



- α Measurement of distance, displacement, extension, vibration and rotation
- α contactless measuring (eddy current)
- α extended ranges beyond 40 mm
- α temperature resistance up to 180°C, special versions up to 230°C
- α up to 10 kHz meas. dynamics
- α rugged design, IP 67 protection
- α customized, OEM and special models
- α separate sensor converter electronics (linearisation, trip point outputs)
- α compatible with Philips or AEG converters

Specifications ¹⁾

		MNH 2 ⁴⁾	MNH 2 E1001 ⁵⁾	MNH 4 ⁴⁾	MNH 8 ⁴⁾	MNH 10 ⁴⁾
Nominal range ²⁾	mm	+/- 1 (0,3 ... 2,3)	+/- 1 (0,3 ... 2,3)	+/- 2 (0,5 ... 4,5)	+/- 4 (1 ... 9)	+/- 5 (1 ... 11)
Sensitivity ³⁾	V/mm	8	8	4	2	1,6
Minimum gap	mm	> 0,3	> 0,3	> 0,5	> 1,0	> 1,0
Head diameter	mm	Ø 8	Ø 8	Ø 14	Ø 40	(Ø 40)
Coil type		Ferrite core	Air core	Ferrite core	Ferrite core	Ferrite core
Housing		M10 Option: M12 or UNF	M10 Option: UNF	M18 Option: UNF	Ø 40 mm on baseplate 80x40mm	Cuboid
Length L	mm	35 Option: < 120	40 Option: < 120	55 Option: < 70	40	40
Cable length (w/o ext.)	m	1	1	4	4	4
Connector (Standard)		Lemo PCA.00	Lemo FFA.00	Lemo FFA.0E	Lemo FFA.0E	Lemo FFA.0E
Material		Housing: stainless steel Head: PEEK Cable: Teflon				
Operating temperature		Sensor: -30°C ... +180°C, special versions: up to +230°C // cable end: max. 80°C				
Linearity		Up to +/-2% o.v., dep. on converter				
Dynamic range		Up to 10 kHz, dep. on converter				
Protection		IP 67				
Connection		Teflon-coax cable, free wires, connector or intermittent connection; Option: protective metal tubing				

1) ref. to material 42CrMo4 (1.7225)

3) w/ adjustment acc. to API 670

5) compatible with converter AEG 110x (with 4m connecting cable)

2) Range extension (2x to 4x) with suitable converter (MNHCON-ERW)

4) compatible w/ converter Philips CON 010 (with 4m connecting cable)

Model overview / order code

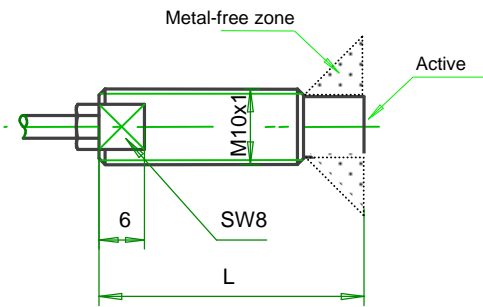
Range	MNH aa					Bbb		ccc		d		e			fff				
	Housing					Sensor length in mm		Cable		Cable length			Connection						
	M10 x 1	M18 x 1,5	3/8"-24UNF	5/8"-18UNF	Other	Standard	Other (in 5 mm steps)	Coax cable	Coax cable w/ prot. metal tubing	Length 1 m	Length 4 m	Other in m (max 5)	Open wires	Plug Lemo PCA.00	Connector Lemo FFA.00 / Z	Connector Lemo FFA.0E / Z	Other (custom)		
MNH 2	X	--	O	--	O	35	bis 120	X	O	X	O	O	O	X	O	O	O		
MNH 2 E1001	X	--	O	--	O	40	bis 120	X	O	X	O	O	O	O	X	O	O		
MNH 4	--	X	--	O	O	55	bis 70	X	O	--	X	O	O	O	O	X	O		
MNH 8	--	--	--	--	X	40	--	X	O	--	X	O	O	O	O	X	O		
MNH 10	--	--	--	--	X	40	--	X	O	--	X	O	O	O	O	X	O		

X = available standard model

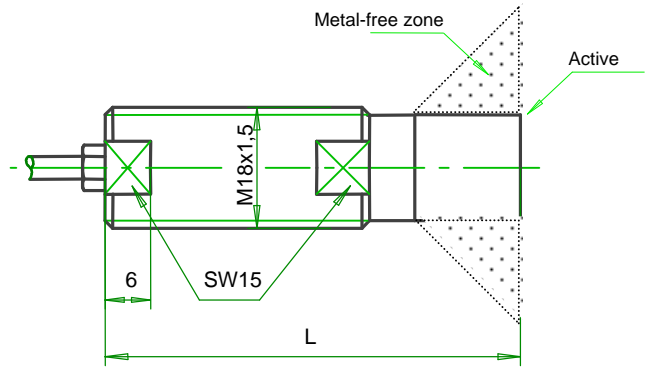
O = option

-- = not available

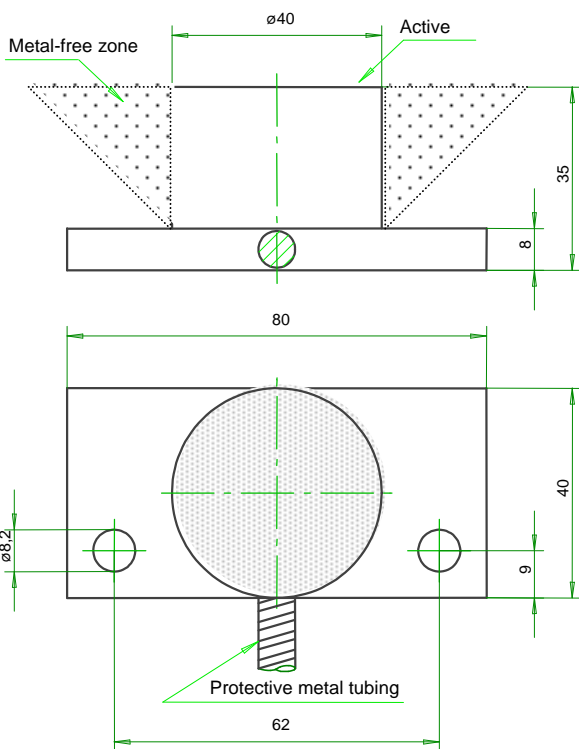
Drawings



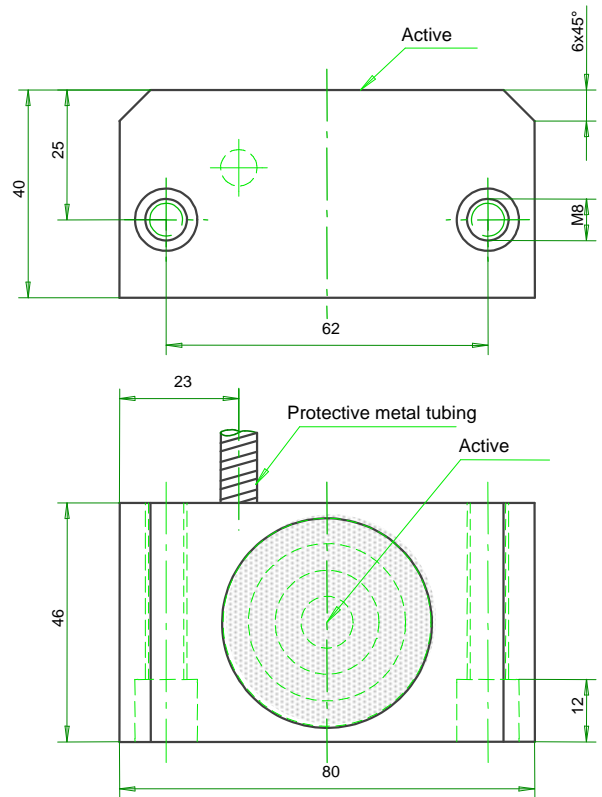
MNH 2 / 2E



MNH 4



MNH 8



MNH 10

Accessories – extension cable

- MNH KAB P3L/LL 3m long, for sensors MNH 2/4 (w/ 1m cable)
- MNH KAB A4L/L 4m long, for sensor MNH 2 E
- MNH KAB A8L/L 8m long, for sensor MNH 2 E
- Others upon request.

Working principle

Eddy-current proximity sensors as the coil (inductance) part form together with a precision converter a resonant circuit. Eddy currents are induced in metal objects in the sensor's active field of view. Those draw an amount of energy from the resonant circuit which – upon internal linearisation – is converted into a distance-proportional output signal (voltage, current).

MNH proximity sensors provide contactless and wear-free measurement, without measurable force on the object. They allow highly dynamic measurements and provide high-temperature resistance, combined with rugged design.

Mounting and operation

1. Ensure non-flush sensor mounting and metal-free zone around sensor head / active surface for optimal measurement.
2. Ensure specified minimum gap between object tip and sensor head / active surface to ensure proper function and to avoid sensor damage.
3. Operate sensor with compatible converter only (e.g. MNHCON) – otherwise sensor could be damaged.
4. Sensor performance is valid only with specified object material (steel, flat surface, diameter = 3 x sensor head diameter).
5. Other material can lead to performance changes (e.g. range, linearity) - Al or Cu object material will reduce measuring range by factor 2 to 3 – custom factory adjustment optional.
6. Sensors are basically compatible with converter Philips CON 010 resp. AEG 110x operation.

Recommended converter MNHCON (for details see separate datasheet)

- ✘ Operates eddy-current sensors (typ. Resonance freq. with MNH Sensor ~1 Mhz)
- ✘ Supply +24 VDC or (with optional inverter MNHCON-INV) –24VDC
- ✘ Output versions:
 - ✘ +2...+18 / +4...+20 VDC,
 - ✘ 4 ... 20 mA ,
 - ✘ -2...-18 / -4...-20 VDC (with optional inverter MNHCON-INV)
- ✘ adjustable trip-point outputs with LED indication
- ✘ factory-adjustable linearisation function