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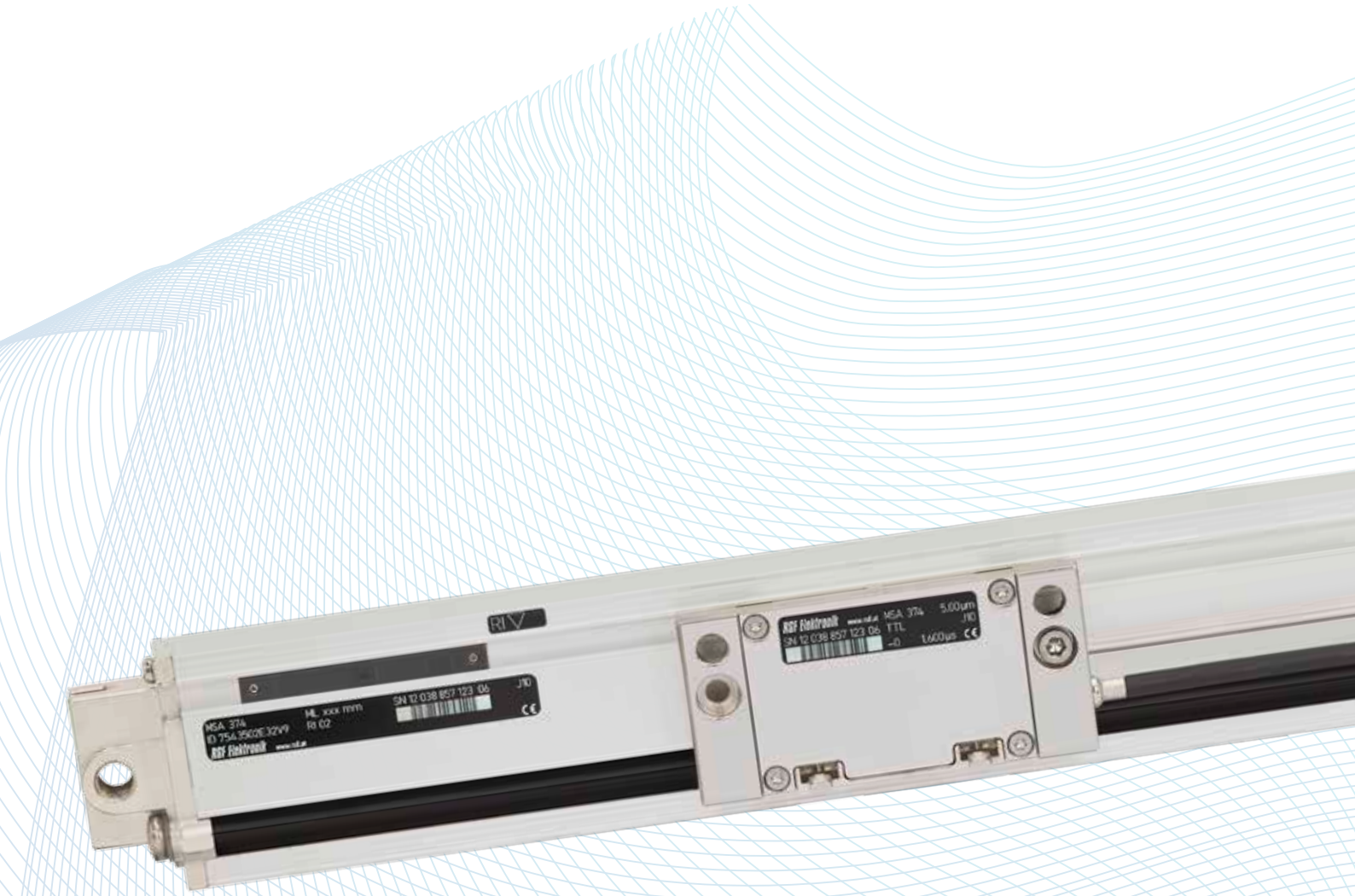
MSA 373, 374, 375

SEALED LINEAR ENCODERS WITH SELF GUIDING



MSA 373, MSA 374, MSA 375

MSA 373

Model	Output signals	Measuring step [µm]	Accuracy grade [µm/m]	Max. velocity [m/s]	Edge separation a_{min}
MSA 37x	⎍	5	±10	1.0	1.6 µs
MSA 37x	⎍	1	±10	1.0	800 ns

Standard measuring lengths (ML): [mm]
70, 120, 170, 220, 270, 320, 370, 420, 470, 520, 620, 720, 770, 820, 920, 1040, 1140, 1240, 1340, 1440, 1540 (other ML on request)

Graduation carrier:
Glass scale ($\alpha \approx 8.5 \times 10^{-6}$/K)

Free positionable actuator magnets for special functions:
The position of the two switch points (S1 and S2) can be selected by the customer within measuring length.

Location of the reference marks:

- One reference mark in the center of measuring length, or 35 mm from either end of measuring length.
- Optional: one reference mark at any location, additional reference marks can be selected by distances of n x 50 mm.

Required moving force:
< 5 N

Environmental sealing according to EN 60529:
IP 52

Permissible vibration:
150 m/s² (40 up to 2000 Hz)

Permissible shock:
300 m/s² (8 ms)

Permissible temperature:

- –20 °C up to +70 °C (storage)
- 0 °C up to +50 °C (operation)

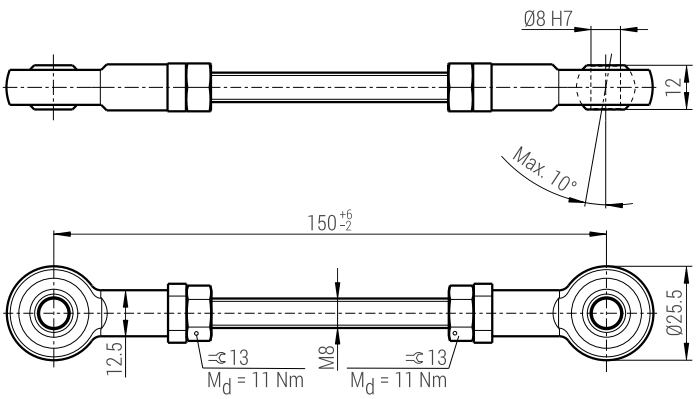
Mass (approx.):
237 g + 1.17 g/mm (ML) + 171 g (reading head without cable)

Power supply:
+5 V ±5 %, max. 120 mA (unloaded)

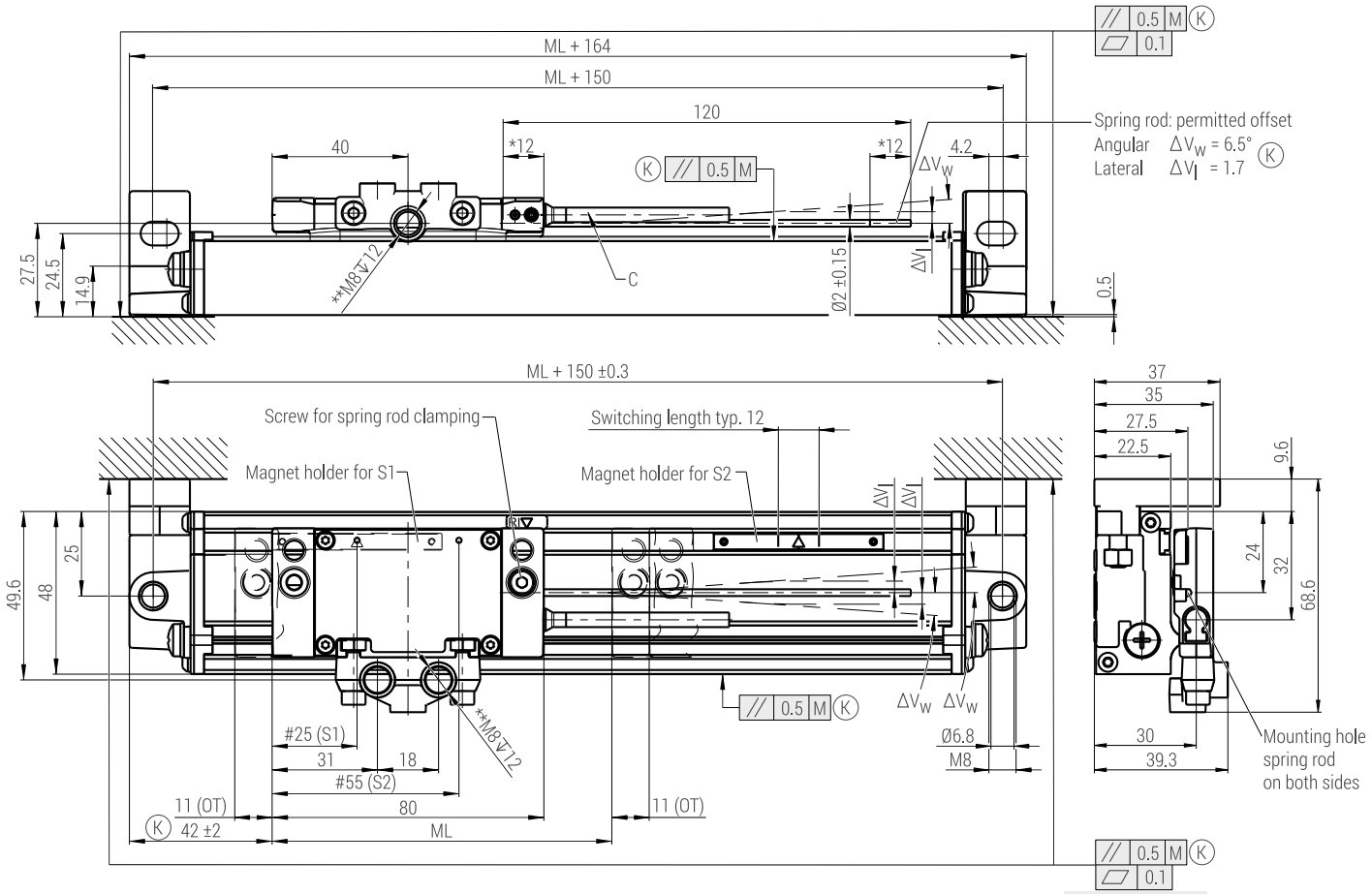
RoHS-conformity:
The linear encoders MSA 373, 374 and 375 comply with the guideline of the RoHS-directive 2011/65/EU and also the delegated directive 2015/863/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

ACCESSORY: CB8-150 coupling bar (only for MSA 373 and MSA 375)

Axis distance: 150 mm (other distances on request).
Included in delivery: 2 hexagon socket screws M8 x 20 ISO 4762 for mounting.



MSA 373

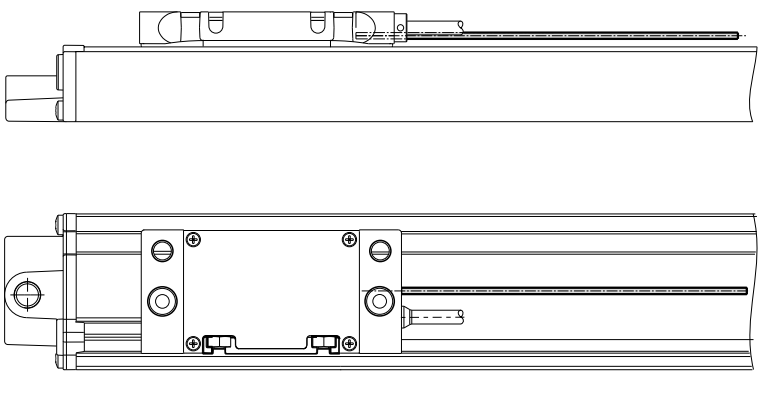


S1, S2 = Switch signals
Switch positions S1 and S2 free selectable (allen wrench 0.9 mm)
= Sensor position
Spring rod clamping on both sides possible (allen wrench 3 mm)
* Clamping length spring rod
** Fastening screw thread for coupling bar

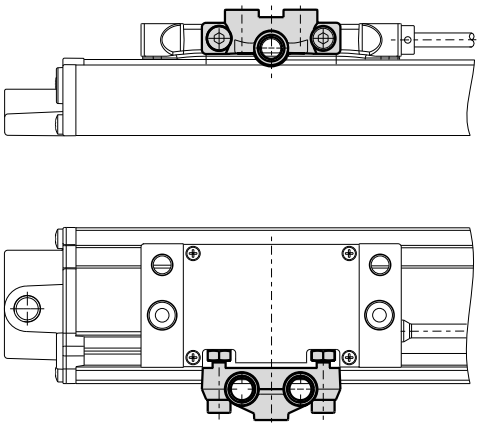
C = Cable - optional left side possible
ML = Measuring length
M = Machine guideway
OT = Overtravel
Ⓚ = Required mating dimensions

mm
Toleranz ISO 8015
ISO 2768 - m H
< 6 mm: ±0,2 mm

MSA 374



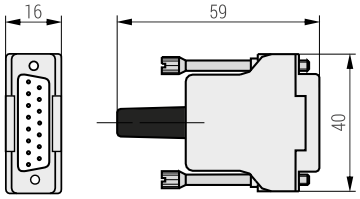
MSA 375



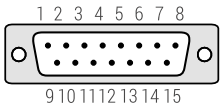
MALE CONNECTORS, PIN ASSIGNMENTS

Connector D-sub, 15 pin

Dimensions
(Male, 15-pin, mass: 25 g)



Pin assignment
View on pins

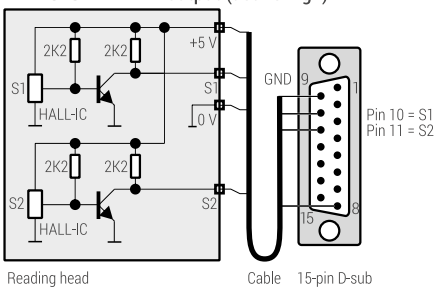


Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sinusoidal voltage signals 1 Vpp	Occupied	0 V Sensor	Occupied	RI−	A2−	A1−	V+ Sensor	V+	0 V	S1*	S2*	RI+	A2+	A1+	nc
TTL-signals	Occupied	0 V Sensor	$\overline{US}$	$\overline{RI}$	$\overline{T2}$	$\overline{T1}$	V+ Sensor	V+	0 V	S1*	S2*	RI	T2	T1	nc

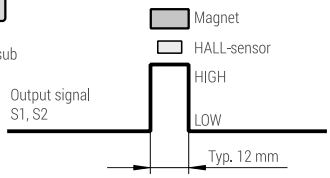
- Sensor: the sensor pins are bridged in the chassis with the particular power supply.
- * Version without switch signals (version K) = nc.
- Shield is connected with the chassis.
- Pins or wires marked “occupied” or “nc” must not be used by the customer.

SWITCH SIGNAL OUTPUT

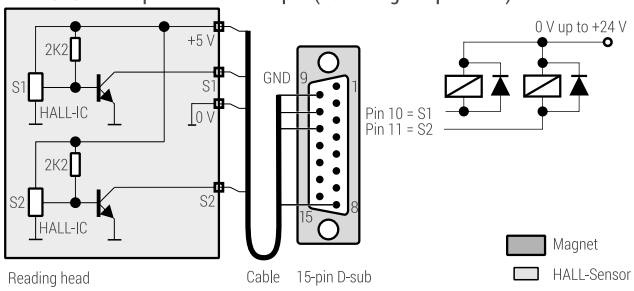
VERSION H: TTL output (active high)



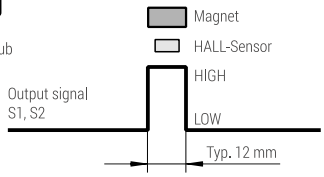
S1, S2 = TTL output
I_{SOURCE} = 1 mA (high level > 2 V)
I_{SINK} = 20 mA (low level < 0.8 V)



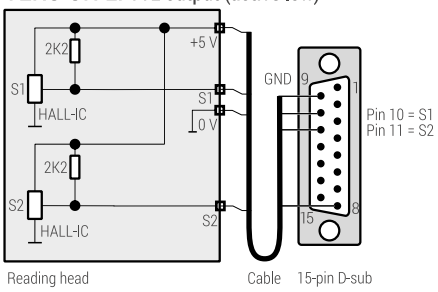
VERSION Z: Open collector output (active high impedance)



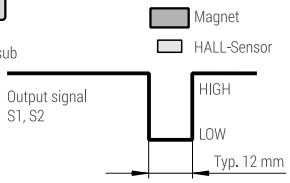
S1, S2 = Open collector output
I_{SINK} = 20 mA (low level < 0.8 V)



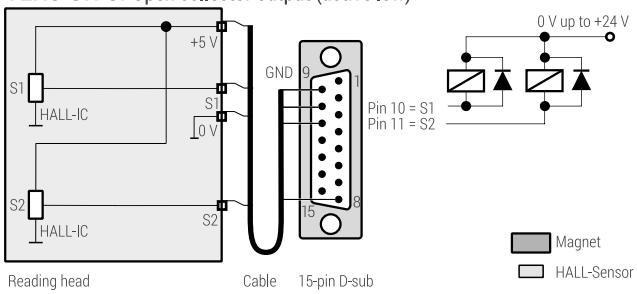
VERSION L: TTL output (active low)



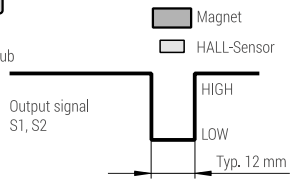
S1, S2 = TTL output
I_{SOURCE} = 1 mA (high level > 2 V)
I_{SINK} = 20 mA (low level < 0.8 V)



VERSION C: Open collector output (active low)



S1, S2 = Open collector output
I_{SINK} = 20 mA (low level < 0.8 V)



According to factory default setting the actuator magnets are placed at the beginning (S1) and at the end (S2) of measuring length and can be moved by the customer.

Date 01/2021 ■ Art.No.1340647-01 ■ Doc.No. D1340647-00-A-01 ■ Technical adjustments in reserve!

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