

Type ELD203/4 Dual Channel Rack Mounting Digital Indicator

The Type ELD203/4 dual channel rack mounting digital indicators are a versatile component which can be used to indicate the tilt angles measured by a pair of any of the range of **ELECTROLEVEL** tilt transducers. The measured angles are displayed on 3 ½ digit LCD meters

The ELD203 can be powered by its internal universal AC mains adaptor or use an external unregulated DC power supply from a wide range of sources anywhere in the range 6-28Volts.



The ELD204 is similar to the ELD203 but is fitted with limit relays which operate at user definable angles so that external equipment can be controlled. Separate relays are provided for both positive and negative angles, and adjustable hysteresis is provided so that control mechanisms switch cleanly at the preset angles. A further relay indicates an alarm condition outside the control limits for fail safe applications. This low power consumption unit can be scaled to provide digital readings representing common standard units e.g

arc-seconds

decimal degrees

millimetres per metre

,or custom scaled to user significant units e.g mm of deflection over a standard base line

Two voltage output signals are provided which are suitable for driving external meters, data loggers, data acquisition systems and power amplifiers for control systems.

Proprietary circuit techniques match the Signal Conditioning Unit to the attached sensors and minimise the effects of temperature scale drift and temperature datum drift, thus contributing to the high precision of an **ELECTROLEVEL** system

Where long cables to an external port need to be driven, the ELD203 should be placed within 100 metres of the sensing head and the optional 4-20mA current loop used to drive the longer cable. (requires 24Volt supply)

Robust circular DIN style connectors are fitted to the ELD203/4 giving a long term reliable connection both to the sensing head and to the power supply/signal connector

The ELD203/4 are members of a family of Signal Conditioning Units suitable for driving the **ELECTROLEVEL** tilt transducers. Other units in the range include signal conditioning units, portable indicators with digital or analogue displays, and units which provide digital outputs in a variety of interface specifications. Single channel units are also available in all these options.

For specialist applications, the Signal Conditioning Unit circuits can be supplied for mounting in Standard Rack systems with multi-channel cards and microprocessor control of the data acquisition function.

SPECIFICATION ELD203/4 Dual Channel Rack mounting Digital Indicator

Signal Conditioning Unit

Output voltage	± 1 volt d.c. into open circuit with respect to datum reference at 2.5 Volts above system ground.
Output current	± 1 mA d.c. into short circuit (short circuit protected). (4-20mA current loop option)
Temperature Coefficient of Scale	0.1%/ $^{\circ}$ C
Zero drift with temperature	100 μ V/ $^{\circ}$ C
Electronic datum Adjustment Range	± 0.1 degrees with 0.5 degree Sensing Head ± 1.0 degrees with 5.0 degrees Sensing Head
Operating Temperature Range to above specification	-15 $^{\circ}$ C to + 60 $^{\circ}$ C
Overrange Capability	will not be damaged by overranged transducer input
Displays	3½Digit LCD meter 11mm digit height. scaled as required.
Input Power Consumption	300 mA at 24V d.c.
Relays	Two relays per channel each with two pairs changeover contacts rated 10A at 250Vrms
External Connections	
Sensing Head	Metal Screwlocking DIN style plug
External D.C. supply and Output	Metal Screwlocking DIN style plug
Sensing head cable length	100 metres (maximum recommended)
Relays	Terminal strips
Power Supply	
Internal Universal mains adaptor	90/264 Volts ac 47/63 Hz
External DC supply	6 to 28 volts d.c. ELD203 24-28 volts dc ELD 204
Physical Details	
Enclosure	19 inch Rack mounting Unit
Nominal Dimensions	483mm W x 88mm H x 150 mm D
Weight	3.15 Kg



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