

MICRO~flex with MODBUS

DACP 504_1/3

The new DACP 504 is a 4 phase AC current clamp with MODBUS communication. Utilising the lightweight and flexible Rogowski sensors along with the unit's auto addressing system, the device is very quick and simple to install. Daisy Chaining the units can deliver a measurement system of up to 64 currents at amplitudes of up to 500 Amps from 40 Hz up to 3 kHz.



Parameter	Symbol	Min	Typ	Max	Unit
Rated Primary Current	I_{pr}		500		A AC
Crest Factor	$C.F.$	2.75		3.00	
Output Signal		MODBUS ¹⁾			
Baud Rates		1.2		115.2	kbps
Measurement Averaging Times		1		3600	secs
Rated Frequency	f_r		50/60		Hz
Rated Short-time Thermal Current @ 50Hz	I_{th}			50	kA
Rated Extended Primary Current	I_{epr}			50	kA
Rated Burden	R_{br}	N/A			
Frequency Bandwidth (-3dB)	BW	0.04		3	kHz
Accuracy		± 1 of reading $\pm 1 A^{2)}$			
Positional Sensitivity		$\pm 2.5^{3)}$			
Linearity		± 0.2			
Temperature Coefficient	T_c	± 0.15			
Resolution			500		mA
External Field Effects		± 0.25 of range			
Power Supply		21.6	24	26.4	V
Current Consumption			15	20	mA
Operating Temperature Range		- 20		65	°C
Storage Temperature Range		-40		75	°C
Primary Conductor Temperature				105	°C
Operating Humidity (non-condensing)		15		85	%

General Characteristics	
Sensor Flammability Rating	UL94 V-0
Enclosure Flammability Rating	UL94 V-2
Sensor Degree of Ingress Protection	IP 67
Enclosure Degree of Ingress Protection	IP 30
Sensor Voltage Rating (EN 61010-1)	1000 VRMS Category III, 600 VRMS Category IV, Pollution Degree 2
Sensor Insulation (Primary to Secondary)	Reinforced (7.4 kV ACRMS for 1 min)
Housing Voltage Rating	Output limited to 30 V to Earth (unterminated)
Sensor Colour	Black (can be customer specific)
Sensor Length	70 mm (can be customer specific)
Sensor Cable Diameter	6 mm
Sensor to Enclosure Length	2 m (can be customer specific)
Output	2 X RJ45 connectors
LED Indication	Tx (Yellow), Rx (Green), Power (Green)
Enclosure Dimensions	92 (l) x 66 (w) x 28 (d) mm
Weight	290 g

Features

- Flexible sensors for ease of installation whilst wearing PPE
- Auto addressing system
- Min, Max & Avg RMS readings
- Wide range of Baud rates
- Adjustable averaging times

Advantages

- Light weight and flexible
- Excellent accuracy Class 1
- Plug and play
- Can be customised to specific requirements
- Can be supplied as single sensor or 2, 3 and 4 phase sensors
- Multiple units can be daisy chained
- Up to 64 current measurements converted into a single digital communication data stream

Applications

- LV Substation monitoring
- LV Power Station monitoring
- Power quality monitoring
- Building energy monitoring

Standards

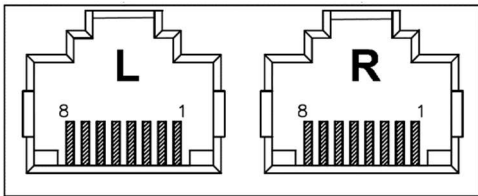
- EN 61010-1, EN 61010-2-032
- EN 61869-10
- IEC 61000-6-4, EN 55011
- IEC 61000-6-5, EN 61326-1

 RoHS Compliant

EMC Standards	
Emissions	IEC 61000-6-4 EN 55011
Immunity	IEC 61000-6-5 (Power Stations Level 3, Substations Level 2) EN 61326-1

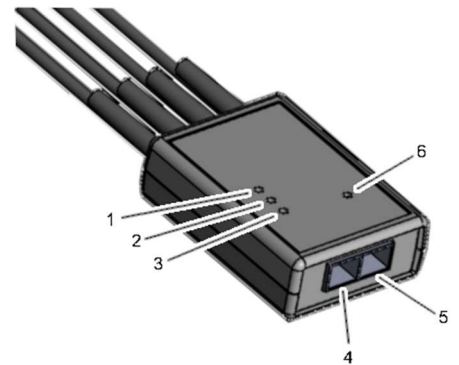
- 1) See Operation Instructions for MODBUS Register Map
- 2) Referenced to primary current
- 3) Not relevant when used with cable clamp adaptor

Output Connections



Multiple units can be powered by connecting (Daisy chaining) via the right RJ45 socket (5)

Pin	Description
1	A1
2	A2
3	A3
4	Modbus B
5	Modbus A
6	A4
7	+24 V DC
8	Common



Main Instrument Features

1. Modbus Tx LED (Yellow)
2. Modbus Rx LED (Green)
3. Power LED (Green)
4. RJ45 socket (power and output signal)
5. RJ45 socket (output for daisy chaining)
6. Factory reset button (recessed)

Dimension (in mm)

