

Inductive position control

11

Product group

A SE W

Application

The MSM position control is suitable as contact free, wear free and therefore solid position control in systems which are under pressure, e.g. for the position control in hydraulic valves.

Function

A rod made of ferromagnetic material in the pressure-tight tube which is in connection with the object to be controlled plunges into a coil. An oscillator feeds this coil with constant frequency. The plunging into the coil causes a stronger coupling between primary and secondary coil whereas exceeding a voltage level releases the switching operation. An evaluation circuit recognizes this process and controls the POWER MOSFETs of both exits. Due to the evaluation according to the LVDT principle, the position control is particularly resistant against electromagnetic radiations.

Construction characteristics

- Suitable for dry and pressure-tight applications
- Pressure-tight tube, designed for 350 bar static pressure (media hydraulic oil)
- Central fastening by means of hexagon flange with thread
- Mechanical possibility of adjustment of the switching point
- Electronic and contact-free, therefore wear free
- Switch exits protected with diodes against disconnect overvoltage of inductive loads
- Bounce-free, quick switching, very low hysteresis
- Large range of supply voltage, because internally stabilized
- Reverse polarity protected
- Electrical connection:
 - Connector company Binder M12 x 1 series 713
 - Protection class according to DIN VDE 0470/ DIN EN 60529 - IP 65
- Exits
 - short-circuit-proof
 - low output voltage drop
- EMC directive
- Version according to ATEX on request



Fig. 1: Type A SE W 001 D08

Technical data

A SE W 001	D08	D09
Rated voltage U_N	24 V	
Supply voltage U_B ; residual ripple	18 - 42 V \pm 10 %	
Max. switchin voltage	$U_{Smax} = U_B - 1.6 \text{ V}$	
Max. output current	490 mA (Ohmic load)	
Switching hysteresis (Reference: switching point at 20°C)	$\leq 0,06 \text{ mm}$	
Typ. temperature drift (Reference: 0 ... 55°C)	$\leq 0,01 \text{ mm / K}$	$\leq 0,003 \text{ mm / K}$
Working temperature range	0°C ... 70°C	
Max. permissible ambient field strength	$\leq 1200 \text{ A/m}$ 50 Hz	
Pressure tightness tube	350 bar static pressure	
Declaration of conformity (EMC)	DC 009284	DC 009283

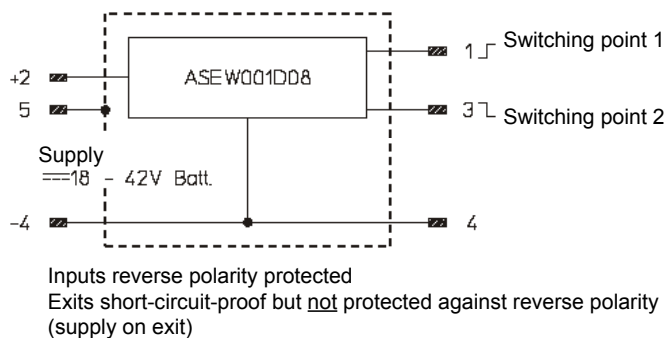


Fig. 2: block diagram A SE W 001 D08

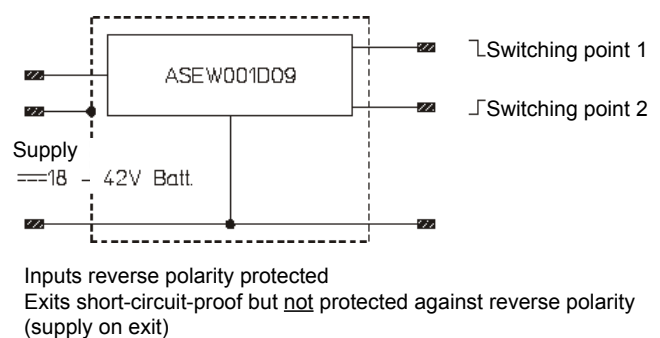


Fig. 3: block diagram A SE W 001 D09

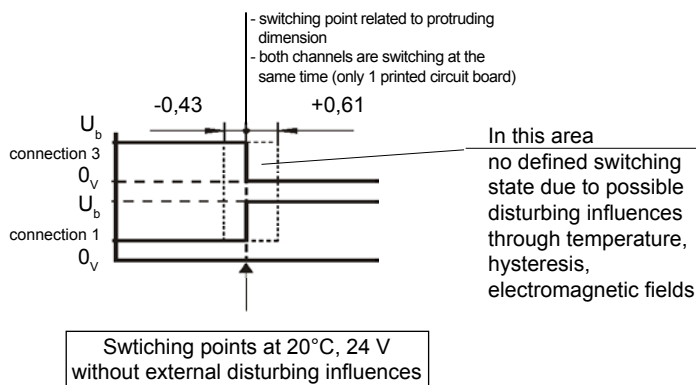


Fig. 4: Switching function A SE W 001 D08

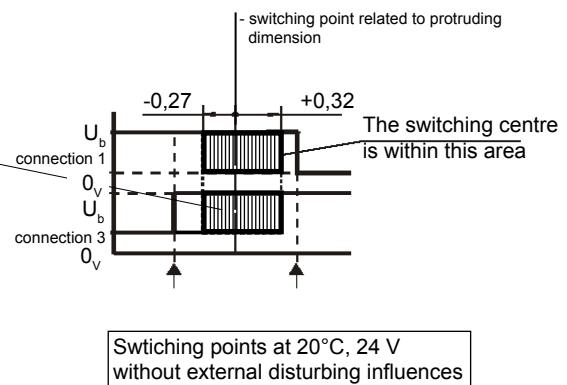


Fig. 5: Switching function A SE W 001 D09

Note: - 2 printed circuit boards
- supply voltage is switched on if both channels show a "high signal"

Dimension drawing

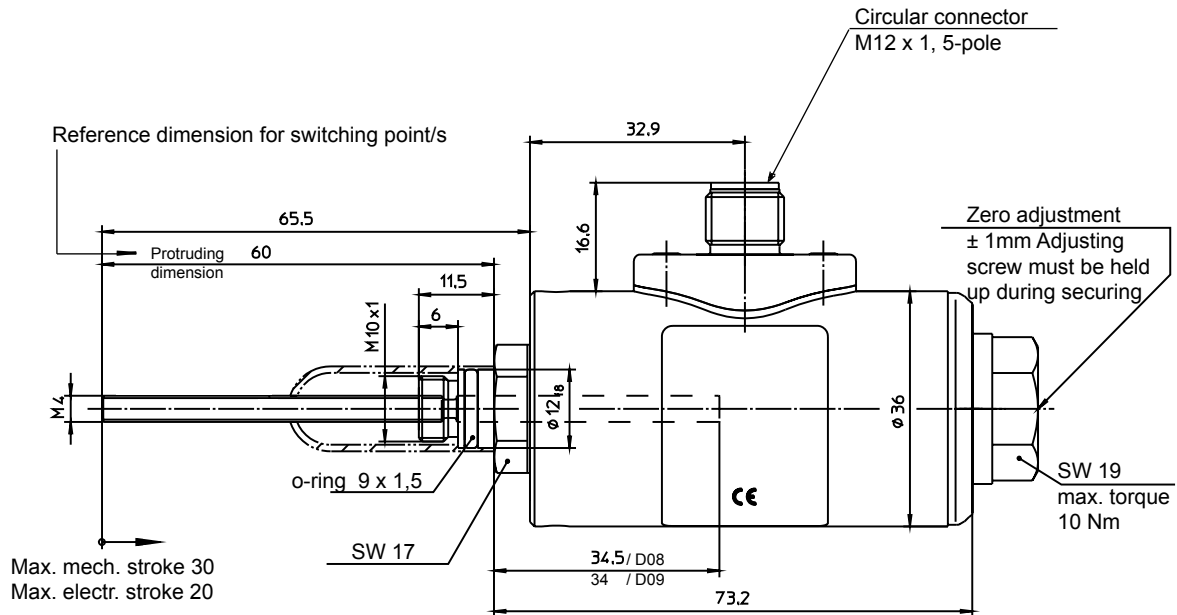



Fig. 6: Type A SE W 001 D08 / D09

Information and remarks concerning European directives can be taken from the correspondent information sheet which is available under Produktinfo.Magnet-Schultz.com.

Please make sure that the described devices are suitable for your application. Our offers for these devices are based on the assumption of maximal 8 in an FMEA severity table, i. e. in case of malfunction of the device model as offered, there is, amongst others, no jeopardy of life or limb. Supplementary information concerning its proper installation can be taken also from the  -Technical Explanation, the effective DIN VDE0580 as well as the relevant specifications.


This part list is a document for technically qualified personnel.

The present publication is for informational purposes only and shall not be construed as mandatory illustration of the products unless otherwise confirmed expressively.


Type code

	A	S	E	W	001	D08
Device group transducer						
Type of transducer						
X: without electronics, E: with electronics						
W: distance						
Measuring range (± 4 mm distance)						
Design number						

Order example

Type A SE W 001 D08
Voltage  24 V DC

Specials designs

Please do not hesitate to ask for our assistance with the solution of your application-oriented task. In order to find rapidly a reliable solution we need complete details about your application conditions. The details should be specified as precisely as possible in accordance with the relevant  -Technical Explanations.

If necessary, please request the support of our corresponding technical office.