



OPERATORS

for potentially explosive atmospheres, increased safety/encapsulation, II 2G Ex e mb IIC T6..T3 Gb
II2 D Ex tb IIC T85°C..T200°C Db IP66/67
steel or stainless steel enclosure

Series
EM
WSEM

FEATURES

- Explosion proof operator, intended for use in potentially explosive atmospheres, according to Directive ATEX 2014/34/EU
- EC type examination certificate (KEMA 98ATEX2542 X) and IECEx certificate (IECEx KEM 08.0002X) are in compliance with the European Standards EN-IEC 60079-0, EN-IEC 60079-7, EN-IEC 60079-18 and EN-IEC 60079-31
- Easy electrical installation by means of a screw terminal coil
- Peak voltage suppression standard for DC executions
- Enclosure provided with integral strain relief for cables with an o.d. from 7 to 12 mm
- Ingress protection degree IP66/67
- A wide range of valves can be supplied with the operator

CONSTRUCTION

Solenoid enclosure

Zinc plated epoxy coated steel (Prefix EM) or
AISI 316 SS (Prefix WSEM)

Cable gland

PA (polyamide) , M20x1,5

Cable gland sealing

NBR (nitrile)

Core, core tube and plugnut

Stainless steel

Shading coil

Copper or silver

Nameplate

Polyester

Coil connection

Embedded screw terminals

ELECTRICAL CHARACTERISTICS SAFETY CODE

Standard voltages:

DC (=): 24V - 48V

II 2G Ex e mb IIC T6..T3 Gb (gas)

AC (~): 24V - 48V - 115V - 230V / 50 Hz

II 2D Ex tb IIC 85°C.. 200°C Db IP66/67 (dust)

(Other voltages and 60 Hz on request)

TEMPERATURE CLASSIFICATION TABLES

The minimum allowable ambient temperature is -40°C for the operator.

Select the requested "T" classification from the temperature classification tables (AC or DC), respecting the maximum ambient temperature and cold (20°C) electrical holding power values.

AC (~) Solenoids

power level (watt)	insulation class	maximum ambient ⁽¹⁾ temp. "T" classification			
		T6 (G) 85°C (D)	T5 (G) 100°C (D)	T4 (G) 135°C (D)	T3 (G) 200°C (D)
Low power (LP)					
1,2 ⁽³⁾	F/H	60°C	75°C	-	-
1,5 ⁽³⁾	F/H	40°C	55°C	-	-
1,85 ⁽³⁾	F/H	40°C	55°C	-	-
Reduced power (RP)					
3,7 ⁽³⁾	F/H	40°C	55°C	75°C	-
Medium power (MP)					
5,8 ⁽³⁾	F/H	-	40°C	75°C	-
Basic power (BP)					
6,0	F/H	-	-	-	40°C
9,0	F/H	-	-	-	40°C
10,0 ⁽³⁾	F/H	-	-	-	40°C
10,0 ⁽³⁾	F/H	-	-	40°C	65°C
10,5	F/H	-	-	-	40°C
13,0	F/H	-	-	-	40°C
13,6 ⁽³⁾	F/H	-	-	-	40°C
14,1 ⁽³⁾	F/H	-	-	-	40°C
16,5	F/H	-	-	-	40°C

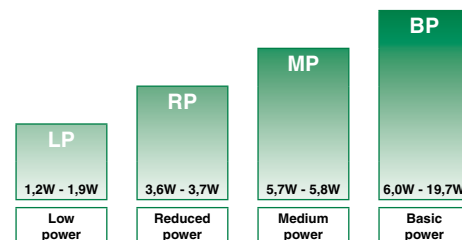
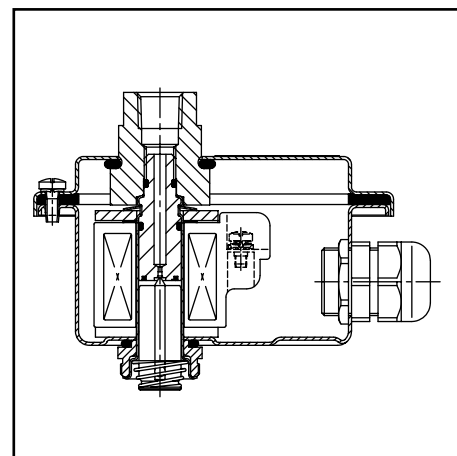
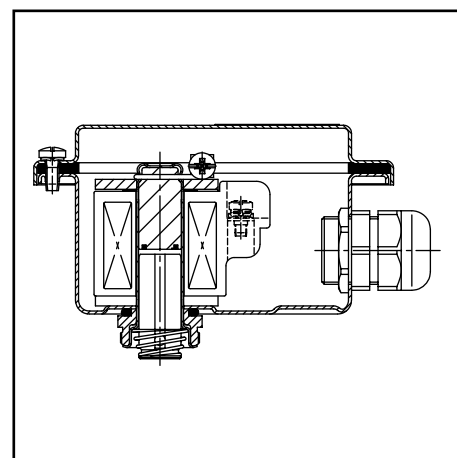
DC (=) Solenoids

power level (watt)	insulation class	maximum ambient ⁽¹⁾ temp. "T" classification			
		T6 (G) 85°C (D)	T5 (G) 100°C (D)	T4 (G) 135°C (D)	T3 (G) 200°C (D)
Low power (LP) ⁽²⁾					
1,3	F/H	60°C	75°C	-	-
1,7	F/H	40°C	55°C	-	-
1,8	F/H	40°C	55°C	-	-
Reduced power (RP)					
3,6	F/H	40°C	55°C	75°C	-
Medium power (MP)					
5,7	F/H	-	40°C	75°C	-
Basic power (BP)					
9,7	F/H	-	-	-	40°C
10,0	F/H	-	-	40°C	65°C
11,2	F/H	-	-	-	40°C
14,0	F/H	-	-	-	40°C
15,3	F/H	-	-	-	40°C
16,8	F/H	-	-	-	40°C
19,7	F/H	-	-	-	40°C

⁽¹⁾ Make sure that the selected ambient temperature does not exceed the allowable valve temperature characteristics as specified on the appropriate valve catalogue sheets

⁽²⁾ Low power coils do not contain diodes for voltage suppression

⁽³⁾ AC (~) rectified coil construction



POWER LEVELS - cold electrical holding values (watt)



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PREFIX TABLE

prefix							description		power level			
1	2	3	4	5	6	7			LP	RP	MP	BP
E	M						Waterproof IP66/67 - Metal enclosure (EN/IEC 60079-7,-18 and -31)*		●	●	●	●
W	S						Waterproof IP66/67 - 316 SS enclosure (EN/IEC 60079-7,-18 and -31)*		●	●	●	●
		E	M				Threaded conduit/hole (M20 x 1,5)		●	●	●	●
				E	T		Threaded conduit (1/2" NPT)		●	●	●	●
						X	Other special constructions		●	●	●	●

● Available feature

- Not available

* ATEX/IECEx valves using these solenoids are approved according to EN 13463-1 (non electrical)

ORDERING EXAMPLES VALVES:

EM	8	327B001	230V / 50/60 Hz
WSEM	G	327B002 MS	24V / DC
EMET	G	327B001 V	230V / 50/60 Hz
EMET	B	320A192 MO	24V / DC
EM	B	320B174 MB	24V / DC
WSEMT	B	320A184 E	24V / DC
WSEM	B	314A301 V	230V / 50 Hz
EM	B	344E074	230V / 50 Hz
WSEMET	B	344A382 CO	240V / 60 Hz

prefix ———
 pipe thread ———
 basic number ——— voltage
 suffix

PRODUCT SELECTION GUIDE

(The selection can only be made in conjunction with the appropriate valve catalogue sheet)

STEP 1

Select basic valve catalogue number, including pipe thread identification letter from one of the specification tables on the separate catalogue pages.

Example: 8327B002

STEP 2

Select voltage. Refer to standard voltages on page 1.

Example: 230V / 50/60Hz

STEP 3

Select solenoid prefix (combination). Refer to the prefix table on this page and respect the indicated power level, cold electrical holding values and "T" classification mentioned on page 1.

NOTE: Make sure that the ambient temperature does not exceed the allowable valve temperature characteristics.

Example:

WSEM

60°C ambient

Basic Power (BP) 10,0W

II 2G Ex e mb II CT3 Gb

II 2D Ex tb IIIC T200°C Db IP66/67

STEP 4

Final catalogue / ordering number.

Example:

WSEM 8327B002 230V / 50/60 Hz

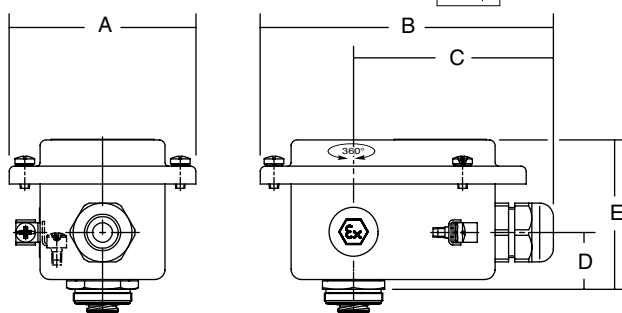
ADDITIONAL OPTIONS

- Special moulded-in solid state components for peak voltage suppression and/or AC (~) rectification
- Brass nickel plated cable gland
- 1/2" NPT (prefix "T") and M20x1,5 (prefix "ET") conduits (aluminium or 316 SS) available

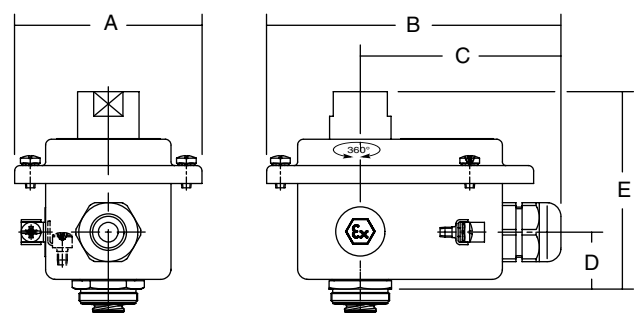
INSTALLATION

- Multi language installation/maintenance instructions are included with each valve
- The solenoid operators can be mounted in any position without affecting operation
- Refer to the nameplate for identification of the maximum cable temperature
- Internal and external earthing connection
- The operator can be rotated 360° to select the most favourable position for cable entry
- The solenoid shall be protected by a fuse capable of interrupting the prospective short circuit current

DIMENSIONS (mm), WEIGHT (kg)



series	A	B	C	D	E	weight
EM/WSEM-(M6)	77	120	82	26	64	0,48
EM/WSEM-(MXX)	77	120	82	23	62	0,55
EM/WSEM-(M12)	77	120	82	21	65	0,67



series	A	B	C	D	E	weight
EM/WSEM-(MXX)	77	120	82	23	80	0,68

All leaflets are available on

8-45-2



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