

# HSQ-6018

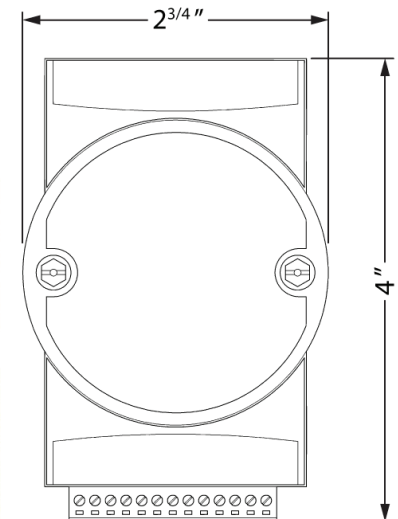
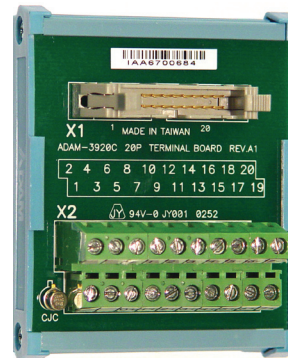
## Isolated 8-Channel Thermocouple Input, 8-Channel Digital Output Module



## Technical Summary

### Key Features

- ◇ I/O Type: Eight Analog Input, Eight Digital Output
- ◇ Supports Multi-Channel/ Multi-Range
- ◇ 10/100 Mbps Base-T Ethernet Communication
- ◇ 2,500 V<sub>DC</sub> Optical Isolation
- ◇ Separate Terminal Board



The HSQ-6018 module is the most effective temperature sensor in the industrial automation market. In addition to the eight input channels, it is also equipped with eight digital output channels, such as, auxiliary alarm outputs or pure outputs. This module comes with a DIN-rail-mounted terminal board for wiring between the module and the field sensor. This greatly enhances the accuracy and reliability for thermocouple measurement in environmental facility monitoring applications.

### SPECIFICATIONS

#### Analog Input

- **Channels:** 8 (differential)
- **Input Impedance:** >10 M $\Omega$
- **Input Type:** Thermocouple
- **Thermocouple Type and Range:**
  - J » 0 – 760° C (32 – 1,400° F)
  - K » 0 – 1,370° C (32 – 2,498° F)
  - T » -100 – 400° C (-148 – 752° F)
  - E » 0 – 1,000° C (32 – 1,832° F)
  - R » 500 – 1,750° C (932 – 3,182° F)
  - S » 500 – 1,750° C (932 – 3,182° F)
  - B » 500 – 1,800° C (932 – 3,272° F)
- **Accuracy:**  $\pm$  0.1% or better
- **Span Drift:**  $\pm$  25 ppm / ° C
- **Zero Drift:**  $\pm$  6  $\mu$ V / ° C
- **Resolution:** 16-bit
- **Wire Burn-out Detection**

#### Digital Output

- **Channels:** 8 (Open Collector to 30 V, 100 mA maximum load)
- **Power Dissipation:** 300 mW per module

#### General

- **Power Consumption:** 2 W @ 24 V<sub>DC</sub>
- **Connectors:** Plug-in screw terminal block (I/O and power)
- **Watchdog:** System (1.6 second) and Communication (programmable)
- **Power Input:** 10 – 30 V<sub>DC</sub>

#### Protection

- **Over Voltage Protection:**  $\pm$ 35 V<sub>DC</sub>
- **Isolation Protection:** 2,000 V<sub>DC</sub>
- **Built-in TVS/ESD Protection**
- **Power Reversal Protection**

#### Environment

- **Operating Temperature:** -10° – 70° C (14° – 158° F)
- **Storage Temperature:** -20° – 80° C (-4° – 176° F)
- **Humidity (Operating):** 20 – 95% RH (non-condensing)
- **Humidity (Storage):** 0 – 95% RH (non-condensing)

