

SAFIR

PROGRAMMABLE MULTI-FUNCTIONS
DIGITAL INDICATOR, WITH INFRARED TERMINAL



Le sens de la mesure sur toute la gamme

F.T. : 192A - 12/97

STANDARD SPECIFICATIONS

- * **Universal input signal :**
Process, temperature, current, voltage, frequency
- * **6 digits display**
- * **2 isolated logic inputs**
- * **1 isolated auxiliary power supply**
- * **6 alarm thresholds**
- * **8 warning LED in front panel**
- * **Linearization on 20 segments**
- * **Statistics and ratio calculations**
- * **Auto/manu station, setpoint generator**
- * **Integration - Totalization on 6 digits**
- * **Configuration on keyboard or through a software**
- * **Infrared remote control transfer**



UNIVERSAL DIGITAL INDICATOR 6 DIGITS

SAFIR is a single channel digital indicator that admits all input signal types used in the process industry. It is the first unit which can enter all the input signals such as process ones, direct temperature, resistances and potentiometers, voltage and current high or low level AC and DC, frequency, tachometer and periodmeter.

In standard version, SAFIR includes two logic inputs and an auxiliary power supply 24 Vdc for transmitters or two-wire sensors.

CALCULATOR - INTEGRATOR

SAFIR contains several processing functions on the process variable : linearization on 20 segments, statistics calculations (mini, maxi, average, standard deviation) and ratio.

SAFIR can also integrate an analog or logic signal, with or without pre-selection and can display the totalized value on its 6 digits.

According to the chosen option and to the specifications of the three available slots, the indicator can also be used as a setpoints generator, as a manual use station, or even as an alarms station.

A digital RS based on the MODBUS protocol allows the integration of SAFIR in a communication network.

INFRARED-BASED CONFIGURATION

The configuration of the SAFIR indicator can be performed using the front panel keyboard.

It can also be done with a PC through an infrared interface set. This remote control unit allows the storage of the configurations on a memory card (credit-card-sized) that can be plugged in it.

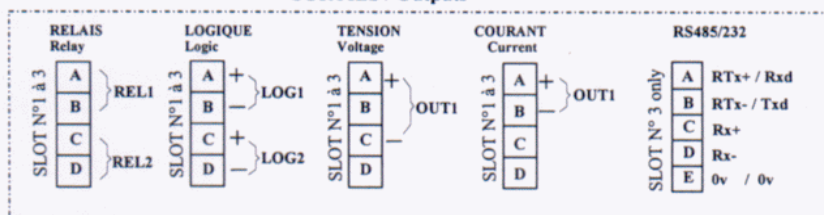


TECHNICAL CHARACTERISTICS

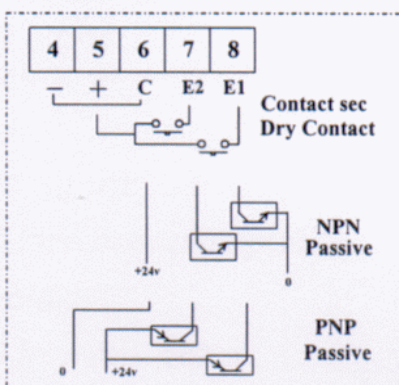
DISPLAY	Continuous display on one channel. A 7-segment display, 6 red digits of 13.6 mm height. 8 red LEDS, status lights.	
ACCURACY	0,1 % on linear inputs. 0,1 % of the nominal range on the TC and RTD inputs + internal cold junction compensation (0,6°C at 25°C + 0,6°C / 10°C).	
ANALOG INPUTS	Thermocouple K : -270 to 1373°C Thermocouple J : -210 to 1200°C Thermocouple T : -270 to 360°C Thermocouple S : -50 to 1767°C Thermocouple R : -50 to 1767°C Thermocouple N : -270 to 1300°C Thermocouple B : 0 to 1820°C Thermocouple E : -270 to 1000°C Thermocouple W ₅ : 0 to 2300°C Special Couple : 18/70/1000mV RTD at 0°C : 3 wires -200 to 650°C	Resistance : 3 wires 0 to 100 KΩ Potentiometer : 0-80 Ω, 0-330 Ω, 0-100 KΩ Continuous voltage: ± 18mV ; ± 70mV ; ± 1000mV (low level) Continuous voltage: ± 10V ; ± 200V ; ± 400V (high level) Continuous current : ± 25mA (low level) Continuous current : ± 5 A, on shunt of 15mΩ Alternative voltage : 10V _{RMS} ; 250V _{RMS} ; 440V _{RMS} Alternative current : ± 5 A _{RMS} , on shunt of 15mΩ
LOGIC INPUTS	NPN or PNP, isolated by opto-coupler. Logic level 1 : U > 11 Vdc Logic level 0 : U < 2 Vdc Maximum frequency : 7 KHz	
AUXILIARY POWER SUPPLY	22 to 28 Vdc, 50 mA	
OUTPUTS	Current : 4-20 mA or 0-20 mA, maximum load : 750 Ω Voltage : 0-10 V, 50 mA 2 relays : 2 relays, 3 A, 250 Vac or 30 Vdc 2 logic : 10 V, 20 mA Digital RS : RS 232 single-point RS 485 multi-points, 32 connections	
SAMPLING	80 mSec	
POWER SUPPLY	85 to 265 V AC/DC consumption 6 VA or 24 / 48 V AC/DC Installation class 2 (NF EN 61010-1 standard)	
ISOLATION	500 V	
TEMPERATURE LIMITS	User mode : 0-50°C. Variation : 150 ppm/°C Storage : -20 to +70°C	
MECHANICAL CHARACTERISTICS	Dimensions : 48 x 96 x 140 mm Cut-out : 45 x 92 mm Weight : 0,4 Kg Front panel : Auto-extinguishible NORYL Protection : IP 54 Terminals to be screwed : 2 x 1,5 mm ²	
ELECTRICAL CHARACTERISTICS	CAT III / 265 V _{RMS} CAT II / 440 V _{RMS} Pollution degree : 2 Electromagnetical compatibility : EMI Severity level 3 (NF EN 50081-1 and NF EN 50082-2 standard)	

CONNECTIONS

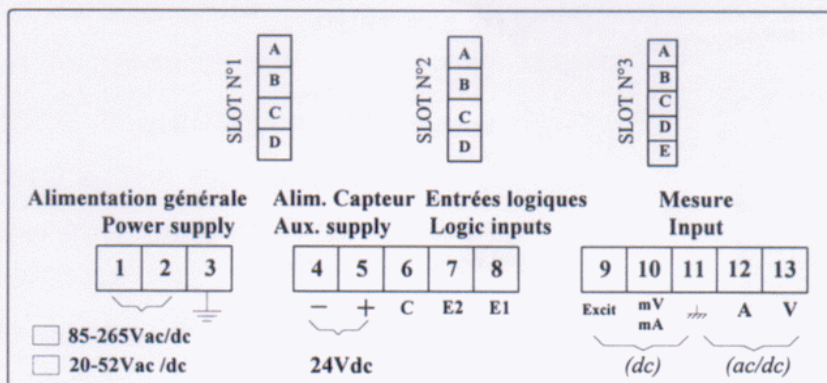
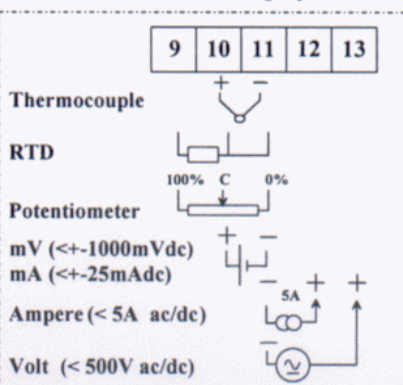
SORTIES / Outputs



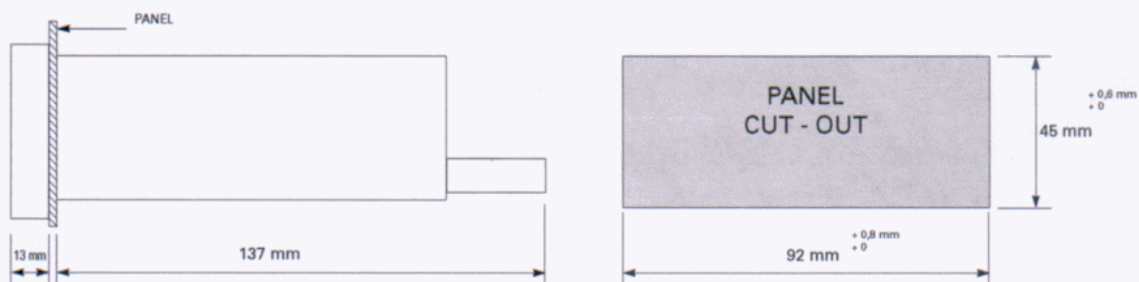
ENTREE LOGIQUE / Logic Input



ENTREE MESURE / Analog Input



DIMENSIONS



CODIFICATION

POWER SUPPLY

A0 92 to 265 Vac/dc

A1 20 to 60 Vac/dc

RMS INPUT

R0 Without

R1 With

SLOT 1 OUTPUT

S0 Without

S1 Current 4-20 mA

S2 Voltage 0-10 V

S3 2 logic

S4 2 relays

S5 Auxiliary power supply

SLOT 2 OUTPUT 2

0 Without

1 Current 4-20 mA

2 Voltage 0-10 V

3 2 logic

4 2 relays

5 Auxiliary power supply

SLOT 3 OUTPUT

0 Without

1 Current 4-20 mA

2 Voltage 0-10 V

3 2 logic

4 2 relays

5 Auxiliary power supply

6 Digital RS 232/485

EXPANSION BOARD

E0 Without

E1 In progress

OPTIONS

OP00 Without

OP01 Shunt (quantity and values to be specified)

OP02 Tropicalization

SAFIR A0 R0 S0 0 0 E0 OP00

Accessories : Configuration kit H 10536 including

- Infrared remote control unit H 10537
- Configuration software H 10538
- Connection cable H 10539

MESURE CONTROLE COMMANDE

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