

Display Universal Counter, frequency

Series IN 4896 HZ



Ref : I FP 2118

Rev :

DESCRIPTION

This device is a multi-function Counter/ Frequency/ Stopwatch display, 6 digits, developed for maximum Efficiency and for the comfort of the user while keeping attractive prices.

The indicator is based on a single chip microcontroller, which guarantees good precision, stability and Ease of control of the instrument

CONTROL

The device is developed and controlled by five keys, positioned opposite front of the device. All device settings can be made by 3 types of programming:

THE LIGHT MENU is protected by an optional numeric code and contains only the stations required for adjusting the device.

THE PROFI MENU is protected by an optional numeric code and contains the entire device setting.

THE USER MENU can contain arbitrary items, chosen from the menu programming (LIGHT / PROFI) to which permission is given (see or edit). Access is free, without the password.

The device is equipped as standard with the OMLink interface which allows you to modify the program and save all device settings as well as update the internal software of the device (with the OML cable).

All settings are saved in EEPROM memory (they remain in memory in the event of a power failure).

OPTION

TWO ALARMS are assigned to monitor two limit values with one relay output. Limits have adjustable hysteresis in the display range as well as the adjustable switch-on time from 0 to 99.9 s. Exceeding preset limits is signaled by an LED and by switching on the relay concerned.

THE COMMUNICATIONS OUTPUTS are, for the transmission of the measurement for display repetition or even directly in the control systems. Isolated type RS232 and RS485 with the ASCII / PROFIBUS protocol.

Isolated **ANALOG OUTPUTS** are useful when you need to process data in an external system. This universal SA allows the selection of the output type - voltage / current. The analog output value corresponds with the displayed values, the type and the range can be selected in the menu.

TIME SAVE even in the event of a power outage (on a fault the device is switched off)

STANDARD FUNCTIONS

PROGRAMMABLE DISPLAY

Input: NPN, PNP, on contact

Parameter: Counter / Frequency meter / Clock mode measurement with coefficient adjustable calibration, time base and projection

Measurement mode: Counter / Frequency meter / C-D / Quadrature counter

Measuring channel: A and B, on an input measuring two independent functions can be performed (Counter and Frequency)

Time base: 0.1... 50 s

Display: -99999... 999999 with floating point or fixed format 10/24/60

SENSOR EXCITATION

Range: 5/12/17/24 VDC / 100 mA, for supplying sensors and transmitters

FUNCTION

Linearization: 25-point linearization curve (only with OM Link)

Tare: designed to reset the display to zero when the input signal drifts

Preselection: setting of preselection other than Zero during a reset

Preselection value: value from which counting begins

Cumulative totalization: cumulation of several totalization

Time saving: The time continues to be measured, even if the power is on cut. (The display is off)

DIGITAL FILTER

Exponential average: over 2... 100 measurements

1 / Fr.: filter to convert frequency into time

Rounding: setting the filter for the display

Filtration constant: transmits the input signal up to 5... 1000 Hz

EXTERNAL ORDER

Blocking: display blocking

Lock: key lock

RESET: counter reset

Start / Stop: Stopwatch / Hours

TECHNICAL DATA

| MODÈLE | |
|-------------------------------|--|
| Input Nombre inputs | 2 |
| UQC input | Selectable in the menu on contact, TTL, NPN / PNP 0... 30/300 V, the levels are adjustable in the menu or automatic |
| Frequency. input | 0,1 Hz...50 kHz (Mode SINGLE) 0,1 Hz...20 kHz (Mode UP/DW) 0,1 Hz...20 kHz (Mode UP-DW) 0,1 Hz...20 kHz (Mode QUADR -frequency) 0,1 Hz...10 kHz (Mode QUADR. - counter) (for duty cycle 50%) |
| Modes Measured | SINGLE Counter / Frequency meter QUADR Counter / Frequency meter - Quadratur UP / DW UP / DW Counter / Frequency meter - measurements on inputs A, B (direction) and can display Numbers / Frequency UP - DW UP - DW Counter / Frequency meter - measurements on inputs A (UP), B (DW) and can display Numbers / Frequency TIME Stopwatch RTC Stopwatch |
| Base of time | 0,5/1/5/10 s |
| Constant Calibr. | 0,00001...999999 |
| Preselection | 0...999999 |
| Constant filtration | 0/5/40/100/1000 Hz |
| Function | Preselection Cumulative totalization Single setting of the initial value Time saving (Clock / Stopwatch) |
| External inputs | 1 Input, on contact The following functions can be assigned OFF input off LOCKK key lock HOLD display / indicator lock TARE tare activation CLEAR RESET Display CLR.ST. Counter / stopwatch reset and preset SUM. Sum display CL.SUM. Sum reset COUNT. Switching Counter / Frequency meter Display |

DISPLAY

Display: -99999... 999999, 7-segment monochrome LED;

-999... 9999, 3-color LED with 7 segments

Height of figures: 14 or 20 mm

Display color: red or green (height 14 mm)

red / green / orange (height 20 mm)

Comma: adjustable in the menu

Brightness: adjustable in the menu

ALARMS

Type: digital adjustable in the menu, response time <50 ms

Hysteresis mode: switching limit, hysteresis band "Lim $\pm 1 / 2$ Hys."

And time (± 99.9 s), which determine the switching delay

C-Puls mode (L1) - Automatic reset of the counter to the set value

Once mode (L1) - The limit is active only once, to turn it off counter must be cleared

On Run Mode (L2) - The output is active when the stopwatch is running

Output: 1... 2x Form A Relay (250 VAC / 30 VDC, 3 A);

1... 2x open collector (30 VDC / 100 mA)

DATA OUTPUTS

Protocol: ASCII, PROFIBUS DP

Data format: 8 bit + no parity + 1 stop bit (ASCII)

Speed: 300... 230,400 Baud

9,600 Baud... 12 Mbaud (PROFIBUS)

RS 232: isolated

RS 485: isolated, addressing (max. 31 devices)

POWER SUPPLY

Range: 10... 30 V AC / DC, $\pm 10\%$, PF ≥ 0.4 , I_{STP} <40 A / 1 ms, isolated

80... 250 V AC / DC, $\pm 10\%$, PF ≥ 0.4 , I_{STP} <40 A / 1 ms, isolated

Consumption: <6.9 W / 7.3 VA

The power supply is protected by a fuse inside the device

MECHANICAL CHARACTERISTICS

Material: Noryl GFN2 SE1, non-flammable UL 94 V-I

Dimensions : 96 x 48 x 120 mm (W x H x D)

Drilling dimension: 90.5 x 45 mm (w x h)

SENSOR EXCITATION

Adjustable : 5/12/17/24 VDC / max. 2.5 W, insulated

DEVICE ACCURACY

TC: 50 ppm / ° C

Accuracy: $\pm 0.01\%$ of range + 1 digits (frequency)

$\pm 0.02\%$ of range ± 2 ms (Stopwatch)

$\pm 0.02\%$ of range ± 130 ms (RTC)

Possible overload: 2x; 10x (t <30 ms) - not for 300 V

Watchdog: Reset after 500 ms

Digital filter: exponential average, rounded, filtration constant, 1 / Fr.

Function: Save count values, Save time,

Preselection, Totalization, Tare

OM Link: Communication interface for Control, Adjustment and Update of devices

Calibration : at 25 ° C and 40% RH

ANALOG OUTPUTS

Type : isolated, programmable with 16-bit resolution, type and range are adjustable in the menu

Non-linearity: 0.1% of the range

TC: 15 ppm / ° C

Speed: response time value change <1 ms

Ranges : 0... 2/5/10 V, ± 10 V, 0... 5 mA, 0/4... 20 mA

(comp. <600 Ω / 12 V)

TERMS OF USE

Connection: pluggable screw connector, section <1.5 / 2.5 mm²

Stabilization period: 5 minutes after switching on

Operating temperature: -20 °... 60 ° C

Storage temperature: -20 °... 85 ° C

Water resistance: IP64 (only for the front panel)

Electrical safety: EN 61010-1, A2

Dielectric characteristics: 4 kVAC after 1 min. between food and entry

4 kVAC after 1 min. between power supply, RSxxx, analog output

4 kVAC after 1 min. between power supply and relay output

2.5 kVAC after 1 min. between input, RSxxx, analog output

Insulation resistance: for pollution degree II, cat. II.

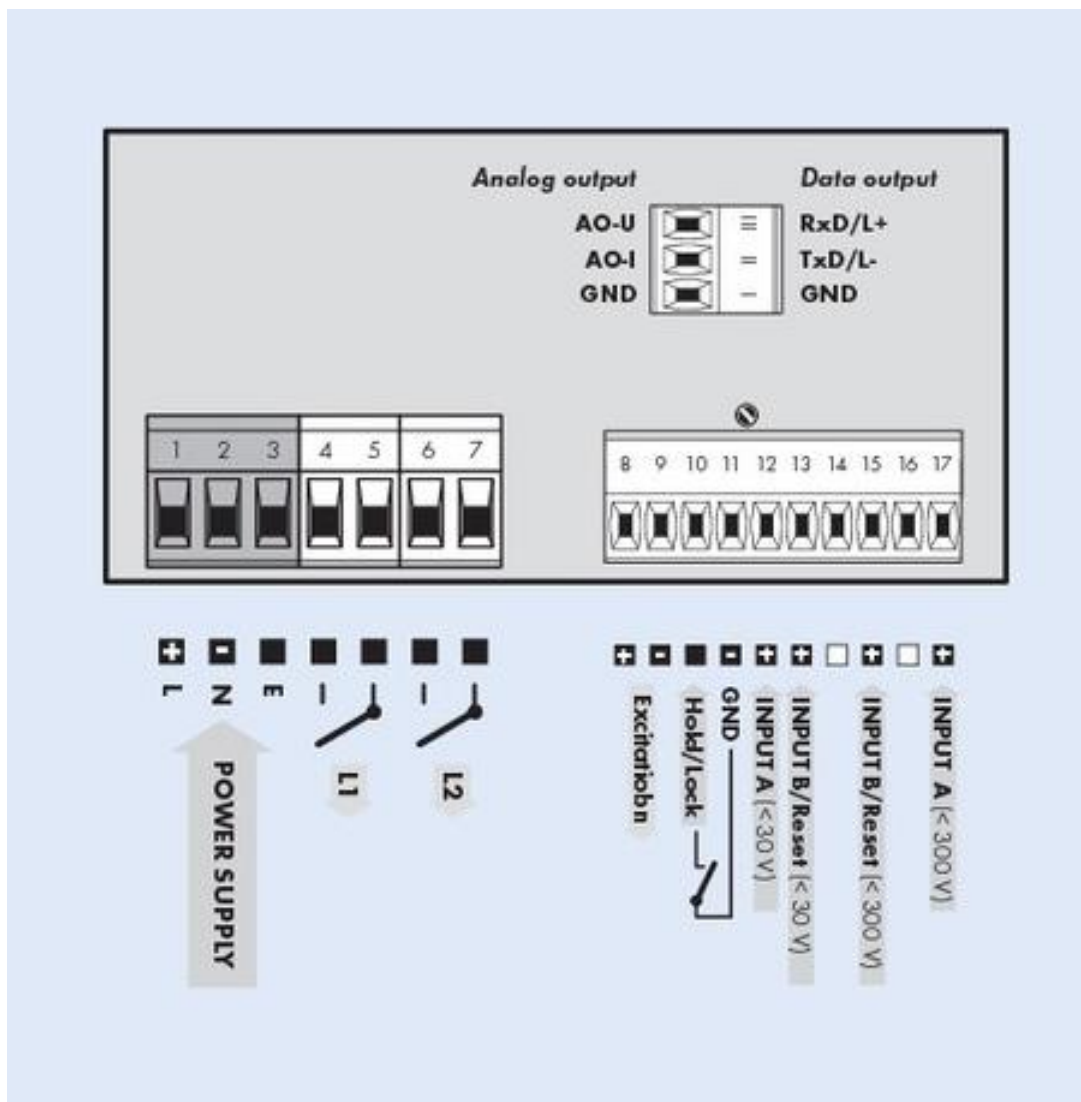
power supply > 670 V (BI), 300 V (DI)

input, output, Excitation Sensor > 300 V (BI), 150 V (DI)

EMC: EN 61326-1 (Industrial zone)



CONNECTION



CONTACT

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