



# PROCESS DISPLAY

Field Programmable

TYPE 510

- **3½ digit bright LED display**
- **User configurable scaling to ranges within - 1999 to +1999**
- **Accepts most standard voltage and milliamp process signals**
- **110 - 240VAC and optional 12 or 24VDC versions**
- **Configurable for reversed reading**
- **Custom-made user changeable legends**
- **Optional front panel protection (up to IP65)**



The 510 Process Display is a 3½ digit LED panel meter which provides a scaleable display of an analogue signal in engineering units. Field-configurable options include input

signal type, span and zero (offset), zero offset polarity, decimal point selection and reading polarity.

### Input source

The input source selection is made via jumper links which select one of six input types (two voltage types and four mA types). A second link selects true or raised zero.

### Input scaling

Scaling to user specified engineering units is catered for by a series of internal jumper links. 'Display Bias' links set the desired display in engineering units when the input signal is at its zero value. The zero reading may be set to either all zeros or a raised (+) or below zero (-) quantity. The 'Span Selector' jumper link sets the full scale display reading. Multi-turn controls provide fine trimming of span and zero readings. Reverse reading is also possible.

### Decimal points

Decimal point positions are selectable via an internal switch.

### Reversed reading

The wide range of available display bias, together with reading polarity and offset polarity settings, enable reversed reading action to be configured. e.g. with 4mA input the display can be set to read '1000' and with 20mA input, to read '0'.

### Display test / Display hold

One of two functions may be activated via a remote switch or 5V signal. The required function is selected by the 'T/H' jumper link and made available at the connector on the rear panel.

**Display test** illuminates all segments on the display. **Display hold** freezes the display whilst the activation signal is maintained.

### Splash resistant front panel

A flexible transparent rubber hood offering front of panel protection up to IP65 is available as an option.

### Legends

Custom made legends, e.g. depicting engineering units or process description, can be supplied at no extra cost or can be made and fitted by user.

## SPECIFICATION

### INPUTS

**User selectable,** 4-20mA, 0-10mA, 0-15mA, 0-20mA, 0-1V, 0-5V

**Impedance:** Current 100 ohms; Voltage >270k ohms

**Overrange protection:** Voltage Inputs 250 volts RMS or DC.  
Current Inputs 100mA dc

### DISPLAY

**Type:** 3½ digit red LED, 14.2 mm high

**Accuracy:** 0.1% of FSD ± 1 digit (if factory set)

**Linearity:** ± 1 digit (from best fit straight line)

**Sample rate:** Approx 3 per second

**Decimal point selection:** none, 0.0, 0.00, 0.000

**Custom engineering units:**

Zero ±1999

Span ±0-150 to ±0 to 1999

**Polarity:** Automatic with negative sign displayed

### TEMPERATURE COEFFICIENTS

±100ppm /°C typical

### TEMPERATURE RANGE

**Operating:** -10°C to +55°C

**Storage:** -30°C to +60°C

### SUPPLY VOLTAGE REJECTION

**Span change:** <0.1% span / % supply change

### SERIES MODE REJECTION

<0.2% error for 50Hz signal equal to 50% span

### POWER SUPPLY

AC 110/220/240 Vac, ±10% 50/60Hz 5VA (standard)

DC 12V or 24V ± 10% 3.5W (option)

### WEIGHT

Approx. 420 grams

### DIMENSIONS

164mm deep (including connector) x 96mm wide x 48mm high

### SAFETY & EMC

**Safety:** EN61010-1

**Immunity:** EN50082-1

**Emissions:** EN50081-1

CE certified

## ELECTRICAL CONNECTIONS



**WARNING:** these details are provided for pre-sales information only. Installation must be carried out in accordance with the User Guide.

Supply

1 — Line } AC  
2 — Neutral } Mains  
3 — Earth } Supply

Positive (+)	} DC Supply Option
Negative (-)	
Earth	

Signal

4 — +5 V  
5 — Test or Hold  
6 — Current input (+)  
7 — Voltage input (+)  
8 — Input signal (0v)

## INFORMATION REQUIRED WHEN ORDERING

### Standard Units

Standard units are supplied with the following default settings:

**Input:** 4-20mA

**Display:** 0 - 100.0

**Test/Hold:** set to 'Test'

**Legend:** %

Order Code: 510

### Pre-configured Units

Order Code: 510 /9

Followed by:

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Input signal                 | <input type="checkbox"/> Display at full scale input signal | <input type="checkbox"/> Display at zero input signal |
| <input type="checkbox"/> Supply voltage and frequency | <input type="checkbox"/> Front panel legend                 |   |

### Splash resistant front panel option

Order Code: 500-COV



**THIS UNIT CAN BE MAINS POWERED, AND ALL INPUTS TO IT MUST BE ISOLATED FROM DANGEROUS VOLTAGES BEFORE MAKING CONNECTIONS TO THE UNIT OR REMOVING IT FROM ITS CASE. LIVE TERMINALS WILL BE EXPOSED.**

Continuous development may necessitate changes in these details without notice

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