

UNIVERSAL TRANSDUCER

ISOLATED SIGNAL TRANSDUCER

MODEL FC-I4E

FEATURES

DIN RAIL AC/DC VOLTAGE & CURRENT TRANSDUCER

Signal converter for electrical signals, isolated, for DIN rail mount.

Isolated signal converter for electrical signals. Configurable to measure AC/DC voltages (ranges from 50 mVac/dc up to 600 Vac/dc), AC/DC currents (ranges from 5 mAac/dc up to 5 Aac/dc) and frequency signals (up to 100 Hz). Unipolar and bipolar signal ranges accepted for DC voltages and DC currents. Output signal configurable for 4/20 mA (active and passive) and 0/10 Vdc. Universal power supply from 18 to 265 Vac/dc. 3 way isolation between input, output and power circuits. Plug-in screw terminal connections.

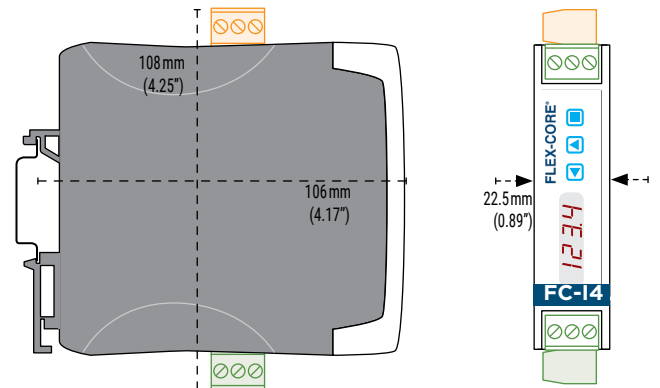
Two configuration modes: ⁽¹⁾easy and fast using predefined configuration codes, and ⁽²⁾advanced configuration through the 'configuration menu' to customize input and output signal ranges. Configuration through front push-button keypad and front display. Configurable display information (input signal value, output signal value, configured label, signal percentage and process value). Manual 'force' functions to generate low and high output signals, to validate remote instrumentation during installation. 'Password' function to block non-authorized access to configuration menu. 'SOS' mode to help on critical maintenance and repairs without affecting the manufacturing process. Designed for industrial use, with potential integration into a wide range of applications, excellent quality and optional customization.

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SPECIFICATIONS

Input signal ranges Vac	
ranges	from 0/50 mVac up to 0/600 Vac
type of measure	True RMS
connections accepted	phase-to-neutral phase-to-phase
category of measure	CAT-II up to 300 Vac
Input signal ranges Vdc	
unipolar ranges	from 0/50 mVdc up to 0/600 Vdc
bipolar ranges	from ± 50 mVdc up to ± 600 Vdc
Input signal ranges Aac	
ranges	from 0/5 mAac up to 0/5 Aac
type of measure	True RMS
connections accepted	phase-to-neutral phase-to-phase
Input signal ranges Adc	
unipolar ranges	from 0/5 mAdc up to 0/5 Adc
bipolar ranges	from ± 5 mAdc up to ± 5 Adc
Frequency AC	
ranges	up to 100 Hz
measured from	measured from existing Vac and Aac signal ranges
Accuracy at 25°C*	see section 7 for each type of signal <small>*values for 4/20 mA output, for 0/10 Vdc output, add +0.05% to indicated accuracy.</small>
Thermal stability	150 ppm/°C (F.S.)
Step response	
AC signals	<350 mSec. typ. (0% to 99% signal)
DC signals	<90 mSec. typ. (0% to 99% signal) 'no filter' <175 mSec. typ. (0% to 99% signal) '50 Hz filter' or '60 Hz filter' <350 mSec. typ. (0% to 99% signal) '50 and 60 Hz filter'
Output signal ranges	
active current output	4/20 mA active, max. <22 mA, min. 0 mA, load <400 Ohm
passive current output	4/20 mA passive, max. 30 Vdc on terminals
voltage output	0/10 Vdc, max. <11 Vdc, min. -0.05 Vdc (typ.), load >10 KOhm
<small>* custom input and output ranges through the 'configuration menu' (for example: 4/12 mA, 0/5 Vdc, 20/4 mA, etc)</small>	
Configuration system	
key pad + display	accessible at the front of the instrument
configuration modes	⁽¹⁾ through preconfigured codes, ⁽²⁾ through 'configuration menu'



Isolation	
input - output	3000 Veff (60 seconds)
power - input	3000 Veff (60 seconds)
power - output	3000 Veff (60 seconds)
Environmental	
IP protection	IP30
impact protection	IK06
operation temperature	from 0 to +50 °C
storage temperature	from -20 to +70 °C
'warm-up' time	15 minutes
humidity	0 to 95% non condensing
altitude	up to 2000 meters
Mechanical	
size	106 x 108 x 22.5 mm
mounting	standard DIN rail (35 x 7.5 mm)
connections	plug-in screw terminals (pitch 5.08 mm)
housing material	polyamide V0
weight	<150 grams
packaging	120 x 115 x 30 mm, cardboard
Power supply	
voltage range	18 to 265 Vac/dc isolated (20 to 240 Vac/dc $\pm 10\%$)
AC frequency	45 to 65 Hz
consumption	<1.5 W
power wires	1 mm ² to 2.5 mm ² (AWG17 to AWG14)
overvoltage category	2

FLEX-CORE®

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SIGNAL TRANSDUCERS

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CONNECTION DIAGRAM

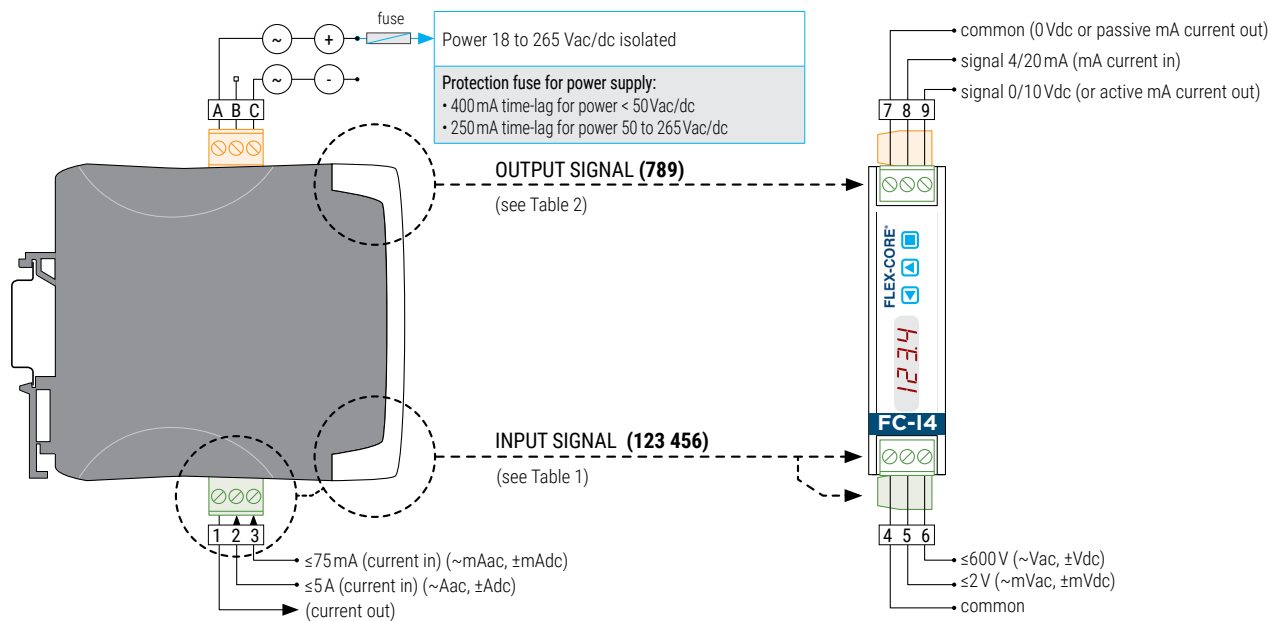


Table 1 | INPUT signal connections

Input signal	Input terminals					
	1	2	3	4	5	6
≤600 Vac				~Vac		~Vac
≤600 Vdc				comm.		±Vdc
≤2 Vac				~mVac	~mVac	
≤2 Vdc				comm.	±mVdc	
≤5 Aac	~Aac	~Aac				
≤5 Adc	-Adc (out)	+Adc (in)				
≤75 mAac	~mAac		~mAac			
≤75 mAdc	-mAac (out)		+mAac (in)			
Frequency	Connect to the Aac, mAac, Vac or mVac terminals, according to the signal measured (AC voltage or AC current)					

Table 2 | OUTPUT signal connections

Output signal	Output terminals			Connections
	7	8	9	
4/20 mA active output		mA- (in)	mA+ (out)	
4/20 mA passive output* (*external loop power needed).	mA+ (out)	mA- (in)		
0/10 Vdc	common		+Vdc	

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