

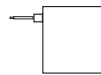
2.11

Coils and Connectors

MA 16/MA 16 L



MA 16



MA 16 L



16 mm wide solenoid system for valves type MD and MK, including valve-head.

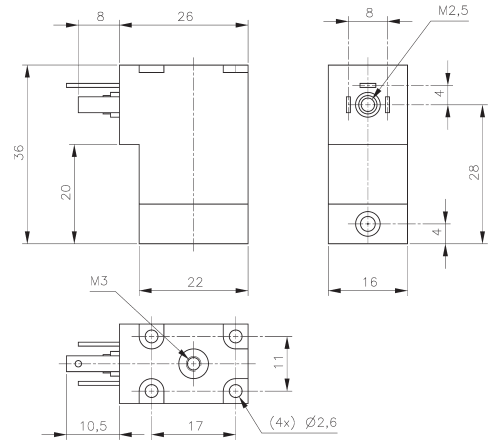
Coil made from 25 % glass filled thermoplastic PA material, epoxy filled. Valve head glass filled thermoplastic PA (standard) or anodised aluminum (on request). Valve-head includes a manual override to push.

MA 16

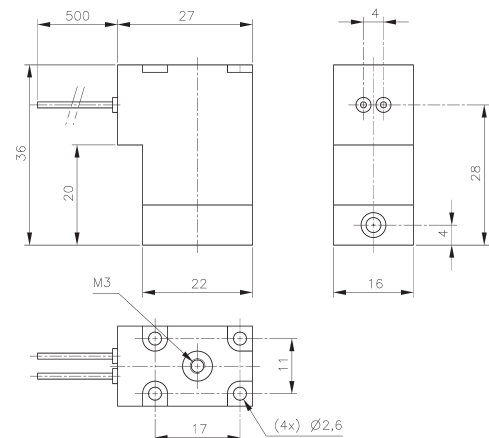
interface form C (DIN EN 175301-803), with 8 mm contact distance, connectors are displayed on page 2. 11.3. Equipped with appropriate connector coil offers IP 65.

MA 16 L (Flying leads version)

have a standard cable length of 500 mm, others are available on request. The coils are not grounded, take national safety regulations into consideration!

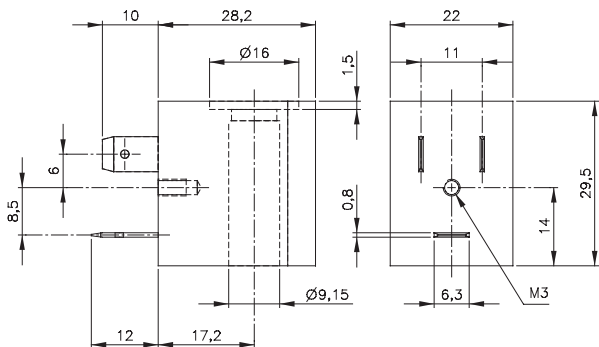


MA 16

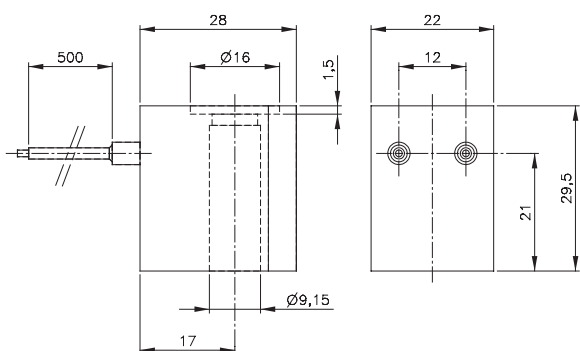


MA 16 L

Type	Voltage	Ampere	Power cons.	Connection
MA 16 6DC	6 V=	300 mA	1,8 W	Form C (DIN EN 175301-803)
MA 16 L 6DC	6 V=	300 mA	1,8 W	Flying leads 500 mm long
MA 16 12DC	12 V=	150 mA	1,8 W	Form C (DIN EN 175301-803)
MA 16 L 12DC	12 V=	150 mA	1,8 W	Flying leads 500 mm long
MA 16 24DC	24 V=	75 mA	1,8 W	Form C (DIN EN 175301-803)
MA 16 L 24DC	24 V=	75 mA	1,8 W	Flying leads 500 mm long
MA 16 24AC	24 V~	125 mA	3 VA	Form C (DIN EN 175301-803)
MA 16 L 24AC	24 V~	125 mA	3 VA	Flying leads 500 mm long
MA 16 110AC	110 V~	27 mA	3 VA	Form C (DIN EN 175301-803)
MA 16 L 110AC	110 V~	27 mA	3 VA	Flying leads 500 mm long
MA 16 230AC	230 V~	13 mA	3 VA	Form C (DIN EN 175301-803)
MA 16 L 230AC	230 V~	13 mA	3 VA	Flying leads 500 mm long



MA 22/MA 22 D/MA 22 U



MA 22 L



22 mm wide coils for solenoid valves of MH-type, 22 mm, 30 mm and 40 mm wide.

MA 22

Housing made from heat resistant thermoplastic polyester material 30 % glass filled. Interface industryform B (DIN / ISO 436 50), connectors are displayed on page 2.11.3. Equipped with appropriate connector, solenoid offers IP 65.

MA 22 L (Flying leads version)

Housing made from heat resistant thermoplastic polyester material with 30 % glass filled. Standard cable length of 500 mm, others are available on request. The coils are not grounded, please take national safety regulations into consideration!

MA 22 D (Epoxy version)

Housing made from Epoxy, interface industryform B (DIN/ISO 436 50). Equipped with connector ST 22 and ST 222 V (please refer to page 2.11.3) solenoid system offers IP 65. Equipped with connector ST 22 L 500 and additional O-rings the system offers IP 67.

AC-coils can be operated at 50 Hz and 60 Hz.

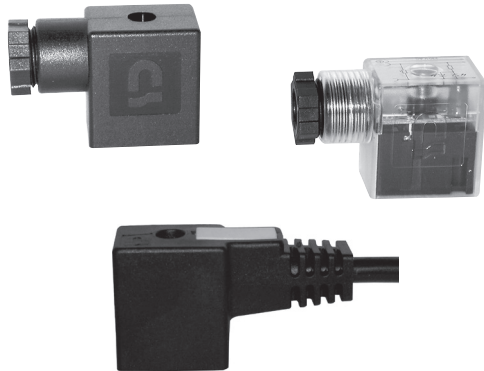
MA 22 U

Same as MA 22 but with UL-certification.



Type	Voltage	Ampere	Power cons.	Connection
MA 22 12 DC	12 V=	250 mA	3 W	Industryform Type B (DIN 436 50)
MA 22 24DC	24 V=	125 mA	3 W	Industryform Type B (DIN 436 50)
MA 22 L5 24DC	24 V=	125 mA	3 W	Flying leads
MA 22 48DC	48 V=	62 mA	3 W	Industryform Type B (DIN 436 50)
MA 22 24AC	24 V~	200 mA	5 VA	Industryform Type B (DIN 436 50)
MA 22 110AC	110 V~	45 mA	5 VA	Industryform Type B (DIN 436 50)
MA 22 L5 110AC	110 V~	45 mA	5 VA	Flying leads
MA 22 230AC	230 V~	22 mA	5 VA	Industryform Type B (DIN 436 50)
MA 22 L5 230AC	230 V~	22 mA	5 VA	Flying leads
MA 22 D 24DC	24 V=	125 mA	3 W	Industryform Type B (DIN 436 50)
MA 22 D 230AC	230 V~	22 mA	5 VA	Industryform Type B (DIN 436 50)
MA 22 U 24DC	24 V=	125 mA	3 W	Industryform Type B (DIN 436 50)
MA 22 U 110AC	110 V~	45 mA	5 VA	Industryform Type B (DIN 436 50)
MA 22 U 230AC	230 V~	22 mA	5 VA	Industryform Type B (DIN 436 50)

ST 16/ST 22/ ST 22 L 500 ST 222 V 67/ST 30



Connectors as accessories for Hafner valves.

Type ST 16 and ST 22

using the enclosed flat seal and fastening screw and nut appropriately the system reaches protection class IP 65 in accordance to IEC 60 529.

Type ST 22 L 500/ST 222 V 67

in combination with MA 22 D, using the enclosed flat seal, adding 2 O-rings at the top of the solenoid system and fastening screw and nut appropriately the system reaches protection class IP 67 in accordance to IEC 60 529. Cable length of ST 22 L 500: 5.000 mm.

ST 222 V 67 available for 24 V and 230 V applications. Cable length: 1.500 mm.

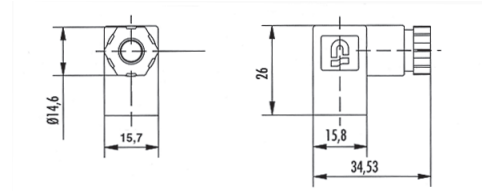
Type ST 30 ATEX

is an ATEX approved connector especially designed for being used in combination with the intrinsically safe coil MA 30 EEx ia C T6 24= displayed on page 2.12.3.2.

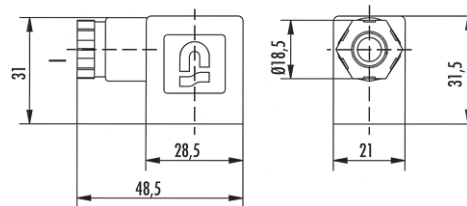
Delivery includes connector, flat nitril gasket and fixing screw (zinc-plated steel).

Other connectors are available on request.

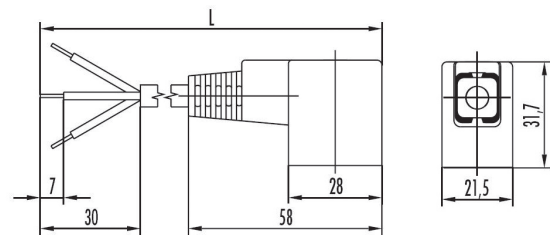
ST 30 ATEX is an in ATEX-approved connector especially designed for the use in combination with the EEx i.A. coil displayed in chapter 2.12.



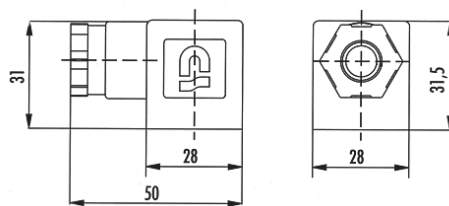
ST 16



ST 22



ST 22 L 500



ST 30

Type	Form	LED	VAR	Operat. voltage	Max. current	cable diamter
ST 16	C, ISO 15219	no	no	0 - 250 V	6 A	5 - 6,5 mm
ST 162 V 24	C, ISO 15219	red	yes	24 V ±10 %	6 A	5 - 6,5 mm
ST 162 V 230	C, ISO 15219	red	yes	230 V ±10 %	6 A	5 - 6,5 mm
ST 22	Industrial	no	no	0 - 250 V	10 A	6 - 8 mm
ST 222 V 24	Industrial	red	yes	24 V ±10 %	10 A	6 - 8 mm
ST 222 V 230	Industrial	red	yes	230 V ±10 %	10 A	6 - 8 mm
ST 22 L 500	Industrial	no	no	0 - 250 V	6 A	6,5 mm
ST 222 V 24 67	Industrial	red	yes	24 V ±10 %	6 A	6,5 mm PUR
ST 222 V 230 67	Industrial	red	yes	230 V ±10 %	6 A	6,5 mm PVC
ST 30 ATEX	A, ISO 4400	no	no	0 - 250 V	10 A	6 - 8 mm