

ASCO™ Operators for 551/553 Series

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

Series
EF/EV

Approvals

EV and EF

UL and CSA Certified for:

Class I, Division 1, Groups A, B, C, D;

Class II, Division 1, Groups E, F, G ⁽³⁾

SIL 3 capable per IEC 61508 with 551 and 553 valve series

EV

ATEX Certified for:

II 2G Ex db h mb IIC T* Gb

II 2D Ex h mb tb IIIC T* Db

IECEx Certified for:

Ex db mb IIC T* Gb

Ex mb tb IIIC T* Db

Construction

Encapsulant

Thermosetting epoxy-resin

Core tube

Stainless steel (Integrated pilot= brass)

Core and plugnut

Stainless steel

Core spring

Stainless steel

Sealings & discs

NBR

Top disc (3 way)

PA

Disc holder

CA

Cartridge

Welded, packless AISI 430

Cartridge seat

Brass

Seat insert

CA

Shading coil

Copper

Ridering (Low Power)

PTFE

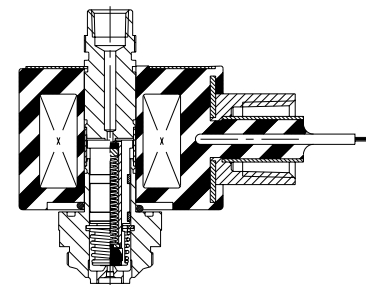
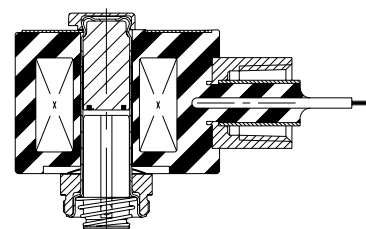
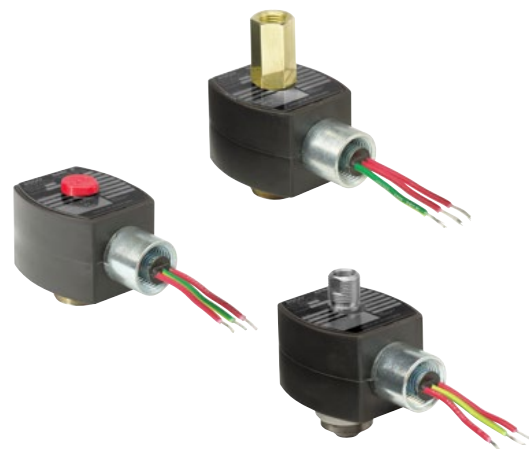
Nameplate

Stainless steel

Conduit hub

1/2" NPT zinc plated carbon steel (EF prefix) or

1/2" NPT stainless steel (EV prefix)



Electrical Characteristics

Standard voltages

Safety Code

Type 7 and 9

Power Level	Insulation Class	AC ⁽¹⁾				DC	
		24V	48V	120V	230V	24V	48V
EF MXX							
Ultra Low Power ULP	F (0,55W) / H (0,7 W)	-	-	-	-	●	●
Low Power (LP)	F (1,4W) / H (1,8W)	-	-	-	-	●	●
Basic Power (BP)	F or H	●	●	●	●	●	●

EV MXX ATEX							
Ultra Low Power ULP	F (0,55W) / H (0,7 W)	-	-	-	-	●	●
Low Power (LP)	F (1,4W) / H (1,8W)	-	-	-	-	●	●
Basic Power (BP)	F or H	●	●	●	●	●	●

● Available feature

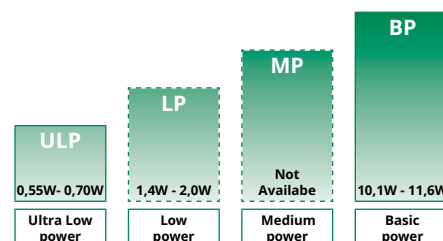
(1) F class is standard and H class option (prefix HT , i.e. EFHT or EVHT)

AC (~) Solenoids

EV Power Level (watt)	Insulation Class	Maximum Ambient ⁽¹⁾ Temp. ATEX "T" Classification			
		T6 (G) 85°C (D)	T5 (G) 100°C (D)	T4 (G) 135°C (D)	T3 (G) 200°C (D)
Basic Power (BP)					
10,1	F	-	-	52°C	-
10,1	H	60°C	-	-	-

DC (=) Solenoids

EV Power Level (watt)	Insulation Class	Maximum Ambient ⁽¹⁾ Temp. ATEX "T" Classification			
		T6 (G) 85°C (D)	T5 (G) 100°C (D)	T4 (G) 135°C (D)	T3 (G) 200°C (D)
Ultra Low Power					
0,55W	F	65°C	-	-	-
0,7W	H	65°C	80°C	-	-
1,4 W	F	60°C	-	-	40°C
1,8W	H	65°C	74°C	-	-
Basic Power (BP)					
11,6	F	-	-	40°C	-
11,6	H	-	-	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) Charts are for ATEX Ambient & T Codes, Separate info is for Class/Divisions.

(3) Basic Power, Class H Coils, Group G Only

Note: Specific wattage depends on type and this sheet is a general guide. Technical sales will verify Wattage as many variations

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Electrical Characteristics

Standard voltages

Power Level	Isolation Class	AC (6,3W)			DC (6,9W)	
		24V/50-60Hz	120V/60Hz 110-120V/50Hz	240V/60Hz 220-240V/50Hz	24V	48V
EF XM5 (in line)						
-	F	●	●	●	●	●

● Available feature
(Other DC voltages on request)

Prefix Table

Prefix	Description
EF	UL and CSA certified solenoid, Type 4X, 7, 9 zinc plated steel 1/2" NPT conduit & 18" leads (approx 46cm)
EFL	UL and CSA certified solenoid, Type 4X, 7, 9 zinc plated steel 1/2" NPT conduit & high temperature & 72" Leads (approx 1,8 meters)
EFHT	UL and CSA certified solenoid, Type 4X, 7, 9 zinc plated steel 1/2" NPT conduit & 18" leads (approx 46cm) & high temperature
EFHTL	UL and CSA certified solenoid, Type 4X, 7, 9 zinc plated steel 1/2" NPT conduit & 72" leads (approx 1,8 meters) & high temperature
JBEF	UL and CSA certified solenoid, Type 4X, 7, 9 Ex proof alum junction box epoxy coil 1/2" NPT conduit (Not Div 1 Gas Group A)
JBEFHT	UL and CSA certified solenoid, Type 4X, 7, 9 Ex proof alum junction box epoxy coil 1/2" NPT conduit & high temperature (Not Div 1 Gas Group A)
JBEFMF	UL and CSA certified solenoid, Type 4X, 7, 9 Ex proof alum junction box epoxy coil 1/2NPT conduit & high temperature & surge suppression coils (Not Div 1 Gas Group A)
JCEF	UL and CSA certified solenoid, Type 4X, 7, 9 Ex proof alum junction box epoxy coil 3/4" NPT conduit (Not Div 1 Gas Group A)
EV	ATEX, IECEx, UL and CSA certified solenoid, Type 4X, 7, 9 316 SS 1/2" NPT conduit & 18" (approx 46cm) leads
EVHT	ATEX, IECEx, UL and CSA certified solenoid, Type 4X, 7, 9 316 SS 1/2" NPT conduit & 18" (approx 46cm) leads & high temperature
EVHTL	ATEX, IECEx, UL and CSA certified solenoid, Type 4X, 7, 9 316 SS 1/2" NPT conduit & high temperature & 72" leads (approx 1,8 meters)
EVL	ATEX, IECEx, UL and CSA certified solenoid, Type 4X, 7, 9 316 SS 1/2" NPT conduit & 72" leads (approx 1,8 meters)
EVMF	ATEX, IECEx, UL and CSA certified solenoid, Type 4X, 7, 9 316 SS 1/2" NPT conduit & 18" (approx 46cm) leads & surge suppression coil
EVMFL	ATEX, IECEx, UL and CSA certified solenoid, Type 4X, 7, 9 316 SS 1/2" NPT conduit & surge suppression coil & 72" leads (approx 1,8 meters)

* Above is for guidance only refer to certification for current design.

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: 551

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

Type 7 and 9

STEP 4

Final catalogue / ordering number.

Example:

EF G 551G001 MO 24V / DC

EV G 551G301 MS 24V / DC

EF 8 551A001 MS 24V / DC

551/553 Series

Suffix	Description
MO	Push and turn to lock with flat head screwdriver slot
MI	Momentary push in with flat head screwdriver slot
MH	Momentary push in by hand
MS	Push and turn to lock by hand
SL	SIL
M	Flow reducer

Ordering Examples Valves

EF	G	551G001	MO	24V / DC
EV	8	551G309	MO	24V / DC
prefix	pipe thread	basic number		voltage suffix

Installation

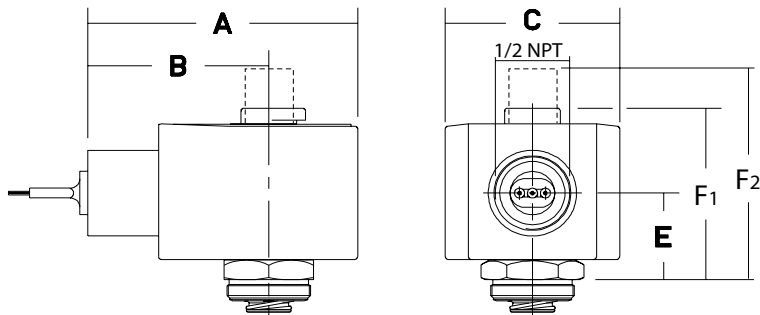
- The solenoid valves can be mounted in any position without affecting operation
- The solenoid can be rotated 360° to select the most favourable position for cable entry

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Dimensions (mm), Weight (kg)



Type	Prefix/Option	Power Level	A	B	C	E	F1 ⁽¹⁾	F2	F3	Weight
MXX	EF / EV (MXX)	BP	77	52	50	26	51	-	77	0,35 kg
MXX	EF / EV	BP	77	52	50	26	49	66	77	0,35 kg

(1) 2/2 way construction only (Dimension are approximate)

Sectional Drawing

Execution:

EV, EF, Low power 3 way cartridge

