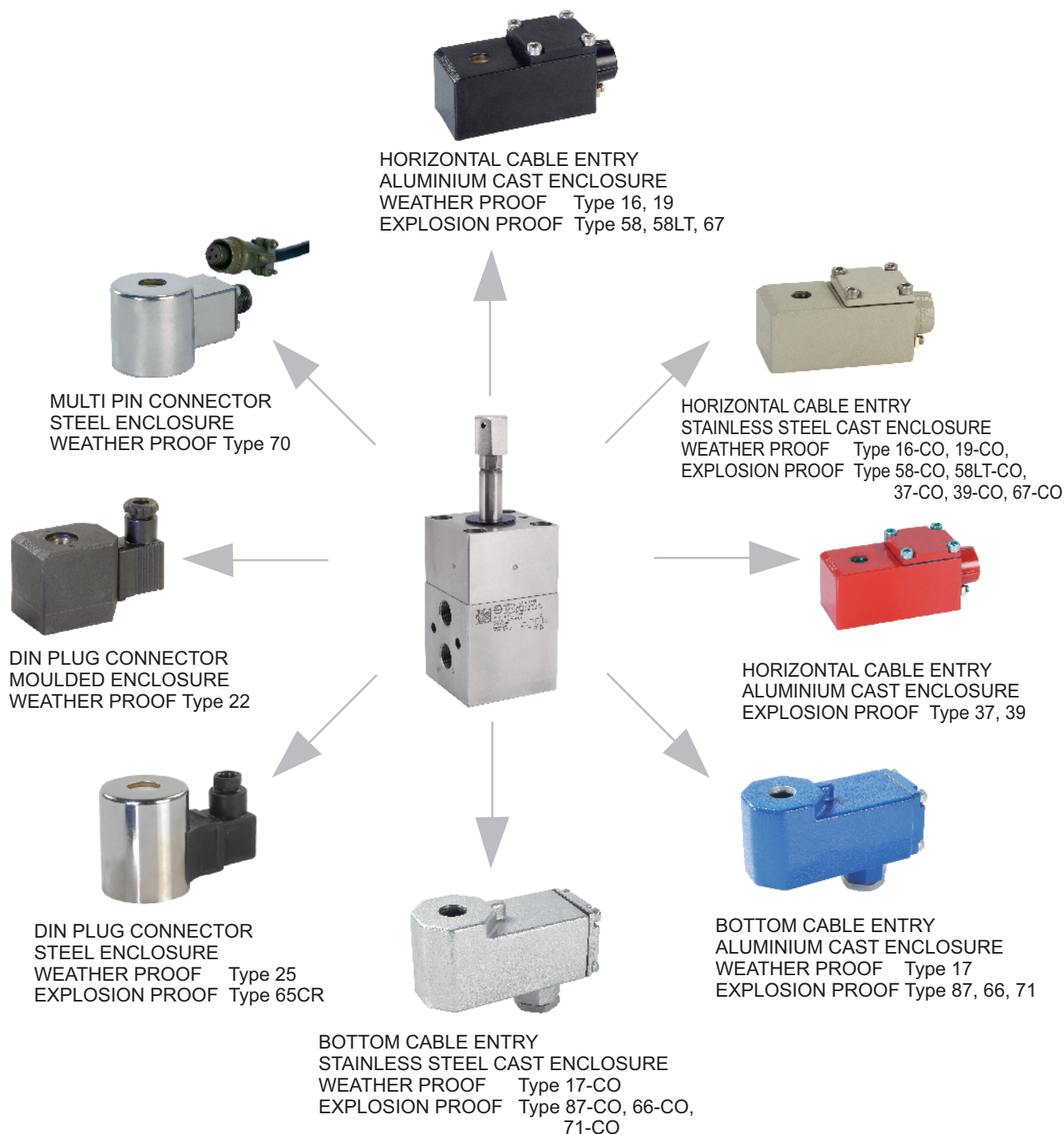


3/2 INTERNAL/ EXTERNAL PILOT OPERATED, NORMALLY CLOSED/ OPEN SOLENOID VALVE

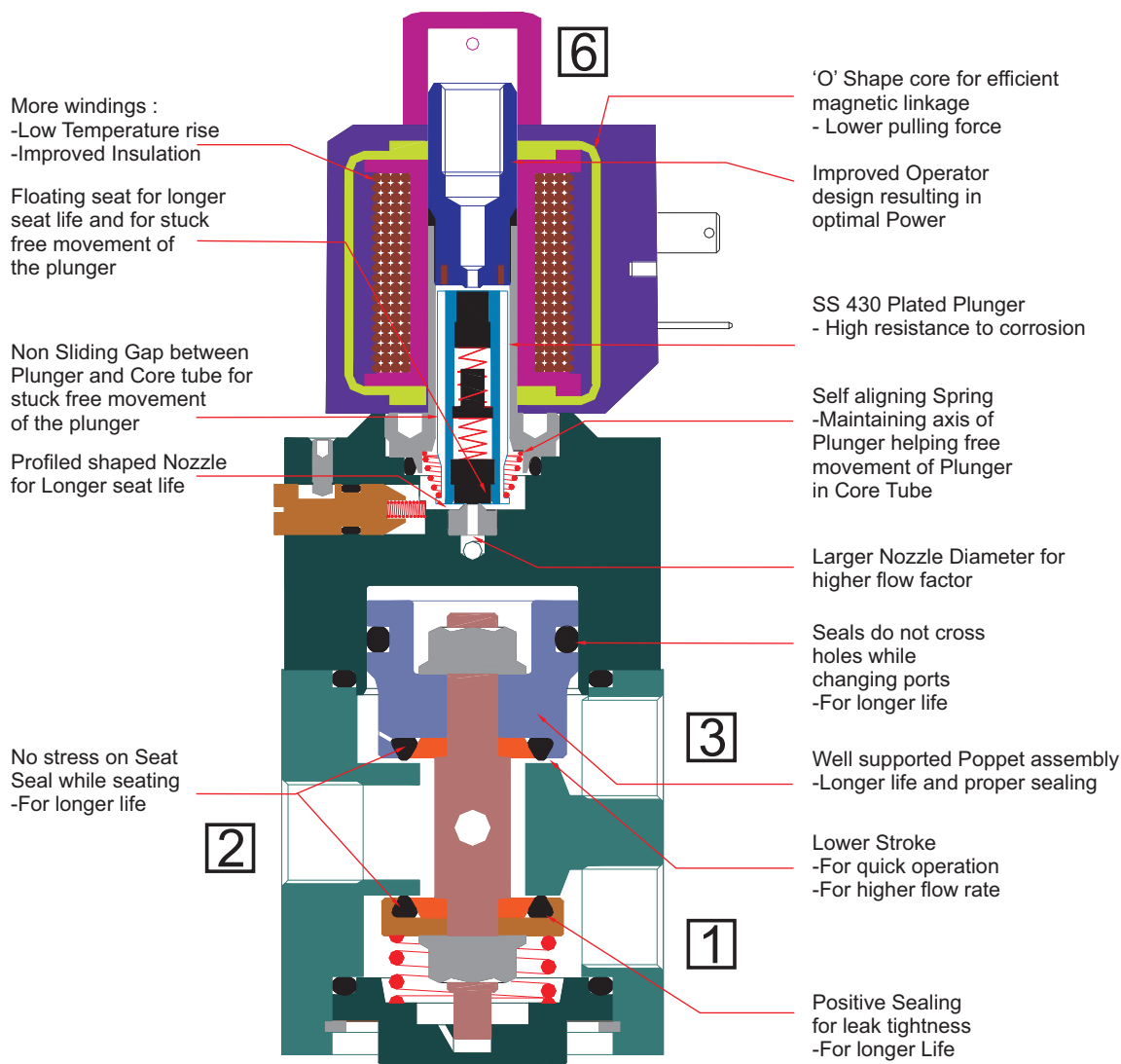


**Interchangeable across
Voltage/ Current range without
affecting performance of the Valve**

3/2 INTERNAL/ EXTERNAL PILOT OPERATED, NORMALLY CLOSED/ OPEN SOLENOID VALVE

FEATURES

- Bubble tight shut OFF
- Mounts in any position
- Vibration resistance up to 9g
- Suitable for high speed cycling, speed upto 600 cycles/ min
- Life >20 million cycles
- 360° Swivellable solenoid for ease of cable routing



WEIGHT IN kg. (Appx.)

Valve

Orifice - Port Connection	Al	Brass	SS316
7-2G/ 2R	0.70	1.55	1.60
7-3G/ 3R/ 4G/ 4R	0.80	1.40	1.80
10-3G/ 3R	1.10	2.85	2.60
10-4G/ 4R	1.30	3.55	3.30
16-4G/ 4R	2.60	5.70	5.40
20-6G/ 6R	2.80	-	6.80
25-8G/ 8R	3.30	-	9.00

Solenoid

Type	Size		Type	Size	Enclosure	
					Al	SS
22	I	0.25	16, 19, 37,	I	0.55	1.20
25, 65CR	II	0.45	39, 58,	II, IV	0.85	1.70
	III	0.40	58LT, 67	III	0.60	1.50
	IV	0.50	17, 66,	II, IV	1.00	1.65
			71, 87	III	0.90	1.50

VOLTAGE VARIATION

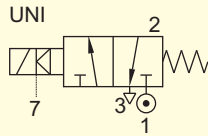
(For Continuous Duty)

Rated Voltage	Operating Voltage
6	4.8V to 7.2V
12	9.6V to 14.4V
24	19.2V to 28.8V
48	38.4V to 57.6V
110 to 120	88V to 132V
220/ 230/ 240	176V to 264V
256	205V to 280V

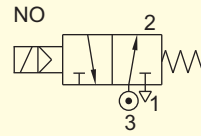
SERIES : 32P

3/2 INTERNAL/ EXTERNAL PILOT OPERATED, NORMALLY CLOSED/ OPEN SOLENOID VALVE

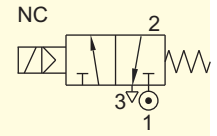
TYPE	PRESSURE
32301	0 - 20 bar
P3006	0 - 10 bar
P3008	0 - 8 bar
I3004	0 - 11 bar
I3004RP	0 - 8 bar



TYPE	PRESSURE
31209	2 - 10 bar
31210	3 - 20 bar
31210EP	3 - 40 bar
31206	3 - 40 bar
P3003	2 - 10 bar
P3009	2 - 8 bar
I3005	2 - 11 bar
I3005RP	2 - 8 bar



TYPE	PRESSURE
31119	2 - 10 bar
31120	3 - 20 bar
31120EP	3 - 40 bar
31121	3 - 40 bar
P3001	2 - 10 bar
P3007	2 - 8 bar
I3003	2 - 11 bar
I3003RP	2 - 8 bar



WETTED PARTS

Code	※	B1	B2	B5	B17
Body	Anodized Aluminium	Anodized Aluminium	Brass	SS 316	Brass Forged
Internals	Aluminium, Brass and SS 316	SS 316	Brass and SS 316	SS 316	Brass and SS 316
Guide	SS 304				
Shadow-Ring	Copper/ None				
Plunger, Insert	SS 430				
Spring/ Circlip	SS 302/ Steel				
Fasteners	SS 304				
Seat, Seals	NBR, Viton, F.Silicon				



PESO



CE

UL



EAC



KOSHA



NACE
MR 0175-1

APPLICATION

Actuation of Control Valve/ Single acting Actuator/ Cylinder

POWER

Power	Normal		Low		Ex ia	
	13W	6W/ 8W	2W	0.4W	Type : 66	Type : 65CR, 67, 71
Type	31121, 31206	31119, 31209 31120, 31210 32301, 31120EP, 31210EP	P3001, P3003, P3006	P3007, P3008, P3009	31119, 31209 31120, 31210 32301, 31120EP 31210EP	I3003, I3004, I3005, I3003RP, I3004RP, I3005RP
Size	II	I/ III	I/ III	III	III	III

Contact Rotex for

- Any other Temperature Range, Media and Application

SPARES

SPARE KIT	CODE
Seal Kit : Oring Set (Only for Intrinsically Safe Valve)	P98
Seal Kit : Oring Set and Plunger Assembly	98
Repair Kit : All Components except Body Cover and Solenoid	99
Solenoid Kit : Solenoid, Gasket and Nut	34
Repair Kit : All Components except Body and Solenoid (for Intrinsically Safe Valve)	99

PORT CONNECTION

VALVE TYPE	MODE	INLET	OUTLET	EXHAUST	PILOT EXHAUST	EXTERNAL PILOT INLET
31119, 31120, 31120EP, 31121, P3001, P3007, I3003, I3003RP	NC	1	2	3	6	
31209, 31210, 31210EP, 31206, P3003, P3009, I3005, I3005RP	NO	3	2	1	6	
32301, P3006, P3008, I3004, I3004RP	NC	1	2	3	6	7
	NO	3	2	1	6	7



The pressure drop at inlet port can result in malfunctioning of the valve. Caution needs to be taken that all equipment connected between header & inlet port should have higher orifice/ kv value as compared to orifice of the selected valve. Excessive blockage of exhaust port can lead to malfunction of the solenoid valve.

3/2 INTERNAL/ EXTERNAL PILOT OPERATED, NORMALLY CLOSED/ OPEN SOLENOID VALVE

SPECIFICATION

VALVE		SOLENOID	
Valve Type	3/2 Internal/ External Pilot Operated, Normally Closed/ Open Solenoid Valve	Voltage-Current	DC 12V, 24V, 48V, 110V, 220V, 256V AC (50Hz/ 60Hz) 24V, 110V, 120V, 230V, 240V AC/ DC (50Hz/ 60Hz/ DC) 24V, 110V, 120V, 230V, 240V
Body Material	Aluminium/ Brass/ Stainless Steel 316/ Brass Forging	Power	13W/ 8W/ 6W/ 2W/ 0.4W
Port Connection	1/4", 3/8", 1/2", 3/4", 1"	Protection	Weather Proof IP67 Explosion Proof Ex d, Ex ia, Ex e mb, IIC, T6/ T5/ T4 IP67
Orifice	7mm/ 10mm/ 16mm/ 20mm/ 25mm	Cable Entry	Pg 9/ M20X1.5/ 1/2" NPT/ M25X1.5
Seals	NBR/ Viton/ F. Silicon		
Manual Override	Stayput/ Momentary/ Without Manual Override		
Flow factor Orifice - kv/ Kv/ Cv	7mm - 18/ 1.1/ 1.3 10mm - 38/ 2.3/ 2.7 16mm - 75/ 4.5/ 5.3 20mm - 110/ 6.6/ 7.7 25mm - 185/ 11.1/ 13		
Media	Air/ Inert Gas		
⑬ Ambient - Fluid Temperature	-25 °C to 75 °C, Optionally -60 °C to 170 °C		
Response ON/ OFF	≤ 20ms/ ≤ 30ms Orifice 7mm, 10mm ≤ 50ms/ ≤ 80ms Orifice 16mm, 20mm, 25mm		
Pressure	2 - 8 bar, 2 - 10 bar, 2 - 20 bar, 2 - 40 bar, 0 - 8 bar, 0 - 10 bar, 0 - 20 bar		

ORDERING CODE Solenoid Valve (Valve Code + Solenoid Code)

VALVE TYPE	SIL	SUFFIX	ORIFICE-PORT CONNECTION	BODY INTERNAL	MANUAL OVERRIDE	SEAL	⑦ MEDIA		
31119	SL	※	7-2G	B2	※	S2G	※		
ACCESSORIES VALVE, PORT	+	SIZE	VOLTAGE, CURRENT	ENCLOSURE	⑦ MTL	SPECIAL	POWER	INSULATION	APPROVAL
A4		III	24V DC	87NS	CO	※	※	H	01
SIL	+	ACCESSORIES SOLENOID							
SL		B4							

ORDERING CODE Valve Spare Kit

SPARE KIT 99	VALVE TYPE 31119	SIL SL	SUFFIX ※	ORIFICE-PORT CONNECTION 7-2G	BODY INTERNAL B2	MANUAL OVERRIDE ※
SEAL S2G	+	ACCESSORIES VALVE, PORT A4				

ORDERING CODE Spare Solenoid

SOLENOID KIT 34	SIZE III	VOLTAGE, CURRENT 24V DC	ENCLOSURE 87NS	⑦ MTL CO	SPECIAL ※	POWER ※	INSULATION H	APPROVAL 01
SIL SL	+	ACCESSORIES SOLENOID B4						

SERIES : 32P

3/2 INTERNAL/ EXTERNAL PILOT OPERATED, NORMALLY CLOSED/ OPEN SOLENOID VALVE

VALVE TYPE-ORIFICE			
NORMALLY CLOSED	NORMALLY OPEN	EXTERNAL PILOT	DESCRIPTION
NORMAL POWER			
31119	31209		2 - 10 bar, 8 Watt, size I/ III
31120	31210		2 - 20 bar, 8 watt, size I/ III
		32301	0 - 20 bar, 8 Watt, Pilot Pressure ≥ Main fluid Pressure or Minimum 2 bar whichever is higher
31120EP	31210EP		3 - 40 bar, 8 Watt, Size III
31121	31206		3 - 40 bar, 13 Watt , Size II
LOW POWER			
P3001V01	P3003V01		2 - 10 bar, 2 Watt
		P3006V01	0 - 10 bar, 2 Watt, Pilot Pressure ≥ Main fluid Pressure or Minimum 2 bar whichever is higher
⑪ P3001V01	⑪ P3003V01		2 - 10 bar, 0.4 Watt, Size III, Power LB04
		⑪ P3006V01	0 - 10 bar, 0.4 Watt, Size III, Power LB04, Pilot Pressure ≥ Main fluid Pressure or Minimum 2 bar whichever is higher
P3007V01	P3009V01		2 - 8 bar, 1.0 Watt, Size III, Power LW1
		P3008V01	0 - 8 bar, 1.0 Watt, Size III, Power LW1, Pilot Pressure ≥ Main fluid Pressure or Minimum 2 bar whichever is higher
INTRINSICALLY SAFE Ex ia 24V DC			
31119	31209		2 - 10 bar, Enclosure Type 66, Size III
31120	31210		2 - 20 bar, Enclosure Type 66, Size III
		32301	0 - 20 bar, Enclosure Type 66, Size III, Pilot Pressure ≥ Main fluid Pressure or Minimum 2 bar whichever is higher
31120EP	31210EP		3 - 40 bar, Enclosure Type 66 , Size III
③② I3003V01	③② I3005V01		2 - 11 bar, Enclosure Type 65CR, 67, 71, Size III
		③② I3004V01	0 - 10 bar, Enclosure Type 65CR, 67, 71, Size III, Pilot Pressure ≥ Main fluid Pressure or Minimum 2 bar whichever is higher
③② I3003V01RP	③② I3005V01RP		2 - 8 bar, Enclosure Type 65CR. 67, 71, Size III
		③② I3004V01RP	0 - 8 bar, Enclosure Type 65CR. 67, 71, Size III, Pilot Pressure ≥ Main fluid Pressure or Minimum 2 bar whichever is higher

SIL CERTIFIED	
CODE	DESCRIPTION
① ✕	NO
SL	YES

SUFFIX	
CODE	DESCRIPTION
① ✕	NIL
⑧ AM	Ammonia

ORIFICE-PORT CONNECTION		
CODE	DESCRIPTION	
	ORIFICE	PORT
7-2G	7mm	1/4" BSP
7-2R	7mm	1/4" NPT
7-3G	7mm	3/8" BSP
7-3R	7mm	3/8" NPT
7-4G	7mm	1/2" BSP
7-4R	7mm	1/2" NPT
②⑤ 10-3G	10mm	3/8" BSP
②⑤ 10-3R	10mm	3/8" NPT
②⑥ 10-4G	10mm	1/2" BSP
②⑥ 10-4R	10mm	1/2" NPT
16-4G	16mm	1/2" BSP
16-4R	16mm	1/2" NPT
20-6G	20mm	3/4" BSP
20-6R	20mm	3/4" NPT
25-8G	25mm	1" BSP
25-8R	25mm	1" NPT

BODY MATERIAL		ORIFICE				
CODE	DESCRIPTION	7	10	16	20	25
① ✕	Aluminium	✓	✓	✓	✓	✓
B2	Brass	✓		✓		
B5	SS316	✓	✓	✓	✓	✓
B5N	SS316 NACE Compliance	✓	✓	✓	✓	✓
②⑤ B17	Brass Forging		✓			

MANUAL OVERRIDE			
CODE	DESCRIPTION	CODE	DESCRIPTION
Pressure	≤ 20 bar	Pressure	20-40 bar
M0	NIL	① ✕	NIL
① ✕	Stayput	M12	Stayput
M8	Momentary	M5	Momentary

SEAL		MEDIA
CODE	GRADE, AMBIENT/ FLUID TEMPERATURE	① ✕
① ✕	NBR, -25 °C to 75 °C	✓
S2G	VITON, -40 °C to 160 °C	✓
S19	F. Silicon, -60 °C to 190 °C	✓

②⑦ MEDIA	
CODE	DESCRIPTION
① ✕	Air, Inert Gas

3/2 INTERNAL/ EXTERNAL PILOT OPERATED, NORMALLY CLOSED/ OPEN SOLENOID VALVE

SIZE-VOLTAGE CURRENT		
CODE	SIZE	VOLTAGE CURRENT
I-12V DC	I	12V DC
I-24V DC	I	24V DC
I-24V 50Hz	I	24V 50Hz/ 60Hz
I-110V 50Hz	I	110V 50Hz/ 120V 60Hz
I-230V 50Hz	I	230V 50Hz/ 240V 60Hz
III-12V DC	III	12V DC
III-24V DC	III	24V DC
III-24V 50Hz	III	24V 50Hz/ 60Hz
III-24V AC/ DC	III	24V 50Hz/ 60Hz/ DC
III-48V DC	III	48V DC
III-110V DC	III	110V DC
III-110V 50Hz	III	110V 50Hz/ 120V 60Hz
III-110V AC/ DC	III	110V 50Hz/ 60Hz/ DC 120V 50Hz/ 60Hz/ DC
III-220V DC	III	220V DC
III-230V 50Hz	III	230V 50Hz/ 240V 60Hz
III-230V AC/ DC	III	220V 50Hz/ 60Hz/ DC 240V 50Hz/ 60Hz/ DC
III-256V DC	III	256V DC
II-12V DC	II	12V DC
II-24V DC	II	24V DC
II-24V AC/ DC	II	24V 50Hz/ 60Hz/ DC
II-48V DC	II	48V DC
II-110V DC	II	110V DC
II-110V AC/ DC	II	110V 50Hz/ 60Hz/ DC 120V 50Hz/ 60Hz/ DC
II-220V DC	II	220V DC
II-230V AC/ DC	II	220V 50Hz/ 60Hz/ DC 240V 50Hz/ 60Hz/ DC
II-256V DC	II	256V DC

ENCLOSURE MATERIAL	
CODE	DESCRIPTION
① ✖	Aluminium Cast Epoxy Powder Coated
CO	CF8M (Stainless Steel 316 Cast)
CO-3M	CF3M (Stainless Steel 316L Cast)

SPECIAL	
CODE	DESCRIPTION
① ✖	NIL
⑦ FR	Full Rectifier with Surge Suppressor Size II, III
③① ①⑨ LD	LED - Size II, III
⑫ SS	Surge Suppressor Size II, III
②⑥	
③① RC	Half Rectifier with Surge Suppressor Size II, III

ENCLOSURE TYPE	
CODE	DESCRIPTION
WEATHER PROOF	
⑤ 22	DIN Plug Solenoid, IP 67, Cable Entry Pg9, as per DIN43650B, Size I
③① 25	DIN Plug Solenoid, IP 67, Cable Entry Pg9, as per DIN43650A, Size II, III
16	Integrated Terminal Box, IP 67, 1/2" NPT, -40 °C to 100 °C
19	Integrated Terminal Box, IP 67, M20 X 1.5, -40 °C to 100 °C
17	Integrated Terminal Box, IP67, Bottom Cable Entry, M25X1.5, Size II, III, IV
17NS	Integrated Terminal Box, IP67, Bottom Cable Entry, 1/2" NPT, Size II, III, IV
17-A	Integrated Terminal Box, IP68, Bottom Cable Entry, M25X1.5, Size II, III, IV
17NS-A	Integrated Terminal Box, IP68, Bottom Cable Entry, 1/2" NPT, Size II, III, IV
EXPLOSION PROOF Ex d (For Gas & Dust)	
⑬ 37	Ex d IIC IP66, -40 °C TO 60 °C, 1/2" NPT
⑬ 39	Ex d IIC IP66, -40 °C TO 60 °C, M20 X 1.5
87	Ex d IIC IP67, -60 °C TO 100 °C, M25 X 1.5, Size II, III
87MS	Ex d IIC IP67, -60 °C TO 100 °C, M20 X 1.5, Size II, III
87NS	Ex d IIC IP67, -60 °C TO 100 °C, 1/2" NPT, Size II, III
87-A	Ex d IIC IP68, -60 °C TO 100 °C, M25 X 1.5, Size II, III
87MS-A	Ex d IIC IP68, -60 °C TO 100 °C, M20 X 1.5, Size II, III
87NS-A	Ex d IIC IP68, -60 °C TO 100 °C, 1/2" NPT, Size II, III
EXPLOSION PROOF Ex e mb (For Gas & Dust)	
58	Ex e mb IIC, IP67, -40 °C TO 70 °C, M25 X 1.5
58MS	Ex e mb IIC, IP67, -40 °C TO 70 °C, M20 X 1.5
58NS	Ex e mb IIC, IP67, -40 °C TO 70 °C, 1/2" NPT
58LT	Ex e mb IIC, IP67, -60 °C TO 70 °C, M25 X 1.5
58LTMS	Ex e mb IIC, IP67, -60 °C TO 70 °C, M20 X 1.5
58LTNS	Ex e mb IIC, IP67, -60 °C TO 70 °C, 1/2" NPT
EXPLOSION PROOF Ex ia (For Gas & Dust)	
③ 65CR	Ex ia IIC, IP67, -60 °C TO 70 °C, Pg9, Size III, DIN Plug In Enclosure
66	Ex ia IIC, IP67, -60 °C TO 70 °C, M25 X 1.5, Size III, Booster Circuit
66MS	Ex ia IIC, IP67, -60 °C TO 70 °C, M20 X 1.5, Size III, Booster Circuit
66NS	Ex ia IIC, IP67, -60 °C TO 70 °C, 1/2" NPT, Size III, Booster circuit
67	Ex ia IIC, IP67, -60 °C TO 70 °C, M25 X 1.5, Size III
67MS	Ex ia IIC, IP67, -60 °C TO 70 °C, M20 X 1.5, Size III
67NS	Ex ia IIC, IP67, -60 °C TO 70 °C, 1/2" NPT, Size III
71	Ex ia IIC, IP67, -60 °C TO 70 °C, M25 X 1.5, Size III
71MS	Ex ia IIC, IP67, -60 °C TO 70 °C, M20 X 1.5, Size III
71NS	Ex ia IIC, IP67, -60 °C TO 70 °C, 1/2" NPT, Size III

INSULATION	
CODE	DESCRIPTION
① ✖	CLASS F
H	CLASS H

SIL	
CODE	DESCRIPTION
① ✖	NO
SL	YES

POWER																
			12V DC	24V DC	24V 50 Hz	24V AC/ DC	48V DC	110V DC	110V 50Hz	110V AC/ DC		230V 50Hz	220V DC	230V AC/ DC		256V DC
CODE	SIZE	POWER WATT	12V DC	24V DC	24V 50 Hz/ 60 Hz	24V 50Hz/ 60 Hz/ DC	48V DC	110V DC	110V 50Hz/ 120V 60Hz	110V 50Hz/ 60Hz/ DC	120V 50Hz/ 60Hz/ DC	230V 50Hz/ 240V 60Hz	220V DC	220V 50Hz/ 60Hz/ DC	240V 50Hz/ 60Hz/ DC	256V DC
LW2	I	2.0		✓												
①✖	I	6.0			✓				✓			✓				
①✖	I	8.0	✓	✓												
LW1	III	1.0		✓												
LW2	III	2.0	✓	✓				✓		✓	✓					
①✖	III	6.0			✓				✓			✓				
①✖	III	8.0	✓	✓		✓	✓	✓		✓			✓	✓		
		9.0									✓				✓	✓
①✖	II	13.0	✓	✓		✓	✓	✓		✓			✓	✓		
		15.0									✓				✓	✓
⑪ LB04	III	0.4		✓												

SERIES : 32P

3/2 INTERNAL/ EXTERNAL PILOT OPERATED, NORMALLY CLOSED/ OPEN SOLENOID VALVE

APPROVAL		⑨ ENCLOSURE TYPE											
CODE	DESCRIPTION	17	37	39	58	58LT	65CR	66	67	71	87	17A	87A
① ⑬ ✕	CCOE/ PESO + BIS, Insulation Class H		✓	✓			✓	✓	✓	✓	✓		✓
01	CE - ATEX, Insulation Class H		✓	✓	✓	✓							
01	IEC Ex + ATEX, Insulation Class H							✓	✓	✓	✓		✓
01B	INDIAN + ATEX, Insulation Class H		✓	✓				✓			✓		✓
02	UL Recognised, for USA and Canada, Type 3, 3S, 4, 4X, 6, 6P UL file Number E 342217	✓											
03	INMETRO + ATEX, Insulation Class H		✓	✓				✓	✓	✓	✓		✓
03C	IEC Ex + ATEX + IN METRO + CuTR-EAC										✓		✓
04	CuTR- EAC + ATEX , Insulation Class H		✓	✓				✓	✓	✓	✓		✓
②① 07	KOSHA + ATEX, Insulation Class H										✓		✓
08	Ukraine, Insulation Class H							✓	✓	✓	✓		✓
⑬ MN	DGMS+CCOE/ PESO + BIS, Insulation Class H		✓	✓			✓	✓	✓	✓	✓		✓
⑫ CE	CE (Weatherproof Solenoid)	✓										✓	
⑫ EAC	EAC MARK	✓										✓	

Note :

- ① Do not Specify when opted for
- ② Approval other than BIS, CCOE/ PESO, DGMS
- ③ BIS, CCOE/ PESO, DGMS Approved coil
- ④ Opt FR from special
- ⑤ Current DC, 50Hz, 60Hz
- ⑦ Do not Opt for Enclosure Type 01, 06, 22, 25
- ⑧ Select Body Material SS316 (B5)
- ⑨ All variation of 17, 37, 39, 58, 58LT, 65CR, 66, 67, 71 87 included
- ⑩ Media Should be Oil free Air/ Inert Gas/ Water
- ⑪ Do not opt for 01, 06, 22, 25. In rush 2W for 100 msec, Holding 0.4W
- ⑫ Current DC
- ⑬ Ambient Temperature restricted for Enclosure Type 17, 37, 39, 58, 58LT, 65CR, 66, 67, 71, 87 to Solenoid Ambient Temperature
- ⑭ Select one or Nil Accessories from each Solenoid (A1 to A6), Valve (B7 to B8)
- ⑮ IP67 Certified by BIS, CCOE/ PESO, DGMS
- ⑯ Can not be opted for Enclosure Type 01, 06
- ⑰ Can be opted for Enclosure Type 01, 06, 16, 19, 22, 25
- ⑱ KOSHA certificate only for enclosure size II ≤ 20W
- ⑲ For Body Material B17 (Brass Forged), add suffix V01 to valve type
- ⑳ Do not Opt for Enclosure Type 01, 06, 22
- ㉑ Media Code shall be part of Ordering Code other than Default Media Type
- ㉒ For Body Material Aluminium and SS316
- ㉓ For Solenoid type 25 with AC current supply, Use 50Hz with Special RC Option
- ㉔ For Intrinsically Safe Solenoid, LD (LED) can be opted with CCOE/PESO certification only
- ㉕ Select Seal Kit Code P98 & Repair Kit Code 99 for Intrinsically Safe Valve

ENTITY PARAMETER

Entity Parameter	
Ui	32V DC
Ii	230mA
Pi	2.3W
Ci	0
Li	0

MINIMUM OPERATING PARAMETER

Type	66	66..LD..	65CR	67	67..LD..	71	71..LD..	65CR	67	67..LD..	71	71..LD..
Minimum Voltage (V)	10	10	11	11	11	11	11	14	14	15	14	14
Minimum Current (mA)	20	21	19	19	22	19	22	25	25	28	25	28
Minimum Power (W)	0.20	0.21	0.21	0.21	0.24	0.21	0.24	0.35	0.35	0.42	0.35	0.42
LED	No	Yes	No	No	Yes	No	Yes	No	No	Yes	No	Yes
Pressure (bar)	As per Solenoid Valve rating		Maximum 8.0					Maximum 11.0				

RESPONSE ON TIME FOR SOLENOID TYPE 66, 66..LD..

Voltage (V)	10	11	12	14	18	22	24	26	30	32	Current (mA)	18.5	20	25	30
Current (mA)	20	22	24	28.5	37	45.5	49.7	54	63	67	Open Ckt Voltage (V)	19.5	19.5	19.5	19.5
Response Time (ms)≤	4800	3800	2500	1600	850	650	450	400	250	250	Time (ms)≤	5000	4000	2500	2000

3/2 INTERNAL/ EXTERNAL PILOT OPERATED, NORMALLY CLOSED/ OPEN SOLENOID VALVE

MARKING Explosion Proof

ENCLOSURE TYPE 37/ 39

SIZE	Power	BIS & PESO, DGMS	EAC - CuTR (Russia)	ATEX / INMETRO
I II IV	≤5W ≤8W ≤11W	Ex d IIC T6/T5 Gb, IP67 Ex tb IIIC T80°C/T95°C Db -40°C ≤ Ta ≤ 65°C FOR T6 -40°C ≤ Ta ≤ 70°C FOR T5	1 Ex d IIC T6/ T5/ T4 Gb IP66 Ex tb IIIC T80°C / T95°C / T130°C Db IP66 ИЛИ -40°C ≤ Ta ≤ 35°C FOR T6 -40°C ≤ Ta ≤ 50°C FOR T5 -40°C ≤ Ta ≤ 60°C FOR T4	Ex II 2G Ex d IIC T6/ T5/ T4 Gb IP66 Ex II 2G Ex tb IIIC T80°C / T95°C / T130°C Db IP66 -40°C ≤ Ta ≤ 35°C FOR T6 -40°C ≤ Ta ≤ 50°C FOR T5 -40°C ≤ Ta ≤ 60°C FOR T4 (Power ≤ 20W)
I II III	≤8W ≤13W ≤8W	Ex d IIC T6/T5 Gb, IP67 Ex tb IIIC T80°C/T95°C Db -40°C ≤ Ta ≤ 60°C FOR T6 -40°C ≤ Ta ≤ 70°C FOR T5		
III	≤15W	Ex d IIC T6/T5/T4 ≤Gb, IP67 Ex tb IIIC T80°C/T95°C/T130°C Db -40°C ≤ Ta ≤ 50°C FOR T6 -40°C ≤ Ta ≤ 65°C FOR T5 -40°C ≤ Ta ≤ 70°C FOR T4		
III IV	≤5W ≤5W	Ex d IIC T6 Gb, IP67 Ex tb IIIC T80°C Db -40°C ≤ Ta ≤ 70°C FOR T6		
II	≤20W	Ex d IIC T6/T5 Gb, IP67 Ex tb IIIC T80°C / T95°C Db -40°C ≤ Ta ≤ 55°C FOR T6 -40°C ≤ Ta ≤ 70°C FOR T5		
II	≤30W	Ex d IIC T6/T5/T4 Gb, IP67 Ex tb IIIC T80°C/T95°C/ T130°C Db -40°C ≤ Ta ≤ 40°C FOR T6 -40°C ≤ Ta ≤ 55°C FOR T5 -40°C ≤ Ta ≤ 70°C FOR T4		

ENCLOSURE TYPE 87

SIZE	Power	ATEX, IEC Ex, BIS & PESO, DGMS	INMETRO	EAC - CuTR (Russia) / UKRANE	KOSHA
III II IV	≤5W ≤8W ≤11W	Ex db IIC T6/T5/T4 Gb IP67 Ex tb IIIC T80°C/T95°C/T130°C Db IP67 -60°C ≤ Ta ≤ +65°C for T6 -60°C ≤ Ta ≤ +80°C for T5 -60°C ≤ Ta ≤ +100°C for T4	Ex db IIC T6/T5/T4 Gb Ex tb IIIC T85°C/T100°C/T135°C Db IP67 -60°C ≤ Ta ≤ +65°C for T6 -60°C ≤ Ta ≤ +80°C for T5 -60°C ≤ Ta ≤ +100°C for T4	1 Ex db IIC T6/T5/T4 Gb IP67 Ex tb IIIC T80°C/T95°C/T130°C Db ИЛИ -60°C ≤ Ta ≤ +65°C for T6 -60°C ≤ Ta ≤ +80°C for T5 -60°C ≤ Ta ≤ +100°C for T4	형식 또는 모델명 : 87, BCE 규격 또는 등급 : Ex d IIC T3-T6 제조자명 : Rotex Automation Limited 안전인증 번호 : 15-AV4BO-0000
III II	≤8W ≤13W	Ex db IIC T6/T5/T4 Gb IP67 Ex tb IIIC T80°C/T95°C/T130°C Db IP67 -60°C ≤ Ta ≤ +60°C for T6 -60°C ≤ Ta ≤ +75°C for T5 -60°C ≤ Ta ≤ +100°C for T4	Ex db IIC T6/T5/T4 Gb Ex tb IIIC T85°C/T100°C/T135°C Db IP67 -60°C ≤ Ta ≤ +60°C for T6 -60°C ≤ Ta ≤ +75°C for T5 -60°C ≤ Ta ≤ +100°C for T4	1 Ex db IIC T6/T5/T4 Gb IP67 Ex tb IIIC T80°C/T95°C/T130°C Db ИЛИ -60°C ≤ Ta ≤ +60°C for T6 -60°C ≤ Ta ≤ +75°C for T5 -60°C ≤ Ta ≤ +100°C for T4	
III	≤15W	Ex db IIC T6/T5/T4 Gb IP67 Ex tb IIIC T80°C/T95°C/T130°C Db IP67 -60°C ≤ Ta ≤ +50°C for T6 -60°C ≤ Ta ≤ +65°C for T5 -60°C ≤ Ta ≤ +100°C for T4	Ex db IIC T6/T5/T4 Gb Ex tb IIIC T85°C/T100°C/T135°C Db IP67 -60°C ≤ Ta ≤ +50°C for T6 -60°C ≤ Ta ≤ +65°C for T5 -60°C ≤ Ta ≤ +100°C for T4	1 Ex db IIC T6/T5/T4 Gb IP67 Ex tb IIIC T80°C/T95°C/T130°C Db ИЛИ -60°C ≤ Ta ≤ +50°C for T6 -60°C ≤ Ta ≤ +65°C for T5 -60°C ≤ Ta ≤ +100°C for T4	
IV	≤5W	Ex db IIC T6/T5/T4 Gb IP67 Ex tb IIIC T80°C/T95°C/T130°C Db IP67 -60°C ≤ Ta ≤ +70°C for T6 -60°C ≤ Ta ≤ +85°C for T5 -60°C ≤ Ta ≤ +100°C for T4	Ex db IIC T6/T5/T4 Gb Ex tb IIIC T85°C/T100°C/T135°C Db IP67 -60°C ≤ Ta ≤ +70°C for T6 -60°C ≤ Ta ≤ +85°C for T5 -60°C ≤ Ta ≤ +100°C for T4	1 Ex db IIC T6/T5/T4 Gb IP67 Ex tb IIIC T80°C/T95°C/T130°C Db ИЛИ -60°C ≤ Ta ≤ +70°C for T6 -60°C ≤ Ta ≤ +85°C for T5 -60°C ≤ Ta ≤ +100°C for T4	
II	≤20W	Ex db IIC T5/T4/T3 Gb IP67 Ex tb IIIC T95°C/T130°C/155°C Db IP67 -60°C ≤ Ta ≤ +45°C for T5 -60°C ≤ Ta ≤ +80°C for T4 -60°C ≤ Ta ≤ +100°C for T3	Ex db IIC T5/T4/T3 Gb Ex tb IIIC T100°C/T135°C/155°C Db IP67 -60°C ≤ Ta ≤ +45°C for T5 -60°C ≤ Ta ≤ +80°C for T4 -60°C ≤ Ta ≤ +100°C for T3	1 Ex db IIC T5/T4/T3 Gb IP67 Ex tb IIIC T95°C/T130°C/T155°C Db ИЛИ -60°C ≤ Ta ≤ +45°C for T5 -60°C ≤ Ta ≤ +80°C for T4 -60°C ≤ Ta ≤ +100°C for T3	
II	≤30W	Ex db IIC T4/T3 Gb IP67 Ex tb IIIC T130°C/T155°C Db IP67 -60°C ≤ Ta ≤ +60°C for T4 -60°C ≤ Ta ≤ +70°C for T3	Ex db IIC T4/T3 Gb Ex tb IIIC T135°C/T155°C Db IP67 -60°C ≤ Ta ≤ +60°C for T4 -60°C ≤ Ta ≤ +70°C for T3	1 Ex db IIC T4/T3 Gb IP67 Ex tb IIIC T130°C/T155°C Db ИЛИ -60°C ≤ Ta ≤ +60°C for T4 -60°C ≤ Ta ≤ +70°C for T3	

SERIES : 32P

3/2 INTERNAL/ EXTERNAL PILOT OPERATED, NORMALLY CLOSED/ OPEN SOLENOID VALVE

MARKING Explosion Proof

ENCLOSURE TYPE 58

SIZE	Power	CE-ATEX, Insulation H
I II IV	≤5W ≤8W ≤11W	Ex II 2GD Ex e mb IIC T6/ T5 IP67 Ex tb IIIC T6/ T5 IP67 -40° C ≤ Ta ≤ 65° C for T6 -40° C ≤ Ta ≤ 70° C for T5
I II III	≤8W ≤13W ≤8W	Ex II 2GD Ex e mb IIC T6/ T5 IP67 Ex tb IIIC T6/ T5 IP67 -40° C ≤ Ta ≤ 60° C for T6 -40° C ≤ Ta ≤ 70° C for T5
III	≤15W	Ex II 2GD Ex e mb IIC T6/ T5/ T4 IP67 Ex tb IIIC T6/ T5/ T4 IP67 -40° C ≤ Ta ≤ 50° C for T6 -40° C ≤ Ta ≤ 65° C for T5 -40° C ≤ Ta ≤ 70° C for T4
III IV	≤5W ≤5W	Ex II 2GD Ex e mb IIC T6 IP67 Ex tb IIIC T6 IP67 -40° C ≤ Ta ≤ 70° C for T6
II	≤20W	Ex II 2GD Ex e mb IIC T6/ T5 IP67 Ex tb IIIC T6/ T5 IP67 -40° C ≤ Ta ≤ 55° C for T6 -40° C ≤ Ta ≤ 70° C for T5
II	≤30W	Ex II 2GD Ex e mb IIC T6/ T5/ T4 IP67 Ex tb IIIC T6/ T5/ T4 IP67 -40° C ≤ Ta ≤ 40° C for T6 -40° C ≤ Ta ≤ 55° C for T5 -40° C ≤ Ta ≤ 70° C for T4

ENCLOSURE TYPE 58LT

SIZE	Power	CE-ATEX, Insulation H
I II IV	≤5W ≤8W ≤11W	Ex II 2GD Ex e mb IIC T6/ T5 IP67 Ex tb IIIC T6/ T5 IP67 -60° C ≤ Ta ≤ 65° C for T6 -60° C ≤ Ta ≤ 70° C for T5
I II III	≤8W ≤13W ≤8W	Ex II 2GD Ex e mb IIC T6/ T5 IP67 Ex tb IIIC T6/ T5 IP67 -60° C ≤ Ta ≤ 60° C for T6 -60° C ≤ Ta ≤ 70° C for T5
III	≤15W	Ex II 2GD Ex e mb IIC T6/ T5/ T4 IP67 Ex tb IIIC T6/ T5/ T4 IP67 -60° C ≤ Ta ≤ 50° C for T6 -60° C ≤ Ta ≤ 65° C for T5 -60° C ≤ Ta ≤ 70° C for T4
III IV	≤5W ≤5W	Ex II 2GD Ex e mb IIC T6 IP67 Ex tb IIIC T6 IP67 -60° C ≤ Ta ≤ 70° C for T6
II	≤20W	Ex II 2GD Ex e mb IIC T6/ T5 IP67 Ex tb IIIC T6/ T5 IP67 -60° C ≤ Ta ≤ 55° C for T6 -60° C ≤ Ta ≤ 70° C for T5
II	≤30W	Ex II 2GD Ex e mb IIC T6/ T5/ T4 IP67 Ex tb IIIC T6/ T5/ T4 IP67 -60° C ≤ Ta ≤ 40° C for T6 -60° C ≤ Ta ≤ 55° C for T5 -60° C ≤ Ta ≤ 70° C for T4

ENCLOSURE TYPE 66, 67 & 71

Enclosure	ATEX/ IECEx (Eurpoe)/ INMETRO/ CEPEL (Brazil)	EAC - CuTR (Russia)	BIS & PESO, DGMS
Al Cast	Ex ia IIC T5 Ga (-60°C≤Ta≤+75°C) Ex ia IIC T6 Ga (-60°C≤Ta≤+60°C) Ex ia IIIC T200 125°C IP67 Da (-60°C≤Ta≤+75°C)	0 Ex ia IIC T5 Ga IP67 (-60°C≤Ta≤+75°C) 0 Ex ia IIC T6 Ga IP67 (-60°C≤Ta≤+60°C) 0 Ex ia IIIC T200 125°C IP67 Da (-60°C≤Ta≤+75°C)	Ex ia I/IIC T5, IP67 (-40°C≤Ta≤75°C) Ex ia I/IIC T6, IP67 (-40°C≤Ta≤60°C)
SS Cast	Ex ia IIC T5 Ga (-60°C≤Ta≤+75°C) Ex ia IIC T6 Ga (-60°C≤Ta≤+60°C) Ex ia IIIC T200 125°C IP67 Da (-60°C≤Ta≤+75°C) Ex ia I Ma (-60°C≤Ta≤+75°C)	0 Ex ia IIC T5 Ga IP67 (-60°C≤Ta≤+75°C) 0 Ex ia IIC T6 Ga IP67 (-60°C≤Ta≤+60°C) 0 Ex ia IIIC T200 125°C IP67 Da (-60°C≤Ta≤+75°C) PO Ex ia I Ma (-60°C≤Ta≤+75°C) (ТОЛЬКО сталь) или	
Al Cast	Ukraine 0 Ex ia IIC T5 X -60°C≤Ta≤+75°C 0 Ex ia IIC T6 X -60°C≤Ta≤+60°C		
SS Cast	PO Иа X -60°C≤Ta≤+75°C (для варианта у сталёному корпусі) 0 Ex ia IIC T5 X -60°C≤Ta≤+75°C 0 Ex ia IIC T6 X -60°C≤Ta≤+60°C		

ENCLOSURE TYPE 65CR

BIS & PESO, DGMS
Ex ia I/IIC T5, IP67 (-40°C≤Ta≤75°C) Ex ia I/IIC T6, IP67 (-40°C≤Ta≤60°C)

MARKING Weather Proof

ENCLOSURE TYPE 17

US & Canada (UL Recognised)
TYPE 3, 3R, 3S, 4, 4X, 6 & 6P -60°C to +100°C POWER ≤20W -60°C to +60°C 20W< POWER ≤30W

3/2 INTERNAL/ EXTERNAL PILOT OPERATED, NORMALLY CLOSED/ OPEN SOLENOID VALVE

14 ACCESSORIES			
	CODE	DESCRIPTION	
	①✖	NIL	VALVE
	A3	Silencer Sintered Bronze	
	A4	Silencer Sintered SS	
	A5	Dust Cap (Ambient Temperature - 20 °C to 80 °C)	
	①✖	NIL	SOLENOID
	B1	Weather Proof Cable Gland M20X1.5(M) Brass	
	B5	ATEX Approved Cable Gland (Plastic) M20X1.5(M) (Ambient Temperature - 20 °C to 80 °C)	
	B6	ATEX Approved Cable Gland (BRASS) M20X1.5(M) (Ambient Temperature - 20 °C to 80 °C)	
	B7	ATEX Approved Cable Gland (SS316) M20X1.5(M) (Ambient Temperature - 20 °C to 80 °C)	
	B8	Weather Proof Cable gland M20X1.5(M) (Plastic)	
	B3	Explosion Proof Double Compression Cable Gland (BRASS) 1/2" NPT(M) (Ambient Temperature - 20 °C to 80 °C), CCOE/ PESO Certified	
	B4	Explosion Proof Double Compression Cable Gland (SS316) 1/2" NPT(M) (Ambient Temperature - 20 °C to 80 °C), CCOE/ PESO Certified	