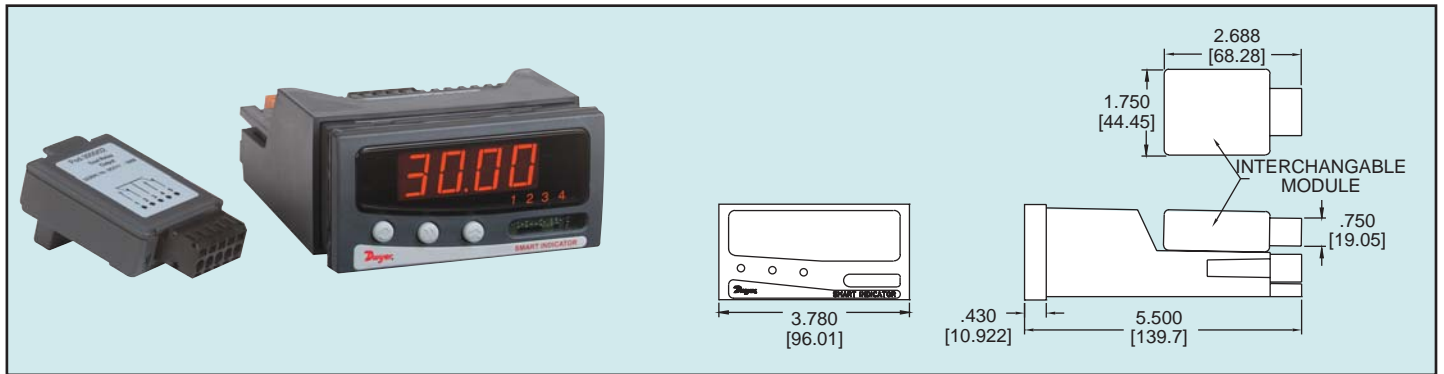




Series
SI

Smart Indicator

Temperature or Process, Interchangeable Output Modules



Series SI Smart Indicator is fully programmable and accepts all commonly used temperature or process inputs. Programming is via the front panel keys following a logical menu structure which can be set to “short” (default) for common usage features or “full” where the full range of programmable features are available. The indicator can also be programmed via a PC using the RS485 Modbus communication module. Password protection can be enabled to prevent any unauthorized setting changes. The Series SI features a 4-digit red LED with selectable resolution. The display can be set to indicate a fixed number of decimal places or auto scale for maximum resolution. Optional interchangeable modules for relay, 4 to 20mA retransmission, or Modbus RS485 serial communication output are easily installed without the need for dismantling or recalibration. Model SI-13 Smart Indicator is designed to accept 2 or 3-wire Pt100Ω RTD or Types J, K, T, R, S, E, F, N, or custom thermocouple inputs. Temperature measurements can be displayed in selectable °F or °C. High/low scale burnout, input filtering or smoothing, and offset can be defined by the user. Select Model SI-23 Smart Indicator for process signal input. The indicator has an internal power supply to provide excitation to field transmitters. Parameters such as input type, range, engineering units, resolution, burnout condition, and filter time constant can be easily programmed.

STOCKED MODEL

Model SI-13 Smart Indicator for Temperature

Model SI-23 Smart Indicator for Process

Interchangeable Output Modules can quickly be connected to the Smart Indicator and are automatically recognized. Dual relay output module has two changeover relays with a common wiper. Each relay can be set as high or low alarm independently. An isolated retransmission module provides 0 to 10mA, 0 to 20mA, or 4 to 20mA output in active (source) or passive (sink) modes. The output can be any portion of the display. The Modbus serial communication module allows communication with a PC for configuring or monitoring.

STOCKED MODELS in bold

Model No.	Module Type
SI-02P	Dual Relay Output (2 per unit max.)
SI-04P	4 to 20mA Retransmission (1 per unit max.)
SI-05P	Modbus Communication (1 per unit max.)

SPECIFICATIONS

GENERAL

- Input/Output Isolation:** 500VAC RMS (galvanically isolated).
- Display Range:** -999 to 9999.
- Output Impedance:** 700Ω @ 24 VDC.
- Power Supply:** 90 to 253VAC 50/60 Hz.
- Ambient Operating Temp.:** -22 to 140°F (-30 to 60°C).
- Filtering:** Off, 2 seconds, 10 seconds, or adaptive.
- Time Constant (Filter Off):** <1 second (to 63% of final value).
- Update Time:** 250 msec maximum.
- Weight:** 2 lb (0.9kg)

MODEL SI-13

- Thermocouple Input Range:** J: -328 to 2192°F (-200 to 1200°C); K: -328 to 2498°F (-200 to 1370°C); T: -328 to 752°F (-200 to 400°C); R and S: -14 to 3200°F (-10 to 1760°C); E: -328 to 1832°F (-200 to 1000°C); F: -148 to 1112°F (-100 to 600°C); N: -292 to 2372°F (-180 to 1300°C); custom: ±9999.
- RTD Input Range:** Pt100Ω 2 or 3-wire: -328 to 1562°F (-200 to 850°C).
- Accuracy:** T/C: ±0.04% full range input, ±0.04% rdg; RTD: ±0.01 full range input, ±0.05% of rdg.
- Thermal Drift:** Zero: 0.05µV/°F (0.1µV/°C), (RTD zero drift is 0.008°F/°F); Span: 50ppm/°F (100ppm/°C).
- Cold Junction Range:** -40 to 185°F (-40 to 85°C).
- Cold Junction Error:** ±1°F.
- Cold Junction Tracking:** 0.05°F/°F (0.05°C/°C).
- Excitation Current:** 300µA to 550µA.
- Maximum Lead Resistance:** 50 ohms/leg.

Lead Resistance Effect: 0.004°F/ohm (0.002°C/ohm).

MODEL SI-23

- Voltage Input Range:** 0 to 1V, 1 to 5V, 0 to 10V.
- Current Input Range:** 0 to 20mA, 4 to 20mA, 0 to 10mA.
- Accuracy:** ±0.05% full scale.
- Thermal Drift:** Zero: 0.05µV/°F (0.1µV/°C); Span: 50ppm/°F (100ppm/°C).
- Excitation:** 24V ±5% @ 50mA.

DUAL RELAY MODULE

- Contacts:** Two changeover relays, common wiper.
- Electrical Rating:** AC: 253V; DC: 125V.
- Maximum Load:** AC: 7A@250V; DC: 7A@30V.
- Maximum Power:** AC: 1750VA; DC: 210W.
- Connections:** 5-way tension clamp connector.

4 TO 20mA RETRANSMISSION MODULE

- Ranges:** 0 to 10mA, 0 to 20mA, 4 to 20mA (active or passive).
- Isolation:** 500VAC.
- Accuracy:** 0.07% full scale.
- Maximum Output Load:** Active: 1 K ohm; Passive: [(Vsupply-2)/20] K ohm.
- Max. External Supply:** 30V (passive).
- Connections:** 5-way tension clamp connector.

RS485 MODBUS COMMUNICATION MODULE

- Isolation:** 500VAC.
- Physical Layer:** 4-wire or 2-wire half duplex RS485.
- Baud Rate:** 19,200 or 9,600.
- Protocol:** Modbus RTU format.
- Maximum Fan Out:** 32 Units.
- Connections:** 5-way tension clamp connector.

Temperature