VMI
probe with integral electronic

- Inductive expansion probe
- Integral 4...20mA electronics
- 2-wire electronics
- compatible with 3-wire configurations

Specifications

	VMI 50 R	VMI 100 R	Notes
Measuring range [mm]	50 (+/-25)	100 (+/-50)	Full-scale
Mech. Travel [mm]	52	105	Incl. Overtravel
Linearity [% FSO]	+/- 0,6		
Electr. Dyn. [Hz]	0 ... 200		
Mech. Dyn. [Hz]	0 ... 5		
Spring force [N]	Fo ~ 30 Fmax ~ 50	Fo ~ 30 Fmax ~ 70	At end position At start position
Material	Enclosure: Aluminium / Stainless steel Rod: Stainless steel, hardened Probe tip: Stainless steel, hardened		
Weight [kg]	Ca. 4,0	ca. 4,7	
Supply Us	2-wire system, dep. on load		See “Connection”
Load [Ohm]	Max. 500 Ohm		
Output [mA]	4 ... 20		2-wire configuration
Start position [mA]	4 ± 0,15		At inner scale end mark (rod fully retracted)
End position [mA]	20 ± 0,30		At outer scale end mark (rod fully extracted)
Operating temperature [°C]	0 ... +70		

Position scale

Rod scale (see right)

The rod is marked with an engraved scale to ease installation and position control for operation and re-adjustment (not provided with „Option /SK“).

Enclosure scale („Option /SK“; see dimensional drawings)
Position is indicated on a transparent scale embedded in the sensor enclosure (no rod scale provided).
Order code: VMI xxx R /SK

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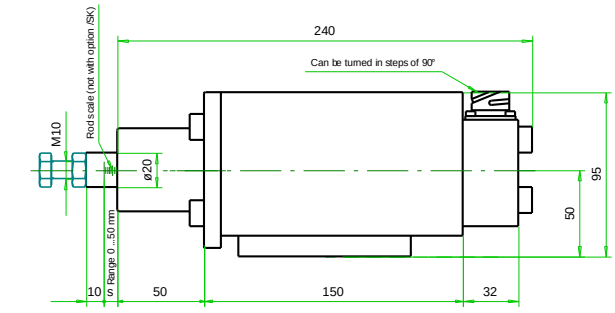
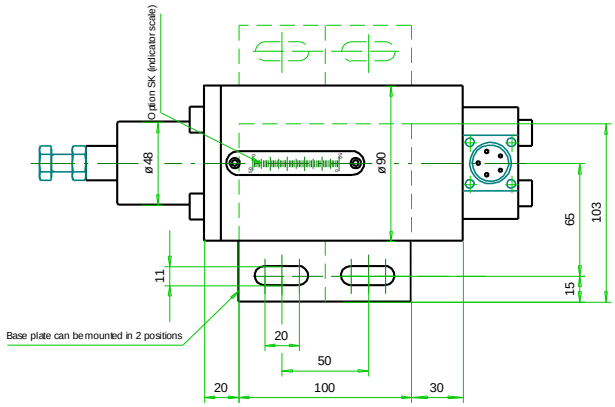
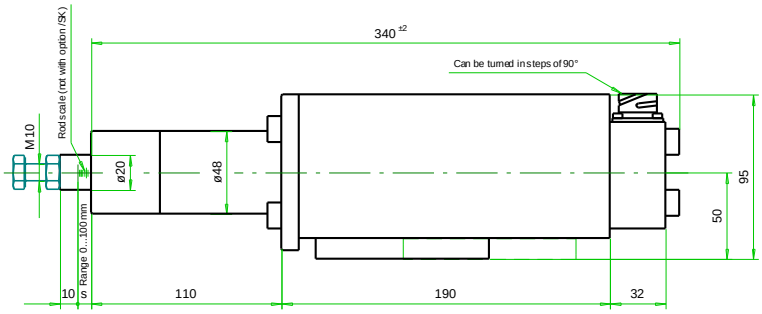
Dimensions

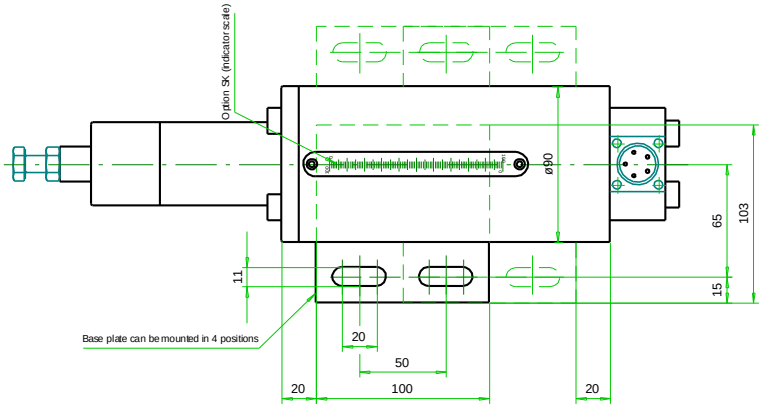
VMI 50





VMI 100





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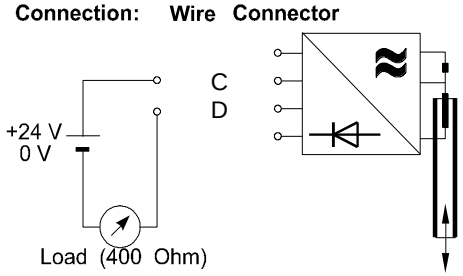
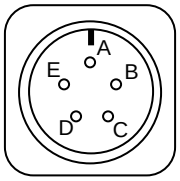
Connection and operation (standard 2-wire configuration)

The sensor VMI provides a 2-wire loop powered electronics with 4...20mA signal output. Sensor supply is delivered by max. 3,5 mA loop current (at corresponding voltage level). Shielding is connected to common.

Loop voltage shall be Us = 23...36 VDC at 500 Ohm max. load. At 400 Ohm max. load a loop voltage of 21,5...36 VDC is acceptable, at < 20 Ohm load a loop voltage of 14...36 VDC.

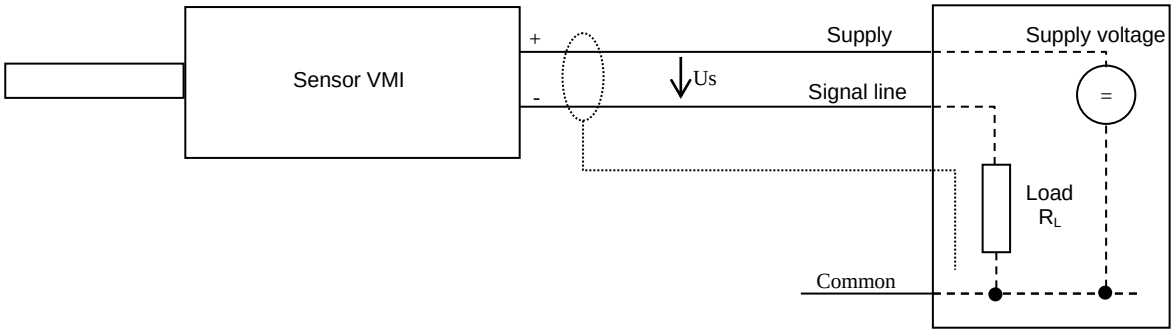


Connector	Signal
C	Supply Us +
D	Supply common 0V



Note for 3-wire configuration:

In 3-wire configuration the "common" line remains unconnected. A sufficient supply level voltage Vs (depending on supply voltage and load) has to be provided. The sensor is 3-wire compatible, a sufficiently low load provided.



Adjustment (if required only, factory pre-adjusted)

The sensor is factory adjusted acc. to specification.

For re-adjustment remove cover on flange.

Place probe rod to middle position using the sensor scale and adjust output current to approx. 12 mA on zero trimmer N.
Then adjust gain trimmer G such that an output current of approx. 20 mA is obtained at outer rod position (extracted) and of approx. 4 mA at inner rod position (retracted).