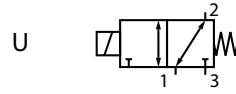


# ASCO™ Inherently Safe Direct Acting Valves

Balanced Poppet Type | 316 Stainless Steel Bodies | 1/4" Porting



**3/2  
Series  
327**

## Features

- Designed for installation in inherently safe areas, with properly approved and sized current and voltage limiting barriers
- No minimum operating pressure required
- No booster electronics leading to quicker response time
- 316L Stainless Steel construction for highly corrosive atmospheres
- NAMUR mount option available
- Product is SIL (Safety Integrity Level) 3 Capable to IEC 61508-1 Exida certified<sup>①</sup>



Performance Data	
Construction	Inherently Safe
Enclosures	Epoxy powder coated Aluminum or 316L Stainless Steel
Flow, Kv (Cv)	IS Standard and NVR: 0.3 (0.35) IS TP-NVR: 0.45 (0.52)
Maximum Operating Pressure Differential, bar (psi)	10 (145)
Fluid Media	Air, Inert Gas
Ambient and Fluid Temperature, Standard FKM Seals, °C (°F)	-40 to 60 (-40 to 140)
Construction	
Body	316L Stainless Steel
Core Tube	316L Stainless Steel
Stem & Insert	316L Stainless Steel
Core & Plugnut	430F Stainless Steel
O-ring Holder	316L Stainless Steel
Springs	17-7 Stainless Steel
Seals & Discs	FVMQ
Rider Ring	PTFE Graphite filled
Temporary Connector <sup>②</sup>	Polypropylene
Electrical	
Voltage, Power, Watts	Suitable for most IS 24VDC systems. Minimum current to operate is 35mA, Nominal power: 0.5W, Maximum allowable system leakage current: 4mA
Enclosure Certifications	
Ingress Protection	IP 66 & 68 Type 4X & 6P
Hazardous Location	UL, ULc CL I, Div 1, Gp A, B, C, D and CL II, Div 1 Gp E, F, G, CL III UL, ULc CL I, ZONE 0, AEx ia IIC T6 Ga; Ex ia IIC T6 Ga ZONE 20, AEx ia IIIC T85°C Da; Ex ia IIIC T85°C Da ATEX/IECEX: II 1G Ex ia IIC T6 Ga II 1D Ex ia IIIC T85°C Da

<sup>①</sup> SIL not applicable for MS variants. Exhaust protection is advised (Bug Screen).

<sup>②</sup> Temporary connector is for test purposes only and must be removed for final installation of product.


# ASCO™ Inherently Safe Direct Acting Valves

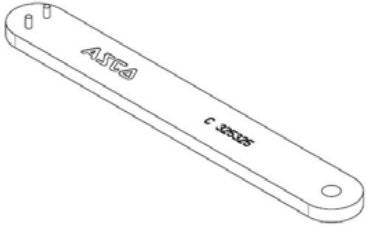
Balanced Poppet Type | 316 Stainless Steel Bodies | 1/4" Porting

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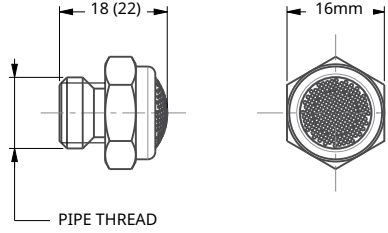
## Recommended Codes

Suggested Codes *	Construction	Body (SS)	Electrical Connection (*Equivalent Temporary Connector Code)	Options	Voltage   Power	Dimensions		
8327C3A2FS92JH3	Inherently Safe	Pipe Threaded	1/2" NPT, SS, Inherently Safe	MO	Suitable for most IS 24VDC systems   0.5W	A		
8327C3A2FS92KH3				MS				
8327C3A2FS9YTH3				None				
8327C3A2FU9YTH3			20mm, SS, Inherently Safe					
8327C3A2FN9YTH3			1/2" NPT, AI, Inherently Safe					
8327C3A2FT9YTH3			20mm, AI, Inherently Safe					
8327C3A2FN92JH3			1/2" NPT, AI, Inherently Safe	MO				
8327C3A2FS92MH3			1/2" NPT, SS, Inherently Safe	NVR				
8327C3A2FN92MH3			1/2" NPT, AI, Inherently Safe					
8327C3A2FS92NH3			1/2" NPT, SS, Inherently Safe	TP-NVR				
8327C3A2FN92NH3			1/2" NPT, AI, Inherently Safe					
8327C3A5FS9YTH3			NAMUR	1/2" NPT, SS, Inherently Safe			None	B

Spare Part Code	Electrical Connection Temporary Connector Cable
M200983	

Removable MO/MS tool

Tool to remove plug. Kit no.: C325325

For critical applications where SIL IEC 61058 valves are required it is recommended to use an exhaust protector (as shown below) or equal.

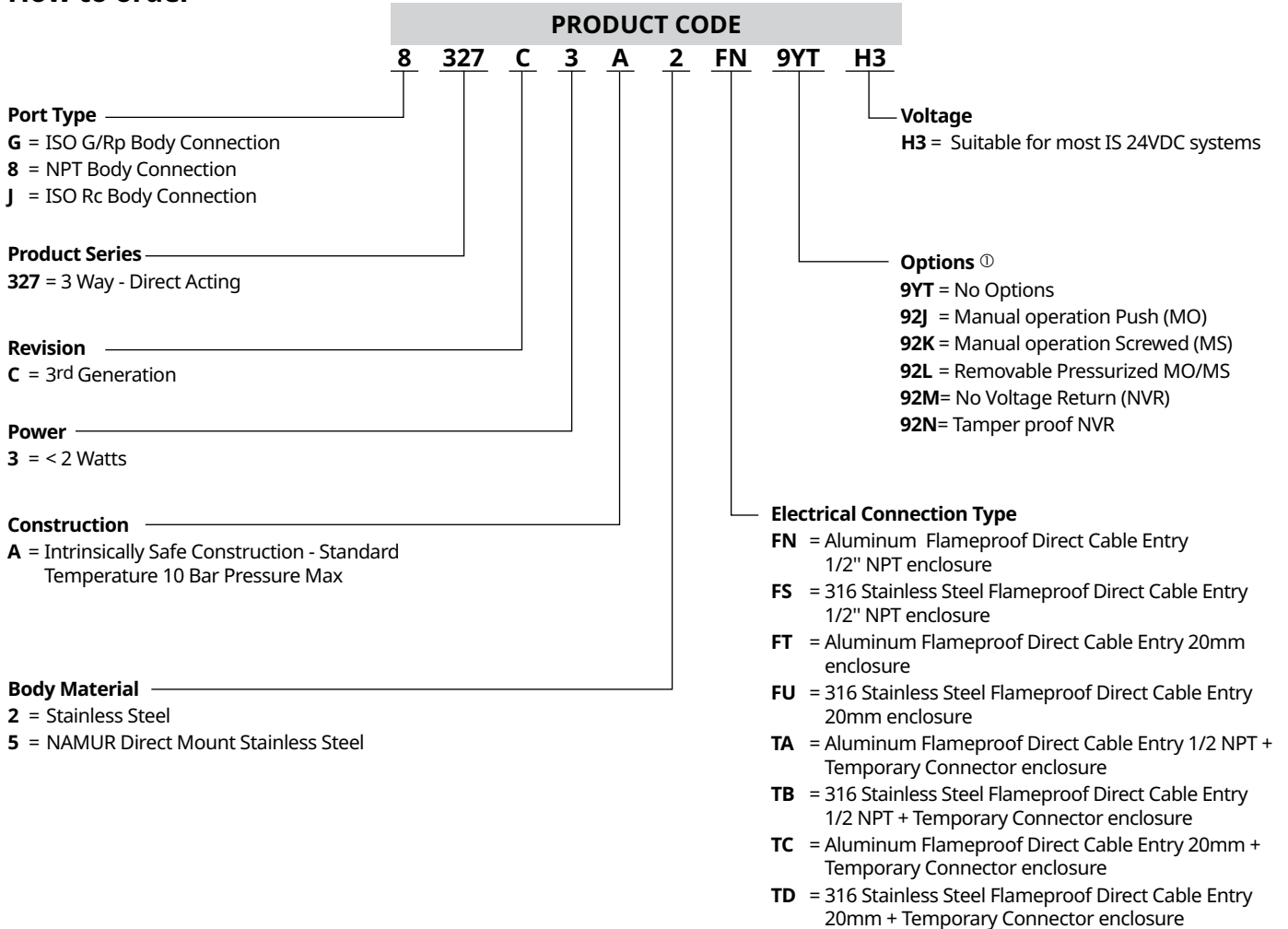
Exhaust Protector						
Pipe size	Thread	Part Number		Mesh/filtering	Wrench size (REF A.)	
		Brass nickel plated	316 Stainless Steel			
1/4	ISO 228/1	131875-001	131875-014	100-200 µm	16mm	
	NPT	131875-002	131875-015			

# ASCO™ Intrinsically Safe Direct Acting Valves

Balanced Poppet Type | 316 Stainless Steel Bodies | 1/4" Porting

**3/2  
Series  
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## How to order



① Notes: If multiple options are required, please use the online configurator on the website to generate the part number ([www.Emerson.com/ASCO](http://www.Emerson.com/ASCO)), or consult factory

# ASCO™ Intrinsically Safe Direct Acting Valves

Balanced Poppet Type | 316 Stainless Steel Bodies | 1/4" Porting

**3/2  
Series  
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## Recommended Interfaces

- Positioned in safe areas, these interfaces provide controlled power to intrinsically safe solenoid valves operating in hazardous, explosive environments
- These Interfaces must be ordered directly from the respective manufacturers, with a clear specification that it is intended for powering intrinsically safe solenoid operators

Barriers / Interfaces		
Manufacturer	Module type	IG/2G T6 IIC
Emerson	Delta V IS Discrete Output 45 ma CHARM	X
Pepperl + Fuchs	KCDO-SD3-EX1.1045	X
	KCDO-SD3-EX1.1245	X
	KCDO-SD3-EX1.1245SP	X
	KFDO-SD2-EX1.1180	X
	KFDO-SD2-EX1.10100	X
	KFDO-SD2-EX2.1245	X
	KFDO-SD2-EX2.1S45	X
	KCD2-SLD-EX1.1045	X
	KCD2-SLD-EX1.1065	X
	KCD2-SLD-EX1.1245	X
	KFD2-SLD-EX2.1045	X
	KFD2-SLD-EX2.1245	X
	KFD2-SLD-EX2.1S45	X
Crouse Hinds/ Eaton	MTL 4521L	X
	MTLX521	X
	MTL5521-T	X
	MTL5522	X
	MTL 4523L	X

Note : This is not an extensive list but when approached Barrier companies will advise their latest products. Obsolete or other new barriers will be compatible. Please send this data sheet to your suppliers technical department who will be able to confirm compatibility


## Electrical Characteristics

### Standard voltages

- DC: 12V +/- 10% nominal
- Minimum current to operate is 35mA
- Nominal power: 0.5W
- Maximum allowable system leakage current – 4mA

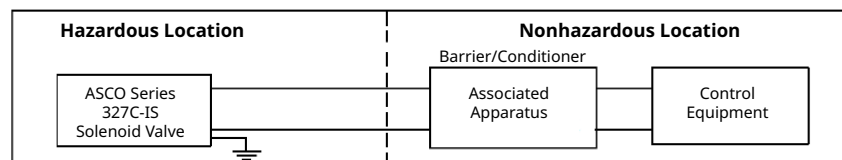
V supply	= The supply voltage to the barrier
T ambient	= The ambient temperature in °C
R barrier	= The maximum barrier end to end resistance
R loop	= The maximum resistance in lead wire
R coil	= The resistance (Ω) of the solenoid coil at T ambient.
R coil	= 310 x (Tambient+234) /254
I loop	= Loop current in the circuit
I loop	= $V \text{ supply} / (R \text{ coil} + R \text{ loop} + R \text{ barrier})$ . This current must always be greater than or equal to 35mA for proper operation of the solenoid valve. T ambient max. is leading.

**In accordance with the zone classification and the national legislation of each country, apply the certification procedures for the connection of IS-rated products with associated equipment. All information subject to change without notice. All responsibility for the use of products from other suppliers and the possible modifications of their characteristics is disclaimed.**

 **Shall be protected against any impact or friction, see installation conditions given in the ISM sheets**

Safety Parameters				
Ui (DC)	Ii	Pi	Li	Ci
(V)	(mA)	(W)	(mH)	(µF)
32	500	1.5	0	0

Example of use with a Zener barrier installed in a non-hazardous zone:

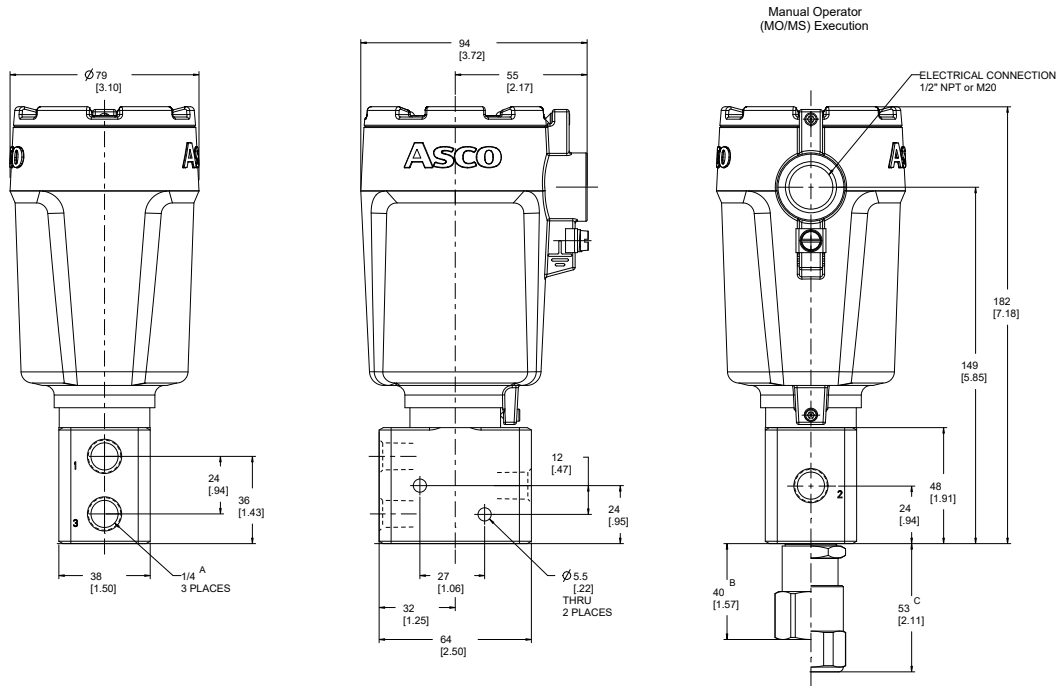


# ASCO™ Inherently Safe Direct Acting Valves

Balanced Poppet Type | 316 Stainless Steel Bodies | 1/4" Porting

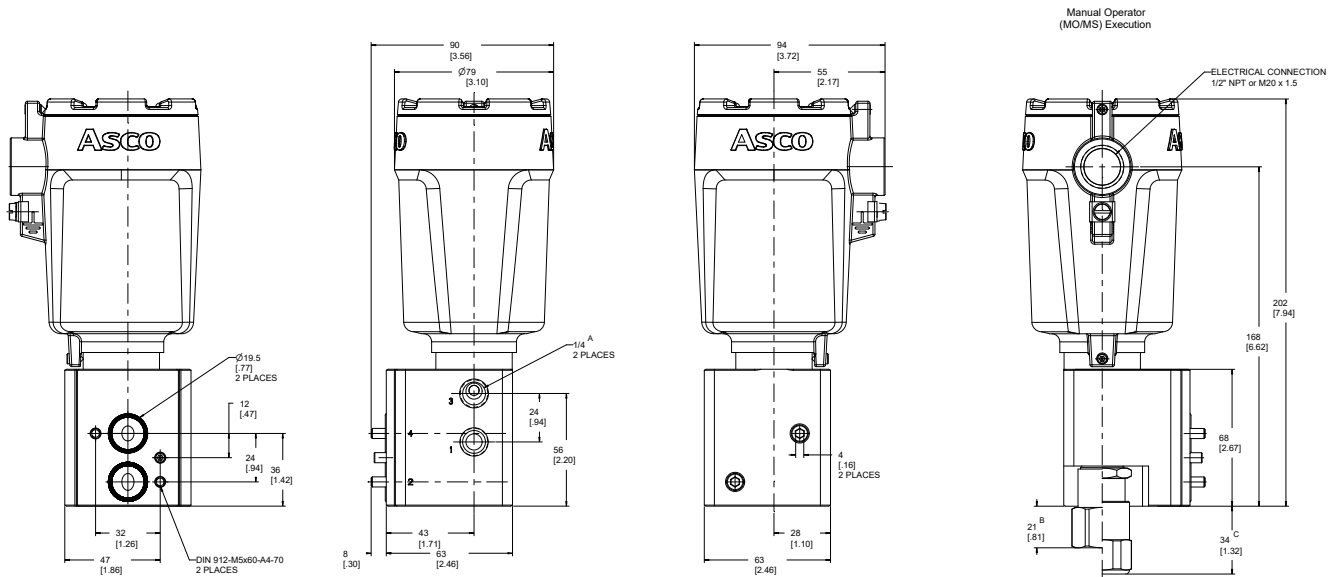
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## Dimensions A: mm (inches) Threaded



A Port Types: ANPT, ISO 1179-1, RC  
 B For Manual Operator Push type  
 C For Manual Operator Screw Type

## Dimensions B: mm (inches) NAMUR Direct Mount



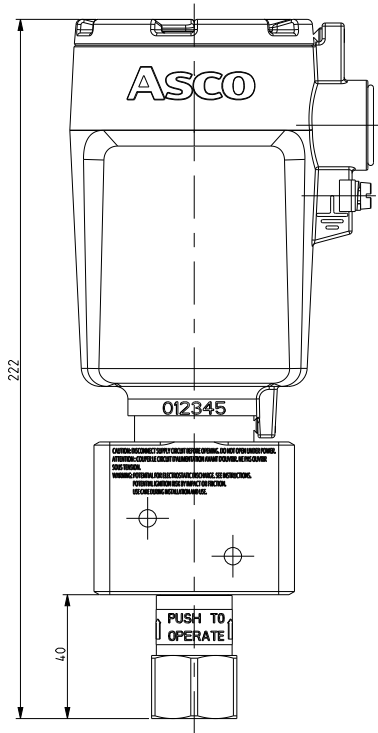
A Port Types: ANPT, ISO 1179-1, RC  
 B For Manual Operator Push type  
 C For Manual Operator Screw Type

# ASCO™ Inherently Safe Direct Acting Valves

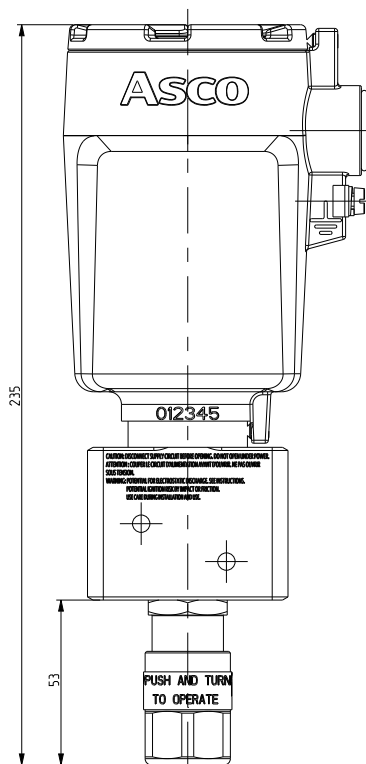
Balanced Poppet Type | 316 Stainless Steel Bodies | ¼" Porting

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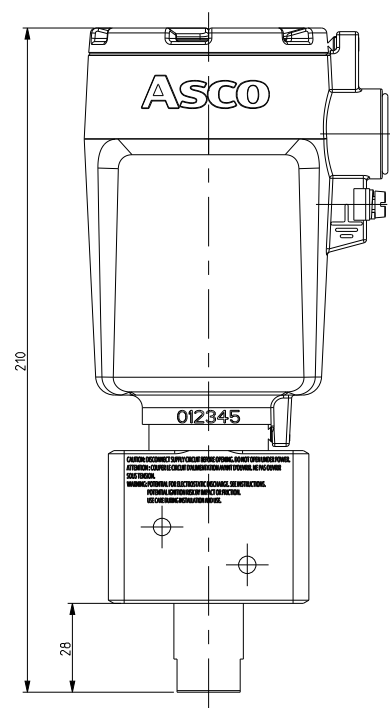
## Dimensions C: mm (inches) No Voltage Release (NVR)/Tamperproof NVR



MANUAL OPERATOR PUSH TYPE



MANUAL OPERATOR SCREW TYPE



REMOVABLE PRESSURIZED MO/MS

Availability, design and specifications are subject to change without notice.  
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