

# Dual Input Voltage & Current Indicator

## Features

- Dual DC Voltage 0V to 10V or Dual DC Current 4mA to 20mA
- Microprocessor based design
- Peak hold
- Independent scaling of each input
- Full calibration & programming via keypad & communications port
- Isolated wide range AC & DC powering
- Isolated analogue outputs
- Input signal relationships include:- (A+B) (A/B) (A-B) (AxB) and A = process, B + set point value with scaling factor
- 4½ digit high resolution

## Typical Applications

- Load Cell based Balancing systems
- Differential pressure measurement
- Pressure compensated force measurement

## Description

The ADP15 range of products is very versatile, accepting a wide range of different signal input types and ranges.

The ADP15's flexibility makes it the first choice for many control system designers. Supporting products like PC software, printers, and sensors, means most customers can deal with a single supplier.

### Outputs include:-

Analogue voltage and current, Industry standard digital communications, Relays, Printer Drive.

### Options and Accessories include:-

Panel mounting, DIN rail mounting, Power supplies for 110/230VAC or 9-32VDC, Communications for Printer, PLC or PC

### Software Options:-

Power Factor, Printers DP data only and TDP for real time/date.

The ADP15 can be supplied as part of a system, including many of the wide range of LCM Systems sensors and instrumentation. Please contact our technical department to discuss your application.



## Specification & Order Codes

### General Specifications

Accuracy	Typical $\pm 0.08\%$ of output, $\pm 0.08\%$ FSD
Resolution	As display resolution, max 15 bits
Calibration	By 15-turn pre sets for gain and offset
Inversion	By keypad value
Isolation	$\pm 130V$ RMS or DC max to analogue input or to any other port
Ranging	Fully keypad scalable over desired display range
PID	Power level, when selected = 12 bit resolution output

### Display

7 segment 4.5 digit display (max display  $\pm 19999$ ), 10mm high digits  
3 x 3mm LED's 2 for relay status, 1 for program and hold indication

### Front Panel Keys/Buttons

4 membrane panel keys, offering the following functionality, when configuring:-

Scroll key to view/update parameter.	
Digit select key	
Digit increment key	
Reset key	

The keys can be configured in normal operation, to offer the following functionality

Keypad can be disabled when in normal operation, required.

Peak/Trough hold reset  
Resetting of relay latches  
Auto-Zero display

### Physical

Case Dimensions	DIN 72 x 72 x 163mm (excluding mounting terminal)
Case Material	Grey Noryl, flame retardant
Weight	750 grams
Terminals	2.5mm, saddle field terminals
Accessibility	Electronics removable through front panel leaving field wiring and case in situ.

### Data Retention/Protection

Retention:	10 years for set up values, minimum of 100,000 write cycle
Protection of data and function(s)	Watchdog timer giving repeat auto resets. Impending power detection and hold off. Keypad security and time out.

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TYPE: ADP15-DI

## CE & Environmental

Storage temperature	-20 to +70°C
Operating temperature	-10 to 50°C
Relative humidity	95% maximum non-condensing
Low Voltage Directive	2006/95/EC
EMC Directive	2004/108/EC

## Input Options

Input Type	Input Range	Order Code
DC Voltage	Dual 0-10V	DIV
DC Current	Dual 4-20mA	DIA

## DC Analogue Outputs

Output Range	Order Code	Output Range	Order Code
0 to 10V	V4	4-20mA	A3
Maximum Current out 50mA		Maximum Voltage out 20V	

## Communications Port

Port Type	Order Code
RS485/232	COM 1
RS485 -For up to 32 instruments on 1 bus, 4 wire.	
RS232 -For printer or direct connection to 1 device.	

## Port Specifications

Baud rates	300, 600, 1200, 2400, 4800, 9600 (19200 MANTRABUS only)
Electrical isolation	±130V RMS or DC max to analogue input or any other port
Formats	MODBUS RTU, MANTRABUS and printer output formats
Cable Length	1km (depending on baud rate)

The printer option utilises the communications board RS232 output. The output drive for a printer offers a Time/Date stamp and log number together with the label of units of measure, or the output drive for a log number only, together with label of units of measure. A wide range of printers may be connected.

In all bi-directional communications option, all display data can be accessed via the communications port along with relay and EEPROM status. All user configurable data can be changed including EEPROM enable/disable and relay reset (address code cannot be changed).

## Alarm/Control Outputs

Relay Output Type	Order Code
One Relay (DPCO)	R2
Two Relays (SPCO)	R3

## Relay Output Specifications

Relays	230V at 5A AC resistive
Isolation	±130V RMS
Keypad	Can be used to reset latch, when relays configured for latching

## Power Supplies

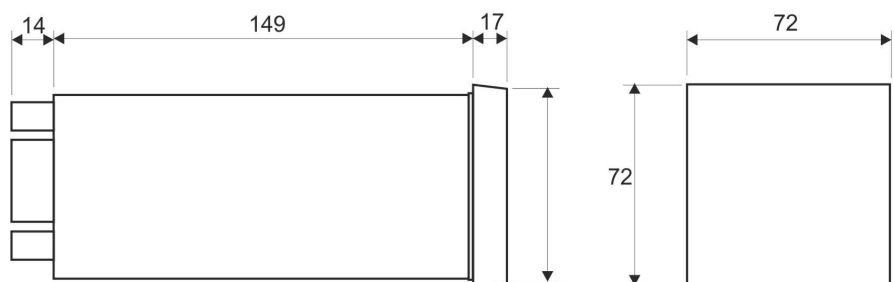
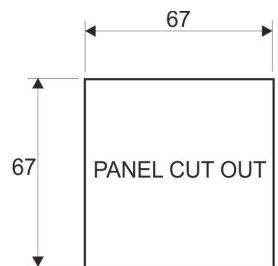
Power Supply Range	Order Code
220V-230V AC 50-60Hz 10W	240
110V-120V AC 50-60Hz 10W	110
9-32V DC 10W isolated	12/24

## Mounting Options

Mounting Type	Order Code	Mounting Type	Order Code
Panel Mounting	P	DIN Rail Mounting	D

## Mechanical Dimensions

All dimensions in millimeters



Unit 15,  
Newport Business Park  
Barry Way, Newport,  
Isle of Wight,  
PO30 5GY  
United Kingdom  
Tel: +44 (0) 1983 249264  
Fax: +44 (0) 1983 249266  
sales@lcmsystems.com

Due to continual product development, LCM Systems Ltd. reserves the right to alter product specifications without prior notice.

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