

# 4-channel Analog Input

## Thermocouple and mV

### 8105-TI-TC

- 4 thermocouple or mV<sup>†</sup> input channels
- Cold junction compensation

### MODULE SPECIFICATION

See also System Specification

### INPUTS

#### Number of channels

- 4

#### THCs types

- B,E,J,K,N,R,S, or T to EN 60584-2, IEC584-2, BS4937; W3 and W5

Input Type	Range	Overall accuracy
mV	0 to +120mV	±0.1% of span (+10 to +40°C) ±0.2% of span (-40 to +70°C)
THC: B	0 to +1820°C	< 600°C 1.5°C + BTA ≥ 600°C 0.45°C + BTA
E	-270 to +1000°C	0.3°C + BTA
J	-210 to +1200°C	0.3°C + BTA
K	-270 to +1372°C	0.3°C + BTA
N	-270 to +1300°C	0.3°C + BTA
R	-50 to +1767°C	0.6°C + BTA
S	-50 to +1767°C	0.4°C + BTA
T	-270 to +400°C	0.3°C + BTA
W3	0 to +2320°C	0.6°C + BTA
W5	0 to +2320°C	0.4°C + BTA

#### Basic THC accuracy (BTA)

- 25°C ±0.05% of THC span
- +10°C to +40°C ±0.1% of THC span
- -40°C to +70°C ±0.3% of THC span

#### Cold junction compensation error<sup>†</sup>

- <± 1°C (-40 to + 70°C)

#### Resolution

- 15 bits plus sign bit

#### Common mode rejection

- > 80 dB @ 50/60 Hz

#### Series mode rejection

- > 40 dB @ 50/60 Hz

#### Maximum input voltage

- ± 4.0 V

#### Common mode voltage between channels

- ± 4.5 V (max.)

#### Isolation

- Any channel to Railbus – 250 V ac rms

#### Open circuit bleed current

- ± 0.5 µA (nom.)

### CONFIGURABLE PARAMETERS

#### Sensor type

- User selectable

#### Input dead zone (hysteresis)

- User defined value

#### Selectable input filtering

- Off / 2 reading average / running average

#### Drive on open circuit fault

- Disabled / upscale / downscale

#### Alarms

- High and low

#### Channel status

- Active / Inactive

### RESPONSE TIMES

#### Signal change to availability on Railbus

- 120 ms (min.)
- 420 ms (max.)

#### O/C sensor detection

- ≤ 10 s

### SAFETY

#### FM non-incendive field wiring parameters (each channel)

- $V_{oc} = 10.5 \text{ V}$ ;  $I_{sc} = 3.6 \text{ mA}$ ;  $C_o = 14.9 \text{ } \mu\text{F}$ ;  $L_o = 1000 \text{ mH}$

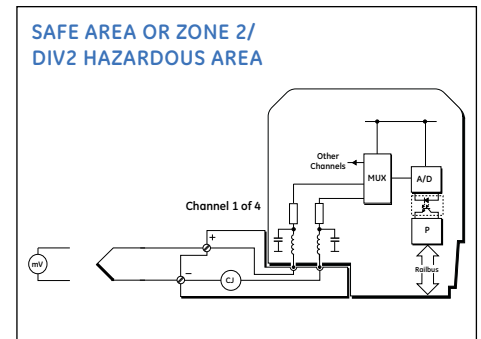
### POWER SUPPLIES

#### Railbus (12V) current

- 150 mA (typ.)
- 200 mA (max.)

#### Bussed Field Power

- Not required



### FIELD TERMINALS

Field Wiring	Recommended Field Terminal	Compatible Field Terminal
General purpose	8605-FT-TC THC	—
Class 1, Div 2 or Zone 2 hazardous area	8605-FT-TC THC	—

### MECHANICAL

#### Module Key Code

- C1

#### Module width

- 42 mm

#### Weight

- 200 g

\* Consult GE for availability

† C J compensation located in recommended field terminal