

# DC volt-ampereometric clamp

# FE04



The FE04 unit is equipped with the necessary electronic circuitry for conditioning and the AD conversion of current and voltage signal. The digital output data (16/32 bit) are made available externally via a galvanic isolated RS485 serial bus.

The number of FE04 devices connected together on the communication bus depends essentially on the power capacity of the master; if the master is a DL02 datalogger this number is limited to 16.

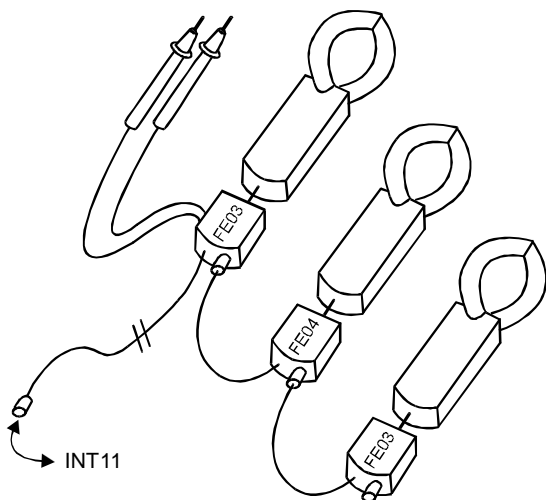
As each analog channel is individually calibrated with the calibration curve stored in EEPROM, every FE04 is fully interchangeable. In particular, the current clamp is calibrated linearizing the response throughout the operating range so to provide maximum accuracy in all conditions.

The communication bus is accessed via an high quality push-pull connector, each device also makes available an additional connector so to allow a daisy chain scheme with multiple devices. The instrument power supply is provided through the communication bus, there is no battery on board.

INT11 adapter enables DL01 dataloggers to interface one or more FE03/04 devices. DL02 dataloggers can be provided with the INT11 interface embedded onboard.



Among the accessories available for the voltage channel are offered probes with test clips, alligator clips and the exclusive OptiVeloX's magnetic hooking probes, able to establish electrical contact directly above the screws of the electrical terminal without requiring any preliminary operation. All accessories are designed to operate with maximum safety.



**Example of cascade connection between 3 FE03/04 devices**

**Ordering codes:**

Code	Part	Description
8802760	FE04	DC volt-amperometric clamp
8802740	INT11	Interface DL01-FE03/04
2400186	-	Adapter cable pair 2mm/4mm L=50 cm red/black
2400188	-	Test clips pair CAT III 1000V red/black
2400190	-	Alligator clips pair CAT IV 1000V red/black
8802420	-	Magnetic hooking probes 4mm L=50cm red/black

**Technical specifications**

**VOLTAGE**

Range: 0.0...1000.0 V  
 Resolution: 0.1 V  
 Accuracy:  $\pm(0.2\% \text{ rdg} + 2 \text{ dgt})$   
 Input impedance: 4 Mohm

**CURRENT**

Range: 0.0...400.0 A  
 Resolution: 0.1 A  
 Accuracy(1):  $\pm(1\% \text{ rdg} + 2 \text{ dgt})$

**POWER**

Range: 0...400000 W  
 Resolution: 1 W  
 Accuracy(1):  $\pm(1.5\% \text{ rdg} + 2 \text{ dgt}) @V>50V, I>4A$

**POWER SUPPLY (Vs)**

3.5...5.1 Vdc  
 28 mA typ

**ENVIRONMENT**

Reference temperature:  $23\pm 2^\circ\text{C}$  (45% < RH < 75%)  
 Working temperature:  $0^\circ\text{...}40^\circ\text{C}$  (RH < 85%)  
 Storage temperature:  $-10^\circ\text{...}60^\circ\text{C}$  (RH < 95%)  
 Max height of use: < 2.000 m

**DIMENSIONS**

160 mm x 75 mm x 40 mm (Clamp) 35 mm (Internal jaw diameter)  
 40 mm x 40 mm x 20 mm (Front End)

**WEIGHT**

~250 g

**COMPLIANCE**

Safety: EN 61010-1, EN 61010-2-031, EN 61010-2-032  
 Category of measure: CATIII 600V  
 Pollution degree: 2  
 Double insulation   
 RS485 isolation voltage: 2500 Vrms

(1)  
 The specified accuracy refers to measurements made at the reference temperature after removing the offset value and with the conductor at the center of the jaw. The measured value will increase by about 0.5% with the conductor near the opening of the jaw and will drop by about 0.5% with the conductor on the opposite side.