

# Elexant 4020i Heat Trace Controller



nVent RAYCHEM Elexant 4020i 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 in three output types: a line powered relay for driving contactors in non hazardous areas; a DC output for driving solid-state relays (SSRs) in non hazardous and Class I Div. 2 / Zone 2 hazardous locations; and a 0-10V analog output for driving variable output power modules. Capable of controlling up to 60A at 690 Vac.

## FEATURES

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; a programmable dry contact alarm relay is also provided for local or remote alarm annunciation

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

## SPECIFICATIONS

|                                            |                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------|
| <b>Current Alarm:</b>                      | 0.1 – 100 A                                                           |
| <b>Autocycle:</b>                          | 1 – 750 h                                                             |
| <b>NEMA Rating:</b>                        | 4X                                                                    |
| <b>Ground Fault Alarm:</b>                 | 10 – 500 mA                                                           |
| <b>Ethernet:</b>                           | 10/100 Base-T                                                         |
| <b>Max Power Supply Input Wire Size:</b>   | 16.8 mm <sup>2</sup>                                                  |
| <b>Max Heating Cable Output Wire Size:</b> | 16.8 mm <sup>2</sup>                                                  |
| <b>Max Ground Terminal Wire Size:</b>      | 16.8 mm <sup>2</sup>                                                  |
| <b>Control Max Current:</b>                | 32A @ 40°C, De-Rated to 24A @ 50°C and Further De-Rated to 16A @ 60°C |
| <b>Voltage Alarm:</b>                      | 80 – 300 V                                                            |
| <b>Control Max Voltage:</b>                | 690 VAC Nominal, 50/60Hz                                              |

|                                   |                                                   |
|-----------------------------------|---------------------------------------------------|
| <b>Control Relay Type:</b>        | Double-Pole, Solid-State                          |
| <b>Communication:</b>             | Ethernet; RS-485                                  |
| <b>IP Rating:</b>                 | IP66                                              |
| <b>Communication Protocol:</b>    | Modbus/TCP; Modbus RTU                            |
| <b>Control Algorithms:</b>        | On/Off, Proportional, PASC, Always On, Always Off |
| <b>RS-485 Cable Type:</b>         | One 2-Wire, Shielded Twisted Pair                 |
| <b>Temperature Control Range:</b> | -200 to 700 °C                                    |
| <b>Temperature Alarm:</b>         | -200 to 700 °C                                    |
| <b>Operating Temperature:</b>     | -40 to 70 °C                                      |

Table 1/2

| Catalog Number | Item Name               | Material                 | Relative Humidity        | Height  | Width  | Depth  |
|----------------|-------------------------|--------------------------|--------------------------|---------|--------|--------|
| 10380-050      | 4020i-A-2-FW-2A1SS3-CVH | Fiber-Reinforced Plastic | 0% to 90%, Noncondensing | 625 mm  | 512 mm | 291 mm |
| 10380-051      | 4020i-A-2-FW-2A1SS3-CVH | Fiber-Reinforced Plastic |                          | 625 mm  | 512 mm | 291 mm |
| 10380-052      | 4020i-A-4-FW-4A1SS3-CVH | Fiber-Reinforced Plastic |                          | 795 mm  | 612 mm | 330 mm |
| 10380-053      | 4020i-A-6-FW-6A1SS3-CVH | Fiber-Reinforced Plastic |                          | 1025 mm | 825 mm | 291 mm |

Table 2/2

| Catalog Number | Item Name               | Circuit Quantity | Switching Capacity | Poles |
|----------------|-------------------------|------------------|--------------------|-------|
| 10380-050      | 4020i-A-2-FW-2A1SS3-CVH | 2                | 30 A               | 1     |
| 10380-051      | 4020i-A-2-FW-2A1SS3-CVH | 2                | 30 A               | 2     |
| 10380-052      | 4020i-A-4-FW-4A1SS3-CVH | 4                | 30 A               | 1     |
| 10380-053      | 4020i-A-6-FW-6A1SS3-CVH | 6                | 30 A               | 1     |

## WARNING

nVent products shall be installed and used only as indicated in nVent's product instruction sheets and training materials. Instruction sheets are available at [www.nvent.com](http://www.nvent.com) and from your nVent customer service representative. Improper installation, misuse, misapplication or other failure to completely follow nVent's instructions and warnings may cause product malfunction, property damage, serious bodily injury and death and/or void your warranty.

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