

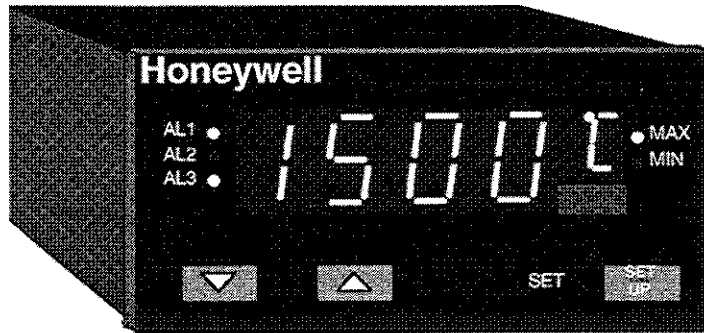
UDI 1500 MICRO-PRO SERIES

Universal Digital Indicator

Specification

Overview

The UDI1500 is a 1/8 DIN horizontal (96mm*48mm) format indicator which combines a high degree of technology and quality with a low price. Its large red display provides a very good, clear and quick legibility of the essential information you need. It is ideally suited for a large number of applications.



Features

A companion for the UDC1000/1500

Based on the same technology as the UDC1000/1500 low price controllers, the UDI1500 is the ideal companion of those controllers for application requiring performance in control and accurate indication.

Moisture resistant front face

Meets NEMA 3/IP65 front face protection against dust and water.

Universal Power supply and input

Can operate on any line voltage from 90Vac to 264Vac at 50/60Hz. A low voltage 24/48Vac/dc solution is also available. All input types like thermocouples, RTD's and linear DC are configurable as standard.

Flexibility & commonality

The option boards (alarm relay output and linear output retransmission) are plug-in for easy upgrade and low inventory.

Large visibility

A large 14 mm four digits LED display in red make the UDI1500 easy to read from a distance. A specific digit for °C or °F is provided.

Alarm strategy

Up to three soft alarms are available with or without remote relay action. The alarm types can be set on PV high or low. Alarm 1 can be latched and requires acknowledgment from the operator.

Min. and Max. indication

Maximum and Minimum values attained by the process variable since the last reset are stored for further analysis.

Time elapsed

The UDI1500 can also store the time elapsed since the alarm 1 became active. In combination with the above Max. and Min. features, it provides alarm information for more detailed analysis.

Transmitter Power Supply

Provided as an option on output 3 is 24 Volts DC power for a 2-wire transmitter.

Configuration

Easy and full configuration with straightforward menu via the instrument front face.

PV retransmission

The linear optional output 2 can be used for PV retransmission.

Specifications

Technical Data	
Accuracy	<i>Measurement</i> : 0.25% of Span \pm 1 LSD <i>Linearisation for T/C & RTD</i> : Better than \pm 0.2°C for decimal range ; Better than \pm 0.5°C for integer range <i>Cold junction compensation (T/C only)</i> : Better than \pm 0.7°C
Temperature Stability	0.01% of span per °C
Input Signal Failure	For Thermocouple and RTDs : Upscale burnout For linear input : Downscale burnout (only applicable to 4-20mA)
Input Sampling Rate	Four samples per second
Input Filter	Digital filter : 0.0 (off), from 0.5S to 100.0 seconds in 0.5s increment
Input Resolution	14 bits approximately, always four times better than display resolution
Input Isolation	Universal input isolated at 2500V from all outputs and from power supply
Stray Rejection	Common mode rejection : >120dB at 50/60Hz with negligible effect at 264V Serial mode rejection : >500% of span at 50/60Hz with negligible effect
Approvals	UL pending and CE approved
Environmental	EMI immunity : meet EN50082-2 part 2 EMI Emission : meet EN50081-2 part 2 Safety considerations : comply with EN61010-1
Front Panel Sealing	IP65/NEMA3
Power consumption	4 Watts
Physical	Weight : 480 grams max. Width : 96mm/3.78 inches, Height : 48mm/1.89 inches, Depth : 100mm/3.94 inches Wiring connection : Screw terminals on the rear of the case (combination head)
Alarms	Up to three soft alarms with 3 SPDT relay outputs Alarm types : PV high or low with direct or reverse acting Up to three alarm hysteresis : From 1 LSD to 10% of span Combination alarms : Logical "OR" or "AND" Alarm 1 can be latched requiring specific acknowledgment
Output type	Type available : Output 1 : Electromechanical relay output SPDT Output 2 : Electromechanical relay output SPDT or Linear DC for PV retransmission Output 3 : Electromechanical relay output SPDT or Transmitter power supply <i>Linear DC output</i> : 4-20mA Accuracy : \pm 0.5% (500 ohms max) Resolution : 8 bits in 250ms (10 bits in 1 second typical, >10 bits in >1 second) Load impedance : 500 ohms maximum. Isolation : isolated 2500V from all other inputs and outputs. Range selection method : Jumper positioning and front panel code setting. Temperature stability : 0.01% / °C <i>Electromechanical relay</i> : SPDT contact with 2 A at 120 V or 240 V (resistive load) Life time : > 500 000 operations at rated voltage/current. <i>Transmitter power supply</i> : Voltage output : 20 - 28 Vdc with 24Vdc nominal Minimum load impedance : 910 ohms (22 mA and 20Vdc)
Retransmission Output	Current output of output 2 can be selected to retransmit the process variable.
Remote Reset Input	Voltage free or TTL compatible (External relay contact or TTL logic signal) To reset the latched alarm output 1

Input Actuations			
		°F	°C
Thermocouple types (Fixed decimal)	R	32-3002	0-1650
	S	32-3000	0-1649
	J	32.0-401.7	0.0-205.4
	J	32-842	0-450
	J	32-1401	0-761
	T	-328-504	-200-262
	T	32.0-501.0	0.0-260.6
	K	-328-1399	-200-760
	K	-328-2503	-200-1373
	L	32.0-402.2	0.0-205.7
	L	32-841	0-450
	L	32-1403	0-762
	B	211-3315	100-1824
	N	32-2550	0-1399
RTD : (3 wires connection) PT100 (IEC) $\alpha = 0.00385$ (Fixed decimal)		32-1471	0-800
		32-571	0-300
		-149.7-211.9	-100.9-100.0
		32.0-213.6	0.0-100.9
		-328-402	-200-206
DC linear : (note 1)		-149.7-999.1	-100.9-537.3
		4-20mA, 10-50mV, 0-50mV	

Note 1: Other DC linear inputs also available via field software configuration and hardware jumper configuration: 0-5V, 1-5V, 0-10V, 2-10V, 0-20mA

Operating Conditions			
	Reference conditions	Operative limits	Transportation and storage
Ambient temperature	20°C±2°C (68°F±4°F)	0°C to 55°C (32°F to 131°F)	-20°C to 80°C (-4°F to 176°F)
Relative Humidity	60-70%	20-95% non condensing	
Voltage	90-264Vac ±1%	90-264Vac 20-50Vac or 22-65Vdc	
Frequency	50Hz	50-60Hz	
Source resistance	<10 ohms for thermocouple	1000 ohms max for thermocouple	
Lead resistance for RTD	<0.1 ohm/lead (PT100)	50 ohms per lead maximum balanced (PT100)	

Model Selection Guide

Key number Table I Table II Table III Table IV Table V Table VI Table VII Table VIII

DI150X	1	X	X	X	X	0	0	0
						None	None	None

Power Supply : 1 = 90 to 264 Vac, 2 = 24 to 48 Vac/dc

Digital input : 0 = None, 2 = Digital Input

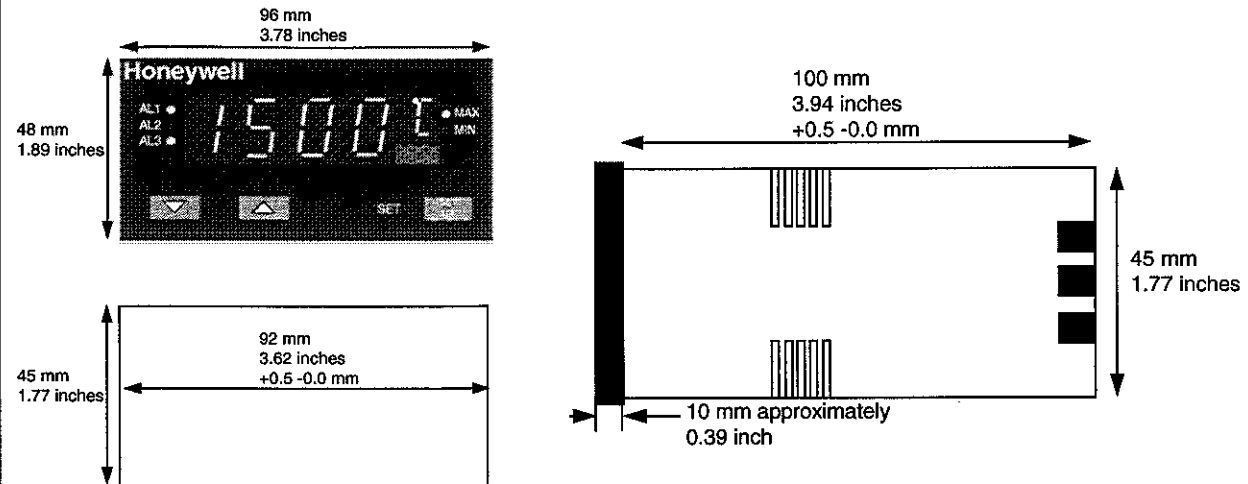
Output 3 : 0 = None, 1 = Relay, 8 = Transmitter power supply

Output 2 : 0 = None, 1 = Relay, 7 = Linear 4-20mA retransmission only

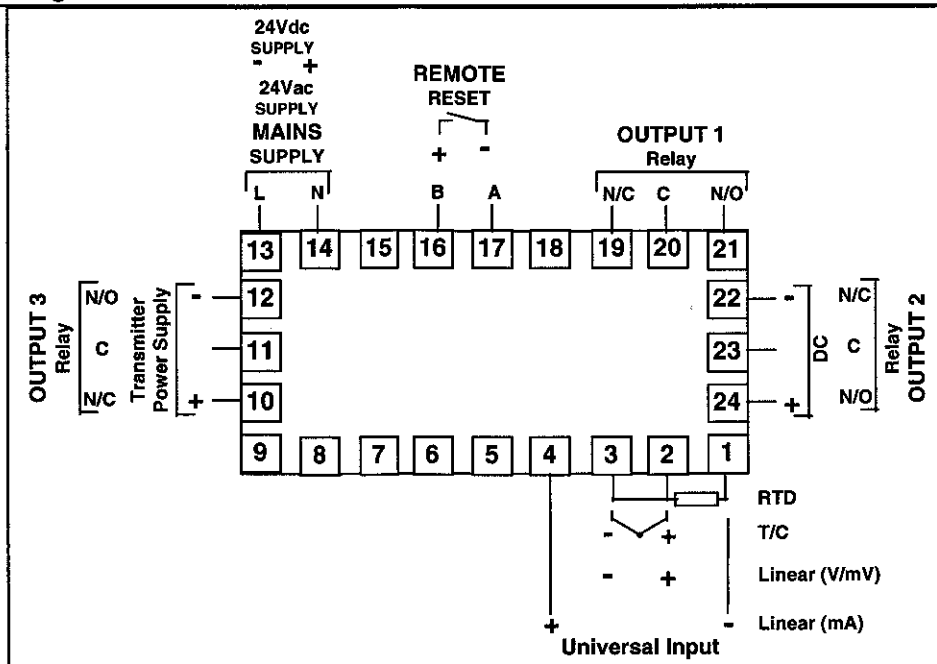
Output 1 : 1 = Relay

Input type : 1 = RTD or linear mV, 2 = T/C, 3 = Linear mA

External Dimensions and Panel Cutout UDI1500



Wiring Diagram



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