

The ASCO ARCS are specially designed redundant solution for emergency shut down valves (ON/OFF valves)⁽¹⁾ and various redundant configurations (1oo2, 2oo2 & 2oo3) to meet both safety & availability.



ASCO ARCS 2oo3 redundant solenoid valve piloting system combines the advantages of both 1oo2 & 2oo2 systems to achieve a high level of process safety and reliability.

⁽¹⁾ For fail safe application of control valves, please contact ASCO representative

Redundant Configurations

1oo2 - Redundancy built to achieve a high level of process safety

Hardware fault tolerant = 1 SIL3

2oo2 - Redundancy built to achieve high availability and prevent nuisance trips

Hardware fault tolerant = 0 SIL2

2oo3 - Redundancy built to achieve a high level of process safety and availability

Hardware fault tolerant = 1 SIL3

** 2oo3 configuration with 3 channels and 3oo4 configuration with 4 channels wiring



Solenoid Valves are Based on ASCO 327-Series, 3 Way

- Direct-acting solenoid valve technology
- Low friction = Low power = High reliability
- Reduced total cost of ownership (TCO)

Options Available

- Aluminum or stainless steel solenoid operator option including Flameproof or Intrinsically safe
- Manual operator or manual reset function
- Pressure gauge, visual indicator (stainless steel)
- Solenoid valve diagnostics (pressure or go switch options)
- Options with Ex proof and intrinsically safe wiring for pressure switches
- High flow and low temperature available



Full Range of Certifications and Approvals

327 certified for SIL applications (Exida)

Up to SIL 3 accreditation from Exida for redundant configuration

Online Maintenance

Common by pass - allows online replacement of solenoid valve

Individual isolation - 2oo2 & 2oo3 - Hot swapping that allow on-line replacement of solenoid valve while maintaining the system capability to bring the process to safe mode in the event of an emergency.

Features & Benefits

- Complete redundant solenoid valve configuration (1oo2/2oo2/2oo3)
- Compact and fully integrated module
- Direct valve-to-valve design
- Status indication & feedback
- Online maintenance-individual isolation / common bypass
- Safe & proven technology

General**Differential pressure**

1 - 10 bar [1 bar = 100kPa]

Maximum viscosity65 cSt (mm²/s)**Response times**

75 - 100 ms

Fluid	Temperature Range (TS)	Seal Materials
Dry & Non Lubricated Air	-20°C to +80°C	FPM ⁽¹⁾
	-40°C to +40°C	(F)VMQ

⁽¹⁾ Highflow limited to -10°C**Specifications**

Pipe Size	Operating Pressure	Power Level	Prefix Solenoid Options											Operation	Fluid Temperature Ts ⁽³⁾ (°C)	Material of Construction	Basic Solenoid Valve	Basic Ordering Code for Solenoid Valve					
			Exd		Ex emb		Exi		Type 7/9				IP67	IP65									
			NPT	Min	Max	~/=	NF/ WSNF	WSCR	EM/ WSCREM	NFIS/ WSNFS/ WSCRIS	WSTIS	EV	EVHT	EVMF	EVMH	JBEF	WP/ WS	SC					
1/4	0/1 ⁽²⁾	10	BP							.					.			Auto Reset	-20 to +120	SS316L	327G042	536408	
										.					.			Auto Reset	-40 to +55	SS316L	327G052	545554	
										.					.			Manual Reset	-20 to +120	SS316L	327G032	536407	
				.	.	.									.	.		Auto Reset	-20 to +120	SS316L	327B202	536398
			MP	.	.	.									.	.		Auto Reset	-50 to +60	SS316L	327B212	545550
				.	.	.									.	.		Manual Reset	-20 to +120	SS316L	327B232	536401
				.	.	.									.	.		Auto Reset	-20 to +120	Aluminium	327B203	536403
				.	.	.									.	.		Auto Reset	-20 to +120	SS316L	327B102	536397
			RP	.	.	.									.	.		Auto Reset	-50 to +60	SS316L	327B112	545549
				.	.	.									.	.		Manual Reset	-20 to +120	SS316L	327B132	536400
				.	.	.									.	.		Manual Reset	-50 to +60	SS316L	327B182	545552
				.	.	.									.	.		Auto Reset	-20 to +120	SS316L	327H102	536404
				.	.	.									.	.		Manual Reset	-20 to +120	SS316L	327H132	536409
				.	.	.									.	.		Auto Reset	-50 to +60	SS316L	327H112	545555
				.	.	.									.	.		Manual Reset	-50 to +60	SS316L	327H182	545556
				.	.	.									.	.		Auto Reset	-20 to +120	Aluminium	327B103	536402
			LP	.	.	.									.	.		Auto Reset	-20 to +120	SS316L	327B302	536399
				.	.	.									.	.		Auto Reset	-50 to +60	SS316L	327B312	545551
				.	.	.									.	.		Manual Reset	-20 to +120	SS316L	327B332	536406
				.	.	.									.	.		Manual Reset	-50 to +60	SS316L	327B382	545553
			BP	.	.	.									.	.		Auto Reset	-20 to +120	Aluminium	327B303	536405
				.	.	.									.	.		Auto Reset	-20 to +60	SS316L	327H302	548533
				.	.	.									.	.		Auto Reset	-50 to +60	SS316L	327H312	548534
				.	.	.									.	.		Auto Reset	-20 to +60	SS316L	307B005 ⁽¹⁾	503838
1/2				.	.	.									.	.		Auto Reset	-10 to +90	SS316L	327A610	543587
				.	.	.									.	.		Auto Reset	-50 to +60	SS316L	327A606	543588
				.	.	.									.	.		Manual Reset	-10 to +90	SS316L	327A620	543589
				.	.	.									.	.		Manual Reset	-40 to +40	SS316L	327A616	543590

⁽¹⁾ For detail specification and dimensions, please refer to ASCO representative⁽²⁾ Zero bar applicable for redundant configuration without online maintenance and diagnostic feature options only⁽³⁾ Can be limited by the operator ambient temperature range for explosion proof solenoids**Flow Rate**

Size	Function	Flow Coefficient Kv	
		(m ³ /h)	(l/m)
1/4"	1oo2	0.19	3.2
	2oo2	0.39	6.5
	2oo3	0.29	4.8
1/2"	1oo2	0.39	6.5
	2oo2	0.76	13
	2oo3	0.64	11

Explanation of Temperature Ranges of Solenoid Valves

Valve temperature range

The valve temperature range (TS) is determined by the selected seal material, the temperature range for proper operation of the valve and sometimes by the fluid (e.g. steam)

Operator ambient temperature range

The operator ambient temperature range is determined by the selected power level and the safety code

Total temperature range

The temperature range of the complete solenoid valve is determined by the limitations of both temperature range above

Electrical Characteristics

Prefix	Inrush (~)	Holding (~)	Power Rating		Operator Ambient Temperature Range	Safety Code	Coil Insulation Class	Electrical Enclosure Protection (EN60529)
			(~)	Hot/Cold =				
			VA	VA	W	W	(°C)	
Basic Power (BP)								
EV	12	12	12	11.6	-40 to +60	Class I, Division 1, Groups A, B, C, D, Class II, Division 1, Groups E, F, G	F	Type 7/9, moulded
JBEF	12	12	12	11.6	-40 to +60	Class I, Division 1, Groups B, C, D, Class II, Division 1, Groups E, F, G	F	Type 7/9, moulded, Alu junction box
NF/WSNF	14.1	14.1	14.1	11/14	-60 to +40/60/90	II2G Ex db IIC Gb T6/T5, II2D Ex tb IIIC Db	H	IP66/67, Alu/SS
WSCR	10	10	10	9/10	-60 to +25/60/90	II2G Ex db IIC Gb T5/T4/T3, II2D Ex t IIIC Db	H	IP66/67, SS
EM	14.1	14.1	14.1	11/14	-40 to +40	II2G Ex eb mb IIC Gb T3, II2D Ex tb IIIC Db	H	IP66/67, steel
WSCREM	10	10	10	9/10	-60 to +25/60/90	II2G Ex eb mb IIC Gb T5/T4/T3, II2D Ex tb IIIC Db	H	IP66/67, SS
WP/WS	14.1	14.1	14.1	11/14	-40 to +90	EN 60730	H	IP67, steel/SS
SC	14.1	14.1	14.1	11/14	-40 to +90	EN 60730	F	IP65, moulded
Medium Power (MP)								
NF/WSNF	5.8	5.8	5.8	5.2/5.7	-60 to +60/75/90	II2G Ex db IIC Gb T6/T5/T4, II2D Ex tb IIIC Db	H	IP66/67, Alu/SS
WSCR	5.8	5.8	5.8	5.2/5.7	-60 to +40/60/90	II2G Ex db IIC Gb T6/T4/T3, II2D Ex t IIIC Db	H	IP66/67, SS
EM	5.8	5.8	5.8	5.2/5.7	-40 to +40/75/90	II2G Ex eb mb IIC Gb T5/T4, II2D Ex tb IIIC Db	H	IP66/67, steel
WSCREM	5.8	5.8	5.8	5.2/5.7	-60 to +40/60/90	II2G Ex eb mb IIC Gb T6/T4, II2D Ex tb IIIC Db	H	IP66/67, SS
WP/WS	5.8	5.8	5.8	5.2/5.7	-40 to +90	EN 60730	H	IP67, steel/SS
SC	5.8	5.8	5.8	5.2/5.7	-40 to +90	EN 60730	F	IP65, moulded
Reduced Power (RP)								
NF/WSNF	3.7	3.7	3.7	3.2/3.6	-60 to +60	II2G Ex db IIC Gb T6, II2D Ex tb IIIC Db	H	IP66/67, Alu/SS
WSCR	3.7	3.7	3.7	3.2/3.6	-60 to +40/60/90	II2G Ex db IIC Gb T6/T5/T4, II2D Ex t IIIC Db	H	IP66/67, SS
EM	3.7	3.7	3.7	3.2/3.6	-40 to +40/55	II2G Ex eb mb IIC Gb T6/T5, II2D Ex tb IIIC Db	H	IP66/67, steel
WSCREM	3.7	3.7	3.7	3.2/3.6	-60 to +40/60/90	II2G Ex eb mb IIC Gb T6/T5/T4, II2D Ex tb IIIC Db	H	IP66/67, SS
WP/WS	3.7	3.7	3.7	3.2/3.6	-40 to +55	EN 60730	H	IP67, steel/SS
SC	3.7	3.7	3.7	3.2/3.6	-40 to +55	EN 60730	F	IP65, moulded
Low Power (LP)								
(NF/WSNF/WSCR)	1.85	1.85	1.85	1.5/1.8	-60 to +55	II2G Ex db IIC Gb T6, II2D Ex tb IIIC Db	H	IP66/67, Alu/SS
WSCREM	1.85	1.85	1.85	1.5/1.8	-60 to +55	II2G Ex eb mb IIC Gb T6, II2D Ex tb IIIC Db	H	IP66/67, SS
EV	-	-	-	2	-20 to +60	Class I, Division 1, Groups A, B, C, D, Class II, Division 1, Groups E, F, G	F	Type 7/9, moulded
EVHT	-	-	-	2.7	-20 to +90	Class I, Division 1, Groups A, B, C, D, Class II, Division 1, Groups E, F, G	H	Type 7/9, moulded
EVMF	-	-	-	2.4	-50 to +60	Class I, Division 1, Groups A, B, C, D, Class II, Division 1, Groups E, F, G	F	Type 7/9, moulded, surge suppression
EVMH	-	-	-	2.9	-20 to +90	Class I, Division 1, Groups A, B, C, D, Class II, Division 1, Groups E, F, G	H	Type 7/9, moulded, surge suppression, High Ambient
JBEF	-	-	-	2	-40 to +60	Class I, Division 1, Groups B, C, D, Class II, Division 1, Groups E, F, G	F	Type 7/9, moulded, Alu junction box
Intrinsically Safe (IS)								
(NFIS/WSNFIS/WSCRIS)	-	-	-	0.5	-40 to +60	II2G Ex ia IIC T6 Gb, II2D Ex tb IIIC Db	H	IP66/67, Alu/SS
WSTIS	-	-	-	0.4	-20 to +60	Ex ia IIC T6 Gb, Ex t IIIC Db	H	IP66/67, SS

Electrical Connections

Code	Connection	Prefix
FN	Solenoid Housing, Die Cast Aluminum, Explosion Proof with 1/2 NPT Cable Entry, Safety Code II2G Ex db IIC Gb T6/T5/T4, II2D Ex tb IIIC Db, ATEX/IEC Ex Certified	NF
FT	Solenoid Housing, Die Cast Aluminum, Explosion Proof with M20*1.5 Cable Entry, Safety Code II2G Ex db IIC Gb T6/T5/T4, II2D Ex tb IIIC Db, ATEX/IEC Ex Certified	NFET
FS	Solenoid Housing, Stainless Steel, Explosion Proof with 1/2 NPT Cable Entry, Safety Code II2G Ex db IIC Gb T6/T5/T4, II2D Ex tb IIIC Db, (WSNF-IECEx) ATEX/IEC Ex Certified	WSNF
FU	Solenoid Housing, Stainless Steel, Explosion Proof with M20 * 1.5 Cable Entry, Safety Code II2G Ex db IIC Gb T6/T5/T4, II2D Ex tb IIIC Db, (WSNF-IEC Ex) ATEX/IEC Ex Certified	WSNFET
WR	Solenoid Housing, Stainless Steel, Explosion Proof with 1/2 NPT Cable Entry, Safety Code II2G Ex db IIC Gb T6/T5/T4/T3, II2D Ex t IIIC Db, (WSCR-IEC Ex) ATEX/IEC Ex Certified	WSCR
X2	Solenoid Housing, Stainless Steel, Explosion Proof with M20 * 1.5 Cable Entry, Safety Code II2G Ex db IIC Gb T6/T5/T4/T3, II2D Ex t IIIC Db, (WSCR-IEC Ex) ATEX/IEC Ex Certified	WSCRET
F1	Solenoid Housing, Die Cast Aluminum, Intrinsically Safe with 1/2 NPT Cable Entry, Safety Code II2G Ex ia IIC Gb T6, II2D Ex tb IIIC Db (Standard Flow Only), ATEX/IEC Ex Certified	NFTIS
X1	Solenoid Housing, Die Cast Aluminum, Intrinsically Safe with M20 * 1.5 Cable Entry, Safety Code II2G Ex ia IIC Gb T6, II2D Ex tb IIIC Db (Standard Flow Only), ATEX/IEC Ex Certified	NFETIS
FV	Solenoid Housing, Stainless Steel, Intrinsically Safe with 1/2 NPT Cable Entry, Safety Code II2G Ex ia IIC Gb T6, II2D Ex tb IIIC Db (Standard Flow Only), ATEX/IEC Ex Certified	WSNFTIS
FW	Solenoid Housing, Stainless Steel, Intrinsically Safe with M20*1.5 Cable Entry, Safety Code II2G Ex ia IIC Gb T6, II2D Ex tb IIIC Db (Standard Flow Only), ATEX/IEC Ex Certified	WSNFETIS
X3	Solenoid Housing, Stainless Steel, Intrinsically Safe with 1/2 NPT Cable Entry, Safety Code: II2G Ex ia IIC Gb T6, II2D Ex tb IIIC Db (Standard Flow Only), ATEX/IEC Ex Certified	WSCRTIS
X4	Solenoid Housing, Stainless Steel, Intrinsically Safe with M20 * 1.5 Cable Entry, Safety Code: II2G Ex ia IIC Gb T6, II2D Ex tb IIIC Db (Standard Flow Only), ATEX/IEC Ex Certified	WSCRETIS
X5	Solenoid Housing, Stainless Steel, Intrinsically Safe with 1/2 NPT Cable Entry, Safety Code: Ex ia IIC Gb T6, Ex t IIIC Db (Standard Flow Only), CC0E	WSTIS
X6	Solenoid Housing, Stainless Steel, Intrinsically Safe with M20 * 1.5 Cable Entry, Safety Code: Ex ia IIC Gb T6, Ex t IIIC Db (Standard Flow Only), CCOE	WSETIS
MV	Solenoid Housing, Steel, Increased Safety with 1/2"NPT Cable Entry, Safety Code: II2G Ex eb mb IIC Gb T6/T5/T4/T3, II2D Ex tb IIIC Db, ATEX/IEC Ex Certified	EM
MT	Solenoid Housing, Steel, Increased Safety with M20 *1.5 Cable Entry, Safety Code: II2G Ex eb mb IIC Gb T6/T5/T4/T3, II2D Ex tb IIIC Db, ATEX/IEC Ex Certified	EMT
X7	Solenoid Housing, Stainless Steel, Increased Safety with 1/2"NPT Cable Entry, Safety Code: II2G Ex eb mb IIC Gb T6/T5/T4/T3, II2D Ex tb IIIC Db, ATEX/IEC Ex Certified	WSCREM
X8	Solenoid Housing, Stainless Steel, Increased Safety with M20 *1.5 Cable Entry, Safety Code: II2G Ex eb mb IIC Gb T6/T5/T4/T3, II2D Ex tb IIIC Db, ATEX/IEC Ex Certified	WSCREMET
X9	Waterproof IP67 - with M20*1.5 Cable Gland, Metal Enclosure	WP
XA	Waterproof IP67 - M20*1.5 Cable Entry, Metal Enclosure	WPET
XC	Waterproof IP67 - with M20*1.5 Cable Gland, Stainless Steel Enclosure	WS
XD	Waterproof IP67 - M20*1.5 Cable Entry, Stainless Steel Enclosure	WSET
XE	Waterproof IP67 - 1/2"NPT Cable Entry, Metal Enclosure	WPT
XF	Waterproof IP67 - 1/2"NPT Cable Entry, Stainless Steel Enclosure	WST
S1	Spade Plug Connector (EN/IEC 60730), IP65	SC
H1	Explosionproof, Epoxy molded solenoid housing with integral ½" NPT stainless steel conduit hub and 18" leads, UL/CSA approvals, Class I Div 1 Groups A, B, C, D; Class II Div 1 Group E, F, G (UL/CSA -Solenoid only)	EV/EVHT
H6	Surge Suppression, Explosionproof, Epoxy Molded Solenoid Housing with Integral ½" NPT Stainless Steel Conduit Hub and 18" Leads, UL/CSA Approvals, Class I Div 1 Groups A, B, C, D; Class II Div 1 Group E, F, G, (UL/CSA -Solenoid Only)	EVMF/ EVMH
7N	Explosionproof Junction Box Enclosure, Die Cast Aluminum, ½" NPT Conduit Connection, UL/CSA Approvals, Class I, Div 1 Groups B, C, D; Class II, Div. 1, Groups E, F, G, (UL/CSA -Solenoid Only)	JBEF

ASCO™ Advanced Redundant Control System

Series
141

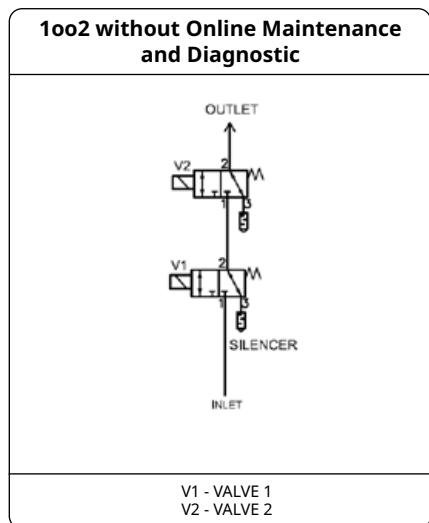
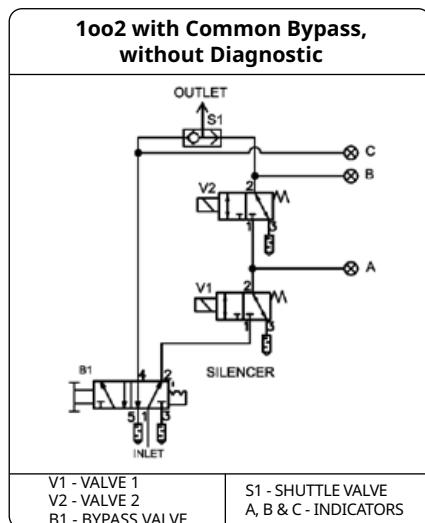
How to Order

Port Type	8	141	A	1	1	0	00	A00	00	Voltage
8 NPT								H3	12V DC	F3 12V DC
Product Series	141	ARCS DA Series						H1	24V DC	F1 24V DC
Revision	A	Initial Release						H9	48V DC	F9 48V DC
Function	1	1002 Manifold Assembly, without Online Maintenance & without Diagnostic						HJ	110V DC	FJ 110V DC
2	1002 Manifold Assembly, with Common By-pass & without Diagnostic							HD	120V DC	FD 120V DC
3	2002 Manifold Assembly, without Online Maintenance and Diagnostic							J1	125V DC	E1 125V DC
4	2002 Manifold Assembly, without Online Maintenance, with Diagnostic							HQ	24V/50-60HZ AC	FQ 24V/50-60HZ AC
5	2002 Manifold Assembly, with Common By-pass with Diagnostic							JY	110V/50-60HZ AC	EY 110V/50-60HZ AC
6	2002 Manifold Assembly, with Individual Isolation with Diagnostic							HC	115V/50-60HZ AC	FC 115V/50-60HZ AC
7	2003 Manifold Assembly, without Diagnostic and Online Maintenance							HA	120V/50-60HZ AC	FA 120V/50-60HZ AC
8	2003 Manifold Assembly, without Online Maintenance, with Diagnostic							JV	220V/50-60HZ AC ⁽⁶⁾	EV 220V/50-60HZ AC ⁽⁶⁾
9	2003 Manifold Assembly, with Common By-pass with Diagnostic							HH	230V/50-60HZ AC ⁽⁶⁾	FH 230V/50-60HZ AC ⁽⁶⁾
A	2003 Manifold Assembly, with Individual Isolation and with Diagnostic									
Port Size / Body Material	1	Standard Flow-Port Size 1/4" NPT - Stainless Steel 316								
2	Standard Flow-Port Size 1/4" NPT - Aluminum									
5	High Flow-Port Size 1/2" NPT - Stainless Steel 316									
Solenoid Valve-3 Way, Direct Acting	0	327B102 - Auto Reset, FPM Sealing, SS, Power 3.6/3.7W (RP)								
1	327B202 - Auto Reset, FPM Sealing, SS, Power 5.7/5.8W (MP)									
2	327B302 - Auto Reset, FPM Sealing, SS, Power 1.8W & IS 0.5W (LP)									
3	327B112 - Auto Reset, FVMQ Sealing (Low Temperature), SS, Power 3.6/3.7W (RP) ⁽⁵⁾									
4	327B212 - Auto Reset, FVMQ Sealing (Low Temperature), SS, Power 5.7/5.8W (MP) ⁽⁵⁾									
5	327B312 - Auto Reset, FVMQ Sealing (Low Temperature), SS, Power 1.8W & IS 0.5W (LP) ⁽⁵⁾									
7	327B132 - Tamper Proof Reset, FPM Sealing, SS, Power 3.6/3.7W (RP)									
8	327B232 - Tamper Proof Reset, FPM Sealing, SS, Power 5.7/5.8W (MP)									
9	327B332 - Tamper Proof Reset, FPM Sealing, SS, Power 1.8W (LP)									
A	327B182 - Tamper Proof Reset, FVMQ Sealing (Low Temperature), SS, Power 3.6/3.7W (RP) ⁽⁵⁾									
C	327B382 - Tamper Proof Reset, FVMQ Sealing (Low Temperature), SS, Power 1.8W (LP) ⁽⁵⁾									
D	327G042 - Auto Reset, FPM/FKM Sealing Normally Closed, Stainless Steel, Power 11.6/12W, Fluid Temperature -20°C to +120°C									
E	327G052 - Auto Reset, F(F)MQ (Low Temperature) Sealing Normally Closed, Stainless Steel, Power 11.6/12W, Fluid Temperature -40°C to +55°C ⁽⁵⁾									
F	327G032 - Tamper Proof Reset, FPM/FKM Sealing Normally Closed, Stainless Steel, Power 11.6/12W, Fluid Temperature -20°C to +120°C									
G	327H302 - Auto Reset, FKM Sealing Normally Closed, Stainless Steel, Power 2/2.7W, Fluid Temperature -20°C to +60°C									
V	327H312 - Auto Reset, VMQ Sealing Normally Closed, Stainless Steel, Power 2/2.7W, Fluid Temperature -50°C to +60°C ⁽⁵⁾									
H	327H102 - Auto Reset, FPM Sealing, SS, Power 3.9W (RP) ⁽⁴⁾									
J	327H132 - Tamper Proof Reset, FPM Sealing, SS, Power 3.9W (RP) ⁽⁴⁾									
K	327H112 - Auto Reset, FVMQ Sealing (Low Temperature), SS, Power 3.9W (RP) ⁽⁴⁾⁽⁵⁾									
L	327H182 - Tamper Proof Reset, FVMQ Sealing (Low Temperature), SS, Power 3.9W (RP) ⁽⁴⁾⁽⁵⁾									
M	327B103 - Auto Reset, FPM Sealing, Aluminum, Power 3.6/3.7W (RP) ⁽²⁾									
N	327B203 - Auto Reset, FPM Sealing, Aluminum, Power 5.7/5.8W (MP) ⁽²⁾									
P	327B303 - Auto Reset, FPM Sealing, Aluminum, Power 1.8W & IS 0.5W (LP) ⁽²⁾									
Q	307B005 - Pilot Operated, Auto Reset, FPM Sealing, SS, Power 0.35W (LP) ⁽³⁾⁽⁴⁾									
R	327A610 - High Flow Auto Reset, FPM Sealing, SS, Power 14/14.1W (BP) ⁽¹⁾									
S	327A606 - High Flow Auto Reset, FVMQ Sealing (Low Temperature), SS, Power 10W (BP) ⁽¹⁾⁽⁵⁾									
T	327A620 - High Flow Manual Reset, FPM Sealing, SS, Power 5.7/5.8W (MP) ⁽¹⁾									
U	327A616 - High Flow Manual Reset, FVMQ Sealing (Low Temperature), SS, Power 3.6/3.7W (RP) ⁽¹⁾⁽⁵⁾									

⁽¹⁾ Applicable only for high flow-1/2" in port size selection
⁽²⁾ Applicable only for aluminum version in body material selection
⁽³⁾ Applicable for electrical connection type X5 and X6.
 For other specification and dimensions please contact ASCO representative
⁽⁴⁾ Applicable for electrical connection type H1
⁽⁵⁾ Selection in options list A01 & B01 are not applicable

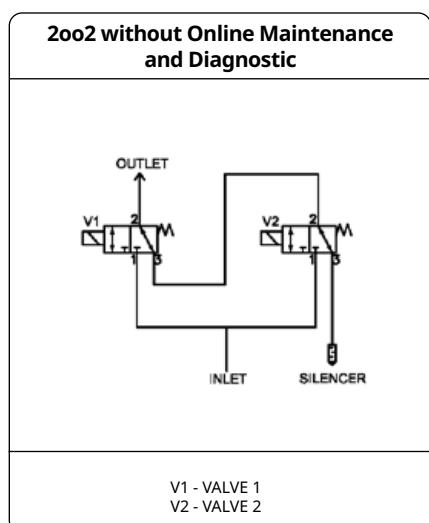
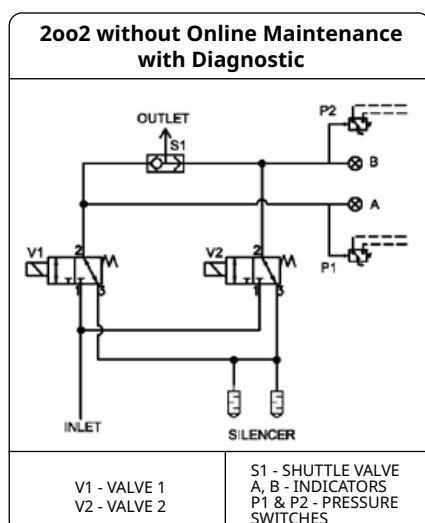
Disclaimer: Selection chart shown for reference.

For detailed configuration/available options/other explosion proof operators, please use ARCS configurator in www.asco.com or contact local ASCO sales office.

**Schematic 1****Schematic 2**

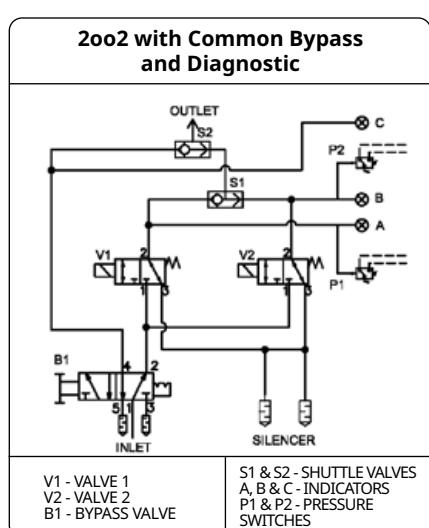
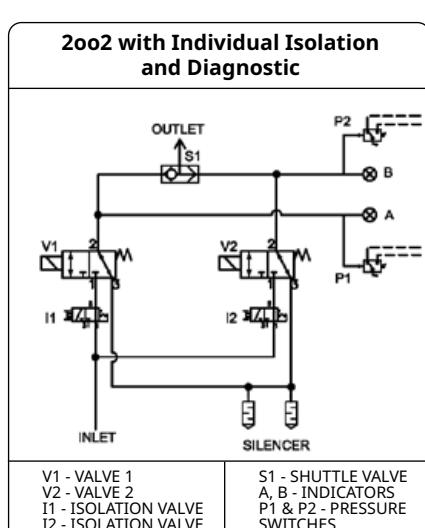
1oo2 Logic Table		
CH 1	CH 2	Outlet
V1	V2	
1	1	1
1	0	0
0	1	0
0	0	0

CH 1 - CHANNEL 1
CH 2 - CHANNEL 2
0 - VALVE DE-ENERGIZED
1 - VALVE ENERGIZED

**Schematic 3****Schematic 4**

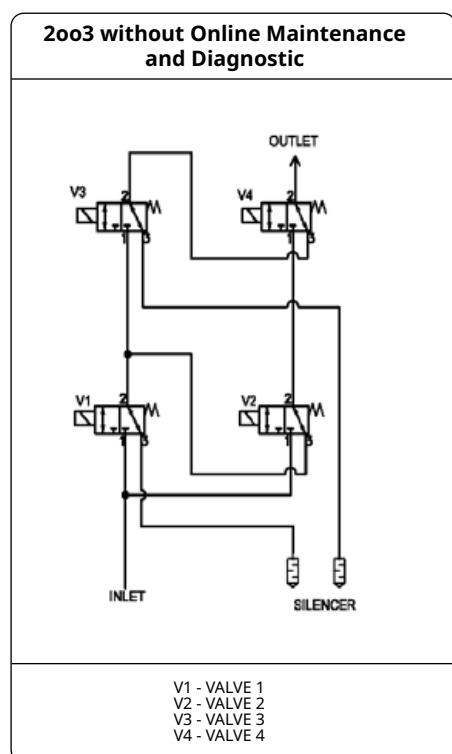
2oo2 Logic Table		
CH 1	CH 2	Outlet
V1	V2	
1	1	1
1	0	1
0	1	1
0	0	0

CH 1 - CHANNEL 1
CH 2 - CHANNEL 2
0 - VALVE DE-ENERGIZED
1 - VALVE ENERGIZED

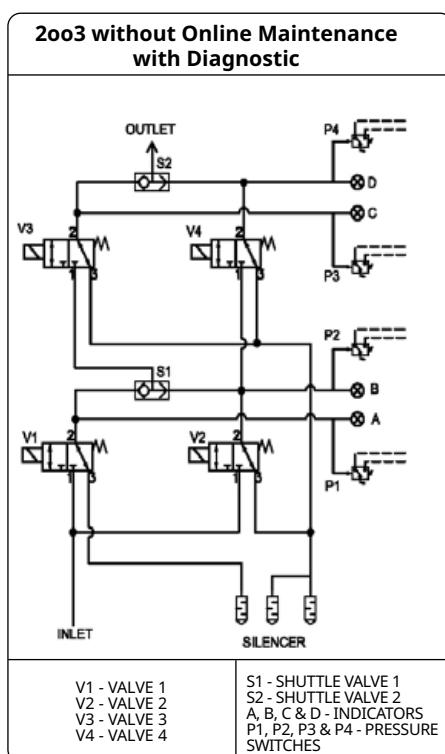
**Schematic 5****Schematic 6**

ASCO™ Advanced Redundant Control System

Series
141



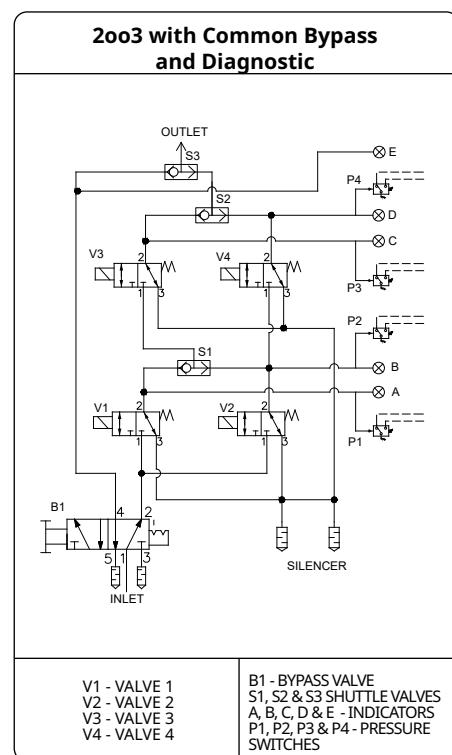
Schematic 7



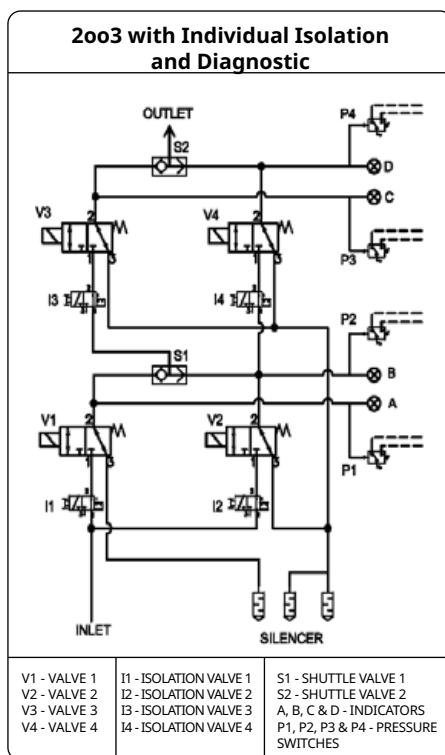
Schematic 8

Zoo3 Logic Table*			
CH 1	CH 2	CH 3	Outlet
V1	V2	V3	V4
1	0	0	0
1	1	0	0
1	1	1	0
1	1	1	1
0	1	0	0
0	1	1	0
0	1	1	1
0	1	0	1
0	0	1	0
0	0	1	1
1	0	1	1
1	0	1	0
0	0	0	1
1	0	0	1
1	1	0	1
0	0	0	0

CH 1 - CHANNEL 1
CH 2 - CHANNEL 2
CH 3 - CHANNEL 3
0 - VALVE DE-ENERGIZED
1 - VALVE ENERGIZED
* FOR SCHEMATIC - 7



Schematic 9



Schematic A

Zoo3 Logic Table*			
CH 1	CH 2	CH 3	Outlet
V1	V4	V2	V3
1	0	0	0
1	0	1	0
1	0	1	1
1	1	1	1
0	0	1	0
0	0	1	1
0	1	1	1
0	1	1	0
0	0	0	1
0	1	0	1
1	1	0	1
1	0	0	1
0	1	0	0
1	1	0	0
1	1	1	0
0	0	0	0

CH 1 - CHANNEL 1
CH 2 - CHANNEL 2
CH 3 - CHANNEL 3
0 - VALVE DE-ENERGIZED
1 - VALVE ENERGIZED
* FOR SCHEMATIC - 8, 9, A

Dimensions (mm), Weight (kg)

TYPE 01:
Epoxy moulded
SC : IEC 335 / ISO 4400

327B102/202/103/203/132/232/112/212/182
327A610/606/616/620



TYPE 02:
Metal, epoxy coated / AISI 316 SS
WP / WS : IEC 335
EM / WSEM : EN/IEC 60079-7, 60079-18
EN/IEC 60079-31

327B102/202/103/203/132/232/112/212/182
327A610/606/616/620



TYPE 03:
Aluminum, epoxy coated / AISI 316L SS
NF / WSNF : EN/IEC 60079-1, 60079-31
NFIS / WSNFIS : EN/IEC 60079-11, 60079-31

327B102/202/302/103/203/303/132/232/112/212/182/312
327A610/606/616/620



TYPE 04:
AISI 316L SS
WSCR : EN/IEC 60079-0, 60079-1, 60079-31
WSCREM : EN/IEC 60079-0, 60079-7, 60079-18
: EN/IEC 60079-31
WSCRIS : EN/IEC 60079-0, 60079-11, 60079-31

327B102/202/302/332/112/312/382
327A610/606/616/620



TYPE 05:
Epoxy moulded, Type 7/9
EV/EVHT : Class I, Division 1, Groups A, B, C, D,
Class II, Division 1, Groups E, F, G
EVMF/EVMH : Surge Suppression,
Class I, Division 1, Groups A, B, C, D,
Class II, Division 1, Groups E, F, G

327G032/G042/G052/H302/H312

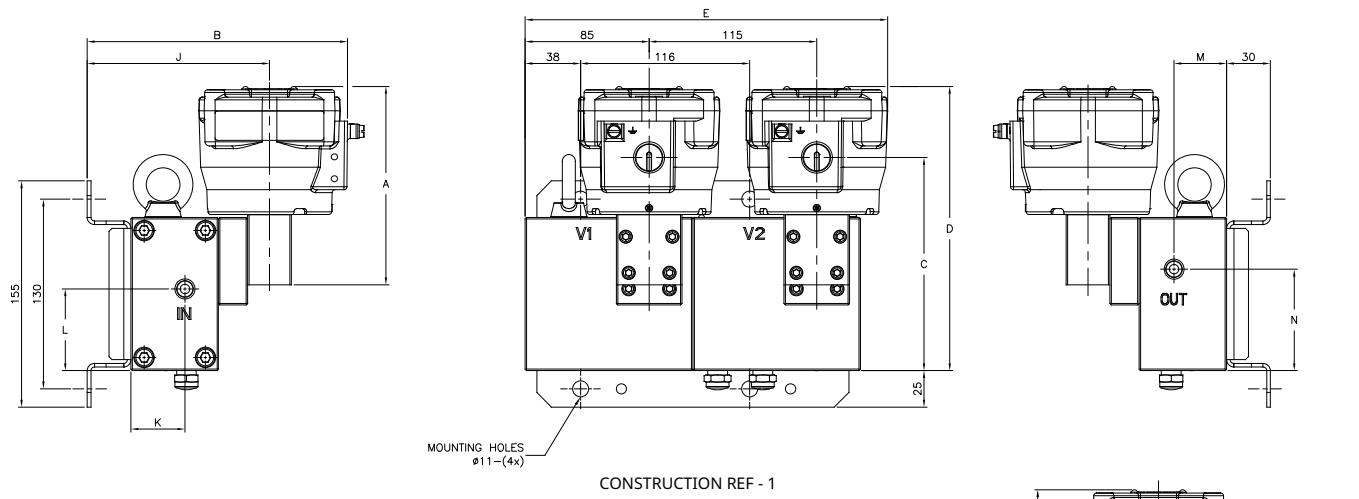


TYPE 06:
Epoxy moulded, aluminum junction box, Type 7/9
JBEF : Class I, Division 1, Groups B, C, D,
Class II, Division 1, Groups E, F, G

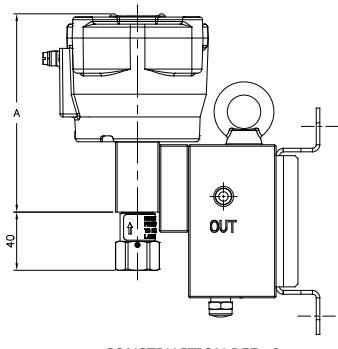
327G032/G042/G052/H302/H312

Dimensions (mm), Weight (kg)

1oo2 Configuration without Online Maintenance and Diagnostic

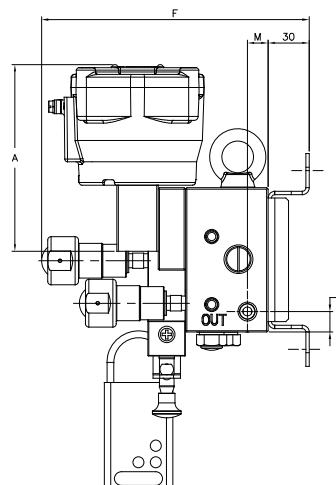
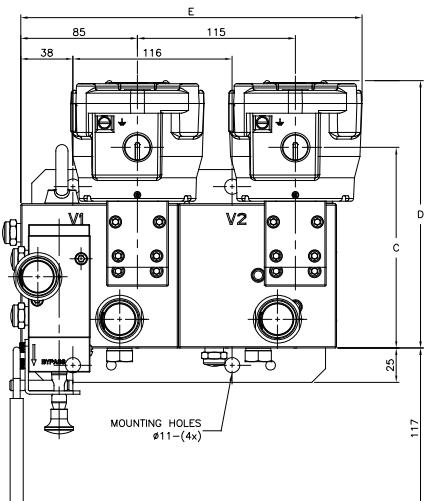
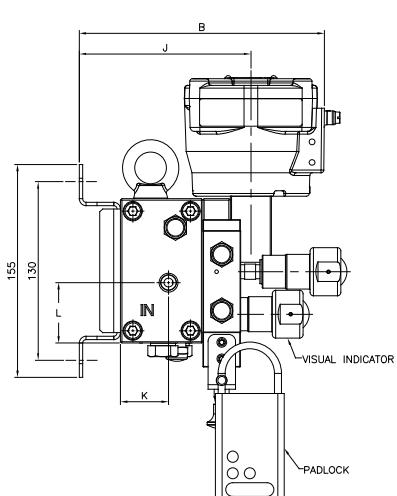


Construction Ref	Basic Catalog No.	Type	Enclosure	A	B	C	D	E	J	K	L	M	N	Approx. Weight (Kg)
1 (AUTO RESET)	327B102/112/ 202/212	01	SC	109	190	-	168	230	125	37	56	36	70	16
		02	WP/WS/EM	112	205	-	171	239						17
		03	NF/WSNF	136	180	146	195	249						19/21
		04	WSCR/WSCREM	140	200	160	199	246						20
	327B302/312	03	NF/WSNF/NFIS/WSNFIS	146	180	156	205	249						19/21
		04	WSCR/WSCREM/WSCRIS	140	200	160	199	246						20
	327B103/203	01	SC	109	190	-	168	230						8
		02	WP/EM	112	205	-	171	239						8
		03	NF	136	180	146	195	249						11
	327B303	03	NF/NFIS	146	180	156	205	249						11
	327G042/052	05	EV	99	177	133	158	230						17
		06	JBEF	118	281	134	177	244						19
2 (MO/MANUAL RESET)	327H312/302	05	EV/EVHT/EVMF/EVMH	102	183	134	161	231						17
		06	JBEF	118	281	134	177	244						19
		01	SC	134	175	-	166	230						17
	327A610/606	02	WP/WS/EM	140	185	126	171	239						17
		03	NF/WSNF	163	160	145	194	249						18/21
		04	WSCR/WSCREM	167	180	159	198	246						20
		01	SC	109	190	-	168	230						16
	327B132/182/232	02	WP/WS/EM	112	205	-	171	239						17
		03	NF/WSNF	136	180	146	195	249						20/22
	327B332/382	04	WSCR/WSCREM	140	200	160	199	246						21
		05	EV	99	177	133	158	230						17
	327G032	06	JBEF	118	281	134	177	244						21
		01	SC	134	175	-	166	230						16
	327A620/616	03	NF/WSNF	163	160	145	194	249						19/21
		04	WSCR/WSCREM	167	180	159	198	246						20
	327A616	02	WP/WS/EM	140	185	126	171	239						17



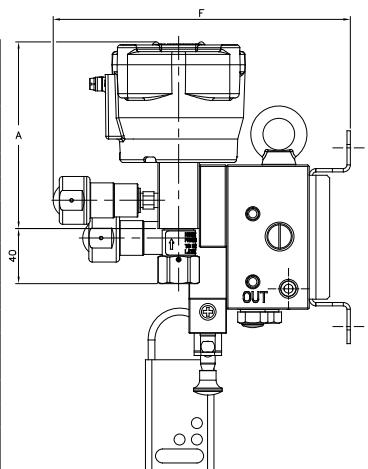
Dimensions (mm), Weight (kg)

1oo2 Configuration with Common Bypass, without Diagnostic



CONSTRUCTION REF - 1

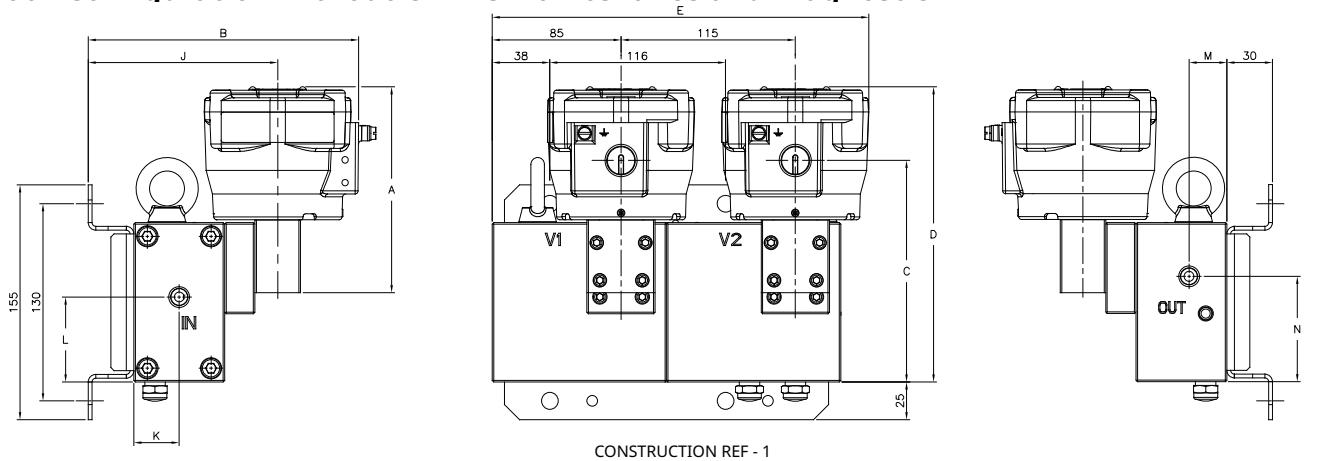
Construction Ref	Basic Catalog No.	Type	Enclosure	A	B	C	D	E	J	K	L	M	N	Visual Indicator	Pressure Gauge	Approx. Weight (Kg)
				109	190	-	168	230	125	35	44	15	15			
1 (AUTO RESET)	327B102/112/ 202/212	01	SC	109	190	-	168	230								18
		02	WP/WS/EM	112	205	-	171	239								19
		03	NF/WSNF	136	180	146	195	249								21/23
		04	WSCR/WSCREM	140	200	160	199	246								22
	327B302/312	03	NF/WSNF/NFIS/ WSNFIS	146	180	156	205	249								21/23
		04	WSCR/WSCREM/ WSCRIS	140	200	160	199	246								22
	327B103/203	01	SC	109	190	-	168	230	125	35	44	15	15			10
		02	WP/EM	112	205	-	171	239								10
		03	NF	136	180	146	195	249								13
	327B303	03	NF/NFIS	146	180	156	205	249								13
	327G042/052	05	EV	99	177	133	158	230								19
		06	JB EF	118	281	134	177	244								21
2 (MO/MANUAL RESET)	327H312/302	05	EV/EVHT/EVMF/ EVMH	102	183	134	161	231								19
		06	JB EF	118	281	134	177	244								21
	327A610/606	01	SC	134	175	-	166	230	105	33	34	20	50	202	181	19
		02	WP/WS/EM	140	185	126	171	239								19
		03	NF/WSNF	163	160	145	194	249								20/23
		04	WSCR/WSCREM	167	180	159	198	246								22
	327B132/182/232	01	SC	109	190	-	168	230								18
		02	WP/WS/EM	112	205	-	171	239								19
		03	NF/WSNF	136	180	146	195	249	125	35	44	15	15	217	224	22/23
		04	WSCR/WSCREM	140	200	160	199	246								23
		05	EV	99	177	133	158	230								19
		06	JB EF	118	281	134	177	244								21
	327G032	01	SC	134	175	-	166	230	105	33	34	20	50	202	181	19
		03	NF/WSNF	163	160	145	194	249								21/23
		04	WSCR/WSCREM	167	180	159	198	246								22
		02	WP/WS/EM	140	185	126	171	239								19
	327A616	01	SC	134	175	-	166	230								
	03	NF/WSNF	163	160	145	194	249									
	04	WSCR/WSCREM	167	180	159	198	246									
	02	WP/WS/EM	140	185	126	171	239									



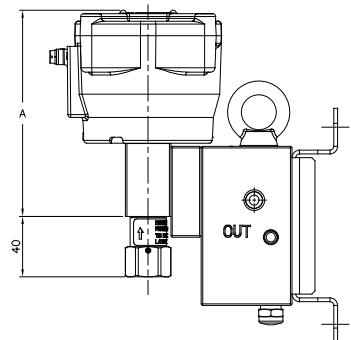
CONSTRUCTION REF - 2

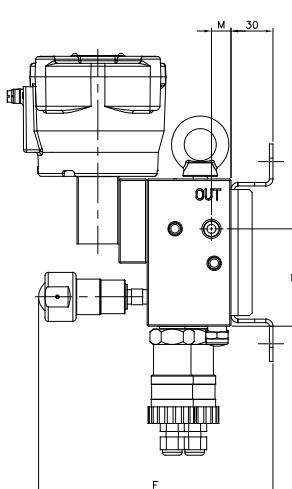
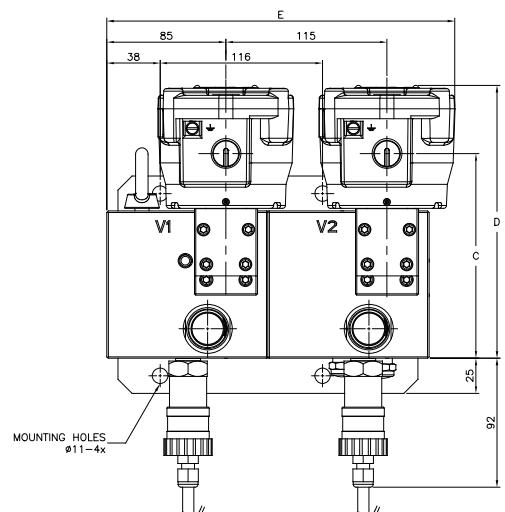
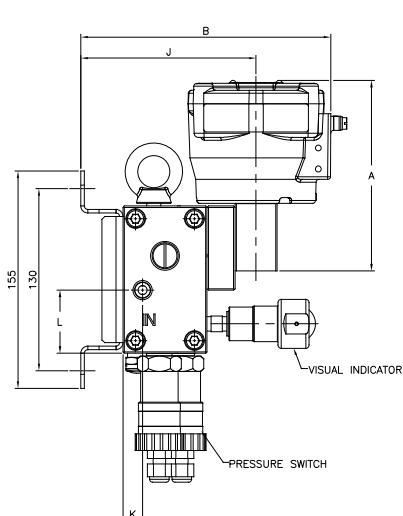
Dimensions (mm), Weight (kg)

Zoo2 Configuration without Online Maintenance and Diagnostic



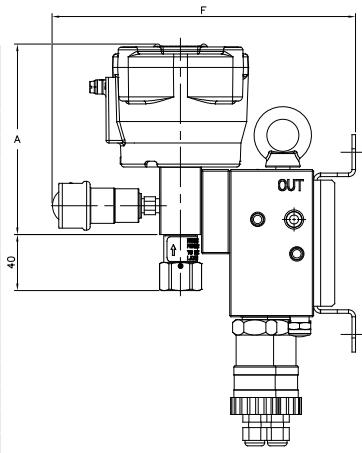
Construction Ref	Basic Catalog No.	Type	Enclosure	A	B	C	D	E	J	K	L	M	N	Approx. Weight (Kg)
1 (AUTO RESET)	327B102/112/ 202/212	01	SC	109	190	-	168	230	125	30	56	25	70	16
		02	WP/WS/EM	112	205	-	171	239						17
		03	NF/WSNF	136	180	146	195	249						19/21
		04	WSCR/WSCREM	140	200	160	199	246						20
	327B302/312	03	NF/WSNF/NFIS/ WSNFIS	146	180	156	205	249						19/21
		04	WSCR/WSCREM/ WSCRIS	140	200	160	199	246						20
	327B103/203	01	SC	109	190	-	168	230						8
		02	WP/EM	112	205	-	171	239						8
		03	NF	136	180	146	195	249						11
	327B303	03	NF/NFIS	146	180	156	205	249						11
	327G042/052	05	EV	99	177	133	158	230						17
		06	JBEF	118	281	134	177	244						19
	327H312/302	05	EV/EVHT/EVMF/ EVMH	102	183	134	161	231						17
		06	JBEF	118	281	134	177	244						19
		01	SC	134	175	-	166	230						17
		02	WP/WS/EM	140	185	126	171	239						17
2 (MO/MANUAL RESET)	327A610/606	03	NF/WSNF	163	160	145	194	249	105	40	51	29	68	18/21
		04	WSCR/WSCREM	167	180	159	198	246						20
		01	SC	109	190	-	168	230						16
		02	WP/WS/EM	112	205	-	171	239						17
	327B132/182/232	03	NF/WSNF	136	180	146	195	249	125	30	56	25	70	20/22
		04	WSCR/WSCREM	140	200	160	199	246						21
	327G032	05	EV	99	177	133	158	230						17
		06	JBEF	118	281	134	177	244						19
	327A620/616	01	SC	134	175	-	166	230	105	40	51	29	68	16
		03	NF/WSNF	163	160	145	194	249						19/21
		04	WSCR/WSCREM	167	180	159	198	246						20
		02	WP/WS/EM	140	185	126	171	239						17



Dimensions (mm), Weight (kg)**Zoo2 Configuration without Online Maintenance, with Diagnostic**

CONSTRUCTION REF - 1

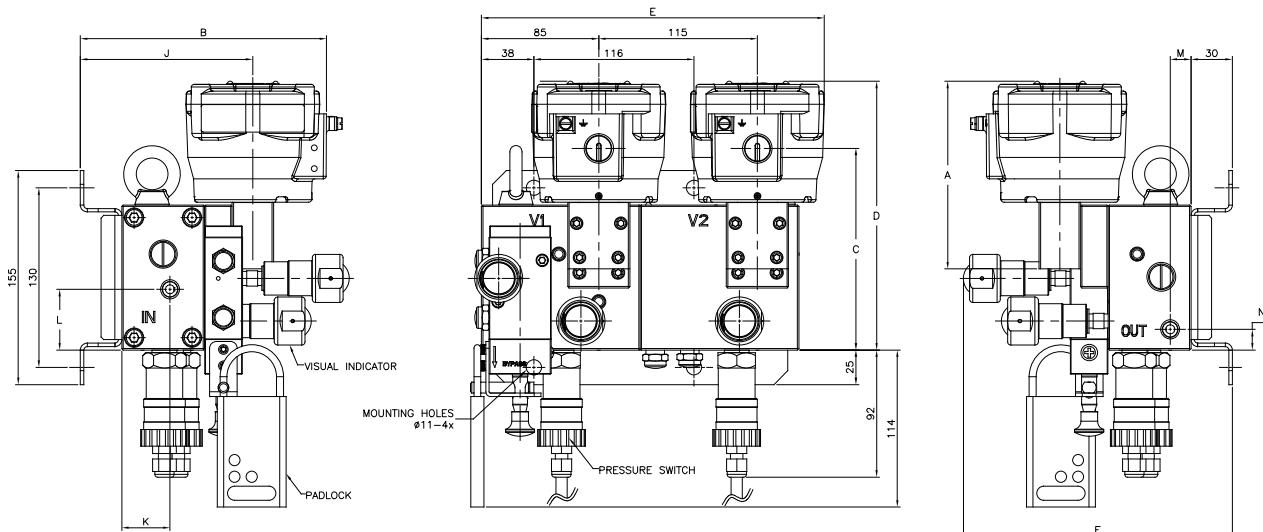
Construction Ref	Basic Catalog No.	Type	Enclosure	A	B	C	D	E	J	K	L	M	N	F		Approx. Weight (Kg)	
														Visual Indicator	Pressure Gauge		
1 (AUTO RESET)	327B102/112/ 202/212	01	SC	109	190	-	168	230	125	14	45	14	70	167	174	17 18 20/22 21	
		02	WP/WS/EM	112	205	-	171	239									
		03	NF/WSNF	136	180	146	195	249									
		04	WSCR/WSCREM	140	200	160	199	246									
	327B302/312	03	NF/WSNF/NFIS/ WSNFIS	146	180	156	205	249									20/22 21
		04	WSCR/WSCREM/ WSCRIS	140	200	160	199	246									
	327B103/203	01	SC	109	190	-	168	230									9 9 12
		02	WP/EM	112	205	-	171	239									
		03	NF	136	180	146	195	249									
	327B303	03	NF/NFIS	146	180	156	205	249									
	327G042/052	05	EV	99	177	133	158	230									12 18 20
		06	JBEF	118	281	134	177	244									
	327H312/302	05	EV/EVHT/EVMF/ EVMH	102	183	134	161	231									18 20
		06	JBEF	118	281	134	177	244									
	327A610/606	01	SC	134	175	-	166	230									18 18 19/22 21
		02	WP/WS/EM	140	185	126	171	239									
		03	NF/WSNF	163	160	145	194	249									
		04	WSCR/WSCREM	167	180	159	198	246									
2 (MO/MANUAL RESET)	327B132/182/232	01	SC	109	190	-	168	230	125	14	45	14	70	217	224	18 18 21/23 22	
		02	WP/WS/EM	112	205	-	171	239									
		03	NF/WSNF	136	180	146	195	249									
	327B332/382	04	WSCR/WSCREM	140	200	160	199	246									
		05	EV	99	177	133	158	230									
	327G032	06	JBEF	118	281	134	177	244									
		01	SC	134	175	-	166	230									
	327A620/616	03	NF/WSNF	163	160	145	194	249									18 20/22 21
		04	WSCR/WSCREM	167	180	159	198	246									
	327A616	02	WP/WS/EM	140	185	126	171	239									



CONSTRUCTION REF - 2

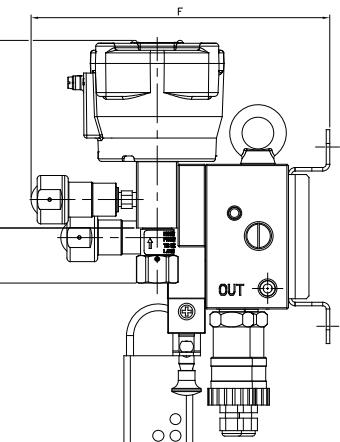
Dimensions (mm), Weight (kg)

Zoo2 Configuration with Common Bypass, with Diagnostic

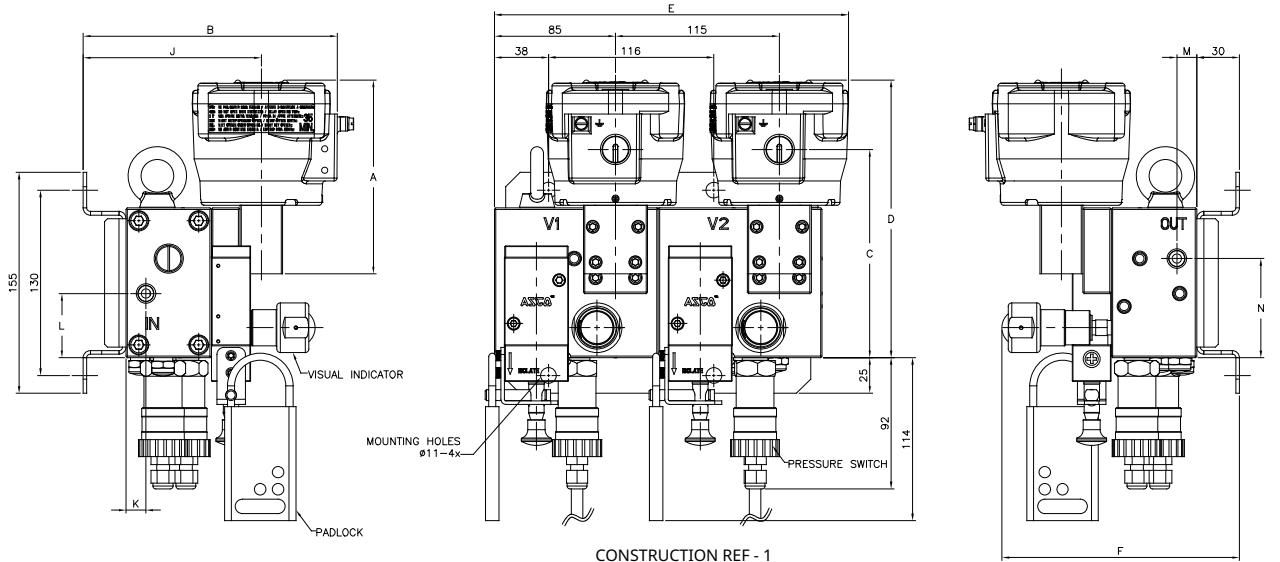


CONSTRUCTION REF - 1

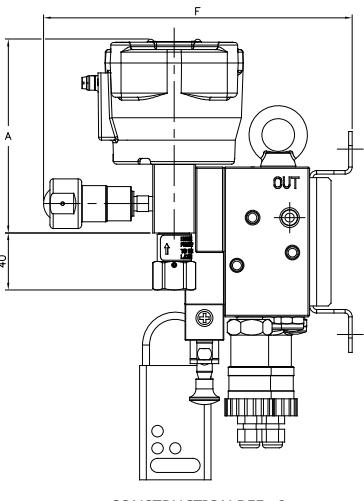
Construction Ref	Basic Catalog No.	Type	Enclosure	A	B	C	D	E	J	K	L	M	N	F		Approx. Weight (Kg)	
														Visual Indicator	Pressure Gauge		
1 (AUTO RESET)	327B102/112/ 202/212	01	SC	109	190	-	168	230	125	35	44	15	15	195	202	18 19 21/23 22	
		02	WP/WS/EM	112	205	-	171	239									
		03	NF/WSNF	136	180	146	195	249									21/23
		04	WSCR/WSCREM	140	200	160	199	246									22
	327B302/312	03	NF/WSNF/NFIS/ WSNFIS	146	180	156	205	249									21/23
		04	WSCR/ WSCREM/ WSCRIS	140	200	160	199	246									22
	327B103/203	01	SC	109	190	-	168	230									10
		02	WP/EM	112	205	-	171	239									10
		03	NF	136	180	146	195	249									13
	327B303	03	NF/NFIS	146	180	156	205	249	105	35	34	28	17	202	181	19 20/23 21 19 21 19 21 19 19 20/23 22	
	327G042/052	05	EV	99	177	133	158	230									19
	327H312/302	06	JBEF	118	281	134	177	244									21
	327A610/606	05	EV/EVHT/EVMF/ EVMH	102	183	134	161	231									19
		06	JBEF	118	281	134	177	244									21
		01	SC	134	175	-	166	230									19
		02	WP/WS/EM	140	185	126	171	239									19
		03	NF/WSNF	163	160	145	194	249									20/23
		04	WSCR/WSCREM	167	180	159	198	246									22
2 (MO/MANUAL RESET)	327B132/182/232	01	SC	109	190	-	168	230	125	35	44	15	15	217	224	18 19 22/24 23 19 21 19 21/23 22 19	
		02	WP/WS/EM	112	205	-	171	239									19
		03	NF/WSNF	136	180	146	195	249									22/24
	327B332/382	04	WSCR/WSCREM	140	200	160	199	246									23
		05	EV	99	177	133	158	230									19
	327G032	06	JBEF	118	281	134	177	244									21
		01	SC	134	175	-	166	230									19
		03	NF/WSNF	163	160	145	194	249									21/23
		04	WSCR/WSCREM	167	180	159	198	246									22
	327A616	02	WP/WS/EM	140	185	126	171	239									19



CONSTRUCTION REF - 2

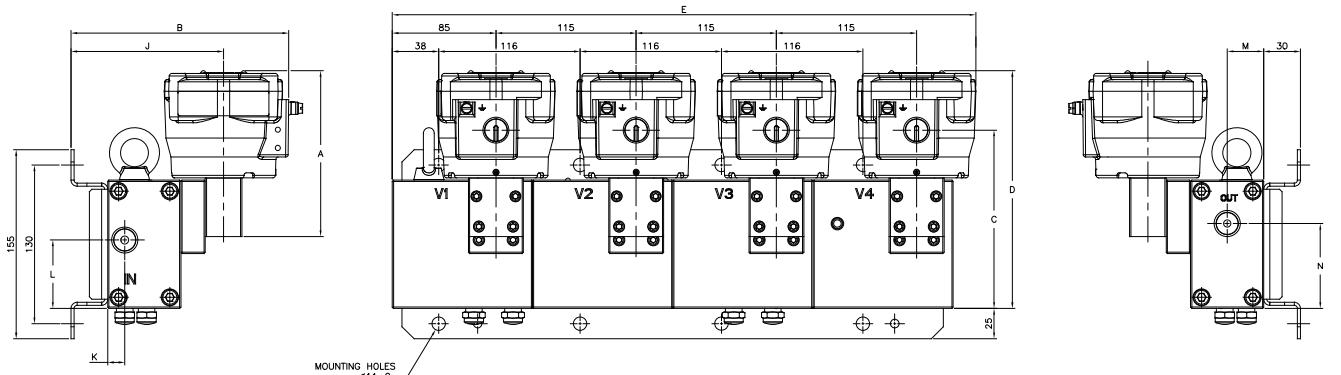
Dimensions (mm), Weight (kg)**Zoo2 Configuration with Individual Isolation, with Diagnostic**

Construction Ref	Basic Catalog No.	Type	Enclosure	A	B	C	D	E	J	K	L	M	N	F		Approx. Weight (Kg)	
														Visual Indicator	Pressure Gauge		
1 (AUTO RESET)	327B102/112/ 202/212	01	SC	109	190	-	168	230	125	14	45	14	70	167	174	19	
		02	WP/WS/EM	112	205	-	171	239								20	
		03	NF/WSNF	136	180	146	195	249								22/25	
		04	WSCR/WSCREM	140	200	160	199	246								23	
	327B302/312	03	NF/WSNF/NFIS/ WSNFIS	146	180	156	205	249								22/24	
		04	WSCR/ WSCREM/ WSCRIS	140	200	160	199	246								23	
	327B103/203	01	SC	109	190	-	168	230								11	
		02	WP/EM	112	205	-	171	239								11	
		03	NF	136	180	146	195	249								14	
	327B303	03	NF/NFIS	146	180	156	205	249	105	14	45	14	68	202	181	20	
	327G042/052	05	EV	99	177	133	158	230									20
		06	JBEF	118	281	134	177	244									22
	327H312/302	05	EV/EVHT/EVMF/ EVMH	102	183	134	161	231									20
		06	JBEF	118	281	134	177	244									22
	327A610/606	01	SC	134	175	-	166	230									20
		02	WP/WS/EM	140	185	126	171	239									20
		03	NF/WSNF	163	160	145	194	249									21/24
		04	WSCR/WSCREM	167	180	159	198	246									23
2 (MO/MANUAL RESET)	327B132/182/232	01	SC	109	190	-	168	230	125	14	45	14	70	217	224	20	
		02	WP/WS/EM	112	205	-	171	239									20
		03	NF/WSNF	136	180	146	195	249									23/25
	327B332/382	04	WSCR/WSCREM	140	200	160	199	246									24
		05	EV	99	177	133	158	230									20
	327G032	06	JBEF	118	281	134	177	244									22
		01	SC	134	175	-	166	230									20
	327A620/616	03	NF/WSNF	163	160	145	194	249									21/24
		04	WSCR/WSCREM	167	180	159	198	246									23
	327A616	02	WP/WS/EM	140	185	126	171	239									20



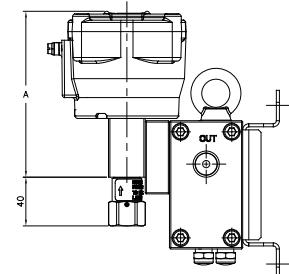
Dimensions (mm), Weight (kg)

Zoo3 Configuration without Online Maintenance and Diagnostic



CONSTRUCTION REF - 1

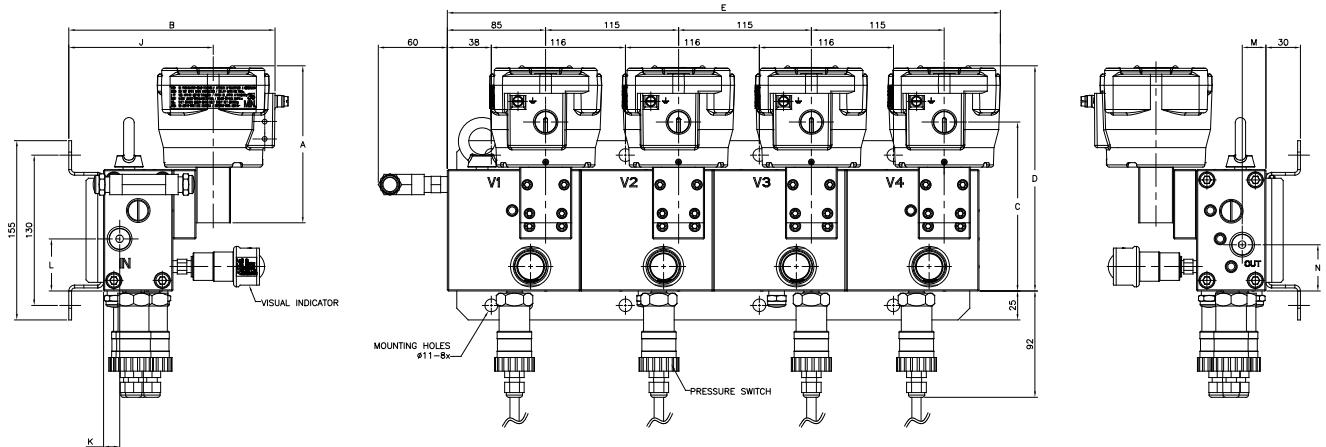
Construction Ref	Basic Catalog No.	Type	Enclosure	A	B	C	D	E	J	K	L	M	N	Approx. Weight (Kg)
1 (AUTO RESET)	327B102/112/ 202/212	01	SC	109	190	-	168	460	125	14	56	30	70	30
		02	WP/WS/EM	112	205	-	171	469						31
		03	NF/WSNF	136	180	146	195	479						36/41
		04	WSCR/WSCREM	140	200	160	199	476						38
	327B302/312	03	NF/WSNF/NFIS/ WSNFIS	146	180	156	205	479						36/41
		04	WSCR/WSCREM/ WSCRIS	140	200	160	199	476						38
	327B103/203	01	SC	109	190	-	168	460						14
		02	WP/EM	112	205	-	171	469						15
		03	NF	136	180	146	195	479						21
	327B303	03	NF/NFIS	146	180	156	205	479						21
	327G042/052	05	EV	99	177	133	158	230						30
		06	JBEF	118	281	134	177	244						35
	327H312/302	05	EV/EVHT/EVMF/ EVMH	102	183	134	161	231						32
		06	JBEF	118	281	134	177	244						35
	327A610/606	01	SC	134	175	-	166	460						31
		02	WP/WS/EM	140	185	126	171	469						31
		03	NF/WSNF	163	160	145	194	479						34/40
		04	WSCR/WSCREM	167	180	159	198	476						37
2 (MO/MANUAL RESET)	327B132/182/232	01	SC	109	190	-	168	460	125	14	56	30	70	31
		02	WP/WS/EM	112	205	-	171	469						32
		03	NF/WSNF	136	180	146	195	479						37/42
	327B332/382	04	WSCR/WSCREM	140	200	160	199	476						39
		05	EV	99	177	133	158	230						31
	327G032	06	JBEF	118	281	134	177	244						36
		01	SC	134	175	-	166	460	105	18	51	30	68	32
	327A620/616	03	NF/WSNF	163	160	145	194	479						35/41
		04	WSCR/WSCREM	167	180	159	198	476						38
	327A616	02	WP/WS/EM	140	185	126	171	469						32



CONSTRUCTION REF - 2

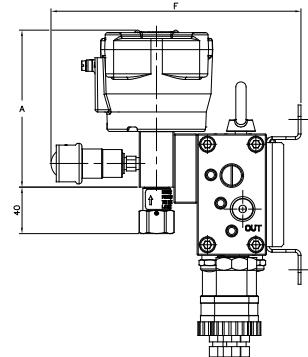
Dimensions (mm), Weight (kg)

2003 Configuration without Online Maintenance, with Diagnostic



CONSTRUCTION REF - 1

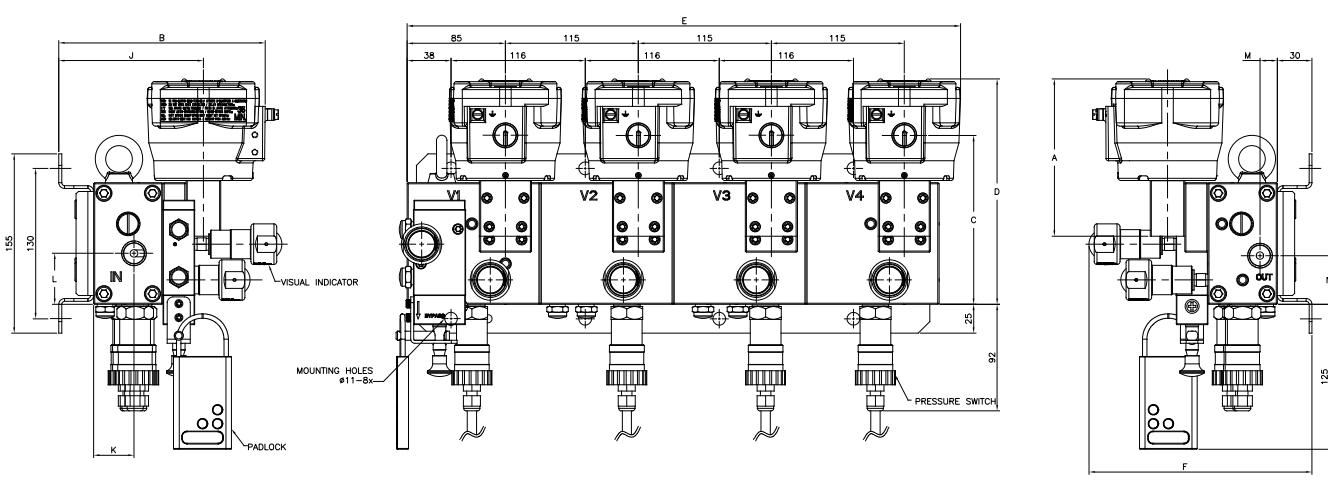
Construction Ref	Basic Catalog No.	Type	Enclosure	A	B	C	D	E	J	K	L	M	N	F		Approx. Weight (Kg)
														Visual Indicator	Pressure Gauge	
1 (AUTO RESET)	327B102/112/ 202/212	01	SC	109	190	-	168	460								33
		02	WP/WS/EM	112	205	-	171	469								34
		03	NF/WSNF	136	180	146	195	479								39/44
		04	WSCR/WSCREM	140	200	160	199	476								41
	327B302/312	03	NF/WSNF/NFIS/ WSNFIS	146	180	156	205	479								39/44
		04	WSCR/ WSCREM/ WSCRIS	140	200	160	199	476								41
	327B103/203	01	SC	109	190	-	168	460								17
		02	WP/EM	112	205	-	171	469								18
		03	NF	136	180	146	195	479								24
	327B303	03	NF/NFIS	146	180	156	205	479								24
	327G042/052	05	EV	99	177	133	158	230								33
		06	JBEF	118	281	134	177	244								38
	327H312/302	05	EV/EVHT/EVMF/ EVMH	102	183	134	161	231								35
		06	JBEF	118	281	134	177	244								38
		01	SC	134	175	-	166	460								34
	327A610/606	02	WP/WS/EM	140	185	126	171	469								34
		03	NF/WSNF	163	160	145	194	479								37/43
		04	WSCR/WSCREM	167	180	159	198	476								40
		01	SC	109	190	-	168	460								34
2 (MO/MANUAL RESET)	327B132/182/232	02	WP/WS/EM	112	205	-	171	469								35
		03	NF/WSNF	136	180	146	195	479								40/45
		04	WSCR/WSCREM	140	200	160	199	476								42
	327B332/382	05	EV	99	177	133	158	230								34
		06	JBEF	118	281	134	177	244								39
	327G032	01	SC	134	175	-	166	460								35
		03	NF/WSNF	163	160	145	194	479								38/44
		04	WSCR/WSCREM	167	180	159	198	476								41
	327A616	02	WP/WS/EM	140	185	126	171	469								35



CONSTRUCTION REF - 2

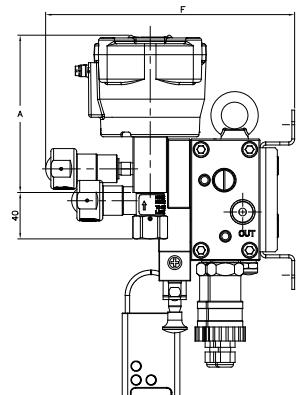
Dimensions (mm), Weight (kg)

Zoo3 Configuration with Common Bypass, with Diagnostic



CONSTRUCTION REF - 1

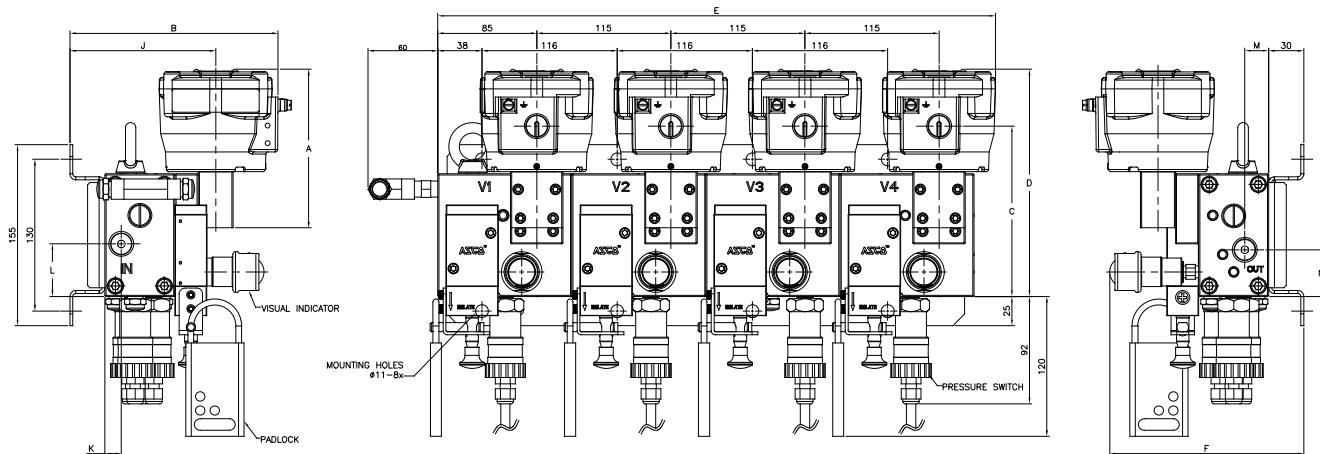
Construction Ref	Basic Catalog No.	Type	Enclosure	A	B	C	D	E	J	K	L	M	N	F		Approx. Weight (Kg)	
														Visual Indicator	Pressure Gauge		
1 (AUTO RESET)	327B102/112/ 202/212	01	SC	109	190	-	168	460	125	35	44	14	43	195	202	34 35 40/45 42 40/45 42	
		02	WP/WS/EM	112	205	-	171	469									
		03	NF/WSNF	136	180	146	195	479									
		04	WSCR/WSCREM	140	200	160	199	476									
	327B302/312	03	NF/WSNF/NFIS/ WSNFIS	146	180	156	205	479									
		04	WSCR/WSCREM/ WSCRIS	140	200	160	199	476									
	327B103/203	01	SC	109	190	-	168	460									
		02	WP/EM	112	205	-	171	469									
		03	NF	136	180	146	195	479									
	327B303	03	NF/NFIS	146	180	156	205	479									
	327G042/052	05	EV	99	177	133	158	230									
		06	JBEF	118	281	134	177	244									
	327H312/302	05	EV/EVHT/EVMF/ EVMH	102	183	134	161	231									
		06	JBEF	118	281	134	177	244									
		01	SC	134	175	-	166	460		105	32	34	21	42	202	181	35 35 38/44 41
		02	WP/WS/EM	140	185	126	171	469									
	327A610/606	03	NF/WSNF	163	160	145	194	479									
		04	WSCR/WSCREM	167	180	159	198	476									
2 (MO/MANUAL RESET)	327B132/182/232	01	SC	109	190	-	168	460	125	35	44	14	43	217	224	35 36 41/46	
		02	WP/WS/EM	112	205	-	171	469									
		03	NF/WSNF	136	180	146	195	479									
	327B332/382	04	WSCR/WSCREM	140	200	160	199	476									
		05	EV	99	177	133	158	230									
	327G032	06	JBEF	118	281	134	177	244									
		01	SC	134	175	-	166	460									
	327A620/616	03	NF/WSNF	163	160	145	194	479	105	32	34	21	42	202	181	36 39/45 42 36	
		04	WSCR/WSCREM	167	180	159	198	476									
		02	WP/WS/EM	140	185	126	171	469									
		01	SC	134	175	-	166	460									



CONSTRUCTION REF - 2

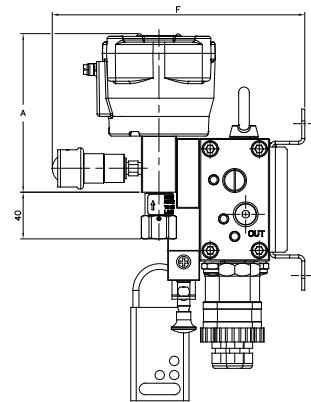
Dimensions (mm), Weight (kg)

Zoo3 Configuration with Individual Isolation, with Diagnostic



CONSTRUCTION REF - 1

Construction Ref	Basic Catalog No.	Type	Enclosure	A	B	C	D	E	J	K	L	M	N	F		Approx. Weight (kg)	
														Visual Indicator	Pressure Gauge		
1 (AUTO RESET)	327B102/112/ 202/212	01	SC	109	190	-	168	460	125	14	45	21	40	167	174	36	
		02	WP/WS/EM	112	205	-	171	469									37
		03	NF/WSNF	136	180	146	195	479									42/47
		04	WSCR/WSCREM	140	200	160	199	476									44
	327B302/312	03	NF/WSNF/NFIS/ WSNFIS	146	180	156	205	479									42/47
		04	WSCR/ WSCREM/ WSCRIS	140	200	160	199	476									44
	327B103/203	01	SC	109	190	-	168	460									20
		02	WP/EM	112	205	-	171	469									21
		03	NF	136	180	146	195	479									27
	327B303	03	NF/NFIS	146	180	156	205	479									27
	327G042/052	05	EV	99	177	133	158	230									36
		06	JBEF	118	281	134	177	244									41
	327H312/302	05	EV/EVHT/EVMF/ EVMH	102	183	134	161	231									38
		06	JBEF	118	281	134	177	244									41
		01	SC	134	175	-	166	460									37
2 (MO/MANUAL RESET)	327A610/606	02	WP/WS/EM	140	185	126	171	469	105	14	45	15	68	202	181	37	
		03	NF/WSNF	163	160	145	194	479									37
		04	WSCR/WSCREM	167	180	159	198	476									40/46
		01	SC	134	175	-	166	460									43
	327B132/182/232	02	WP/WS/EM	112	205	-	171	469									37
		03	NF/WSNF	136	180	146	195	479									38
		04	WSCR/WSCREM	140	200	160	199	476									43/48
		05	EV	99	177	133	158	230									45
	327G032	06	JBEF	118	281	134	177	244									37
		01	SC	134	175	-	166	460									42
	327A620/616	03	NF/WSNF	163	160	145	194	479									38
		04	WSCR/WSCREM	167	180	159	198	476									41/47
		02	WP/WS/EM	140	185	126	171	469									44
		02	WP/WS/EM	140	185	126	171	469									38



CONSTRUCTION REF - 2

ASCO™ Advanced Redundant Control System

Series
141

Spares Code

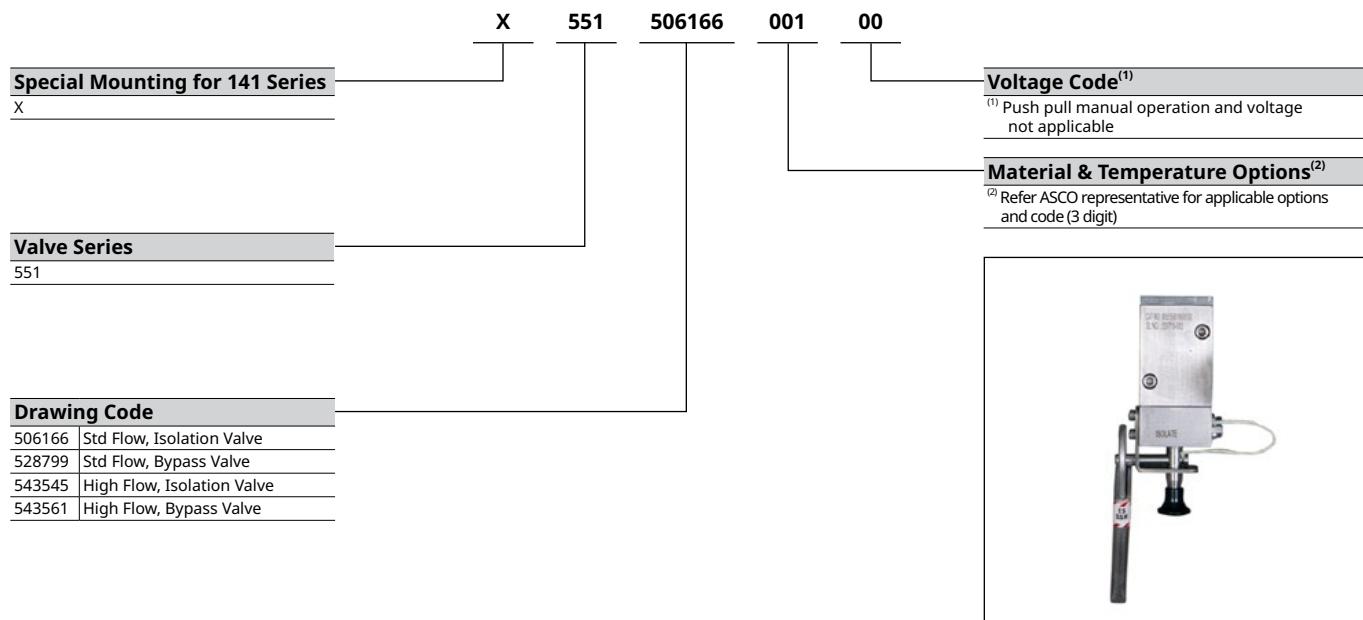
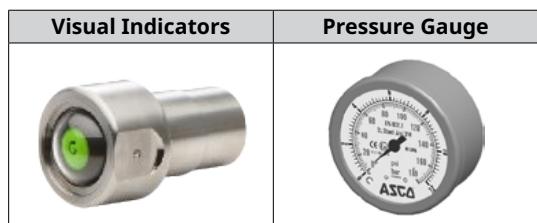
Solenoid Valve

Description: ASCO 327 series, 3/2 way, direct acting, normally closed, 5.7mm/12mm orifice, stainless steel 316/aluminum

X	327	536397	001	H1	
Special Mounting for 141 Series					Voltage
X					H1 | 24V DC
					H3 | 12V DC
					H9 | 48V DC
					HJ | 110V DC
					HD | 120V DC
					J1 | 125V DC
					HQ | 24V/50-60HZ AC
					JY | 110V/50-60HZ AC
					HC | 115V/50-60HZ AC
					HA | 120V/50-60HZ AC
					JV | 220V/50-60HZ AC ⁽²⁾
					HH | 230V/50-60HZ AC ⁽²⁾
					F1 | 24V DC
					F3 | 12V DC
					F9 | 48V DC
					FJ | 110V DC
					FD | 120V DC
					E1 | 125V DC
					FQ | 24V/50-60HZ AC
					EY | 110V/50-60HZ AC
					FC | 115V/50-60HZ AC
					FA | 120V/50-60HZ AC
					EV | 220V/50-60HZ AC ⁽²⁾
					FH | 230V/50-60HZ AC ⁽²⁾
⁽²⁾ Not applicable for low and reduced power options					
Ordering Code					
536397	327B102 Basic Catalog				Electrical Connection/ Enclosure Protection ⁽³⁾⁽⁴⁾
536398	327B202 Basic Catalog				*** | Three digit code for applicable Electrical connection and other options
536399	327B302 Basic Catalog				⁽³⁾ Refer ASCO representative for applicable electrical connection/endlosure protection and code (3 digit)
536400	327B132 Basic Catalog				⁽⁴⁾ Refer solenoid operator chart
536401	327B232 Basic Catalog				
536402	327B103 Basic Catalog				
536403	327B203 Basic Catalog				
536404	327H102 Basic Catalog				
536405	327B303 Basic Catalog				
536406	327B332 Basic Catalog				
536407	327G032 Basic Catalog				
536408	327G042 Basic Catalog				
536409	327H132 Basic Catalog				
545549	327B112 Basic Catalog				
545550	327B212 Basic Catalog				
545551	327B312 Basic Catalog				
545552	327B182 Basic Catalog				
545553	327B382 Basic Catalog				
545554	327G052 Basic Catalog				
545555	327H112 Basic Catalog				
545556	327H182 Basic Catalog				
548533	327H302 Basic Catalog				
548534	327H312 Basic Catalog				
543587	327A610 Basic Catalog (High Flow)				
543588	327A606 Basic Catalog (High Flow)				
543589	327A620 Basic Catalog (High Flow)				
543590	327A616 Basic Catalog (High Flow)				
503838	307B005 ⁽¹⁾ Basic Catalog				
⁽¹⁾ Selection of base catalog no. 307B005 will restrict to the voltage code H1 and solenoid operator codes WSTIS/WSETIS					
					

Spares Code**3 Way Push-Pull Manual Valve with LOTO**

Description: ASCO 551 series, 3/2 way, manual push button operated, normally closed, with 6 & 8mm orifice, stainless steel 316 and lock out tag out for tamper proof lock arrangement. Used for common by pass in 1oo2, 2oo2 & 2oo3 and individual isolation in 2oo2 & 2oo3

**Accessories****ARCS - Customised Solutions**

ASCO is also able to offer customized solutions to meet specific redundancy requirements, complete with options to integrate valve automation accessories like filter regulators, pilot operated valves, junction boxes for switches (feedback wiring), visual indicators, gauges and more. Available in open frame or explosion proof enclosures (Exia, Exe and Exd protection).