

Inductive Position Control

11

Product group

A SE W

Pamphlet

Application

MSM position-control units are suitable for contactless, wear-free and thus reliable position control in systems under pressure e.g. position control on hydraulic valves.

Function

A pin made of ferromagnetic material in a pressure-tight tube, which is connected to the object to be controlled, dives into a coil. Constant frequency is supplied to this coil from an oscillator. Diving into the coil results into a stronger coupling between primary and secondary coil. Exceeding a certain voltage level releases the switching procedure. An evaluation switching recognises this procedure and controls the POWER MOSFET's of both exits. Owing to the evaluation to the LVDT principle, the position control is extremely safe against electromagnetic irradiation.

Design features

- Suitable for dry and pressure-tight application
- Pressure-tight tube, designed for 350 bar static pressure (medium hydraulic oil)
- Centre mounting by hexagonal flange with screw-in thread
- Switching point mechanically adjustable
- Electronic and contactless, thus wear-free
- Switching exits protected by diodes against cut-off overvoltage of inductive loads
- Bounce-free, quick operation, extremely small hysteresis
- Large supply-voltage range owing to internal stabilisation
- Reverse battery protection
- Electrical connection:
 - M12 x 1 plug by Messrs. Binder 713 series
 - Protection to DIN VDE 0470/EN 60529 – IP 65
- Exits
 - Short circuit proof
 - Only slight decrease in output voltage
- EMC: to EMC guideline 89 / 336 / EWG



Fig. 1: Type A SE W 001 D08



Technical data

A SE W 001	D08	D09
Operating Voltage U_B	18 - 42 V \pm 10 %	
Maximum switching voltage	$U_{Smax} = U_B - 1.6$ V	
Maximum output current	490 mA (Ohmic load)	
Switching hysteresis	≤ 0.06 mm	
Typical temperature drift	≤ 0.01 mm / K	≤ 0.003 mm / K
Working temperature range	0°C ... 70°C	
Max. admissible strength of ambient field	≤ 1200 A/m 50 Hz	
Pressure-tightness of tube	350 bar static pressure	
Declaration of conformity (EMC)	DC 009284	DC 009283

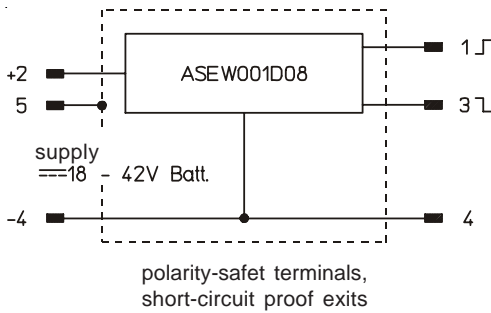


Fig. 2: wiring diagram A SE W 001 D08

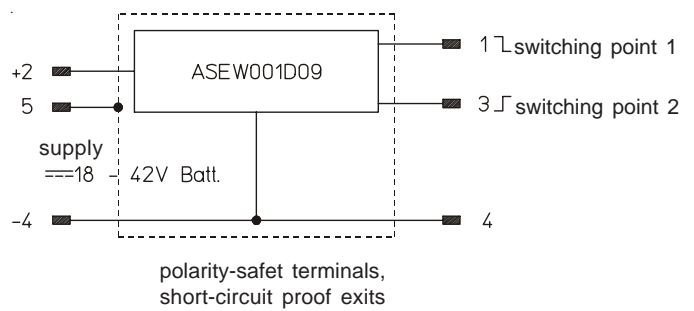


Fig. 3: wiring diagram A SE W 001 D09

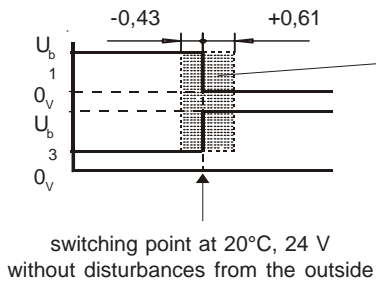


Fig. 4: switching function A SE W 001 D08

in this range
no defined switching
condition owing to
possible disturbances
through temperature,
hysteresis, electro-
magnetic fields

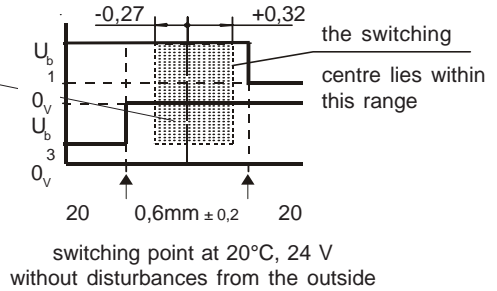


Fig. 5: switching function A SE W 001 D09

Dimensions sheet

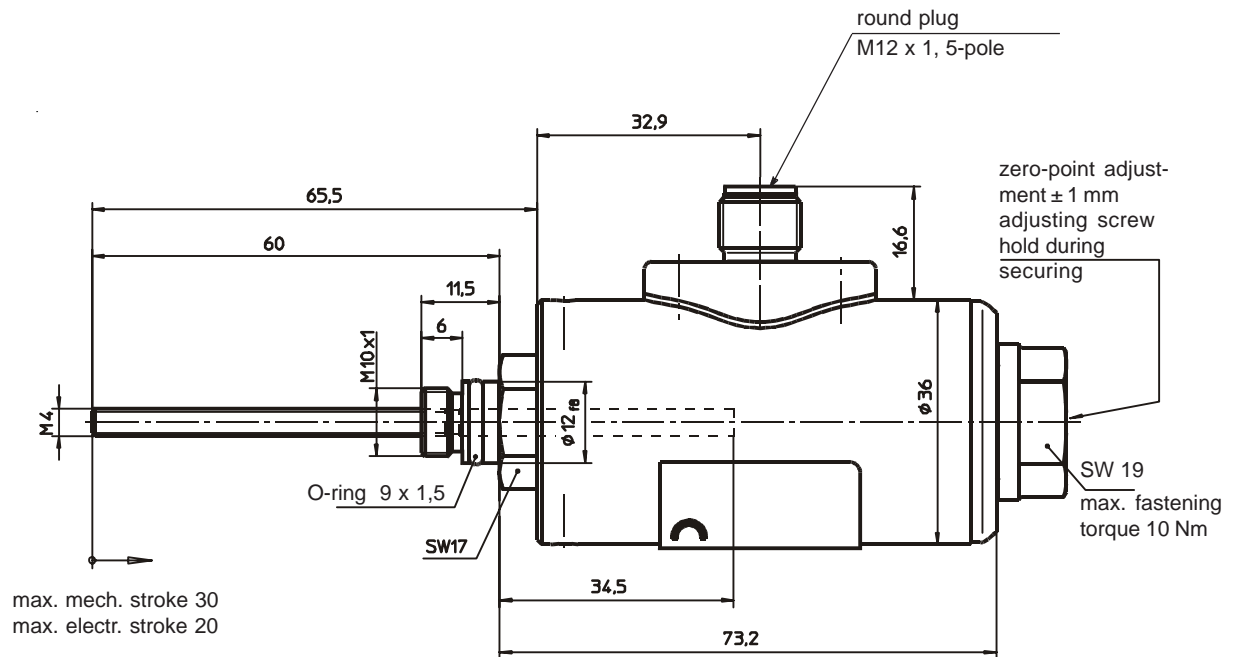


Fig. 6: Type A SE W 001 D08 / D09

Note on the technical harmonisation guidelines within the EU

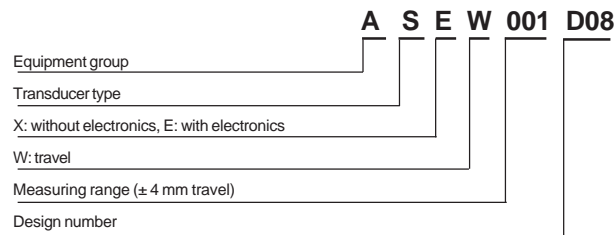


The device has been EMC tested and conforms with the regulations of EU guideline 89/336/EWG.

Compliance with standards can be confirmed on request.



Type code



Order Example

Type A SE W 001 D08
Voltage == 24 V DC

Specials

Special designs and modifications are available on request for which full application conditions should be specified in accordance with our -Technical Explanations.