



RAYCHEM

ELEXANT 4010I HEAT TRACE CONTROLLER



nVent RAYCHEM Elexant 4010i Series is a range of compact, full-featured, touch screen based, single-point heat-tracing controllers, with ground fault protection. It provides control and monitoring for both freeze protection and process temperature maintenance. Available with either an electromechanical relay (EMR) for use in non hazardous areas, or solid-state relay (SSR) for use in non hazardous and Class I Div. 2 / Zone 2 hazardous locations. Capable of controlling up to 32A at 277 Vac.

FEATURES & BENEFITS

Global approvals for CID2/Zone 2, ATEX Zone 2, IEC Ex Zone 2

Ready to install: no need for custom panel design or field assembly

Flexible control options: up to three directly- connected temperature sensors; also supports 4-20 mA inputs, allowing the use of external temperature sensor converters with thermocouples or other sensor types; also line sensing, ambient sensing, proportional ambient sensing control (PASC) and power limiting modes.

Flexible monitoring options: ground fault, temperature, current and voltage to ensure system integrity

Multiple communication ports: RS485 and Ethernet, readily connected to a distributed control system (DCS); support both the Modbus RTU and Modbus/TCP protocols; can network to a host PC running Windows®-based nVent RAYCHEM Supervisor software for central programming, status review, and alarm annunciation

Reliable during long life: 10 year product warranty available

Soft-Start, ground fault trip and high/low temperature limit features for equipment protection

Multiple communication ports: RS485 and Ethernet, readily connected to a distributed control system (DCS)

Support both the Modbus RTU and Modbus/TCP protocols

Automatic network configuration with DHCP, or static IP configuration

Firmware updates using USB thumb drive

Multi-language interface: English, French, German, Spanish, Russian

Two multi-purpose digital inputs for connection to external dry (voltage free) contact or DC voltage

SPECIFICATIONS

NEMA Rating 4X

Operating Temperature -40 to 60 °C

Relative Humidity 0% to 90%, Noncondensating

Control Relay Type Double-Pole, Mechanical

Control Max Voltage 277 VAC Nominal, 50/60Hz

Control Max Current 32A @ 40°C, De-Rated to 24A @ 50°C and Further De-Rated to 16A @ 60°C

Control Algorithms On/Off, PASC, Always On, Always Off

Temperature Control Range -200 to 700 °C

Temperature Alarm -200 to 700 °C

Ground Fault Alarm 10 – 500 mA

Current Alarm 0.1 – 100 A

Voltage Alarm 80 – 300 V

Autocycle 1 – 750 h

Max Power Supply Input Wire Size 16.8 mm²

Max Heating Cable Output Wire Size 16.8 mm²

Max Ground Terminal Wire Size 33 mm²

Communication RS-485; Ethernet

Communication Protocol Modbus/TCP; Modbus RTU

RS-485 Cable Type One 2-Wire, Shielded Twisted Pair

Ethernet 10/100 Base-T

Table 1/2

Catalog Number	Item Name	Material	IP Rating	Height	Width	Depth
10380-001	4010i-EMR-FW	Fiber-Reinforced Plastic	IP64	305 mm	226 mm	156 mm
10380-005	4010i-EMR-IS-FW	Fiber-Reinforced Plastic	IP64	305 mm	226 mm	156 mm
10380-007	4010i-EMR-IS-SW	Stainless Steel, 304	IP66	300 mm	231 mm	160 mm
10380-003	4010i-EMR-SW	Stainless Steel, 304	IP66	300 mm	231 mm	160 mm

Table 2/2

Catalog Number	Item Name	Intrinsically Safe Barriers on RTD Inputs
10380-001	4010i-EMR-FW	No
10380-005	4010i-EMR-IS-FW	Yes

Catalog Number	Item Name	Intrinsically Safe Barriers on RTD Inputs
10380-007	4010i-EMR-IS-SW	Yes
10380-003	4010i-EMR-SW	No

NEMA Rating 4X

Operating Temperature -40 to 60 °C

Relative Humidity 0% to 90%, Noncondensating

Control Relay Type Double-Pole, Solid-State

Control Max Voltage 277 VAC Nominal, 50/60Hz

Control Max Current 32A @ 40°C, De-Rated to 24A @ 50°C and Further De-Rated to 16A @ 60°C

Control Algorithms On/Off, Proportional, PASC, Always On, Always Off

Temperature Control Range -200 to 700 °C

Temperature Alarm -200 to 700 °C

Ground Fault Alarm 10 – 500 mA

Current Alarm 0.1 – 100 A

Voltage Alarm 80 – 300 V

Autocycle 1 – 750 h

Max Power Supply Input Wire Size 16.8 mm²

Max Heating Cable Output Wire Size 16.8 mm²

Max Ground Terminal Wire Size 33 mm²

Communication RS-485; Ethernet

Communication Protocol Modbus/TCP; Modbus RTU

RS-485 Cable Type One 2-Wire, Shielded Twisted Pair

Ethernet 10/100 Base-T

Table 1/2

Catalog Number	Item Name	Material	IP Rating	Height	Width	Depth
10380-002	4010i-SSR-FW	Fiber-Reinforced Plastic	IP64	308 mm	226 mm	184 mm
10380-006	4010i-SSR-IS-FW	Fiber-Reinforced Plastic	IP64	308 mm	226 mm	184 mm
10380-008	4010i-SSR-IS-SW	Stainless Steel, 304	IP66	308 mm	231 mm	191 mm
10380-004	4010i-SSR-SW	Stainless Steel, 304	IP66	308 mm	231 mm	191 mm

Table 2/2

Catalog Number	Item Name	Intrinsically Safe Barriers on RTD Inputs
10380-002	4010i-SSR-FW	No
10380-006	4010i-SSR-IS-FW	Yes
10380-008	4010i-SSR-IS-SW	Yes
10380-004	4010i-SSR-SW	No

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