JUNIOR JR-E/JR20-E

DESCRIPTION

DIGITAL METER for the following input signals:
- DC VOLTAGE (±600V, ±200V and ±20V)
- DC CURRENT (±5A, ±1A, ±100mV and ±60mV)
- AC VOLTAGE (0-600V, 0-200V and 0-20V)
- AC CURRENT (0-5A, 0-1A, 0-100mV and 0-60mV)

JR-E and **JR20-E** models admit both alternating and direct voltage and current signal inputs for industrial signal monitoring. Easy to scale into desired engineering units, directly by frontal keys or real input signal value in teach mode.

Universal AC/DC voltage supply. Fully configurables through 3 frontal keys, they allow signal input type.

4 digit indicator with **14mm** digit and **–9999** to **9999** display range for JR-E and **20mm** digit and **–1999** to **9999** display range for JR20-E, configurable decimal point and 2 led for setpoints status indication (if output 2RE option card is installed).

Detection, saving, later recalling and resetting of maximum and minimum values reached by the input signal since last reset activation.

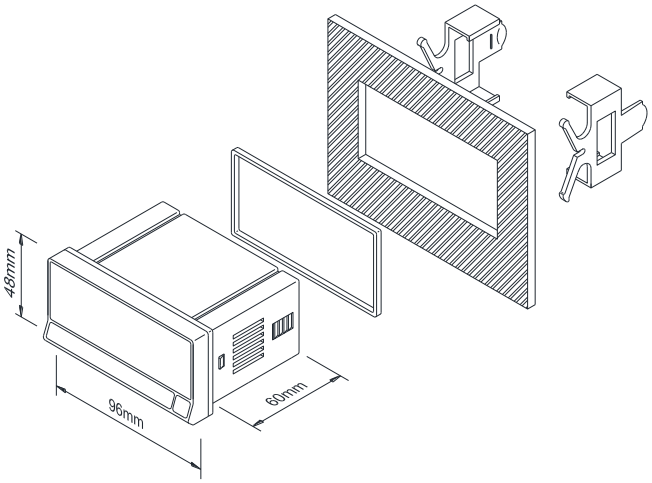
Reset function sets automatically memorized value to current input signal value when maximum or minimum value are displayed. Maximum and minimum values recalling to display and reset functions are directly available through frontal keys.

Capable of measuring AC/DC voltage in 600V, 200V and 20V ranges, AC/DC current directly or through a current transformer in 5A and 1A ranges or through an external shunt in 60mV and 100mV ranges.

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.

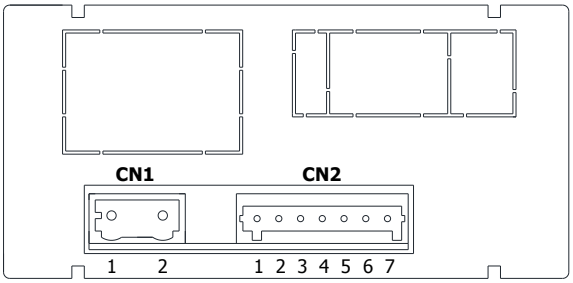


ORDERING CODES

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

CONNECTIONS

Rear view



CN1	POWER SUPPLY			
1	V DC / V AC			
2	V DC / V AC			
CN2	INPUT SIGNAL			
	V DC	A DC	V AC	A AC
1	-IN (COMMON)			
2		+IN 1A		IN 1A
3		+IN 5A		IN 5A
4		+IN SHUNT 60mV/100mV		IN SHUNT 60mV/100mV
5	+IN 20V		IN 20V	
6	+IN 200V		IN 200V	
7	+IN 600V		IN 600V	

TECHNICAL SPECIFICATIONS

SPECIAL FUNCTIONS

Return to factory configuration.
Software configuration lockout.

PRECISION

Temperature coefficient ..... 100 ppm/ºC
Temperature coefficient (A AC) ..... 200 ppm/ºC
Warm-up time ..... 5 minutes
Specifications range ..... 23ºC±5ºC

POWER SUPPLY AND FUSES (DIN 41661) (not included)

JR-E: 20-265 V AC 50/60 Hz and 11-265 V DC . F 1A/ 250V
JR20-E: 20-265 V AC 50/60 Hz and 11-265 V DC . F 1A/ 250V
Power consumption (both models) 3W

CONVERSION

Technique ..... Sigma-Delta
Resolution ..... 16 bits
Conversion rate 20/s

FILTER

Cutoff frequency (-3dB) ..... 7.3Hz to 0.2Hz
Slope ..... -20dB/Dec.

DISPLAY

Range:
JR-E ..... -9999 ÷ 9999, 14mm RED LED
JR20-E ..... -1999 ÷ 9999, 20mm RED LED
Decimal point ..... Configurable
LED's ..... 2 for setpoints state indication
Display refresh rate 50ms
Display/input overrange indication ..... -OvE , OvE

ENVIRONMENTAL CONDITIONS

Operating temperature ..... -10ºC ÷ +60ºC
Storage temperature ..... -25ºC ÷ +85ºC
Relative humidity (non-condensing) ..... <95% @ 40ºC
Maximum altitude 2000m
Frontal protection degree IP65

INPUT SIGNAL

Configuration ..... Differential asymmetrical

DC VOLTAGE

±20V range input impedance 100kΩ
±200V range input impedance 1MΩ
±600V range input impedance 3MΩ
Maximum permanent overload:
±20V 100V
±200V 600V
±600V 1000V
EMI max. Influence (±20V) ..... ±10mV
EMI max. Influence (±200V) ..... ±100mV
EMI max. Influence (±600V) ..... ±300mV

RANGE	RESOLUTION	ACCURACY
±20V	1mV	±(0.05%rdg + 25mV)
±200V	10mV	±(0.05%rdg + 250mV)
±600V	25mV	±(0.05%rdg + 0.7V)

AC VOLTAGE

0-20V range input impedance 100kΩ
0-200V range input impedance 1MΩ
0-600V range input impedance 3MΩ
Maximum permanent overload:
0-20V 100V
0-200V 600V
0-600V 1000V
EMI max. Influence (0-20V) ..... ±20mV
EMI max. Influence (0-200V) ..... ±200mV
EMI max. Influence (0-600V) ..... ±600mV

RANGE	RESOLUTION	ACCURACY (45Hz-1kHz)
0-20V	1mV	±(0.35%rdg + 30mV)
0-200V	10mV	±(0.25%rdg + 0.3V)
0-600V	25mV	±(0.1%rdg + 0.9V)

DC CURRENT

±1A range input impedance 70mΩ
±5A range input impedance 14mΩ
±60mV shunt range input impedance 2.5kΩ
±100mV shunt range input impedance 2.5kΩ
Maximum permanent overload:
±1A 1.2A
±5A 7A
±60mV 20V
±100mV 20V
EMI max. Influence (±1A) ..... ±500µA
EMI max. Influence (±5A) ..... ±2.5mA
EMI max. Influence (Shunt 60mV) ..... ±30µV
EMI max. Influence (Shunt 100mV) ..... ±50µV

RANGE	RESOLUTION	ACCURACY
±1A	50µA	±(0.05%rdg + 1mA)
±5A	200µA	±(0.05%rdg + 6mA)
Shunt 60mV	5µV	±(0.05%rdg + 70µV)
Shunt 100mV	10µV	±(0.05%rdg + 120µV)

AC CURRENT

0-1A range input impedance 70mΩ
0-5A range input impedance 14mΩ
0-60mV shunt range input impedance 2.5kΩ
0-100mV shunt range input impedance 2.5kΩ
Maximum permanent overload:
0-1A 1.2A
0-5A 7A
0-60mV 20V
0-100mV 20V
EMI max. Influence (0-1A) ..... ±1mA
EMI max. Influence (0-5A) ..... ±5mA
EMI max. Influence (Shunt 60mV) ..... ±60µV
EMI max. Influence (Shunt 100mV) ..... ±100µV

RANGE	RESOLUTION	ACCURACY (45Hz-1kHz)
0-1A	50µA	±(0.1%rdg + 5mA)
0-5A	200µA	±(0.1%rdg + 20mA)
Shunt 60mV	5µV	±(0.1%rdg + 300µV)
Shunt 100mV	10µV	±(0.1%rdg + 300µV)

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10.09.12 30738203B