

# Geonor M-610 series High Performance Piezometers



## Embedment type Vibrating Wire Sensors

### FEATURES:

- For direct embedment in earth/rockfill dams, embankments and other underground applications
- For placement in boreholes, tanks and for water level monitoring in open bodies of water
- Proven long-term stability in harsh underground environments
- Open standpipe sensor
- Stainless steel housing (other alloys available)
- Easy-to-digitize frequency signals
- Built-in temperature sensor available in the M-610A version

## THE GEONOR M-610 SERIES VIBRATING WIRE PIEZOMETER

The Geonor M-610 series are vibrating wire piezometers used for direct burial in embankments and earth/rockfill dams, for placement in boreholes, and for water level monitoring in open wells, tanks, and open bodies of water.

As all other Geonor vibrating wire piezometers, the M-610 series offers the highest level of safety for continuous pore pressure measurements. Constantly improved since it was first designed and produced by Geonor in 1963, it is still a leader regarding long-term stability and reliability. Accuracies better than 0,5% of full scale

have in effect been fully documented in over 25 year-long performance surveys carried out by the Norwegian Geotechnical Institute (NGI).

Original technical solutions combined with non-stop innovation are the essence of the Geonor piezometer's performance.

An example is the unique Geonor twin-magnet system which gives both faster and more consistent readings than "pluck and read" vibrating wire piezometer. No accuracy loss due to noise-sensitive analog voltage signals. Capable of recording signals with cable lengths of up to 1000 m.

Sensor	M-610	M-610A
Pressure range (4)	2 to 30 bar	2 to 30 bar
Part number	412010	413000
Accuracy (%FS)	Better than $\pm 0.5\%$ FS	
Temperature range (1) (5)	-20°C to +60°C	
Resolution (%FS)	Better than 0.025%FS	
Max.temp.coeff. (2)	0.2 % FS/°C	
Safe over-pressure	2 x rated pressure	
Standard filter	Carborundum	
Housing material	Stainless steel	
Membrane material	Stainless steel	
Size, mm (L x Dia)	135 x 30	165 x 30
Overvoltage protection	Yes	
Cable type (3)	P-540 twin jacket	P-430 armoured
High air-entry resistance value filter, 1-5 bar	Yes (Optional)	

(1) Other temperature ranges on request

(2) The actual values will be better as each sensor is individually calibrated. The sensor can be calibrated at working temperature specified by customer (option)

(3) Other cable types on request

(4) 1 bar  $\approx$  10,2 m (33,5 ft) of water column  $\approx$  14,5 psi

(5) Termoelement can be built in on request (M-610)