



# OPERATORS

for explosive atmospheres  
2 and 3 way  
encapsulated moulded coils with leads



Series  
**EF**  
**EV**

## FEATURES

- The solenoid is conforming to **ICS-6 ANSI / NEMA** standard and **UL** standards **429, 508 and 1002**
- A one-piece moulded epoxy coated solenoid with an integral 1/2" NPT conduit hub and built-in strain relief for leads
- The epoxy encapsulation serves as the enclosure and the magnetic frame is moulded into the coil
- The operator is available as both pull or push type solenoid and can be installed on normally open and normally closed valves
- The solenoid has 35 cm long leaded wires
- The solenoids include an internal non-resettable thermal fuse to limit solenoid temperature in the event that extraordinary conditions occur, which could cause excessive temperatures

## CONSTRUCTION

<b>Encapsulant</b>	Thermosetting epoxy-resin
<b>Core tube</b>	Stainless steel
<b>Core and plunger</b>	Stainless steel
<b>Core spring</b>	Stainless steel
<b>Sealings &amp; discs</b>	NBR
<b>Top disc (3 way)</b>	PA
<b>Disc holder</b>	CA
<b>Cartridge</b>	Welded, packless AISI 430
<b>Cartridge seat</b>	Brass
<b>Seat insert</b>	CA
<b>Shading coil</b>	Copper
<b>Ridering (Low Power)</b>	PTFE
<b>Nameplate</b>	Stainless steel
<b>Conduit hub</b>	1/2" NPT zinc plated carbon steel (EF prefix) or 1/2" NPT stainless steel (EV prefix)

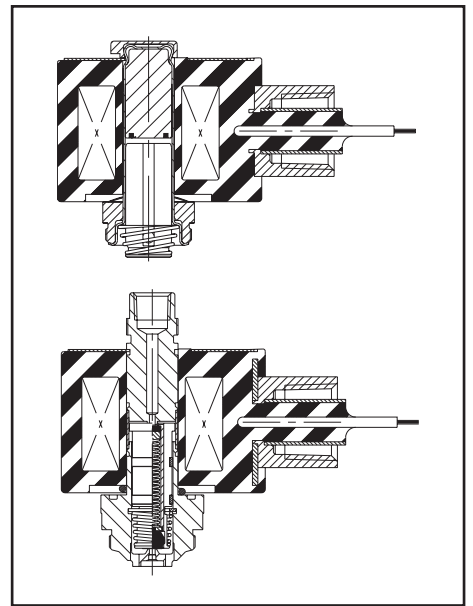
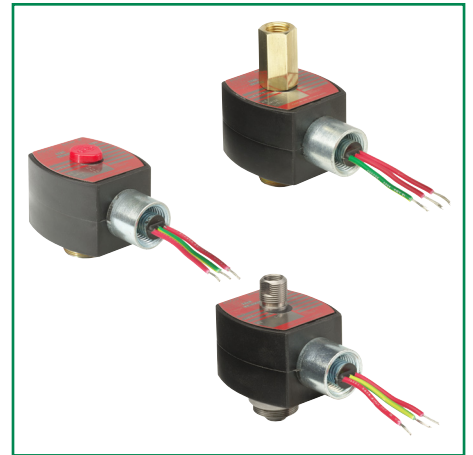
## ELECTRICAL CHARACTERISTICS

### Standard voltages:

DC (=) : 24V - 48V  
AC (~) : 24V - 48V - 120V - 240V / 60 Hz  
(Other voltages and 50 Hz on request)

## SAFETY CODE

NEMA, types 7 and 9



## TEMPERATURE CLASSIFICATION TABLES

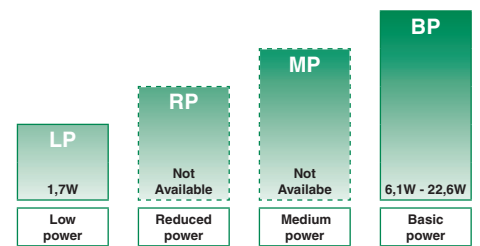
The minimum allowable ambient temperature is -40°C for the operator.  
Select the requested "T" classification from the temperature classification tables (AC or DC), respecting the maximum ambient temperature and cold (20°C) electrical holding power values.

AC (~) Solenoids

power level (watt)	insulation class	maximum ambient <sup>(1)</sup> temp. "T" classification			
		T6 (G) 85°C (D)	T5 (G) 100°C (D)	T4 (G) 135°C (D)	T3 (G) 200°C (D)
<b>Low power (LP)</b>					
-	-	-	-	-	-
<b>Basic power (BP)</b>					
6,1	F	-	-	-	52°C
9,1	F	-	-	-	52°C
10,1	F	-	-	-	52°C
12,0 <sup>(2)</sup>	F	-	-	-	52°C
15,1	F	-	-	-	52°C
17,1	F	-	-	-	52°C

DC (=) Solenoids

power level (watt)	insulation class	maximum ambient <sup>(1)</sup> temp. "T" classification			
		T6 (G) 85°C (D)	T5 (G) 100°C (D)	T4 (G) 135°C (D)	T3 (G) 200°C (D)
<b>Low power (LP)</b>					
1,7	F	-	-	-	40°C
<b>Basic power (BP)</b>					
10,6	F	-	-	-	40°C
11,6	F	-	-	-	40°C
22,6	F	-	-	-	40°C



POWER LEVELS - cold electrical holding values (watt)

<sup>(1)</sup> Make sure that the selected ambient temperature does not exceed the allowable valve temperature characteristics as specified on the appropriate valve catalogue sheets  
<sup>(2)</sup> AC (~) Full wave rectified coil construction

### PREFIX TABLE

prefix							description	power level			
1	2	3	4	5	6	7		LP	RP	MP	BP
E	F						Explosionproof - NEMA 7, 9 - zinc plated steel conduit	○	-	-	●
E	V						Explosionproof - NEMA 7, 9 - 316 SS conduit	○	-	-	●
						X	Other special constructions	-	-	-	-

- Available feature
- Available feature in DC only
- Not available

### 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: G327G001**

#### STEP 2

Select voltage. Refer to standard voltages on page 1.

**Example: 24V / DC**

#### 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: EF**

**40°C ambient**

**Basic Power (BP) 11,6W**

**NEMA Type 7 and 9, T3**

#### STEP 4

Final catalogue / ordering number.

**Example:**

**EF G327G001 24V / DC**

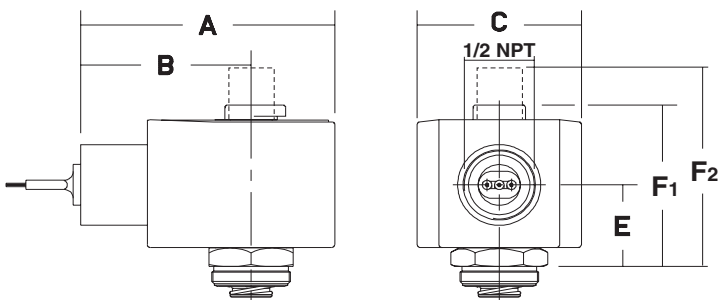
### ORDERING EXAMPLES VALVES:

	EF	B	320G200	MO	240V / 60 Hz
prefix	EV	E	316G084	MB	240V / 60 Hz
pipe thread					voltage
basic number					suffix

### INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation
- The solenoid can be rotated 360° to select the most favourable position for cable entry

### DIMENSIONS (mm), WEIGHT (kg)



type	prefix/option	power level	A	B	C	E	F1 <sup>(1)</sup>	F2	weight
M6	EF / EV (M6)	BP	70	48	43	24	46	-	0,25 kg
MXX	EF / EV (MXX)	BP	77	52	50	26	51	-	0,35 kg
MXX	EF / EV	BP	77	52	50	26	49	66	0,35 kg

<sup>(1)</sup> 2/2 way construction only

### SECTIONAL DRAWING

