

PROGRAMMABLE TRANSMITTER

of AC electrical network measures :
single or 3-phase balanced / unbalanced networks



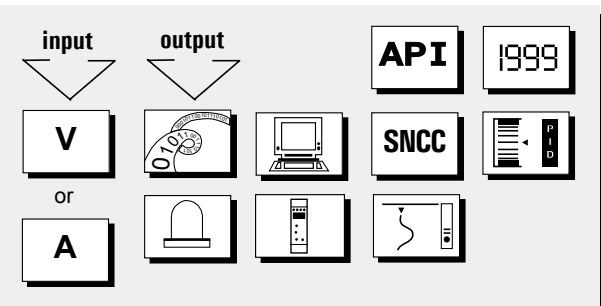
μTAC 300

The μTAC 300 is an insulated **measure transmitter** which can convert parameters of AC electrical networks : voltage, current, power, frequency, cosine... Universal, measures more than 25 parameters, which can be assigned on choice by programming on the output channels.

Appliance **fully programmable** by **micro-console** or by **PC** via a programming software.

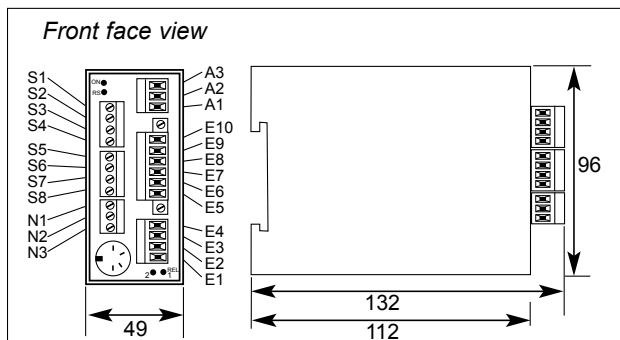
- Output options :
analog bi-directional,
relays (setpoint or pulses),
digital Modbus/JBus RS485, 2 wires.
- Safened input (1 and 5A) with screwed connectings.
- Galvanic partition :
 Inputs / Supply / Outputs : 2,5 KV (optional 4KV)
 Between outputs : 1kV
- Harmonics analysis (optional)

FUNCTIONS



The **micro-console** allows measure visualisation on a 4 digit alphanumerical display, or quick programming modifications via a 4-key keyboard. It also allows teleloading a programming file to other products of the range.

DIMENSIONS



Dimensions without terminals: (H x L x D) 96 x 49 x 112 mm
 Dimensions with terminals : 96x49x132 mm

Case : Self-extinguishing in black UL94VO ABS
 For latching on symmetrical DIN rail.

Plug-off connector for screwed connections
 (2,5mm², flexible or rigid)

Protection : Case / terminals : IP 20

Weight : 230g (packaging included)



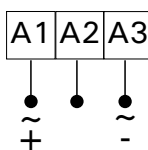
The friendly interface

ENVIRONMENT

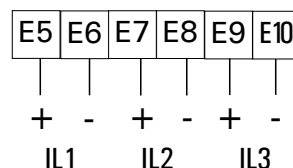
- Operating temperature : -10°C to +55°C.
- Storage temperature : -25°C to +70°C.
- CE Marking

WIRING

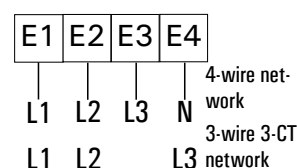
Supply



Inputs : current

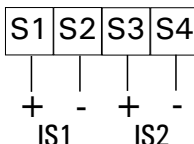


: voltage

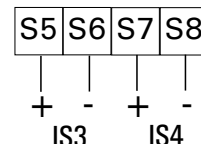


Analog outputs

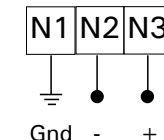
Bidirectionnal



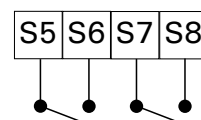
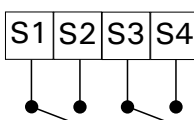
Unidirectionnal



Data link RS485



Relay outputs



(for details of wiring see user handbook delivered with the instrument)

TECHNICAL FEATURES AT 23°C

μTAC 300

INPUTS	<u>Voltages</u>	2 programmable calibers; Un= 150 Vac and 500 Vac Oversteppings 120% Un	<i>Power draws</i>	Voltage inputs : 1 MΩ resistors Current inputs : < 0.2 VA
	<u>Currents</u>	2 programmable calibers; In = 1.2 A and 6 A Oversteppings 120 % In	<i>Test voltage</i>	2 kV / 50 Hz / 1 min. with the supply 2 kV / 50 Hz / 1 min. with the outputs
	<i>Overloads</i>	Permanent : 750 V, 10 A During 10 s : 1000 V, 50 A	<i>Frequency</i>	45...50...65 Hz (other frequencies : consult)
	<i>Test voltage</i>	2,5KV(optional 4KV)/50Hz/1min.with the supply 2,5KV(optional 4KV)/50Hz/1min.with the outputs	<i>Type of network</i>	Single or 3-phase balanced/unbalanced with/without neutral
OUPUTS	Outputs which can be combined together		<u>RELAY OUTPUT</u> (setpoint or pulses) : option R	
	<u>ANALOG OUTPUT</u> (bi-directionnal) : option A		<i>Galvanic partition</i>	
	<i>Galvanic partition</i>	2,5 KV (optional 4KV) /inputs; 2kV/relays; 1kV other outputs	<i>Type of contact</i>	
	<i>Programmable output signal</i>	-20/20mA -10/10mA -5/5mA 0/5mA 0/10 mA 0/20 mA 4/20 mA	<i>Cut power</i>	
	<i>Scale setting</i>	0 to 100% of measure range by programm.	SETPOINT output :	
	<i>Admissible load</i>	Up to 700 Ω (20 mA)	<i>Setting of setpoints : 0 to 100% of measure range by progr.</i>	
	<i>Board resolution</i>	24000 points	<i>Switching hysteresis : 0 to 15 % of setpoint by progr.</i>	
	<i>Board accuracy</i>	< 0.1% of full scale on -20/20mA (< 0.4 % on -5/5 mA)	<i>Time delay : 0 to 15 s. by programming</i>	
	<i>Max. residual ripple</i>	25 mV (peak to peak) on 500 Ω load	PULSE output :	
	<i>Response time</i>	< 120 ms input/output	<i>Pulse width : 100/200/400 ms by progr.</i>	
POWER SUPPLY	<i>Thermic drifts</i>	< 150 ppm	<i>Count rate : 4/2/1 puls./sec. according to programmed width</i>	
	2 Versions : High Voltage or Low Voltage (to be specified on order)		<i>Weight of pulses : on choice by programming</i>	
MEASURE	High Voltage	90...270 Vac or 88...350 Vdc	<u>OUTPUT RS485</u> : option N	
	Low Voltage	20...40 Vac or 20...60 Vdc	<i>Galvanic partition</i>	
	More than 25 measurable parameters ...		2,5 KV (optional 4KV) / inputs; 1kV/ analogue output; 2kV / relay output	
	<i>Accuracy rating</i>	Voltage, Current : 0.2 Power, Energy : 0.5	<i>Type</i>	RS485 2 wires
	<i>Thermic drifts</i>	< 200 ppm	<i>Speed</i>	4800 / 9600 / 19200 bauds
	<i>Cycle time</i>	55ms (all types of networks)	<i>Protocole</i>	Modbus / Jbus RTU 8 bits no parity
	<i>Measuring method</i>	Fast simultaneous sampling of voltages and currents.	<i>Format of data</i>	Integer 16 bits (table of units)
	Digital calculation on 32 bits.		<i>Power draw</i>	5 VA max. in ac
			<i>Harmonics analysis</i>	Harmonics up to rank 50 on the 6 channels.
			<i>Digital filtering Energies</i>	Programmable on various levels Saved every 5 min. Active energy accuracy class 1 (CEI61036).
			<i>Measured parameters</i> : Voltage, current, frequency, active power, reactive power, apparent power, power factor, active energy, reactive energy ...	

CODING

Type : μTAC 300

• Possible output combinations :

Analog

2 bi-directionnal analog outputs 2A
2 bi-directionnal outputs, 1 unidirectionnal 4A

Relays : setpoint or pulses

2 relay outputs 2R
4 relay outputs 4R

Digital

RS485 MODBUS / JBUS N

• **Option to be specified** Harmonics analysis H
(available only on the version with digital output)

• Power supply

High Voltage : 90/270 Vac 2 88/350 Vdc
Low Voltage : 20/40 Vac 3 20/60 Vdc

Ordering examples :

-For a μTAC 300 with 4 analog outputs and 1 digital output,
in high voltage power supply, request reference :
μTAC 300 4AN 2

-For a μTAC 300 with 2 analog outputs and 2 relay outputs,
in low voltage power supply, request reference :
μTAC 300 2A2R 3

*This instrument is dedicated to industrial applications. It has to be
mounted in an electrical switchbox, or equivalent.*

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