

ELECTRICAL NETWORK ANALYSERS

Single or 3 phase balanced/unbalanced networks, 3 or 4 wire

DIVA 15 PBUS



Digital output
RS485 PROFIBUS

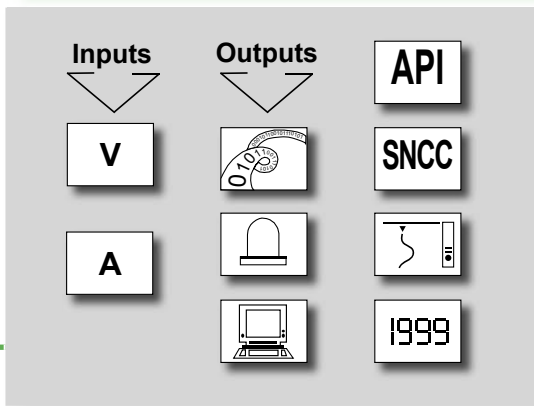
The DIVA 15 PBUS is dedicated to the measurement of AC electrical networks. It has a digital output RS485 PROFIBUS DP (SUB-D9 plug) which is a fast communication mode, allowing the instrument to receive its configuration directly from the PLC (GSD and GSF files).

- The various measures (more than 28 measurable parameters) are visualised on 3 indicators which can be programmed from the keyboard on the front face.
- Programmable input calibers :
Current : 1A and 5A AC
Voltage : 150V and 500V AC
- Broad supply range.

Possibility to associate as option :

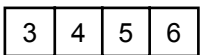
- 1 to 2 relay outputs, programmable by the user (logic and pulses).
- Harmonics analysis.

Functions



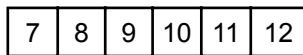
Wiring

Inputs : voltage



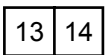
L1 L2 L3 N 4 wire network
L1 L2 L3 3 wire network

: current



+ - + - + -
IL1 IL2 IL3

Supply



~ ~
+ -

Relay outputs



R1 R2

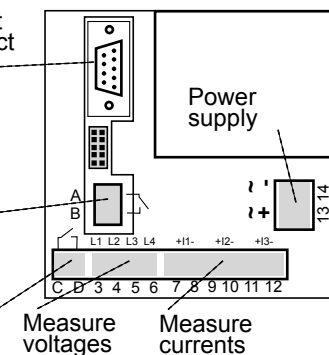
View from rear face

RS485 output
SUB-D contact
9 points
female



Relay output 1 : R1

Relay output 2 : R2

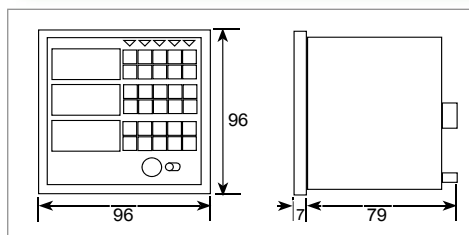


Measure voltages
Measure currents

The friendly interface

DIVA analysers are especially designed for the measurement, the control and display of all the parameters of AC electrical networks : 3U, 3V, 3I, Cos, F, P, Q, S, Cos P/phase, Cos Q/phase, leak current, Eactive IN and OUT, Ereactive L and C, output PROFIBUS DP.

Dimensions



Environment :
Operating T° :
0°C to +55°C.
Storage T° :
-25°C to +70°C.
CE marking
(89/336 rev.92/31).

Housing : Self-extinguishing case of black UL 94 V1 polycarbonate. 96x96x86mm (with terminals) Stand. DIN 43700

Tighten. : By 2 screwed pads (located on choice : on the sides or above / under)
Mounting on panel ; cut out 92x92mm

Connectors : Plug-off connectors on rear face for screwed connectings (2.5mm², flexible or rigid)
Digital output : SUB-D 9 point female contact

Protection : Case/terminals:IP 20. IP 40 front face (IP 65 optional)

Display : Three 1000 point high brightness displays (14 mm high red digits).

Weight : 375 g.



ANALYSERS

CA
IN/30

Technical features at 23°C

DIVA 15 PBUS

Inputs			
<u>Voltage</u>	2 Programmable ranges Un=150 and 500Vac	<u>Power draw</u>	Voltage input : 1 MΩ resistances Current input : < 0.2 VA
<u>Current</u>	2 Programmable ranges : 1A and 5A In=1.2 and 6Aac	<u>Test voltage</u>	2 kV / 50 Hz / 1 min. (inputs/outputs/supply)
<u>Oversteppings</u>	<i>measurable</i> : 1.2 In; 1.2 Un	<u>Frequency</u>	45...50...65 Hz (others : consult)
<u>Overloads</u>	Permanent : 750 V, 10 A During 10 s : 1000 V, 50 A	<u>Type of network</u>	Single or 3 phase balanced / unbalanced with or without neutral
Digital output PROFIBUS DP		Relay outputs (option 1R or R)	
<u>Speed</u>	9600 bauds to 12 Mbauds	<u>Option R</u>	Either 2 logic outputs, or 2 pulse outputs Or 1 logic and 1 pulse output
<u>Connectings</u>	SUB-D (9 point) female contact	<u>2 combinable outp.</u>	
<u>Configuration</u>	The instrument (slave) takes its configuration from the PLC (master) by way of the mode PROFIBUS (GSD and GSF files).	<u>Option 1R 1 output</u>	1 Logic output or 1 pulse output
		<u>Type of contact</u>	On potential free contact (galvanic partition 2.5KV) output 1NO
		<u>Life-time</u>	Mechanical Electrical
			> 20 000 operations > 100 000 operations - Lr* : 5A/250V > 300 000 operations - Lr* : 2A/250V (*Lr : Load resistance)
		<u>Rated load</u>	5A - 250 Vac
		<u>Logic output</u>	
		Setting of the setpts.	0 to 100% of measure range by progr.
		Switching hyst.	0 to 15% of the setpoint by programming
		Time delay	0 to 15s by programming
		<u>Pulse outputs</u>	
		Count rate	4 / 2 / 1 pulse/sec. accord. to progr. width
		Width of the pulses	100 / 200 / 400 ms by programming
28 measurable parameters		Harmonics analysis (option H)	
<u>Accuracy rating</u>	U, I : 0.2 (IEC 60688), P, Q, S : 0.5 (IEC 60688), Active energy : 1 (IEC 62053-21), Reactive energy : 2 (IEC 62053-23). Zero reset of the energy counters	Display of the harmonics and the THD* (*harmonics distortion rate) of the 3 voltages and the 3 currents from rank 2 to rank 50 (even and odd). Retransmission in PROFIBUS of the odd harmonics and the THD* of the 3 voltages and the 3 currents from rank 3 to rank 29.	
<u>Thermic drifts</u>	< 200 ppm		
<u>Measuring method</u>	Simultaneous sampling of the 3 voltages and the 3 currents. Digital calculation on 32 bits. Measurement of disturbed signals, pass band at 800Hz.		
<u>Digital filtering</u>	Programmable on several levels		
<u>Measured parameters</u>	3U, 3V, 3I, Cos, F, P, Q, S, Cos P/phase, Cos Q/phase, leak current, Eactive IN and OUT, Ereactive L and C, Profibus DP output + Harmonics and THD*.		
		Power supply	
		<u>2 Versions : High or</u>	<u>low voltage (specify on order)</u>
		<u>High voltage (2)</u>	90...270 Vac or 88...350 Vdc
		<u>Low voltage (3)</u>	20...40 Vac or 20...60 Vdc
		<u>Power draw</u>	< 6 VA

Coding

DIVA 15 PB

Options : 1R or R / H

1R : option output 1 relay

R : option output 2 relays

H : option harmonics analysis

Power supply : High or low voltage (specify)

(2) : high voltage or (3) : low voltage

Order example :

For a DIVA15 PBUS with 1 relay output (logic or pulses) with 230 Vac power supply, request reference : DIVA15 PB 1R 2

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

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