

CODICE/ CODE	SIGLA/ TYPE
XCAPIPO3	CAPIPO3

Dati tecnici di ingresso / Input Technical Data	
Segnale di ingresso / Input signal	19 scale, vedere fig. 1 / 19 signals see Table 1
Impedenza tensione-corrente / Impedance voltage-current mode	1 MΩ / 50 Ω
Tensione d' ingresso max / max input voltage	15 V
Corrente di ingresso massima / maximum input current	30 mA

Dati tecnici di uscita	
Segnale di uscita / Output signal	7 scale, vedere fig. 2 / 7 signals : see Table 1
Carico uscita tensione -corrente	≥ 10kΩ / ≤ 500 Ω
Load impedance (voltage/current mode)	
Tensione di uscita massima / Maximum output voltage	12 V
Corrente di uscita massima / Maximum output current	25 mA

Dati tecnici generali	
Tensione di alimentazione / Supply voltage	15...36 Vdc / 22...26 Vac
Corrente massima assorbita / Rated current	100 mA @ 24 Vdc/ac
I max. tensioni ausiliarie / Auxiliary DC feed output max. current	5mA a 10 Vdc / 30 mA a 24 Vdc
Max. errore di linearità / Gain error	< 0.1% fondo scala / < 0.1% full-scale
Max. errore di offset / Offset error	< 0.05% fondo scala / < 0.05% full-scale
Regolazione zero / Zero adjustment	± 10% del fondo scala / ± 10% full-scale
Regolazione span / Span adjustment	± 10% del fondo scala / ± 10% full-scale
Frequenza di conversione / Max. frequency	400Hz±1kHz in funzione del fondo scala 400Hz±1kHz according to full-scale
Tempo di salita / Rise time	150 mV / μs
Banda passante / Bandwidth	1 kHz a -6 dB
Ritardo di fase / Phase delay	< 10 μs
Isolamento IN-OUT- MAIN / IN-OUT-MAIN isolation	> 3 kVac / 60 s
Isolamento contatto/uscita analogica	≥ 500 Vac / 60 s
Contact / analogue output isolation	
Isolamento tensione permanente / Continuous voltage isolation	800 Vac max.
Norme di riferimento / Reference Standards	IEC 664-1, DIN VDE0110
Categoria di sovratensione / Over-voltage category	3
Gruppo di inquinamento / Pollution degree	2
Temperatura ambiente / Operating temperature	-10°C + +65°C
Corrente di commutazione contatto / Contact rated current	1 A @ 30 Vdc / 0.5 A @ 125 Vac
Grado di protezione / Protection degree	IP30
Norme EMC / EMC standards	EN 61000-6-2, EN 61000-6-4
Tipo di collegamento / Connection terminal blocks	2.5 mm ² estribili / 2.5 mm ² pluggable
Materiale del contenitore / Housing material	Poliammide UL94V-0 / Polyamide UL94V-0
Peso / Weight	130 g
Informazioni sul montaggio / Mounting position	Adiacenti senza interspazio / Adjacent without gap
Montaggio su guida / Mounting rail according to	IEC60715/TH53-7,5

fig. 1								
POWER	SW1							
ON	SW2							
OFF								
INPUT SELECTION TABLE	SW1 (INPUT)							
INPUT RANGE	1 2 3 4 5 6 7 8							
UNIPOLAR	0 ± 60mV	± 60mV						
BIPOLAR	0 + 100mV	± 100mV	X					
	0 + 500mV	± 500mV		X				
	0 + 1V	± 1V			X			
	0 + 2V	± 2V				X		
	0 + 5V	± 5V	X	X	X	X		
	0 + 10V	± 10V					X	
	0 + 5mA	± 5mA	X	X				
	0 + 10mA	± 10mA	X	X				
	0 + 20mA	± 20mA	X		X	X	X	
X = ON	= OFF							
OUTPUT SELECTION TABLE	SW2 (OUTPUT)							
OUTPUT RANGE	1 2 3 4 5 6 7 8							
INPUT TYPE	SW3							
UNIPOLAR	X X	X X	X X	X X	U			
BIPOLAR	X X	X X	X X	X X	U			
± 5V								
UNIPOLAR	X X	X X	X X	X X	U			
BIPOLAR	X X	X X	X X	X X	U			
0 + 10V	X X	X X	X X	X X	U			
± 10V								
UNIPOLAR	X X	X X	X X	X X	U			
BIPOLAR	X X	X X	X X	X X	U			
0 + 20mA	X X	X X	X X	X X	U			
± 20mA								
UNIPOLAR	X X	X X	X X	X X	U			
BIPOLAR	X X	X X	X X	X X	U			
4 + 20mA	X X	X X	X X	X X	U			
UNIPOLAR	X X	X X	X X	X X	U			
BIPOLAR	X X	X X	X X	X X	U			

DESCRIPTION OF FUNCTION	
ZERO ADJ: ±10% regulation of the minimum level of the signal range.	
SPAN: ±10% regulation of the maximum level of the signal range.	
N.B.: by regulating one trimmer, the regulation set with the other one also varies slightly. Subsequent adjustments are necessary for achieving the maximum precision.	
POWER green LED: indicates "POWER ON"	
TERMINAL BLOCK 1: positive of the input signal	
TERMINAL BLOCK 2: negative of the input signal	
TERMINAL BLOCK 3: 10Vdc / 5 mA auxiliary power supply, e.g. for potentiometers	
TERMINAL BLOCK 4: 24Vdc / 30 mA auxiliary power supply for 4-20 mA two or three wire loop sensors	
TERMINAL BLOCK 8: output signal negative	
TERMINAL BLOCK 9: output signal positive	
TERMINAL BLOCK +: power supply positive	
TERMINAL BLOCK -: power supply negative	

PROGRAMMING OF THE MODULE	
The module can be programmed with the dip-switches located on one side (see Table 1), the ZERO ADJ and SPAN trimmers, the switch SW3, located behind the front openable panel (see Table 3).	

ANALOG CONVERTER/GALVANIC ISOLATOR: RAPID PROGRAMMING

WARNING: switch the micro-switches only when power is not supplied

1. input: set the range with SW1 (see Table 1)
2. output: set the signal mode with SW3; U = voltage, I = current (see Table 3)
3. output: set the output range with SW2 (see Table 1)

Note: by this procedure the error may reach 2% with single-pole/single-pole or two-pole/two-pole conversions, 4% with single-pole/two-pole conversions or vice versa. The error depends on the deviation of the ranges set in relation to the 0-10V/0-10V works calibration.

ANALOG CONVERTER/GALVANIC ISOLATOR: PRECISION CALIBRATION

To achieve < 0.1% error, supply power to the module for 5 minutes before calibration as indicated in points A to K. Use a 24Vdc stabilised power supply, a calibrated source of standard signals to generate the input signal and a multimeter with scale of 4 1/2 figures for displaying the output signal. Precision of the calibration depends on the precision of the instruments used.

WARNING: switch the micro-switches only when power is not supplied

- A) input: set the signal range with SW1 (see fig. 1)
- B) output: set the signal mode; voltage SW3 setting U, current SW3 setting I (see fig. 1)
- C) output: set the signal range with SW2 (see fig. 2). The setting of SW2 varies according to whether the input signal is single-pole or two-pole, as indicated in the INPUT TYPE column of fig. 1, SW2
- D) connect the multimeter to the output, terminals 9(+) and 8(-)
- E) supply power to the module at terminals + and -
- F) set the source to the required signal and connect it to the terminals 1(+) and 2(-);
- G) regulate the source to the minimum range level with single-pole signals or at the max. negative level with two-pole signals; regulate ZERO ADJ (see Table 3) until the minimum range value is read on the multimeter with single-pole signals or the max. negative value with two-pole signals.
- H) regulate the source to the max. positive level of the signal; regulate SPAN (see Table 3) until the value equal to the signal in input is read on the multimeter
- I) repeat points H) and I) until the required precision is obtained (normally three times)
- J) if one of the signals set is two-pole, check calibration also at the centre of the range value for precise calibration of the offset.

Note: the loop-powered sensors must be connected to terminals 4 (+24 VDC) 1 (+IN) and 2 (only with 3 wire sensor - see Table 4)

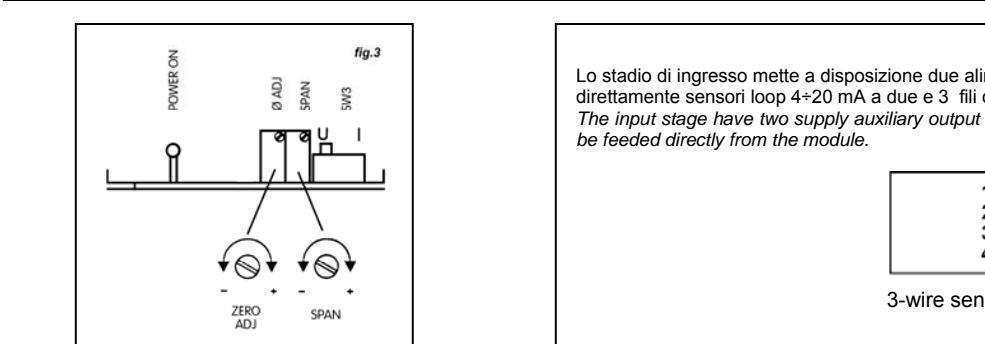
POTENTIOMETRIC CONVERTER: RAPID PROGRAMMING

1. set the input range to 0-5V with SW1 (see Table 1)
2. set the output range and mode with SW3 (see Table 3.) and SW2 (see Table 1)
3. connect one pole of the potentiometer (value > 1kohm) to terminal 3 (output +10V / 5 mA of power supply of the potentiometer) (see Table 4)
4. connect the cursor of the potentiometer to terminal 1 (signal positive)
5. connect the other pole of the potentiometer to terminal 2 (signal negative)
6. supply power to the module at terminals + and -

POTENTIOMETRIC CONVERTER: PRECISION CALIBRATION

To obtain a precision of 0.1% wait a few minutes warm-up time and proceed as follows:

7. Proceed as above from points 1 to 6
8. connect to the terminals 9 (+) and 8 (-) (see Tab.2) a digit multimeter for reading the output signal
9. with the potentiometer at zero calibrate ZERO ADJ until "0.000" is read on the multimeter or with a two-pole output the max. negative value (see Table 3)
10. with the potentiometer at max. calibrate SPAN until the max. signal is read on the multimeter
11. repeat points 9 and 10 until the required precision is obtained.



DESCRIZIONE DELLE FUNZIONI	
ZERO ADJ: regolazione ± 10% del livello minimo della scala di segnale	
SPAN: regolazione ± 10% del livello massimo della scala di segnale	
N.B.: regolando un trimmer, varia leggermente anche la regolazione impostata con l'altro; sono necessarie alcune regolazioni successive per ottenere la massima precisione.	
POWER LED verde: indica la presenza di alimentazione	
MORSETTO 1 : positivo del segnale di ingresso	

DICHIARAZIONE DI CONFORMITÀ
Declaration of conformance

N. 3877

Si dichiara che il materiale sottodescritto:
We hereby declare that material under described:

Code	Type	Description
XCAPIPO3	CAPIPO3	<i>Analog Signals Programmable Converter</i> 19 settable IN ranges; 7 settable OUT ranges Supply voltage: 15...36 Vdc / 22...26 Vac
		<i>Convertitore programmabile di segnali analogici</i> IN 19 scale configurabili OUT 7 scale configurabili Alimentazione 15...36 Vdc / 22...26 Vac

Consegnato con d.d.t. N°
Delivered with Note No.

A fronte dell'ordine N°
Against the order No.

Emesso da :
Issued by

Ha superato i collaudi di lavorazione finale ed è conforme ai requisiti del prodotto, alle sigle di riferimento ed alle specifiche di fornitura.
Has passed all processing inspections and the final test and it is in conformity with the product requirements, including all reference codes and supply specifications.

Specifica Cliente N°
Customer specification No.

Normativa di riferimento: IEC 664-1 DIN VDE0110.1
Reference standards: EN 61000-6-2, EN 61000-6-4

(safety standards)
(electromagnetic compatibility)

Il prodotto risponde alle normative comunitarie, per cui è stato marcato:
The product is in compliance with EU Standards, therefore it bears the CE mark:



Data 8 settembre 2009
Date

M18.7



UNI EN-ISO 9001



UNI EN-ISO 14001

The product manager
Daniele Bruscagin