

Position Transducers
Linotast,
induktive

Series F 200 g



Special features

- very good linearity, Standard $\pm 0,1 \dots \pm 0,3 \%$
- with connector, protection class IP 67 (only with EEM 33-70)
- reverse voltage protection
- built-in hybrid electronic circuitry
- DC power supply, DC output
- almost infinite resolution
- good temperature constancy

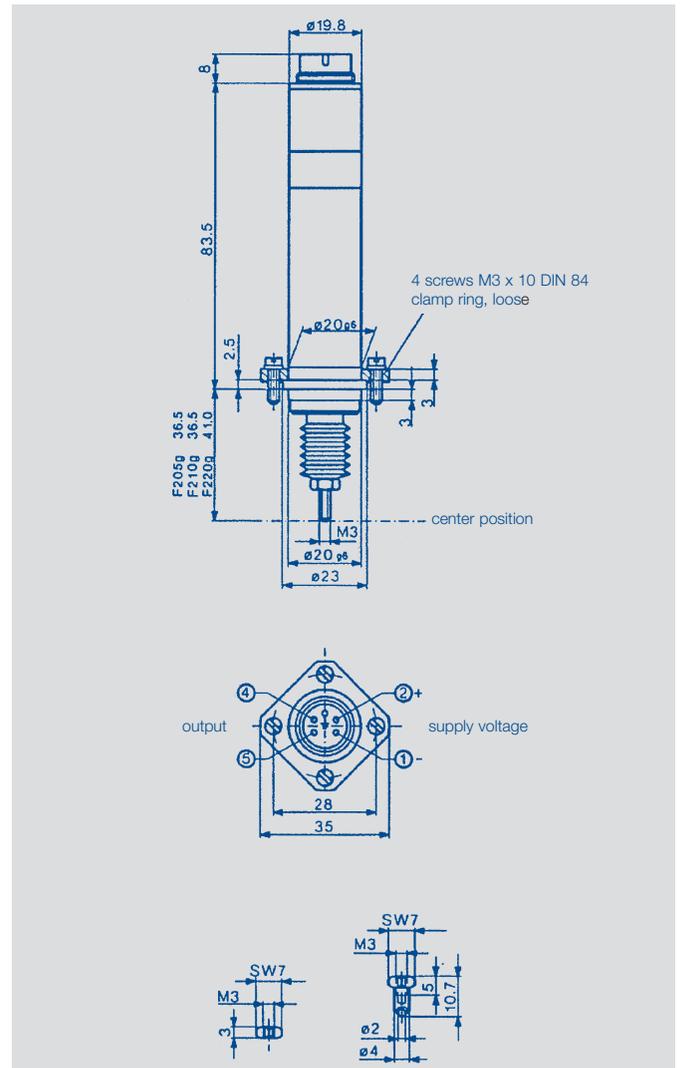
The inductive position transducer series F 200 converts small rectilinear displacements into electrical analogue signals by means of a differential transformer with a movable core.

The core is mounted on a pushrod which may be pressed by a built-in spring against the object to be measured, or rigidly connected to the object.

The transducer is supplied with a DC voltage. A built-in oscillator provides an AC voltage to supply the differential transformer.

The secondary voltages of the transformer are rectified by a demodulator which is also built-in. The oscillator and the demodulator are hybrid circuits.

The DC output voltage is strictly proportional to the displacement of the core and, therefore, to the displacement to be measured. The electrical zero is in the middle of the useful stroke of the pushrod.

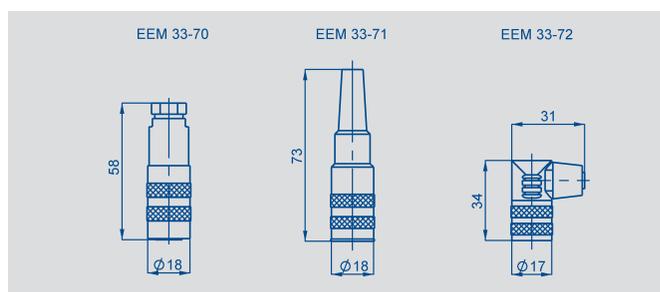
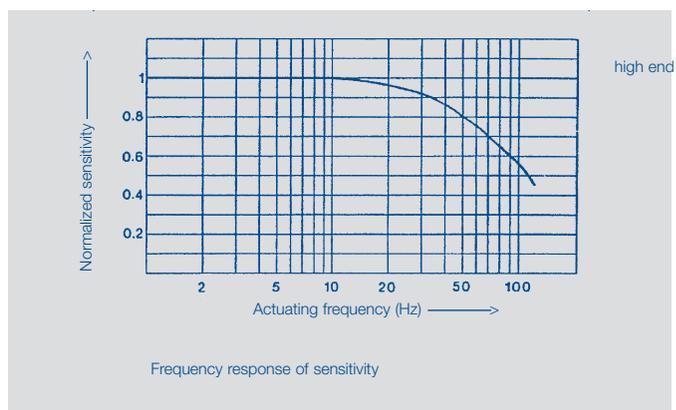
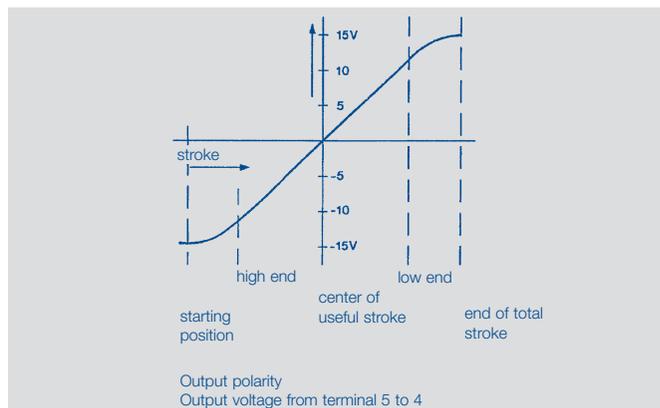


Description	
Housing	black anodized aluminium
Actuating rod	antimagnetic stainless steel; a pre-stressed helical spring presses the pushrod outwards against the stop
Bearing	maintenance-free plastic sleeves, pushrod passage dust-protected by bellows
Fixing	centering pilot, collar and clamp flange
Electrical connections	5-pin connector (see accessories) protection class depending on connector type
Electronic	potted hybrid circuits

Type	F205g	F205.1g	F210g	F210.1g	F220g	
Mechanical Data						
Operating force	≤ 2					N
Mass of actuating rod	6	6	6	6	7	g
Total weight	80					g
Dimensions	see drawing					
Electrical Data						
Independent linearity	0,2	0,1	0,2	0,1	0,3	±%
Defined electrical range	5 (±2,5)	5 (±2,5)	10 (±5)	10 (±5)	20 (±10)	mm
Mechanical range	8	8	12	12	22	mm
Sensitivity approx. (supply 24 VDC)	4,5	4,5	2,2	2,2	1	V/mm
Power supply	24 ±20 %					VDC
Reverse voltage protection	parallel-connected diode; max. permitted current with inverse voltage; 1 A (or 50 A for 8 ms)					
Current consumption	approx. 50					mA
Output voltage	±10, floating DC voltage					VDC
Residual ripple	1 % of DC output voltage, or 10 mV pk-pk, whichever is greater					
Internal resistance (dynamic) (Output circuit is short-circuit proof)	4					kΩ
Zero drift for variation of supply voltage	< 1 μm/10 %					
Thermal zero shift	< 1 μm/10 K					
Thermal sensitivity shift	25 typ.					ppm/K
Sensitivity change	proportional to supply voltage					
Maximum permitted voltage between output terminals and housing plus between input and output	100					VDC

Environmental Data		
Temperature	-30 ... +70	°C
Acceleration	10 g in all directions	
Humidity	Transducer is insensitive against humidity, water wetting, grinding oil and coolant	

Order designations	
Type	Art.-No.
F 205 g	005303
F 205.1 g	005304
F 210 g	005323
F 210.1 g	005324
F 220 g	005325



Included in delivery
Screw-on probe with hard-alloy ball-point and stainless steel locknut. Allows friction-locked connection between gauging pin and measuring object.
Connecting ring with unloseable screws.

Recommended accessories
Connector EEM 30-70 protection class IP 67, Art.Nr. 005611,
Connector EEM 33-71 protection class IP 40 Art.Nr. 005612,
Angled connector EEM 33-72 protection class IP 40 Art.Nr. 005613