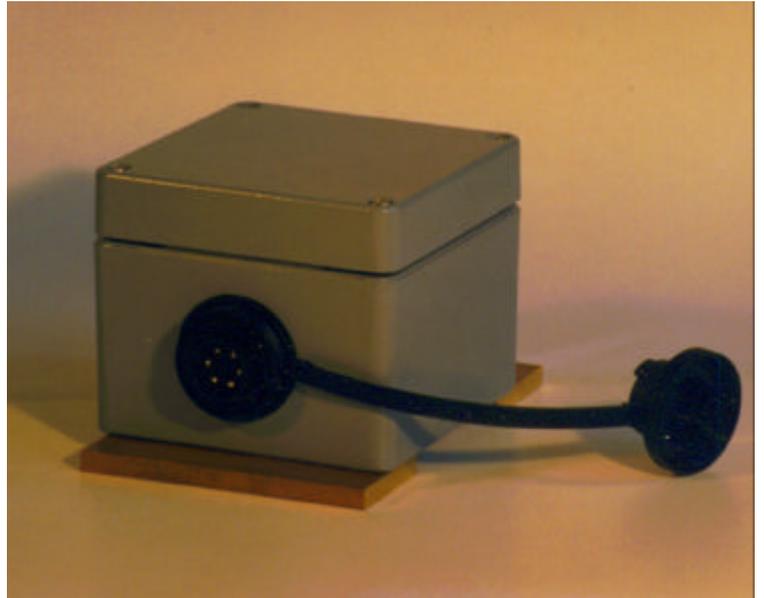


Type ELH102

Wide Angle Sensing Head

The Type ELH102 Wide Angle Sensing Head is a robust inclinometer unit with a die cast Aluminium housing which is sealed to IP65.

The plastic multipole connector is rated IP68. The housing contains all the necessary drive electronics to measure the angle of the sensor with respect to gravity.



Type ELH102 Wide Angle sensing Head

The angle reading is available at the output connector in various forms to suit different applications.

For example the output can be

analogue current 4-20mA;
analogue voltage ± 2.0 Volts
digital serial output

for driving long cables
for general purpose use
for input to computer systems

The digital output at RS232 /RS485 levels consists of a synchronising ASCII character followed by the measured angle as a series of ASCII coded numbers. The data is continuously transmitted while the device is powered up. Alternative output coding is available to special order.

To achieve the highest specifications the system monitors the temperature of the sensor, and uses the result to correct for zero drift and scale drift. For optimum performance the sensor should thus be in thermal equilibrium with its surroundings

The unit is available with a variety of full scale ranges and accuracies, please contact our engineers for further information.

SPECIFICATION

Type ELH102 Wide Angle Sensing Head family

PERFORMANCE VARIANTS

Total Angular Range	from $\pm 30^\circ$ to $\pm 60^\circ$ full scale depending on variant
Threshold and resolution	0.01°
Linearity-	$\pm 0.1^\circ$
Null repeatability	0.05°
Error Band	from $\pm 0.1^\circ$ (with internal compensation) to $\pm 1^\circ$ depending on variant
Cross axis error	$\pm 1\%$ up to 45° cross axis angle
Natural Frequency	0.4 Hz

ENVIRONMENTAL

Temperature range operating	-20°C to $+70^\circ\text{C}$
Temperature coefficient of zero	$0.01^\circ/\text{C}^\circ$
Temperature coefficient of scale	$0.1\%/\text{C}^\circ$
Protection	IP65

ELECTRICAL

Supply	12-24Volts DC regulated 5%
Current	40mA MAX
Output options	4-20mAmps custom scale ± 2.0 Volts RS232 digital
Connector	IP68 plastic Multipole
Cable type	DEF STAN 61-12-part 4

MECHANICAL

Material	Die Cast Aluminium alloy
Weight	0.5Kg
Fixing	4 off 6mm dia holes
General Arrangement	See Dwg A15734

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