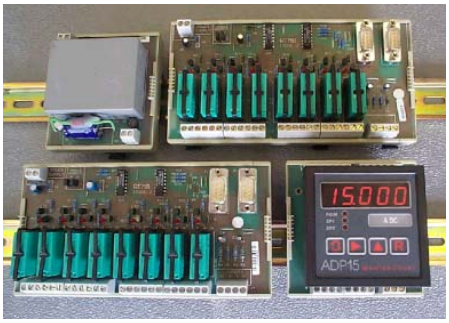
Universal Indicator / Controller with up to 16 Set Points

Features

- Up to 16 Set Point
- Programmable from ADP15 Keypad
- 4 and 8 relay DIN Rail Module
- Individual Set Points & Hysterisis Values
- Programmable Output Actions
- Selectable Set Point Quality
- Relay Contact Rating 230V @ 5A AC
- PID Control
- VisualLink PC SCADA Software (optional)
- Industry Standard Analogue Outputs
- Output Relays, Communications, Printer Drive



Introduction

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.

Options & Accessories

- Supplies for 115/230 VAC or 9-32V DC
- Communications Outputs for Printer, PLC or PC
- Quick reset
- IF25 Interface module connects up to 25 ADP15's
- to one RS232 port
- Printers DP data only and TDP for real time/date

Specifications

Inputs

Order Code	Probe Type	AC Volts	
PT	Pt 100 Resistance Bulbs Thermocouple	ACV1	0-200V
T1, T2, T3, T4, T5, T6, T7, T8	Type K, J, R, S, T, B, N, E	ACV2	0-2V
DC Volts		ACV3	0-20V
DCV1	±20mV	ACV4	0-200V
DCV2	±200mV	AC Current Potentiometer	
DCV3	±2V	ACA	0-1A
DCV4	±20V	RL	Potentiometer 100R -10K
DCV5	±200V		Rate & Totaliser Inputs V AC
DC Current			MV, 5V logic & NAMUR
DCA1	±2mA		
DCA2E	±4 to 20mA (+3.5 to 20.5mA) with 24 V excitation		
DCA3	±20mA		
DCA4	±0200m		

Pressure	Excitation 40mA @ 10V	Display	Set by keypad, up to 64 standard update
Accuracy	90 days ± 0.08% of reading ±0.05% of FSD typical	Average	1 x 4 digit, High Brightness, 10mm Red LED
Drift	0.002% ºC typical @ 2.5mV/V	Display	2 x 3mm LED's for SP1 and SP2 status, 1 x 3mm
Display Rate	0.1 seconds for standard update		LED for hold

DC Analogue Outputs

Order Code	Range	Order Code	Range
V1	0 to 1V	A1	0 to 1mA
V2	0 to 5V	A2	0 to 20mA
V3	1 to 5V	A3	4 to 20mA
V4	0 to 10V	A4	10 to 50mA
V6	-10 to +10V	A5	0 to 5mA
Max Current out 50mA		Max Voltage out 20V	

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

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).

Communications Port		**Details**
Order Code	**Type**	For printer or direct connection to 1 device, 3 wire
COM1	RS232	For up to 32 instruments on 1 bus, 4 wire
COM1	RS485/422	For up to 25 instruments per interface, 4 wire
S1	20mA	

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

Alarm/Control Outputs

Order Code	Type	Function
R1	SPCO	1 relay on SP1
R2	DPCO	1 relay on SP1
R3	SPCO	2 relays on SP1& 2
R4	SPCO	1 relay on SP2
R5	DPCO	1 relay on SP2

Relays, 230V at 5A AC resistive
Isolation, ±130V RMS
Keypad Programmable options: Hysteresis, Latching, Output Inversion, Delay Times, PID values and Time Proportioning.

Power Supplies

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

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 second

Controls

4 membrane panel keys with tactile feedback. 1 scroll key to view/update parameter. 1 digit select key. 1 digit increment key. 1 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 cycles.
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 +70ºC	European EMC Directive	2004/108/EC
Operating temperature	-10 to 50ºC	Low Voltage Directive	2006/95/EC
Relative humidity	95% maximum non condensing		

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.

ISO 9001 REGISTERED FIRM

Designed, Manufactured & Supported in the UK

THE QUEEN'S AWARDS FOR ENTERPRISE 2009

CE *In the interest of continued product development, Mantracourt Electronics Limited reserves the right to alter product specifications without prior notice.*