PROGRAMMABLE CONVERTER

µC 3200I / 10I / 10IC

Features

►**Frequency measure or counting input**:
Possibility of connection (without external components) to sensors of the type npn, pnp, logic, namur, contact, alternating up to 500 V.
µC 10I/µC3200I: Mode frequencymeter
µC 10IC: Mode counting

►Logic input
►Self-diagnosis
►Insulation between input / outputs / supply
►Universal power supply: 20 to 270 VAC
20 to 300 VDC
►**1 insulated analog output (A) µC 10I/10IC**
Programmable in 0-4-20mA (active or passive) current, or in 0-10V voltage.

► **2 insulated fast analog outputs**
µC3200I
0-4-20mA current or 0-10V voltage (specify on order)
► **Relay outputs** (**R**):
µC3200I: 2 relays 1NO: 5A/250 Vac on resistive load
µC 10 I / 10IC: 2 inverting relays 8A/250 Vac on resistive load
► **Digital output** (**N**) insulated: µC 10I/ 10IC
RS 485 Modbus /Jbus
(Possible only with an active current output)
► **Mode driver**: the analog output is piloted either locally by the mciro-console or by the digital data link (µC 10I/ 10IC).
► Function simulation of the input measure
► Programming with the **micro-console** or by PC via the software **MCVision**.

CONVERTERS

Functions

• **Frequency measure or counting input**:

In mode frequencymeter: µC 10I/3200I
- Measurement of a signal varying from 0.01 Hz to 130kHz (according to the input type), with an accuracy of 0.025% of the measure and a thermic drift < 50 ppm/°C.
- Special linearisation in 41 points.
- Enlarging effect

In mode counting: µC 10IC
- Programming of a pulse weight, of an initialisation value and a self-initialisation setpoint.
- Saving of the counter in case of power supply cut.

• **Logic input**

Type of sensor: potential free contact, logic (0-5 V)
Not insulated from the measure input
Display hold
0 reset of the min. and max.
0 reset / re-load / counter stop and start (µC 10IC)

Configuration

A range of measure interfaces fully programmable either with the micro-console or by PC (configuration software for all the range of SFERE programmable converters)

• **Programming with the micro-console**

This miniaturised micro-console connected on the front face of the instruments allows:
the visualisation of the measure and the status of the analog and relay outputs,
the visualisation and the modification of the programming,
the teleloading of programming files for duplication to other converters.

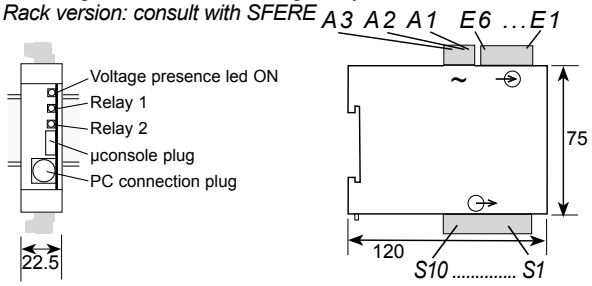
• **Configuration software**

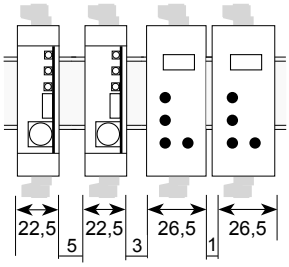
Programming software (Windows environment) allowing:
the storage of configurations as files which can be consulted, modified, duplicated or loaded into the converters,
the edition and printing of files with or without having a converter connected.

• **Digital data link RS485** (Modbus/Jbus)(µC 10I/10IC)
Allows the communication with processing and explotation sets (PLC's), as well as a complete configuration of the input, the output and the safeties.

Dimensions

Self-extinguishing case of black UL 94VO ABS
Mounting in switchbox: latching on symmetrical DIN rail.
Rack version: consult with SFERE





Dimensions : 22.5x75x120 mm
With µconsole : 26.5x80x130 mm

To allow inserting the µconsole: mount the instruments vertically (on horizontal DIN rail) leaving a 5mm space between each.

Operating T°: -10° to 50°C
Storage T°: -20 to 70°C

CA
CO/96

Features

Frequency measure or counting input

- **Sensor type**: npn, pnp, logic, namur, contact, alternating.

- Logic: voltage up to 18V
  Low level ≤ 1.2 V
  High level ≥ 2.1 V
- Npn or contact:
  Input resistance from 4.7KΩ to +18 Vdc
- Pnp :
  Input resistance 10 KΩ to the GND
- Namur :
  8.4 V supply (10 mA max.)
  Input resistance: 1 KΩ to the GND
  Low level ≤ 1.2 mA
  High level ≥ 2.1 mA
- Alternating:
  Signal ranging from 5 to 500 Veff.
  Input resistance: 1 MΩ

- **Measurable frequency** from 0.01 Hz to 130 KHz according to the type of sensor.
- **Accuracy:** 0.025% of the measure
- **Scale factor** programmable
- Enlarging effect
- **Linearisation**:
- Linear input or special linearisation in 41 points (in x and in y)
- Cut off programmable
- **Filtering:**
  Programmable analog filter: allows suppressing any parasite noises.
  Digital filter, coefficient and action range programmable allows stabilising the display in case of unsteady input.
- **Sampling time**:
  1 measure window + 1 signal period
  Measure window: Programmable for the µC3200I (from 0.5 to 100 ms)
  100 ms for the µC 10I
  - Programming of the minimum measurable frequency

Outputs

Code	Types of **OUTPUTS**		Features
A	1 µC 10I/10IC)	Current and/or Tension	Current: direct or reversed 0-20mA Load impedance ≤ Lr 600Ω Voltage: direct or reversed load impedance ≥ 5kΩ
	2 (µC3200I)* analog		
R	2 relays 1 NO(µC3200I) 2 relays 1NO-NC (µC 10I/10IC)		2 setpoints per relay, configurable on the whole MR. Hysteresis programmable from 0 to 100%. Time delay programmable from 0 to 25 sec. 5A/250V (µC3200I) on resistive load 8A/250V (µC10 I) Mode alarm (setpoint or window) or mode pulses (µC10IC)
N	(1) RS485 Protocole Modbus/Jbus (EIA RS485) insulated digital data link. (with or without parity, even or odd; 1 or 2 stop bits) (only on µC 10I or IC with active current output)		

*For the µC3200I outputs are in standard and the choice current or voltage must be specified on order.

Galvanic partition: 2kV-50Hz-1min. between supply, input, analog output, relay outputs and digital output (µC10I/10IC) 1 KV, 50Hz, 1 min. between the analog output and the digital output (µC10I/10IC) or between the 2 analog outputs (µC3200I)

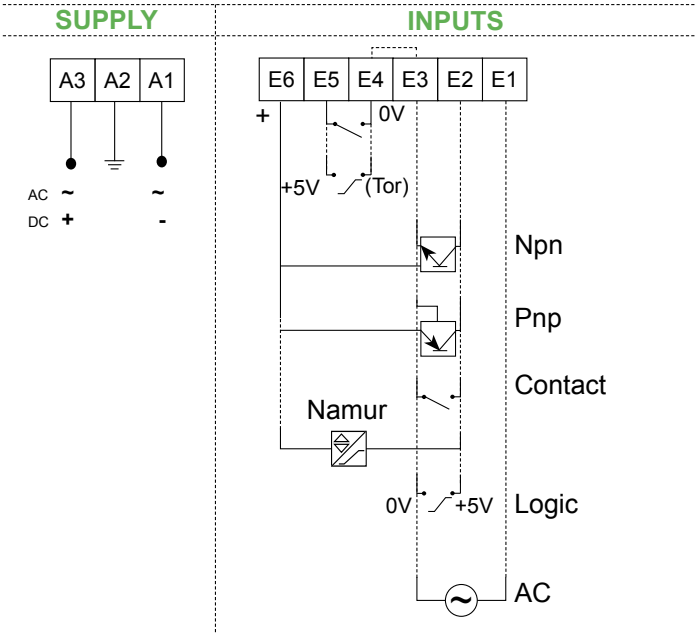
- **Power supply:**
  20 to 270 VAC and 20 to 300 VDC
  Power draw: 4 W maximum, 7 VA maximum

♦ CE according to IEC 61000-6-4, IEC 61000-6-2 (industrial environment).

♦ Disturbance immunity according to the standard IEC 61000-6-2(IEC 61000-4-3 level 3, IEC 61000-4-4 level 4, IEC 61000-4-6 level 3)

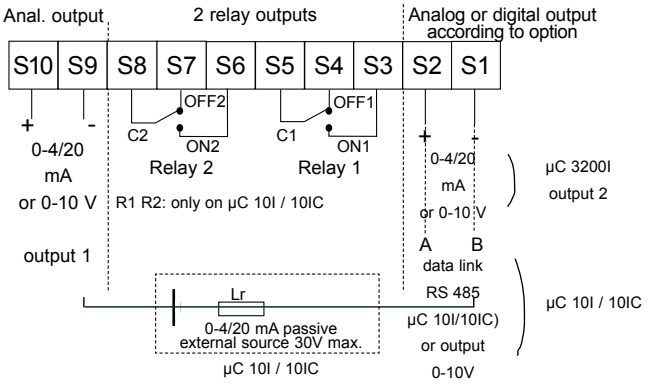
Wiring

Upper connectors



Lower connector

OUTPUTS OF THE µC 3200I / µC 10I/IC



Coding

Type µC 10 I ARN

Versions:
10I/3200I Frequency input version
10IC Counting input version
K Rack version (consult)

Outputs:
A 1 Analog I/U insulated
R 2 inverting rel. 1NO or NO-NC
N Data link RS 485 (µC 10I/10IC)

Available versions: (consult with us for different configurations)

µC 10I	A	AR	ARN
µC 10IC	-	AR	ARN
µC3200I		R	-

Order example: for converter with frequency input + analog output + 2 relays, request the reference:
µC 10I AR

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