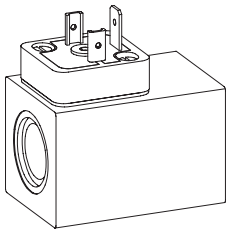
Solenoid coil M.S35/16x53 to VDE 0580 Protection class IP65/IP67



DESCRIPTION

The slip-on solenoid coil M.S35/16x53 is available with different types of electric connections. The AC voltage type incorporates a rectifier. The available AC voltages are listed in the type code section. The construction corresponds to standard VDE 0580. The steel housing is zinc-/nickel-coated as standard.

FUNCTION

In combination with the corresponding armature tube the function of an on-off solenoid or proportional solenoid will be obtained.

TYPE CODE

M ☐ S35/16x53 - ☐ ☐ - ☐ # ☐

Metal housing, square				
Connection execution				
Connector socket EN175301-803/ISO4400	D		Flying leads	L (only DC)
Connector socket AMP Junior-Timer	J (only DC)		Cable	K
Connector Deutsch DT04-2P	G (only DC)		Bayonet connector VG 95234	B
			Screw clamp	X (only DC)
Coil execution				
Internal coil diameter 16 mm				
Coil length 53 mm				
Voltage	Direct current	G	Alternating current	R
Nominal voltage	12 VDC	12	115 VAC	115
	24 VDC	24	230 VAC	230
Standard				
Special cable execution			M28	
With pressure compensation			M35 (only DC)	
Special screw clamp			M209 (only DC)	
Screw clamp and electric wiring			M222 (only DC)	
Design-Index (Subject to change)				

SPECIFICATIONS

Coil winding insulation class	min. H (180 °C)
Protection class	depending on the connector version IP65 or IP67 according to EN 60 529 (if correctly mounted)
Relative duty factor	100 % DF / 5 min when mounted on armature tube and valve
Ambient temperature	See temperature curve on page 4
Nominal voltage range	10 – 250 VDC 24 – 250 VAC
Corrosion protection	Salt spray test in accordance with EN ISO 9227 > = 1000 hours

		12 VDC	24 VDC	115 VAC	230 VAC
Nominal power (Switching function)	(W)	23	22	25,5	28
Limiting power (Proportional function)	(W)	15,5	15	–	–
Limiting current (50 °C) (Proportional function)	(A)	1,285	0,625	–	–
Nominal resistance	(Ω)	6,3	26,1	413	1500
Number of windings	(–)	815	1656	5930	12000
Weight of solenoid coil	(kg)	0,37	0,37	0,37	0,37

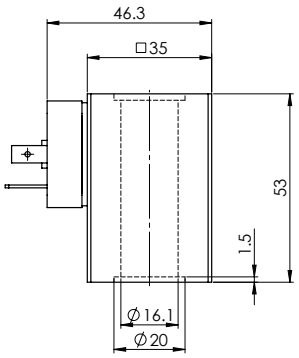
SAFE OPERATION

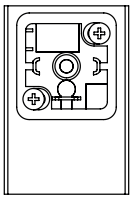
Caution: To avoid overheating the coil may only be energised when mounted on an armature tube and valve.

NOTE!

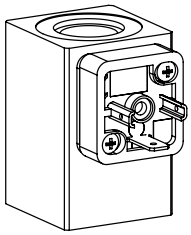
The effective heat emissions depends on the installation conditions (heat emission surface, air circulation, etc.), these influence the described area of application.

TYPE LISTE / DIMENSIONS / GENERAL SPECIFICATIONS



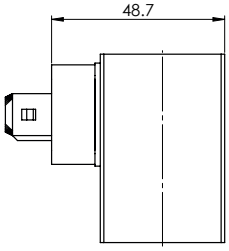


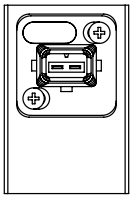
Valve side



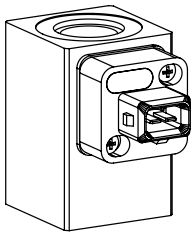
Execution: M [D] S35/16x53-…

- 3 pole 2 P+E
- DC- and AC-execution available
- Connector socket plastic
- Protection class IP65
  With corresponding mating connector
  (not included in delivery)
  and professional assembly



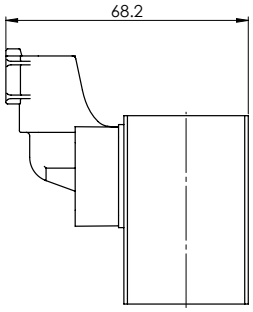


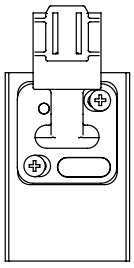
Valve side



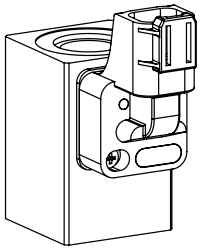
Execution: M [J] S35/16x53-…

- 2 pole 2P
- DC-execution available
- only for $U_N \leq 75$ VDC
- Connector socket plastic
- Protection class IP65
  With corresponding mating connector
  (not included in delivery)
  and professional assembly



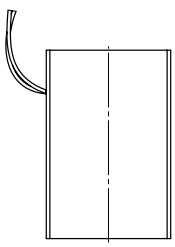


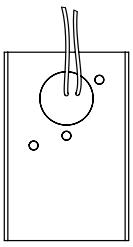
Valve side



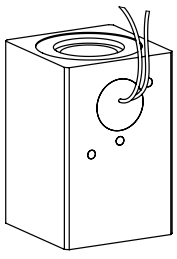
Execution: M [G] S35/16x53

- 2 pole 2P
- DC-execution available
- only for $U_N \leq 75$ VDC
- Protection class IP 67 and 69 K
  With corresponding mating connector
  (not included in delivery)
  and professional assembly



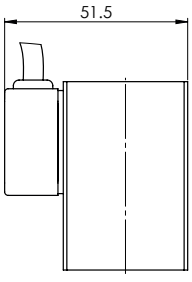


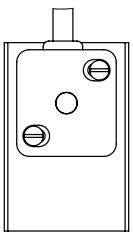
Valve side



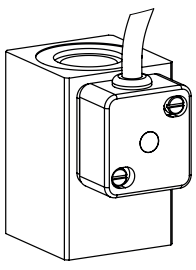
Execution: M [L] S35/16x53-…

- 2 pole 2P (2x 0,25 mm^2) Radox 155
- Cable length 500 mm
- DC-execution available
- nur für $U_N \leq 75$VDC
- Protection class IP65
  With professional assembly



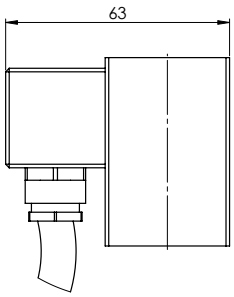


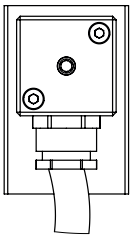
Valve side



Execution: M [K] S35/16x53-…

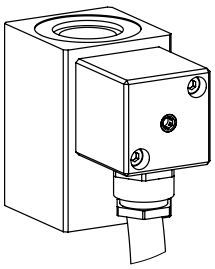
- 3 pole 2P+E 3x 0,75 mm^2 Thermoplast
- Cable length 1500 mm
- Cable diameter 6 mm
- DC- and AC-execution available
- Cable housing plastic
- Protection class IP67
  With professional assembly





Valve side

DC-execution

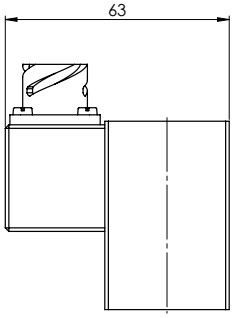


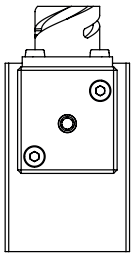
AC-execution

Execution: M **K** S35/16x53-… **M28**

- 3 pole 2P+E 2x 1 mm² [E] (acc. to IEC 332)
- Cable length 1500 mm
- DC- and AC-execution available
- Connector housing steel
- Protection class IP67 With professional assembly

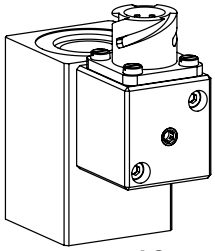
- Plastic rectifier housing, h+10,5 mm



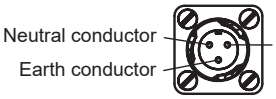


Valve side

DC-execution



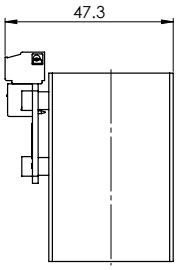
AC-execution

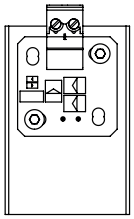


Execution: M **B** S35/16x53-…

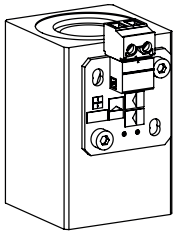
- 3 pole 2P+E
- MiL VG 95234
- DC- and AC-execution available
- Connector housing steel
- Protection class IP67 With corresponding mating connector (not included in delivery) and professional assembly

- Plastic rectifier housing, h+10,5 mm

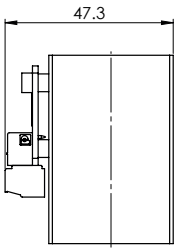


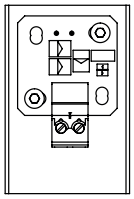


Valve side

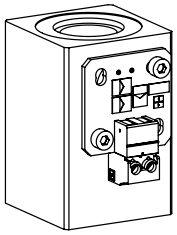


M209a





Valve side

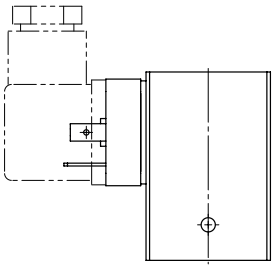


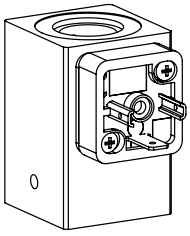
M209b

Execution: M . S35/16x53-… **M35**
M . S35/16x53-… **M../35**

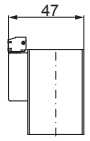
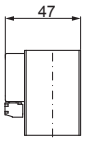
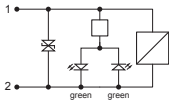
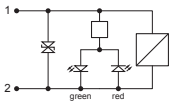
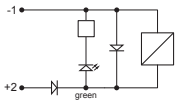
- With pressure equalising bore for underwater applications in oil bath
- Oil tank separated from water by a membrane
- With connection type «D», «L», «X»
- DC-execution available

Attention:
In case of the connection execution «D» only plugs with the additional designation «Z23» must be utilised (not included in the scope of supply of the solenoid)





Valve side

Plug alignment		Electric wiring
		
M222a	M222b	
M222c	M222d	
M222e	M222f	 * Not recommended for proportional solenoids

Execution: M **X** S35/16x53-… **M222**

- 2 pole
- DC-version available up to 28 VDC
- Screw clamp plastic
- Plug housing plastic, transparent, removable
- Printed circuit board protected with conformal coating

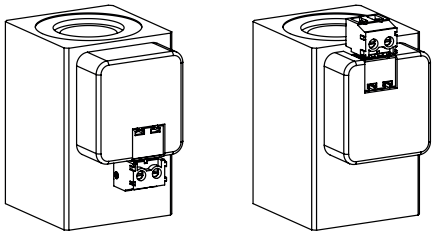
- Protection type IP40 with plastic hood installed

* I_{max} = 1,0 A at 130 °C
I_{max} = 1,5 A at 120 °C
I_{max} = 2,0 A at 110 °C

PARTS LIST

Position	Article	Description
10	219.2802	Mating connector (M209 and M222)
20	088.1116	Plastic hood (only M222)

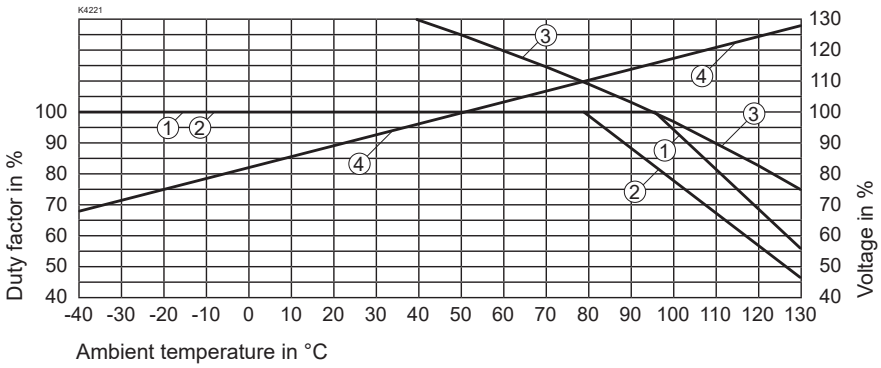
M222b/d/f M222a/c/e



Valve side

NOTE!
Technical explanation see data sheet 1.1-400/410/430

DUTY FACTOR / TEMPERATURE TEMPERATURE / VOLTAGE



① Duty factor at nominal voltage
② Duty factor at 110 % nominal voltage
③ Max. voltage in % for 100 % duty factor
④ Min. voltage in % for proportional limiting current at 100 % duty factor