OPERATORS

for potentially explosive atmospheres
increased safety/encapsulation, II 2 G/D EEx **em** II / IP67
steel or stainless steel enclosure

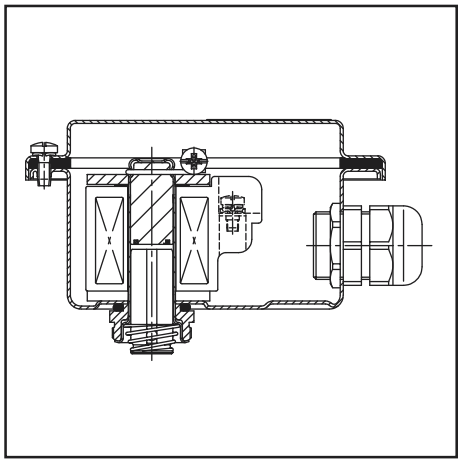
ATEX Series **EM** **WSEM**

FEATURES

- *Explosion proof operator, intended for use in potentially explosive atmospheres, according to Directive ATEX 94/9/EC*
- *EC type examination certificate (KEMA 98ATEX2542) is in compliance with the European Standards EN 50014, EN 50019, EN 50028 and EN 50281-1-1*
- *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 IP67*
- *The operator is available as both a push or pull type solenoid and can be supplied on a wide range of ASCO/JOUCOMATIC valves*

CONSTRUCTION

Solenoid enclosure	Zinc plated epoxy coated steel (Prefix EM) or AISI 316 SS (Prefix WSEM)
Cable gland	Polyamide (PA), M20x1,5
Cable gland sealing	NBR
Core, core tube and plugnut	Stainless steel
Shading coil	Copper or silver
Nameplate	Polyester
Coil connection	Embedded screw terminals

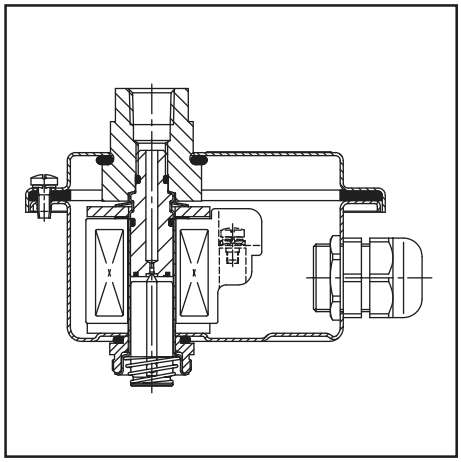


ELECTRICAL CHARACTERISTICS

Standard voltages:
DC (=) : 24V - 48V
AC (~) : 24V - 48V - 115V - 230V / 50 Hz
(Other voltages and 60 Hz on request)

SAFETY CODE

Ⓔx II 2 G EEx em II T6/T3 (gas)
Ⓔx II 2 D IP67 85°C/100°C/135°C/ 200°C (dust)



TEMPERATURE CLASSIFICATION TABLES

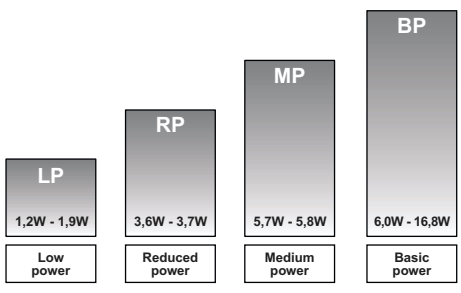
The minimum allowable ambient temperature is -40°C for the operator.
Select the requested "T" classification from the temperature classification tables (AC or DC), respecting the maximum ambient temperature and cold (20°C) electrical holding power values.

AC (~) Solenoids

power level (watt)	isolation 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 [2]	F	60°C	-	-	-
1,5 [2]	F	40°C	55°C	-	-
1,9 [2]	F	40°C	55°C	90°C	-
Reduced power (RP)					
3,7 [2]	F	40°C	55°C	60°C	-
Medium power (MP)					
5,8 [2]	F	-	40°C	75°C	90°C
Basic power (BP)					
6,0	F	-	-	-	40°C
9,0	F	-	-	-	40°C
10,0 [2]	F	-	-	-	40°C
10,5	F	-	-	-	40°C
10,8 [2]	F	-	-	40°C	65°C
13,0 [2]	F	-	-	-	40°C
13,6	F	-	-	-	40°C
16,5 [2]	F	-	-	-	40°C

DC (=) Solenoids

power level (watt)	isolation 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)					
1,3	F	60°C	-	-	-
1,7	F	40°C	55°C	-	-
1,8	F	40°C	55°C	90°C	
Reduced power (RP)					
3,6	F	40°C	55°C	90°C	-
Medium power (MP)					
5,7	F	-	40°C	75°C	90°C
Basic power (BP)					
9,7	F	-	-	-	40°C
10,7	F	-	-	40°C	65°C
11,0	F	-	-	-	40°C
11,2	F	-	-	-	40°C
12,5	F	-	-	-	40°C
14,0	F	-	-	-	40°C
16,8	F	-	-	-	40°C
-	-	-	-	-	-



POWER LEVELS - cold electrical holding values (watt)

[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] AC (~) rectified coil construction

2004/R01

PREFIX TABLE

prefix							description	power level			
1	2	3	4	5	6	7		LP	RP	MP	BP
E	M						Encapsulated ATEX (EN 50019 & EN 50028) *	●	●	●	●
		E	T				Threaded conduit/hole (M20 x 1.5)	●	●	●	●
W	S						Waterproof IP67 - 316 SS enclosure	●	●	●	●
W	S	E	M				316 SS enclosure ATEX (EN 50019 & EN 50020) *	●	●	●	●
		T					Threaded conduit (1/2" NPT)	●	●	●	●
				H	C		Class H - Battery charging circuit	-	-	-	●
				H	T		Class H - High temperature	●	●	●	●
						X	Other special constructions	●	●	●	●

● Available feature
- Not available

* ATEX solenoids are also approved according to EN 13463-1 (non electrical valves)

ORDERING EXAMPLES VALVES:

EM B 327A001 230V / 50 Hz
WSEM G 327A002 MS 24V / DC
EMET G 327A001 V 230V / 50 Hz
EMET B 320A192 MO 24V / DC
EM B 320A174 MB 24V / DC
WSEMT B 320A184 E 24V / DC
WSEM B 314A301 V 230V / 50 Hz
EM E 344E074 230V / 50 Hz
WSEMET G 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 indentification letter from one of the specification tables on the separate catalogue pages.
Example: B327A002

STEP 2
Select voltage. Refer to standard voltages on page 1.
Example: 230V / 50Hz

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) 10,5W
II 2 G EEx d IIC T3
II 2 D IP65 T200°C

STEP 4
Final catalogue / ordering number.
Example:
WSEM B327A002 230V / 50 Hz

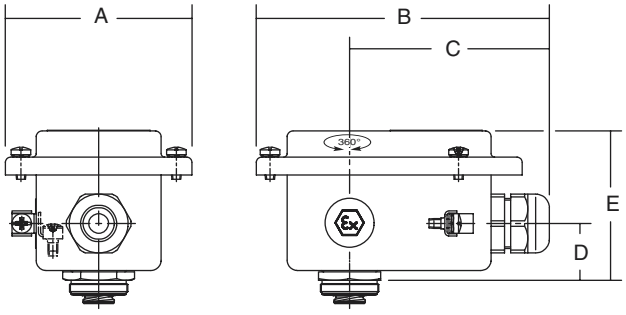
ADDITIONAL OPTIONS

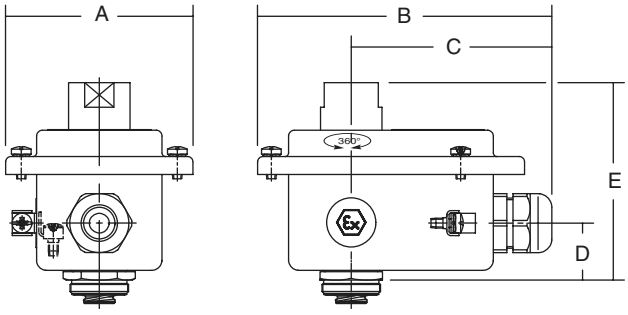
- Special moulded-in solid state components for peak voltage suppression and/or AC (~) rectification
- Cable gland (cable o.d. 10 to 14 mm), TPL 16497
- Brass nickel plated cable gland
- 1/2" NPT (prefix "T") and M20x1,5 (prefix "ET") conduits (aluminium or 316 SS) available

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

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