

DESCRIPTION

DIGITAL METER for the following input signals:

- HIGH VOLTAGE (10 to 600V AC)
- SENSORS: MAGNETIC, NAMUR, NPN and PNP
- TTL/24V ENCODER
- CONTACT SWITCH

JR-D and **JR20-D** models, accept most commonly used pulse generators or transducers to work as an **unidirectional counter**, **tachometer** or **frequency meter** (rpm or rate). They have configurable factor and offset when are programmed as a counter or easily scalables into desired engineering units working as tachometer or frequency meter.

Universal AC/DC voltage supply. Fully configurables through 3 frontal keys, they allow signal input type selection and also provide **8V or 24V DC** up to **60mA** or **30mA** load current output respectively for sensor excitation.

4 digit indicator with **14mm** digit for JR-D and **20mm** for JR20-D. **0 to 9999** display range, configurable decimal point and 2 led for setpoints status indication (if output 2RE option card is installed).

2RE option activates two alarms depending on display programmed values, though not from totalizer which this is only an informative reading.



Configured as a counter has a totalizer (up to **999999**) and a RESET function, available through frontal key or remotely. Besides current counting display, the totalizer brings the possibility of visualizing the cumulative number (divided in two parts) of pulses produced in multiple processes. Remote RESET is activated through contact switch input present at input rear connector.

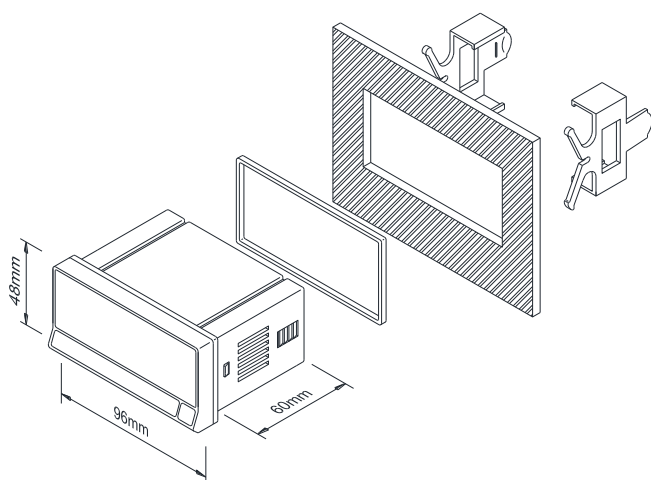
When configured as a frequency meter or tachometer it is also possible to adjust internal sampling time and time limit, thus providing specific application adaptation.

Detection, saving, later recalling and resetting of maximum and minimum values reached by display since last reset activation (functions not available for counter mode).

DIMENSIONS AND MOUNTING

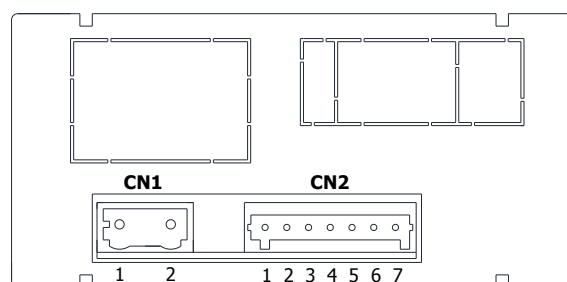
Dimensions..... 96 x 48 x 60 mm (1/8 DIN).
 Panel cutout 92 x 45 mm.
 Weight 150g.
 Case material UL 94 V-0 polycarbonate

Instruments include a sealing gasket and 2 fixing clips for frontal and rear panel installation.



CONNECTIONS

Rear view



CN1	POWER SUPPLY
1	V DC / V AC
2	V DC / V AC
CN2	SIGNAL INPUT
1	-IN (COMMON)
2	+IN
3	+EXC 8V DC
4	+EXC 24V DC
5	RESET
6	N.C
7	IN HIGH (10-600V AC)

ORDERING CODES

JR-D: 20-265V AC 50/60Hz and 11-265V DC (14mm digit)
JR20-D: 20-265V AC 50/60Hz and 11-265V DC (20mm digit)

TECHNICAL SPECIFICATIONS

SPECIAL FUNCTIONS

Return to factory configuration.
Software configuration lock-out.

PRECISION (frequency meter or tachometer mode)

Temperature coefficient 50ppm/°C
Accuracy $\pm(0.01\% \text{ rdg} + 1\text{d})$
Specifications range $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$
Warm-up time 5 minutes

ALIMENTACIÓN y FUSIBLES (DIN 41661) (no incorporados)

JR-D: 20-265 V AC 50/60 Hz and 11-265 V DC.. F 3A/ 250V
JR20-D: 20-265 V AC 50/60 Hz and 11-265 V DC.. F 3A/ 250V
Power consumption (both models) 3W
Sensor excitation (both models) 8V@60mA ; 24V±3V@30mA

DISPLAY

Ranges:
JR-D 0 ÷ 9999, 14mm RED LED
JR20-D 0 ÷ 9999, 20mm RED LED
Totalizer (counter mode) (both models) 0 ÷ 999999
Decimal point Configurable
LEDs 2 for setpoints state indication
Display refresh rate
(frequency meter/tachometer mode) 0.1s to 9.9s (config.)
Display/frequency overrange indication "OuE"
OFFSET (counter mode) Through frontal key configurable
RESET (counter and totalizer) Through frontal key
Remote RESET (counter) Contact switch
MAX./MIN. and MAX./MIN. RESET functions
(frequency meter/tachometer mode) Through frontal key

FILTER (switch contact)

Cutoff frequency (Fc)..... 20Hz

ENVIRONMENTAL CONDITIONS

Operating temperature $-10^{\circ}\text{C} \div +60^{\circ}\text{C}$
Storage temperature $-25^{\circ}\text{C} \div +85^{\circ}\text{C}$
Relative humidity (non-condensing) $<95\% @ 40^{\circ}\text{C}$
Maximum altitude 2000m
Frontal protection degree IP65

INPUT SIGNAL

Maximum frequency (counter mode) 7.5kHz
Maximum frequency (freq. meter/tachometer mode) 25kHz
Minimum frequency (freq. meter/tachometer mode) 0.01Hz

High voltage input

Range 10V AC to 600V AC

Magnetic sensor

Sensitivity $F \geq 1\text{kHz}$; $V_{in} \text{ min.} \geq 100\text{mV}$

Namur sensor

R_C $1\text{k}\Omega$
 I_{ON} $< 1\text{mA DC}$
 I_{OFF} $> 3\text{mA DC}$

NPN/PNP sensor

R_C $1\text{k}\Omega$
Logic level "0" $< 2.4\text{V DC}$
Logic level "1" $> 2.6\text{V DC}$

TTL/24V encoder

Logic level "0" $< 2.4\text{V DC}$
Logic level "1" $> 2.6\text{V DC}$

Contact switch

V_C 5V
 R_C $3.9\text{k}\Omega$

2RE OPTION

Maximum switching current (resistive load) 8A
Maximum switching power 2000VA / 192W
Maximum switching voltage 400VAC / 125VDC
Contact rating 8A @ 250VAC / 24VDC
Contact resistance $\leq 100\text{m}\Omega$ at 6V DC @ 1A
Contact type SPDT
Operate time $\leq 10\text{ms}$