

# **QM-E9** Magnetostrictive Level Sensor



#### Summary:

QM-E9 level controller is one kind of intelligent digital display liquid level measurement and control products combined level measurement, intelligent digital display, output and control into one product. This product is fully electronic structure; its front end adopts the most advanced magnetostrictive sensor. Processed by microprocessor to calculate, it can display onsite, and output an analog quantity and four-way switch quantity. This level transmitter controller is flexible to use, simple to operate, easy to debug, safely and reliably, so it can be widely used in hydropower , water , petroleum, chemical , machinery, hydraulic and other industries. It also can measure and control multi-media level interface accurately with no influence by any environmental pressure.

## **QY Electronic Co Ltd**

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#### **Features:**

Advanced technology in absolute position measurement; stable and reliable; no drifting; 0.1mm accuracy without periodic calibration Measure small capacity level in pressure container accurately, and measure multi-media level interface accurately with no influence by pressure 4 LED digital display without apparent value error Four control points relay output AC220V/1A, alarm value set by buttons, reliably and nimbly 4 ~ 20mA standard signal out put, DA conversion accuracy of 12 Power supply can be chosen: 24VDC AC/DC220V Threaded-mounted, flange-mounted and side-mounted, use flexible

### **Technical data**

Capacity	0~5m
Accuracy class	0.1% (small range)
Resolution	0.5mm
Bearing capacity	2.5Mpa / or customized
Stability	$\leqslant~0.01\%$ / Year
Supply voltage	AC/DC220V, DC24V
Display	four 0.56 " nixie tube
Display range	0 ~9999
Ambient temperature	-20 °C ~70 °C
Relative humidity	≤ 80%
Mounting thread	M20 * 1.5 or customized
Material	304 Stainless Steel

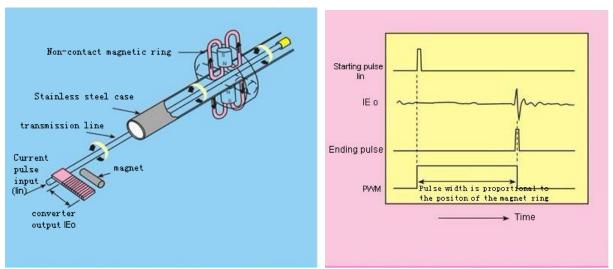
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#### **Operating principles:**

Magnetostrictive sensor is mainly composed by waveguide wire, measuring rod, electronic storehouse and non-contact magnetic or floating ball (built with permanent magnets) covering on measuring rod. When the sensor is working, the electronic circuit in electronic storehouse generates an electronic compartment "start pulse". This start pulse transmits along the magnetostrictive wire (waveguide wire) in constant speed, meanwhile generates a rotating magnetic field along the waveguide and the pulse. when magnetic field meets permanent magnetic in floating ball, the two magnetic fields will superimpose to cause magnetostrictive effect and then the waveguide wire twists. This twist is mounted in signal processing part in electronic storehouse to percept and change into relevant "end pulse". The position can be measured accurately by calculating the time difference between "start pulse" and "end pulse".



#### QM-E9 magnetostrictive flexible level sensor

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