

Standard range, magneto-resistive

Magneto-resistive sensors are more sensitive than sensors with the Hall effect by a factor of 10. Not only can they be very small, they can also detect especially low field strengths.

At the same time, they stand out by virtue of their high measuring accuracy even at high ambient temperatures, their particularly high degree of reliability and by the fact that they occupy little space. The principle by which they are designed also means that they are independent of polarity, which means that the magnet does not have to be mounted with pole orientation. With the corresponding encapsulation, Bernstein magneto-resistive sensors have proved effective even in demanding environments such as elevator construction or agricultural technology.

- Output circuit PNP, NC or NO contact
- Very high sensitivity (up to sensing range 60 mm)
- Voltage range 10 – 39 V DC / 10 – 30 V DC
- Output current 400 mA / 200 mA, short-circuit protected
- Reverse polarity protected
- Independent of polarity
- Switching frequencies up to 1.5 kHz
- Design diameter 6 mm to M 18

Sensing ranges for electronic magnetic sensors

Since the sensing range of magnetic sensors is influenced by the combination of sensor and magnet, they can only be looked at as a complete system. The following provides an overview of the expected sensing ranges (Sn) when various magnets from the Bernstein range are used.

Magnet	Dimensions	Part number	Sn with Hall sensor	Sn with magneto-resistive sensors
T 75	Ø 5 mm	630.1175.057	5 mm	10 mm
T 06	Ø 6 mm	630.1106.065	5 mm	15 mm
T 61	Ø 20 mm	630.1261.035	10 mm	35 mm
T 62	Ø 23 mm	630.1262.039	17 mm	45 mm
T 67	Ø 20 mm	630.1167.054	15 mm	40 mm
T 69	Ø 31 mm	630.1269.031	20 mm	60 mm



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Type of housing	Series	Output	Material	Part number	Designation	Technical Data
M 10 x 1 mm x 40 mm	M 10	NO contact	Brass*	637.3261.087	MEM-M10PS/M01-KL2	PNP output NO or NC contact Ub: 10 – 39 V DC Imax: 400 mA Sensing range 45 mm/omnipolar** magnetic sensitivity 1.0 mT Switching frequency 1.5 kHz Switching state LED -25 °Celsius to +70 °Celsius Protection IP 67
M 10 x 1 mm x 40 mm	M 10	NC contact	Brass*	637.3161.088	MEM-M10PÖ/M01-KL2	
M 12 x 1 mm x 46 mm	M 12	NO contact	Brass	637.3262.094	MEM-M12PS/M01-KL2	
M 12 x 1 mm x 46 mm	M 12	NC contact	Brass	637.3162.096	MEM-M12PÖ/M01-KL2	
M 12 x 1 mm x 46 mm	T 12	NO contact	Plastic	637.3262.093	MEK-M12PS/M01-KL2	
M 12 x 1 mm x 46 mm	T 12	NC contact	Plastic	637.3162.095	MEK-M12PÖ/M01-KL2	
M 18 x 1 mm x 46 mm	M 18	NO contact	Brass	637.3263.102	MEM-M18PS/M01-KL2	
M 18 x 1 mm x 46 mm	M 18	NC contact	Brass	637.3163.104	MEM-M18PÖ/M01-KL2	
M 18 x 1 mm x 46 mm	T 18	NO contact	Plastic	637.3263.101	MEK-M18PS/M01-KL2	
M 18 x 1 mm x 46 mm	T 18	NC contact	Plastic	637.3163.103	MEK-M18PÖ/M01-KL2	
Ø 6,5 mm x 25 mm	D 06	NO contact	Stainless	637.3270.105	MEN-D06PS/M02-K2	Ub: 10 – 30V DC Imax: 200 mA no LED
8 x 8 x 40 mm	Q 08	NO contact	Brass	637.3280.106	MEM-Q08PS/M02-K2	
M 8 x 1 mm x 32 mm	M 8	NO contact	Brass	637.3260.107	MEM-M08PS-M02-K2	

* also in the front area

** referred to magnet T 62