

Description

The DIN rail mounted remote relay units offer an increased number of set points over that provided by a standard ADP15 indicator/controller. This allows for multi action operations.

The software of the ADP-SP16 gives the user freedom to program the number of set points for their requirements. A single ADP-SP16 will control up to 16 set points, programmed from its front panel. Set points can be individually set up with In Flight compensation and hysteresis values. Separate 'Output Latch' and 'Output Action' for up to 14 of the 16 set points is available, settable from the front panel of the ADP-SP16. A special mnemonic allows the user to specify the number of set points to be used.

A DIN rail mounted power supply unit is required where more than 4 set points are to be used. The units are driven from the ADP-SP16 via an internal special remote driver board. All relays are pluggable and connections are made via field screw terminals. The operating procedures for these units are to be considered together with the standard ADP15 when preparing the system for operation.

Outputs include: - Analogue voltage and current, Industry standard digital communications, Relays, Printer Drive

Options and Accessories include: -

- Panel mounting via DIN rail mounting
- IF25 Interface module connects up to 25 ADPs to 1 RS232 port
- Power supplies for 110/230 V AC or 9-32V DC

Communications for Printer, PLC or PC.

Software Options include: - Power Factor Printers DP data only and TDP for real time/date. Printers DP data only and TDP for real time/date.

Typical Applications

- Crane safety remote display and control
- Batch control
- Multiple motor/pump control

ADP15-SP16 Indicator/Controller with up to 16 Setpoints



Features

- Up to 16 Set Points, programmable from ADP15 keypad
- 4 and 8 relay DIN rail module
- Individual set points & hysteresis values
- Selectable set point quality
- Relay contact rating 230V @ 5A AC
- PID Control
- Programmable output actions

TYPE: ADP15-SP16

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Indicator/Controller with up to 16 Set Points

Specification

| Input Type | Input Ranges | Order code |
|---------------|--|------------|
| Temperature | Platinum Pt100 Resistance Bulb | PT |
| | Type K Thermocouple | T1 |
| | Type J Thermocouple | T2 |
| | Type R Thermocouple | T3 |
| | Type S Thermocouple | T4 |
| | Type T Thermocouple | T5 |
| | Type B Thermocouple | T6 |
| | Type N Thermocouple | T7 |
| | Type E Thermocouple | T8 |
| DC Voltage | +/-20mV | DCV1 |
| | +/-200mV | DCV2 |
| | +/-2V | DCV3 |
| | +/-20V | DCV4 |
| | +/-200V | DCV5 |
| DC Current | +/-2mA | DCA1 |
| | 4-20mA (+ 3.5mA to 20.5mA) | DCA2E |
| | +/-20mA | DCA3 |
| | +/-200mA | DCA4 |
| AC Voltage | 0-200mV | ACV1 |
| | 0-2V | ACV2 |
| | 0-20V | ACV3 |
| | 0-200V | ACV4 |
| AC Current | 0-1A | ACA |
| Potentiometer | Any value in the range 100R to 10K | RL |
| LVDT | AC excitation with signal selectable 20mV to 10V full range | LVDT |

| Outputs | Order code |
|----------|------------|
| 0 to 1V | V1 |
| 0 to 5V | V2 |
| 1 to 5V | V3 |
| 0 to 10V | V4 |
| ±10V | V5 |
| 0-1mA | A1 |
| 0-20mA | A2 |
| 4-20mA | A3 |
| 10-50mA | A4 |
| 0-5mA | A5 |
| 0-10mA | A6 |

Other Information

| | |
|-------------|--|
| Accuracy | Typical ±0.08% of output, ± 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 | ±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 |

| Communications Port | Details | Order code |
|---------------------|--|------------|
| RS485/232 | RS485 - For up to 32 instruments on 1 bus, 4 wire | COM 1 |
| | RS232 – printer or direct connection to 1 device, 3 wire | |
| 20mA current loop | For up to 25 instruments per interface, 4 wire | S1 |
| | RS232 – printer or direct connection to 1 device, 3 wire | |
| 20mA current loop | For up to 25 instruments per interface, | S1 |

Other Information

| | |
|----------------------|---|
| 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 |

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| Alarm/Control Outputs | Details | Order code |
|-----------------------|--|------------|
| SPCO | 4 relay module | REM4 |
| SPCO | 8 relay module (PSU required) | REM8 |
| PSU | Power supply for REM8 module | REMPSU |
| REM cable | REM to REM cable (req. for additional REM units) | REMC2 |
| DPCO | 1 relay on SP2 | R5 |

Other Information

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|---|--|
| Relays | 230V at 5A AC resistive |
| Isolation | ±130V RMS |
| Keypad Programmable values and options: | Hysteresis, Latching, Output Inversion, Delay Times, PID Time Proportioning. |
| 16 relay option can be supplied on external DIN rail modules (10A SPCO), ask for ADP15-SP16 | |

| Power Supplies | Details | Order code |
|----------------|--------------------------|------------|
| 240 | 220V-230V AC 50-60Hz 10W | 240 |
| 110 | 110V-120V AC 50-60Hz 10W | 110 |
| 12 & 24V | 9-32V DC 10W isolated | 12/24 |

| Mounting Type | Order code |
|------------------|------------|
| Front Panel | P |
| Din Rail Adaptor | D |

Communication Port CP Operation

All ADP15 display data can be accessed via the communications port along with relay, PID power and EEPROM status.

All ADP15 user configurable data can be changed including EEPROM enable/disable and relay reset (ADP15 address code cannot be changed).

Other Options & Accessories

| |
|---|
| One pass calibration |
| 20mA PC Communications Interface (IF25) |
| VisualLink PC SCADA Software |
| Analogue Totaliser (Integrator) |

Base ADP15

| | |
|--------------|---|
| Input Filter | Programmable to average up to 64 display updates. |
| Displays | 7 segment LED 4.5 digit 10mm.3 x 3mm LED's 2 for relay status, 1 for program and hold indication. |
| Update Rate | Up to 10 updates per seconds |

Controls

| | |
|-----------------------|---|
| 4 membrane panel keys | Scroll key to view/update parameter. |
| | Digit select key. |
| | Digit increment key. |
| | Reset key. |
| | Keypad disable by internal links behind front panel. |
| | Hold function by digit select key when in input mode. |

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. |

CE & Environmental

| | |
|------------------------------|---|
| Storage temperature | -20 to +70°C |
| Operating temperature | -10 to 50°C |
| Relative humidity | 95% maximum non condensing |
| Safety/Low Voltage Directive | 73/23/EEC amended by 93/68/EEC BS EN 61010-1:2001, IEC 1010-1-1990 |
| EMC Directive | 89/336/EEC Basic Standard BS EN 61326:1998 |
| EMC Emissions | BS EN 55011:1998 |
| EMC Immunity | BS EN 61000-4-2:1995 BS EN 61000-4-3:2002 BS EN 61000-4-4:2004 BS EN 61000-4-11:2004 |

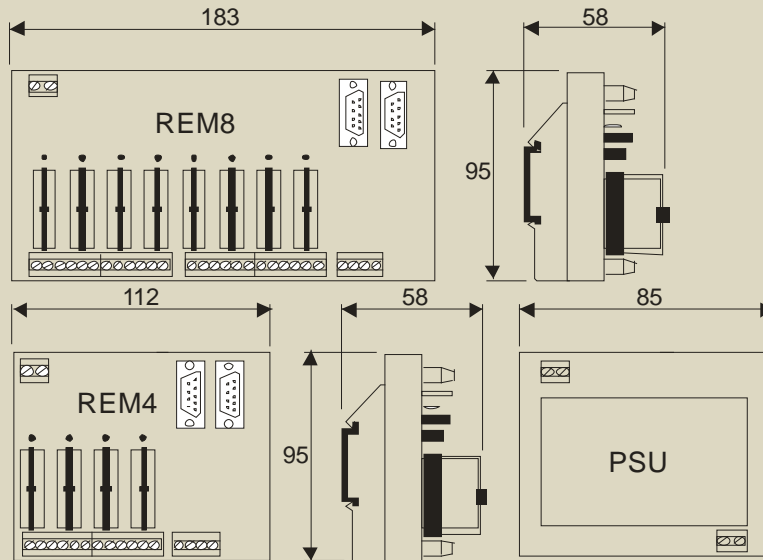
Physical

| | |
|-----------------|--|
| 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 | All electronics removable through front panel leaving field wiring and case in situ. |

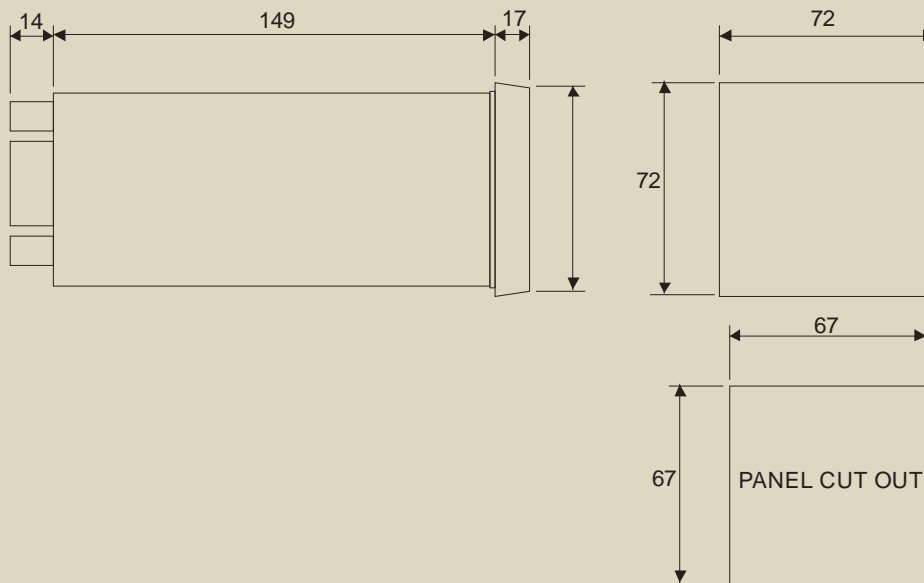
Mechanical Dimensions

All dimensions in millimeters

Dimensions for the DIN Rail Relay Output Modules



Panel Mount Dimensions for the ADP15



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

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