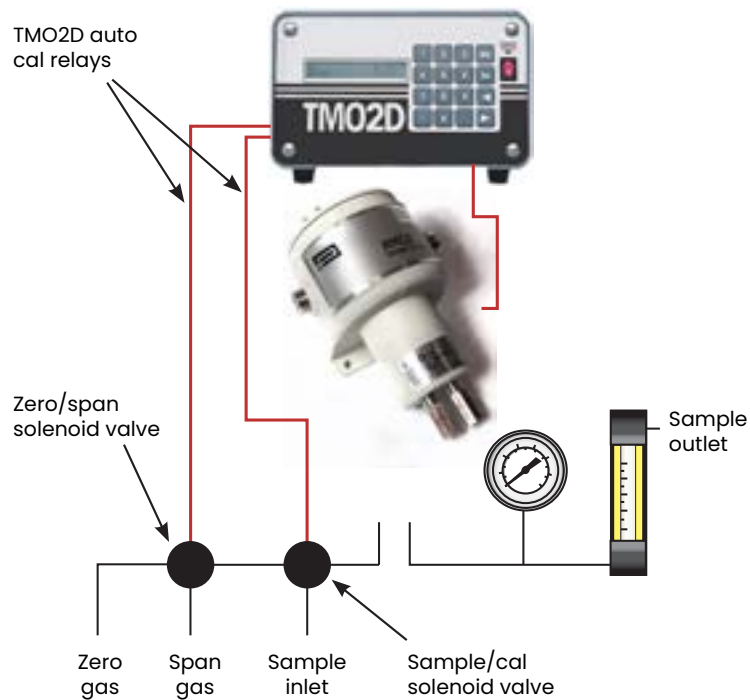

XMO2 thermoparamagnetic oxygen transmitter

XMTC thermal conductivity gas transmitter

O2X1 galvanic fuel cell oxygen transmitter

TMO2D auto cal relays

Zero/span solenoid valve

Sample outlet

Zero gas

Span gas

Sample inlet

Sample/cal solenoid valve

TMO2D with XMO2 and sample system

TMO2D specifications

Performance

System accuracy

Refer to transmitter specifications

Electronics display and output accuracy

±0.1% of span

Ambient temperature effect

±0.05% of full scale per ºF (ºC)

Functional

Analog output

- Standard: Single, isolated 0/4 to 20 mA, 500 Ω maximum, 12-bit resolution, field programmable

- Optional: Dual, isolated 0/4 to 20 mA, 500 Ω maximum, 12-bit resolution, field programmable

Alarms

- Standard: Two form C, SPDT, 2 A maximum @ 115 VAC, field programmable, 0.01% set-point resolution, 0.05% of span dead band

- Optional: Two hermetically sealed relays for class I, division 2 hazardous (classified) locations

- Two standard or hermetically sealed relays for automatic calibration (auto cal)

Digital output

RS232C serial port

Display

Two-line x 24-character backlit LCD

Analog input

- One 4 to 20 mA input from any transmitter

- Optional second 4 to 20 mA input from TMO2 transmitter

Power

100/115/220/240 VAC ±10%, 50/60 Hz, 35 W maximum provides 24 VDC, 1 A maximum to transmitter

Temperature

- Operating: 32ºF to 122ºF (0ºC to 50ºC)

- Storage: −4ºF to 158ºF (−20ºC to 70ºC)

Physical

Dimensions

- Rack mount: 5.25 in x 19 in x 9.25 in (133 mm x 483 mm x 235 mm)

- Bench mount: 5.25 in x 9 in x 9.25 in (133 mm x 229 mm x 235 mm)

- Panel mount: 5.25 in x 9 in x 9.25 in (133 mm x 229 mm x 235 mm)

Weight

- Rack mount: 5.4 lb (2.4 kg)

- Bench mount: 7.4 lb (3.4 kg)

- Panel mount: 4.7 lb (2.1 kg)

Environmental

- General-purpose: rack, bench, panel

- Non-incendive: rack, panel; FM/CSA class I, division 2, groups A, B, C and D

European compliance

Complies with EMC directive 2014/30/EU, LV directive (overvoltage category II , pollution degree 2)2014/35/EU

TMO2D specifications

Order information

Record selected option in blank indicated at bottom of form.

TMO2D display and control module

Design package

1 Rack mount*

2 Bench mount*

3 Panel mount*

Power

1 100 VAC, 50 to 60 Hz

2 115 VAC, 50 to 60 Hz

3 230 VAC, 50 to 60 Hz

4 240 VAC, 50 to 60 Hz

Output

2 Dual isolated 0/4 to 20 mA

Alarm relays

1 Dual Alaram Relays (Standard)

2 Dual alarm relays, hermetically sealed for class I, division 2

3 Dual alarm relays and auto cal**

4 Dual alarm relays and auto cal**, hermetically sealed for class I, division 2

Analyzer

1 For use with oxygen analyzer

2 For use with gas analyzer

Special

0 None

1 XMTC H2 cooled software

2 XMTC UOP software

S Special (consult Factory)

TMO2D -_ _ _ _ _ _ Use this number to order product

*Approved for division 2 with division 2 alarms

**Dual automatic calibration relays (auto cal)

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