



## ITI 9

Programmable digital panel meter for electrical measurements

ITI 9 is a programmable digital process panel meter 96 x 48 mm for process voltage and current, and frequency measurements.

## Description

ITI 9 is a programmable digital panel meter 96 x 48 mm for process voltage and current, and frequency measurements. The can be configured either by two front keys or using the PC software delivered with option serial output.

It is possible to change the configuration of measurement type, range, limits and scaling.

The configuration of these parameters is protected against any inopportune modifications.

- Panel meter size: 96 mm x 48 mm
- IP65 protected
- Measurement, display and scaling of:
  - DC and AC voltage up to 400 V
  - DC current up to 2,000 A with an external shunt
  
  - AC current up to 200 A + Current transformer, with secondary current of 1 A or 5 A
  
  - Frequency up to 5,000 Hz
- 2 programmable limits with relay outputs
- 8 different power supplies available

# Specifications

## Electrical measurement indicator

Type	Range (1)	Resolution	Accuracy (1 year) (23°C ±5°C)	Comments
DC voltage	500 mV 5 V 50 V 400 V	100 µV 1 mV 10 mV 100 mV	0.1% + 100 µV 0.1% + 1 mV 0.1% + 10 mV 0.1% + 0.1 V	Input impedance > 100 MΩ 1 MΩ 1 MΩ 1 MΩ
AC voltage	500 mV 5 V 50 V 400 V	100 µV 1 mV 10 mV 100 mV	0.7% + 1 mV 0.5% + 6 mV 0.5% + 60 mV 0.5% + 0.6 V	1 MΩ 1 MΩ 1 MΩ 1 MΩ
DC current	4-20 mA or 0-50 mA 1 A (2) 5 A (2)	10 µA 1 mA 1 mA	0.2% + 10 µA	10 Ω shunt included external shunt 100 mV external shunt 100 mV
AC current (3)	1 A (2) 5 A (2)	1 mA 1 mA		external shunt 100 mV external shunt 100 mV
Frequency (4)	5 to 500 Hz 5 to 5000 Hz	0.1 Hz 1 Hz	0.1% + 0.1 Hz 0.1% + 1 Hz	10 MΩ 10 MΩ

Temperature coefficient: ≤ 10% accuracy/°C

Continuous mode: -40 to 100 % range.

Alternate mode: 4 to 100 % range from 25 to 500 Hz without D.C component (possible measurements up to 10 kHz on some ranges with less precision).

(1) Extended measurement range: -40 to +110% range

(2) With external shunts

(3) For AC current measurements, it is necessary to use a current transformer between the current to be measured and the panel meter

(4) Two levels of input voltage: 50 mV~ to 50 V~ and 5 V~ to 250 V~.

## Further features

Ranging	Automatic
Scaling	The value is to be entered using keyboard, while the value of measurement corresponding can be introduced of the same way, is measured by the instrument.

	This possibility is very interesting for error corrections on temperature ranges.
Statistics	Memorizing of maximum and minimum values
Alarms	2 pre-alarm thresholds and 2 alarm thresholds with acknowledgment
Programmable thresholds and relays	2 programmable thresholds with hysteresis and relays Breaking capacity from the relays: 1 A / 250 V~ or 60 VA at 50 Hz or 1 A / 150 V- or 30 W continuous
Sampling rate	2.5 samples / s

## General specifications

Size	104.5 x 57.5 x 101 mm
Weight	300 g
Display	From -1999 to 9999 with 14 mm red indication LED
Supply	230 V at $\pm 10\%$ (50/60 Hz) Other power supplies available in option

## Environmental specifications

Reference range	23°C $\pm 5^\circ\text{C}$ (45 to 75 % w/o condensing)
Operating reference range	0 to 50°C (RH: 20 to 80 % w/o condensing)
Limit operating range	-10°C to +50°C
Storage conditions	-30°C to +70°C (RH: 10 to 80 % w/o condensing)
IP protection	IP65 over front panel

## Safety specifications

Protections	- Protection of unit programming by access code. - Protection of the threshold values by safety function programming
Class	In accordance with EN 61010-1 Category II, pollution 2
Rated voltage	150 V
EMC conformity	Immunity: <ul style="list-style-type: none"> <li>• EN 50082-1/1992</li> </ul>

Conducted and radiated emissions:

- EN 55022, class B

# Models and accessories

## Instrument:

Ordering reference code: ITI9-Power supply-Instruction manual

### Power supply:

48 V~	9
230 V~	8
115 V~	7
24 V~	6
36 to 72 V-	5
18 to 36 V-	4
9 to 18 V-	3
5 V-	2

### Instruction Manual:

French	F
English	G

## Accessories:

AN8003	Shunt 1 A - 100 mV
AN8004	Shunt 5 A - 100 mV
AN8005	Shunt 4-20 mA (50 ohms)
AN5844	Current transformer 2/1 A
AN5845	Current transformer 20/1 A
AN5846	Current transformer 200/1 A
ER42062-001	RC protection circuit
AMD002-000:	Current transformer 20/5A
AMD003-000:	Current transformer 200/5 A