

Product Information

Sensors and Instrumentation

Ultrasound Level Transmitter EL



Characteristics

The level transmitter consists of an ultrasound sensor which, contact-free, determines the separations of media of different types (fluids, transported goods, solids). The ultrasound sensor works on the principle of end-to-end measurement. Emitted ultrasound impulses are reflected at the surfaces, and return to the transducer after a transit time. The transit time is proportional to the distance. The sensors have a control input which makes it possible to synchronise up to 12 sensors with one another, or also to switch off the sensor. In normal operation, the control input (pin 2) is left open.

To switch the sensor off, the control input is connected to 0 V. In this case, the signal last existing at the analog output is frozen until the sensor is released again.

In order to synchronise several sensors with one another, the control inputs of all sensors are connected to one another. The sensors' pulse packages are then emitted simultaneously. The received ultrasound echo from each individual sensor is then evaluated and presented at the analog output.

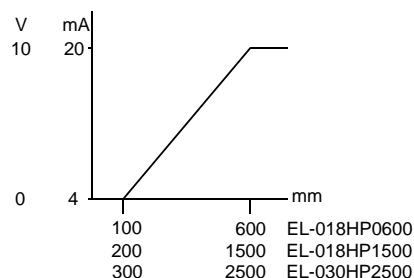
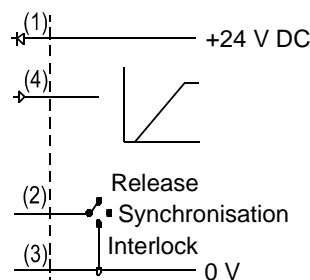
Technical data

Types	EL-018HP0600	EL-018HP1500	EL-030HP2500
Connection	M18x1	M18x1	M30x1.5
Metering range	100..600 mm	200..1500 mm	300..2500 mm
Response time (at 90 %EW)	< 50 ms	< 90 ms	< 150 ms
Weight	0.05 kg	0.05 kg	0.15 kg

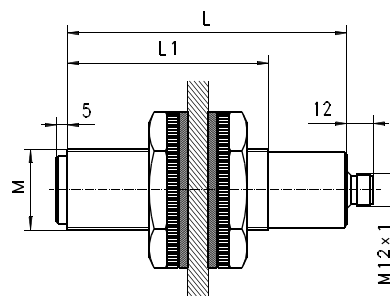
Combined data:

Sensor	piezoceramic ultrasound transducer
Sound beam	8 °
Linearity error	< 0.3 %
Repeatability	±2 mm
Temperature range	-20..+70 °C
Operating voltage	18..30 V DC
Output	0..10 V or 4..20 mA
Medium temperature	max. 90 °C
Construction material	PET 30 % glass fibre
Ingress protection	IP 67
Electrical connection	for round plug connector M12x1, 4-pole
Conformity	CE

Wiring



Dimensions



Types	L	L1
EL-018HP0600V	92	65
EL-018HP1500V	92	65
EL-030HP2500V	130	62

Ordering code

1. 2. 3. 4. 5.
EL - P S

○=Option

1. Connection size	
018H	screw-in fitting M18x1
030H	screw-in fitting M30x1.5
2. Connection material	
P	PET
3. Range	
0600	100.. 600 mm
1500	200..1500 mm
2500	300..2500 mm
4. Output signal	
V	0..10 V
T	○ 4..20 mA
5. Optional	
S	for round plug connector M12x1, 4-pole