senso

1/8 DIN Process Indicator

AK30

The model AK30 is an universal process indicador with advanced features.

All its inputs, outputs and options are fully user configurable.

Applications

The model AK30 is multipurpose process indicador to be used for temperature, pressure, weight, and many other applications.

The instrument can be equipped with an analog retransmisión output, serial communications or 24Vdc transmitter power supply.

General features

Standard:

Universal Input
Fully configurable input for thermocouple, RTD, voltaje, current loop or strain gage.

Strain gage excitation
Gage excitation output: 10Vdc.

Transducer Calibration
The CAL function is specific for plastic melt pressure. (see P500 series of SALVIO transducers).

Alarms
Equipped with 2 SPST fully configurable alarm relay output.

Rear wiring
The wiring is made with screwed terminals. The recommended terminals are 'fork' type.

Options:
AK37 module: To have the 24Vdc transmitter power supply.
AK35 module: User seectable analog retransmission 0..20mA, 4..20mA, 0..5Vdc or 0..10 Vdc.
AK36 module: RS485 MODBUS/RTU protocol serial communications.

Specifications

Case
1/8 DIN 43700 (96x48 mm , horizontal mounting), front removeable.

Display
Type: 5 red digits, 7 LED segments, 13 mm for the process value.
2 alarm status indicators.

Thermocouple Input
User configurable:
Type: J : 0..600°C (Fe-CuNi , IEC584)
L : 0..600°C (Fe-CuNi , DIN43710)
K : 0..1200°C (NiCr-NiAl , IEC584)
N : 0..1200°C (NiCrSi-NiSi , IEC584)
T : 0..400°C (Cu-CuNi , IEC584)
R : 0..1600°C (Pt / 13%Rh-Pt , IEC584)
S : 0..1600°C (Pt / 10%Rh-Pt , IEC584)
Cold junction compensation accuracy: betteer than 0.5°C after 30 minutes.
Sensor break indication: Up Scale
Measuring units: °C or °F
Measuring resolution: 14 bit
Measuring accuracy: better than +/- 0.25% fsv (full scale value).

RTD Input
2 user configurables ranges:
-99,9..200,0°C Pt100 (IEC751)
-200..600°C Pt100 (IEC751)
Configuration: 3 wires
Sensor break indication: Up Scale
Measuring units: °C or °F
Indicatting resolution: 1 o 0,1 °C/°F
Measuring accuracy:
Better than +/- 0.3°C in the range of –99..200.0°C
and +/-1°C in the range of –200..600°C

Linear current input
Input signal: 0..20mA or 4..20mA , user configurable.
Measuring range: configurable beetween 0 and 99999.
Sensor break: Up Scale.
Configurable decimal point.
Input impedance: 150Ω

Linear voltage input
Input signal: 0..5Vdc or 0..10Vdc, user configurable.
Measuring range: configurable beetween 0 and 99999.
Sensor break: Up Scale.
Configurable decimal point.
Input impedance: > 1MΩ

Strain Gage input
350Ω strain gage.

Transducer excitation
Gage excitation: 10Vdc (100 mA)

Alarm relays
SPST relay (1A@250 Vac).

Transmitter power supply (as option)
24 Vdc output (40mA).

Power supply
85..265 Vac , 50/60 Hz.
Optionally: 21..53 Vac/Vdc.

Power consumption
8VA.

Room conditions
Operating: 0..50°C
Storage: -10..60°C
Humidity: 0..95 % HR without condensation

Protection degree
IP50 in the front

Case
ABS self extinguishing

Dimmensions
48 x 96 x 98 mm.

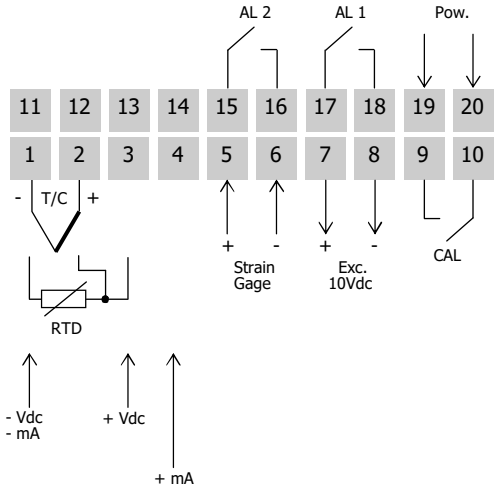
Panel cutoff
45,5 x 91,5 mm. (+/- 0,5 mm.)

Weight
220 grs.

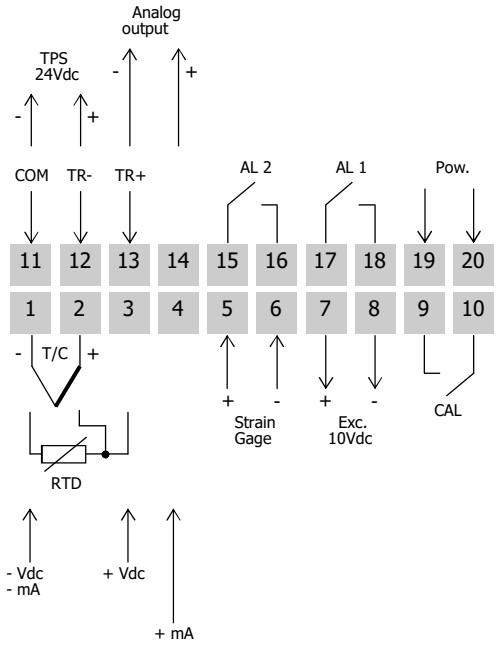
CE conformity (industrial and commercial env.)
Safety: EN61010
Immunity EMI: EN50082-1
EN61000-4-2, electrostatic disch. EN61000-4-3, radiated fields
EN61000-4-4, burst EN61000-4-5, surge
EN61000-4-6, injected currents EN61000-4-8, magnetic field
EN61000-4-11, PQT
EMI emission: EN50081-1
EN55022-b, conducted EN55022-b, radiated
Armonics: EN61000-3-2
Voltage variations: EN61000-3-3

Wiring options

Base wiring



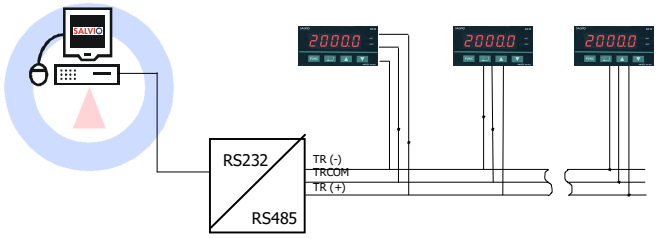
Wiring depending on the options



Options

All options are Plug & Play and user configurable

RS485 serial communications
Multiple instruments linked via a single communications loop with MODBUS/RTU™ protocol (AK36 module).
There is the **AKROSOFT** software for an easier configuration
The communications link is RS485 , 2 wire + common , half duplex.
There is an specific instructions manual for the communications protocol.



Converter

Linear retransmission
The AK30 indicador can be equipped with the AK35 module that will install the user configurable analog retransmisión output.
Can be configured as direct or reverse. The range is also user configurable.
Can be selected as:
0..20 mA (500Ω max.) 0..5 Vcc (20 mA max.)
4..20 mA (500Ω max.) 0..10 Vcc (20 mA max.)

Transmitter power supply
With the AK37 module, the instrument can be equipped with a 24Vdc power supply for an analog transmitter

Ordering code

Model	Base Options	Power Supply
	0: No options **1**: AK35 analog output **2**: AK36 serial communications **4**: AK37 transmitter power supply	**1**: 85..265 Vac 50/60 Hz **2**: 21..53 Vac/Vdc
AK30	1	1

Example: AK30-11

The AK35, AK36 and AK37 can be ordered separately.

Where to find us ?

Few words about us

SENSO is a company based in Mataró at 30Km north of the Barcelona area.
Our activity is electronic instrumentation and sensors for temperature and pressure measurement and control.
We have also a good reputation on plastic injection moulding systems.

You will find us at:

http://www.senso.es

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