INDICATORS

S301 - 4 DIGIT MICROPROCESSOR INDICATOR

Microprocessor indicators programmable from keypad with ultrabright red LED 4 digit display.
This family of indicators, easy to use and program, displays directly in engineering units the signals provided by the process transducers, with display range from -1999 to 9999. The front panel with polycarbonate membrane is protected to IP41.

Universal inputs for voltage, current, resistance, heating element and thermocouple signals with filter time on input signal programmable from keypad. The inputs are protected against overvoltages and overcurrents.



Stabilized 20Vdc 20mA power supply for transducer.

Retransmitted output with current signal 0-20 / 4-20 mA or voltage signal 0-5 / 1-5 / 0-10 / 2-10 Vdc.

Optional board with 3 relay alarms (capacity 250Vac/8A) or with 4 open collector alarms (capacity 300mA/35V) with programmable threshold values and hysteresis.
Optional board for RS232 and RS485 serial interface selectable by monitoring and remote programming.

MAIN FEATURES

- 4 figure with red LED display 14 mm in height, 4 LED for alarm indication
- High wear resisting keyboard and optimal tactile sensation
- Measure of mA, mV, V, Pt100, thermocouple, with inputs protected against over-voltage and over-currents
- Internal resolution of 20000 points
- Rejection to the network frequency in a differential way min 40 dB (50 Hz)
- Input by contact with HOLD function
- Memorising of the peak upper and lower values
- Polarity selection of the BURN-OUT function
- Analogue output mA/V galvanic isolated with settable scale
- Optional serial interface for remote monitoring and programming
- Optional alarm outputs : 3 SPDT or 4 open-collar completely configurable relays (delays, hysteresis, alarm type, …)
- Frontal with polycarbonate membrane and IP41 protection grade
- Extractable terminal box for connecting and replacing

TECHNICAL DATA

- Power supply :

S301-1-xx : 115 - 230 Vac +/-10% 50 / 60 Hz
S301-23-xx : 24 Vdc-ac +/- 10%

- Power consumption : 4 VA
- Galvanic separation :

S301-1-xx

supply // input and supply // retransmitted output : 3700 Vac
input // retransmitted output : 500 Vac
S301-23-xx
supply // input and supply // retransmitted output : 1500 Vac
input // retransmitted output : 500 Vca

- Multi-scale universal input :

Thermocouple	Pt100	Potentiometer	Voltage (bipolar)	Current (bipolar)
J : -200 / +800 °C K : -250 / +1200 °C R : 0 / +1600 °C S : 0 / +1600 °C T : -200 / + 400 °C B : 0 / +1800 °C	-200 / +650 °C	0,5 / 15 kohm	0 / 200 mV 0 / 2 V 0 / 5 V 0 / 10 V	0 / 20 mA

- Input impedance :

- approx. 60 ohm for current input
- 1 Mohm for voltage input

- Input resolution :

- thermocouple: resolution 2,5 uV, automatic TC interruption detection
- Pt100 : 3 wires measurement, exciting current 0,56 mA, resolution 0,05 °C, automatic RTD or cables interruption detection
- potentiometer : minimum span 500 ohm, resolution 0,005%, exciting current 0,56 mA
- voltage : resolution 0,005%
- current : resolution 0,005%

- Transducer power supply : min. 20Vdc 20mA
- Errors :

Input	Precision	Linearity	Thermal stability	Other
Voltage / Current	0,1% o.r.	0,01%	0,01%/°C	+/- 1 digit 1% d.s. (3)
Potentiometer / Pt100	0,2% o.r.	0,05% (2)	0,01%/°C	+/- 1 digit 1% d.s. (3)
Thermocouple	0,2% o.r.	0,2 - 0,5% (1)	0,01%/°C	+/- 1 digit 1% d.s. (3)
Cold junction compensation	1 °C from 20 to 40 °C ambient			
Retransmitted output (4)	0,1% o.r.	0,1%	0,01%/°C	

(1) depends on thermocouple type and range selected
(2) cable resistance effect 0,05%/ohm (max. 10 ohm)
(3) for possible EMC interferences
(4) to sum to the other errors of selected input

- Sampling frequency : 3 samples / second
- Output impedance:

- 0 - 600 ohm current loop impedance
- load for voltage output > 2,5 Kohm

- Output resolution :

- 0,025% for 0 - 20 mA / 0 - 10 V / 0 - 5 V
- 0,032% for 4 - 20 mA / 2 - 10 V / 1 - 5 V

- Alarm outputs :

- 3 relay outputs each with 1 SPDT changeover 5 A 250 Vac (resistive load)
- 4 open-collector outputs 300 mA 35 Vdc

- Input protection :

- current input 200 mA continuous
- other inputs 60 V continuous

- Output / supply protection : from impulsive overvoltages 400 W/ms
- DATA memory : EEPROM for configuration parameters, 10 years retaining memory
- Operating temp. : 0 / + 55 °C
- Humidity : 90% a 40 °C (non-condensing)
- Dimensions (b x h x d) : 96 x 48 x 149 mm
- Weight : approx. 500 g.

ORDERING CODES

Code	Power supply	Retransmitted output	Alarms	Serial interface RS232/485
S301-1-R	115 - 230 Vac	X	-	-
S301-1-R-AR-S	115 - 230 Vac	X	3 relays	X
S301-1-R-AOC-S	115 - 230 Vac	X	4 oc	X
S301-23-R	24 Vdc-ac	X	-	-
S301-23-R-AR-S	24 Vdc-ac	X	3 relays	X
S301-23-R-AOC-S	24 Vdc-ac	X	4 oc	X

For more info please refer to the operating manual

Characteristics can be subject to change without notice

Download documentations referring to this product:

- **Operating manual**
- **Serial interface manual**
- **Data sheet (this page)**
- **CE conformity declaration**

Documentations' consultation requires Adobe Acrobat Reader.