

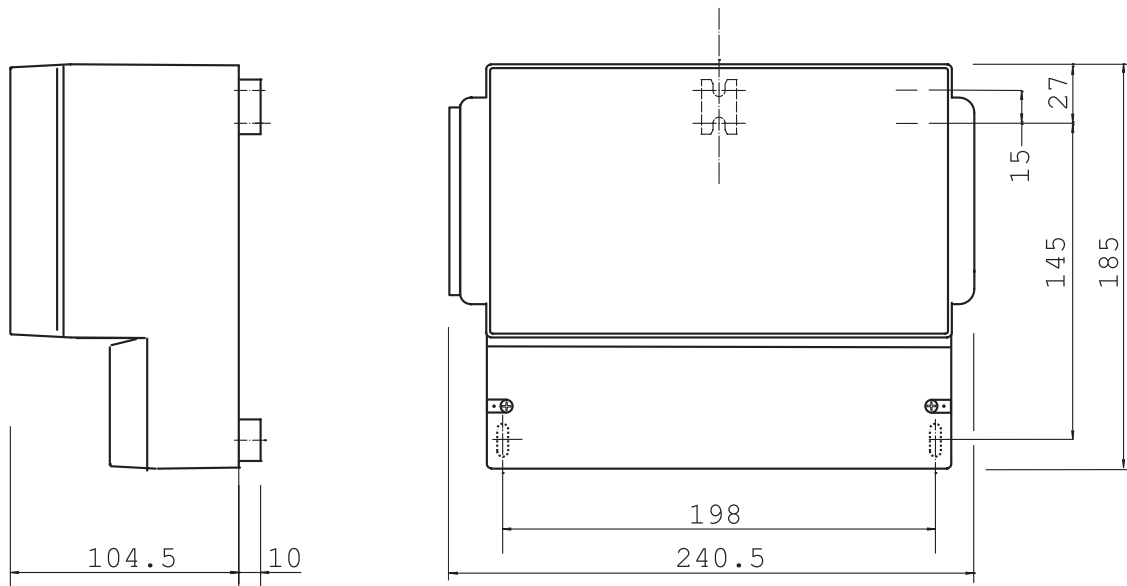


# BCD TO ANALOGUE CONVERTER

TYPE 116-24A

- \* *User selectable output ranges*
- \* *User selectable input range for FSD*
- \* *Positive or negative logic inputs*
- \* *Charging for battery powered encoders*
- \* *AC mains or DC powered versions*

## DIMENSIONS



**This instrument provides accepts up to four decades of BCD data and converts the digital information into a proportional analogue signal.**

Input range for full scale may be user set by four switches, each corresponding to a decade of BCD. Output ranges are user selectable by jumper links.

Typical application include conversion of BCD data from linear or rotational position optical encoders.

### Ordering Information

- Specify Type 116-24A
- Input signal type (TTL or volt-free contact)
- Input signal logic type (positive or negative)
- Output signal type
- Supply voltage and frequency

## SPECIFICATION

### INPUTS (factory set)

TTL or voltage-free contact,  
positive (active state = "1")  
or negative logic (active state = "0")  
*NB both input and logic types must be specified  
at time of order.*

### INPUT RANGE FOR FULL SCALE

Maximum range 9999  
(user selectable by four switches)

### OUTPUTS (field programmable)

0-10 mA into 2000 ohms max.  
0-20 mA into 1000 ohms max.  
2-10 mA into 2000 ohms max.  
4-20 mA into 1000 ohms max.  
0-1 V into 500 ohms min.  
0-5 V into 500 ohms min.  
0-10 V into 1000 ohms min.  
0.2-1 V into 500 ohms min.  
1-5 V into 500 ohms min.  
2-10 V into 1000 ohms min.  
*N.B. Outputs other than those listed can be provided.*

### OUTPUT SELECTION

Output options are selected using internal jumper  
links; span and zero controls are provided for  
trimming.

### HOLD SIGNAL

TTL level signal to transducer. The 116-24A sets high  
when processing current data.

### TRANSDUCER CHARGER SUPPLY

12 VDC @ 10mA max.

### ISOLATION

The input and output are isolated from each other and  
from the power supply. However, inputs are not  
isolated from each other.

Maximum Voltage 250V RMS or 400V DC  
Resistance between input, output(s) or power supply  
 $\geq 50 \times 10^6$  ohms measured at 1000V DC.

### ACCURACY

$\pm 0.25\%$  FSD at 100% when factory calibrated. NB  
ranges set to less than 100 will reduce accuracy to  
approx. 100

### LINEARITY ERROR

$\leq \pm 0.1\%$  FSD

### SUPPRESSION / ELEVATION ERROR

$\leq \pm 0.1\%$  FSD

### OUTPUT RIPPLE

$\leq 0.2\%$  RMS of FSD

### LOAD RESISTANCE EFFECT

$\leq 0.001\%$  of span / 100 ohm change

### STABILITY

Over 24 hours  $\pm 0.1\%$  FSD  
Over 1 year  $\pm 0.25\%$  FSD

### INTERFERENCE REJECTION

Filtering is incorporated to attenuate R.F. and other  
industrial noise.

### SERIES MODE AC REJECTION RATIO

For 50/60Hz series mode signals with p.t.p. amplitude  
 $\leq$  input; rejection ratio greater than 40dB.

### COMMON MODE REJECTION

$<0.2\%$  error for 250V RMS 50/60 Hz, or 400V DC,  
common mode signals.

### TEMPERATURE COEFFICIENTS

Zero:  $\pm 0.02\%$  span / °C  
Span:  $\pm 0.02\%$  span / °C

### TEMPERATURE RANGE

Operating:  $-10^\circ\text{C}$  to  $+60^\circ\text{C}$   
Storage:  $-20^\circ\text{C}$  to  $+70^\circ\text{C}$

### POWER SUPPLY

Standard  
AC 110, 220 or 240V  $\pm 10\%$  50/60Hz 5VA  
Fuse: 100 mA quick blow type 20 x 5 mm

### DC Option

DC 12, 24 or 48V  $-10\%$  to  $+20\%$  @ 3.5 W  
Fuse: 250mA Anti-surge type

### WEIGHT

Approx. 1.1kg



**WARNING: THIS UNIT CAN BE MAINS POWERED, AND ALL INPUTS TO IT  
MUST BE ISOLATED FROM DANGEROUS VOLTAGES BEFORE THE FRONT  
COVER IS REMOVED. LIVE TERMINALS WILL BE EXPOSED.**

Continuous development may necessitate changes in these details without notice

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