

# VALVES SERIES 70, SOLENOID/PNEUMATIC

TECHNICAL DATA	1/8" NPT	1/4" NPT	3/8" NPT	1/2" NPT	
Operating pressure:					
• monostable	psi	36.3 to 145			
• bistable	psi	14.5 to 145			
• asserved	psi	Vacuum to 145			
Minimum pilot pressure	psi	36.3			
Operating temperature range	°F	14 to +140			
Nominal diameter	in	0.20	0.30	0.52	0.59
Conductance C	scfm/psi	0.30	0.65	1.23	2.37
Critical ratio b	psi/psi	0.32	0.27	0.32	0.43
Flow rate at 87 psi ΔP 7.5 psi	scfm	14	26.5	55.2	113
Flow rate at 87 psi ΔP 14.5 psi	scfm	19.5	39	75	163
		Cv 0.55	Cv 1.1	Cv 2.1	Cv 4.6
TRA / TRR monostable at 87 psi	ms	15/35	19/45	21/72	36/60
TRA / TRR bistable at 87 psi	ms	20/20	21/21	18/18	30/30
Coil voltage values		12; 24 VDC - 24; 110; 220V AC 50/60Hz			
Power		2 W (DC) 3.5 VA (AC)			
Voltage tolerance	%	-10 to +15			
Insulation class		F 155			
Maximum coil nut torque	lbf ft	0.74			
Hand operation		Bistable		*	

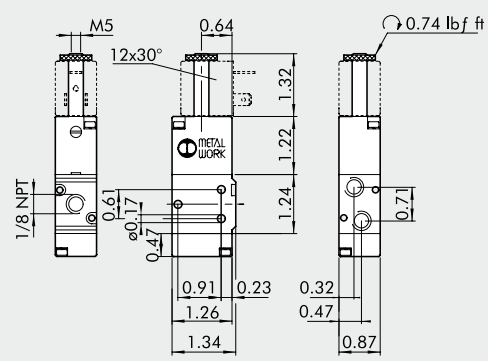


## KEY TO CODES

SOV	2	3	SO	S	NC	U
<b>FAMILY</b>	<b>DIMENSIONS</b>	<b>FUNCTION</b>	<b>OPERATORS 14</b>	<b>RESETTING (12)</b>	<b>FURTHER DETAILS</b>	<b>THREAD</b>
SOV solenoid/pneumatic	2 1/8" 3 1/4" C 3/8" 4 1/2"	3 3/2 5 5/2 6 5/3	SO solenoid SE solenoid assisted	S mechanical springs B bistable D differential P pneumatic A pneumatic/mechanical spring*	NC normally closed NO normally open CC closed centres OC open centres PC pressure centres OO 5/2	U NPT
				*on demand		

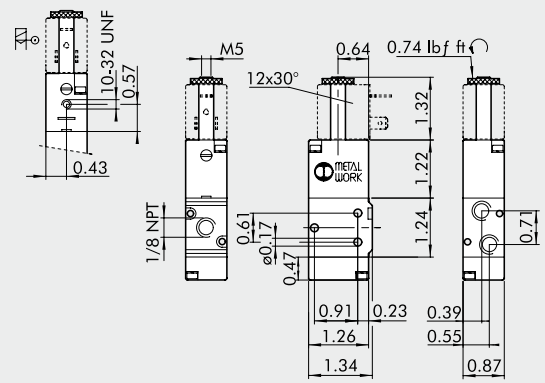
## VALVES SERIES 70, SOLENOID/PNEUMATIC, PILOT-ASSISTED SOLENOID/PNEUMATIC, 1/8" NPT

### MONOSTABLE 3/2 NO, 1/8" NPT



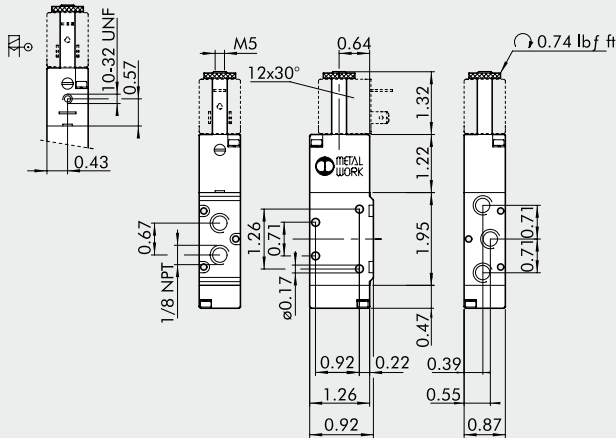
Symbol	Code	Abbrev.	Weight [lb]
	7010020400U	SOV 23 SOS NO U	0.221

### MONOSTABLE 3/2 NC, 1/8" NPT



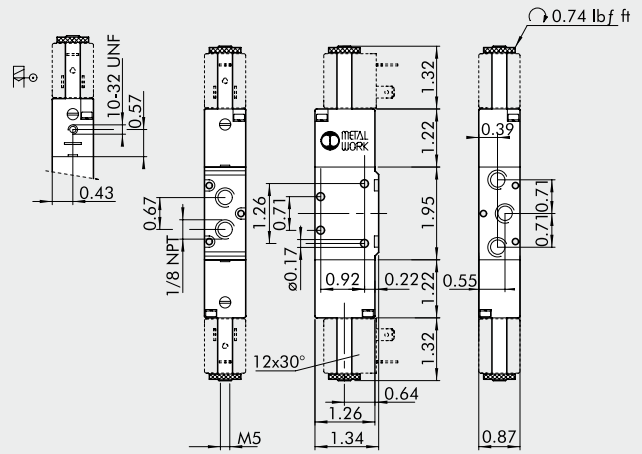
Symbol	Code	Abbrev.	Weight [lb]
	7010020200U	SOV 23 SOS NC U	0.221
	7010020500U	SOV 23 SES NC U	0.221

### MONOSTABLE 5/2, 1/8" NPT



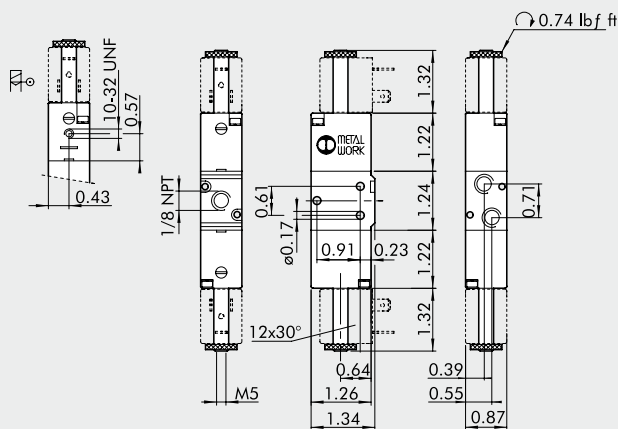
Symbol	Code	Abbrev.	Weight [lb]
	7010021100U	SOV 25 SOS OO U	0.282
	7010021500U	SOV 25 SES OO U	0.285

### BISTABLE 5/2, 1/8" NPT



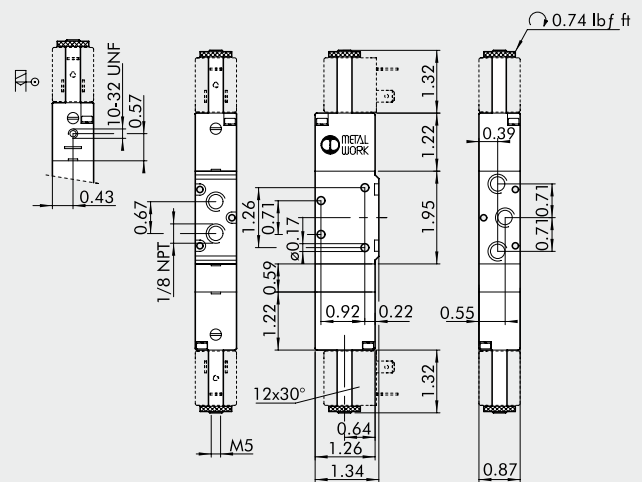
Symbol	Code	Abbrev.	Weight [lb]
	7010021200U	SOV 25 SOB OO U	0.353
	7010021300U	SOV 25 SOD OO U	0.366
	7010021600U	SOV 25 SEB OO U	0.353

### BISTABLE 3/2, 1/8" NPT



Symbol	Code	Abbrev.	Weight [lb]
	7010020100U	SOV 23 SOB OO U	0.298
	7010020300U	SOV 23 SEB OO U	0.300

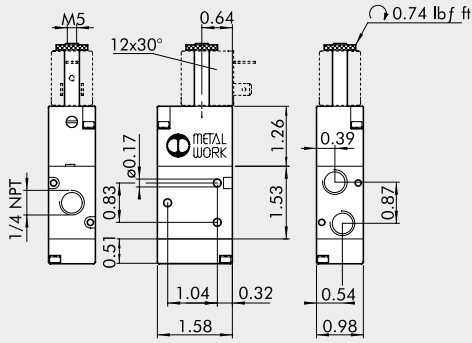
### MONOSTABLE 5/3, 1/8" NPT



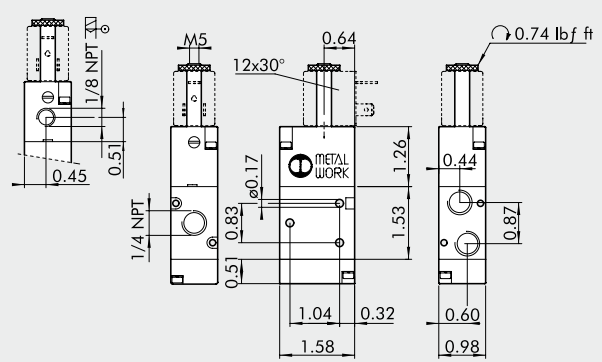
Symbol	Code	Abbrev.	Weight [lb]
	7010022100U	SOV 26 SOS CC U	0.419
	7010022200U	SOV 26 SOS OC U	0.419
	7010022300U	SOV 26 SOS PC U	0.419
	7010022400U	SOV 26 SES CC U	0.415
	7010022500U	SOV 26 SES OC U	0.415
	7010022600U	SOV 26 SES PC U	0.415

# VALVES SERIES 70, SOLENOID/PNEUMATIC, PILOT-ASSISTED SOLENOID/ PNEUMATIC, 1/4" NPT

## MONOSTABLE 3/2 NO, 1/4" NPT



## MONOSTABLE 3/2 NC, 1/4" NPT

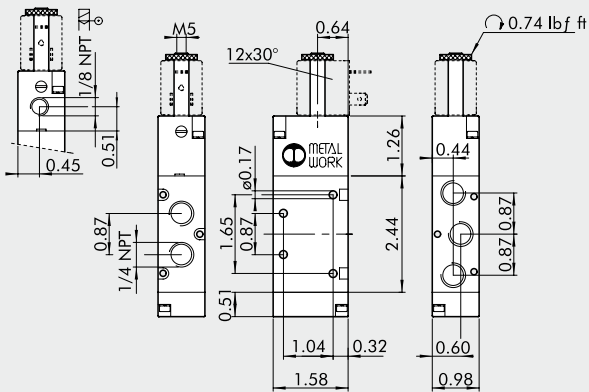


Symbol	Code	Abbrev.	Weight [lb]
	7020020400U	SOV 33 SOS NO U	0.335

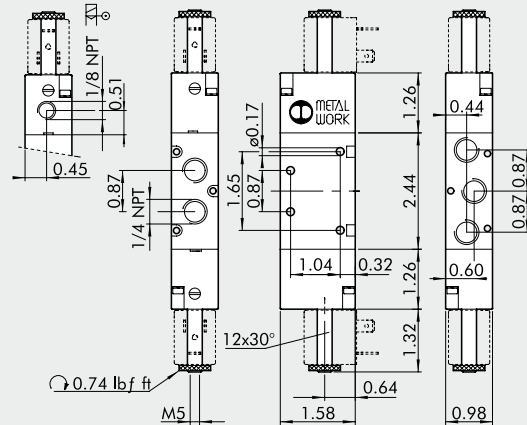
Symbol	Code	Abbrev.	Weight [lb]
	7020020200U	SOV 33 SOS NC U	0.335

	7020020500U	SOV 33 SES NC U	0.335
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## MONOSTABLE 5/2 1/4" NPT



## BISTABLE 5/2 1/4" NPT

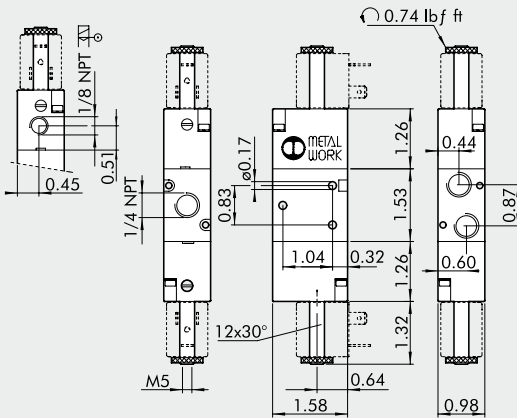


Symbol	Code	Abbrev.	Weight [lb]
	7020021100U	SOV 35 SOS OO U	0.441
	7020021500U	SOV 35 SES OO U	0.441

Symbol	Code	Abbrev.	Weight [lb]
	7020021200U	SOV 35 SOB OO U	0.520
	7020021300U	SOV 35 SOD OO U	0.517

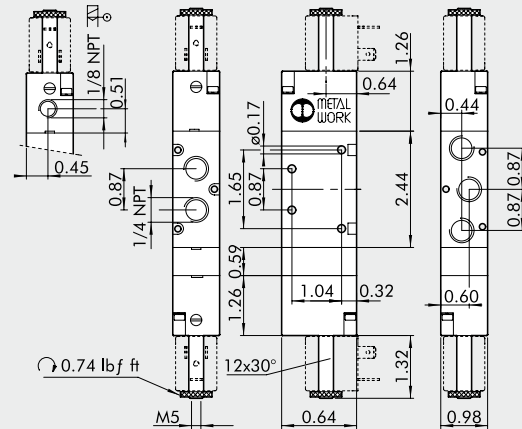
	7020021600U	SOV 35 SEB OO U	0.534
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### BISTABLE 3/2, 1/4" NPT



Symbol	Code	Abbrev.	Weight [lb]
	7020020100U	SOV 33 SOB OO U	0.419
	7020020300U	SOV 33 SEB OO U	0.419

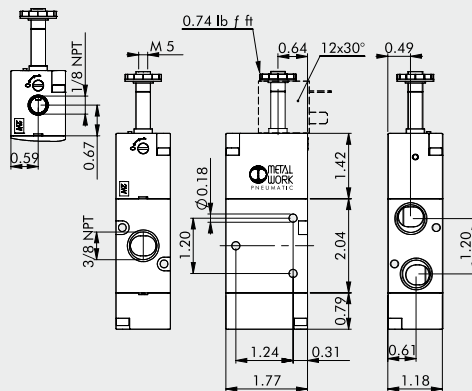
### MONOSTABLE 5/3, 1/4" NPT



Symbol	Code	Abbrev.	Weight [lb]
	7020022100U	SOV 36 SOS CC U	0.604
	7020022200U	SOV 36 SOS OC U	0.604
	7020022300U	SOV 36 SOS PC U	0.604
	7020022400U	SOV 36 SES CC U	0.611
	7020022500U	SOV 36 SES OC U	0.611
	7020022600U	SOV 36 SES PC U	0.611

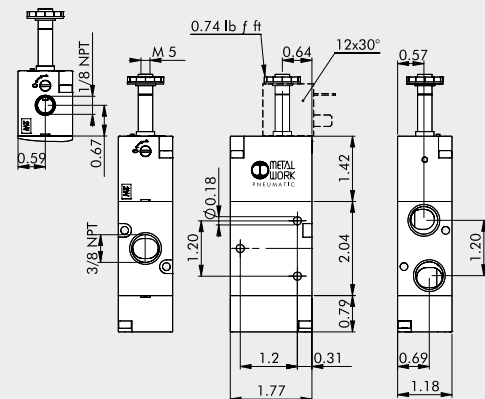
## VALVES SERIES 70, SOLENOID/PNEUMATIC-PILOT, ASSISTED SOLENOID/PNEUMATIC, 3/8" NPT

### MONOSTABLE 3/2 NO, 3/8" NPT



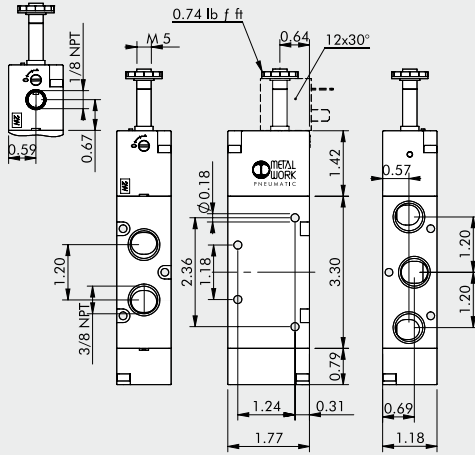
Symbol	Code	Abbrev.	Weight [lb]
	7040020400U	SOV C3 SOS NO U	0.564

### MONOSTABLE 3/2 NC, 3/8" NPT



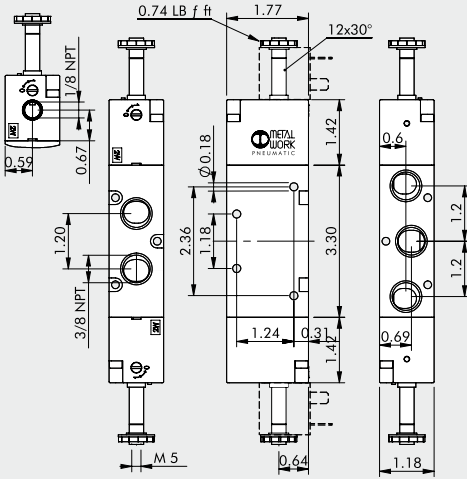
Symbol	Code	Abbrev.	Weight [lb]
	7040020200U	SOV C3 SOS NC U	0.564
	7040020500U	SOV C3 SES NC U	0.562

MONOSTABLE 5/2, 3/8" NPT



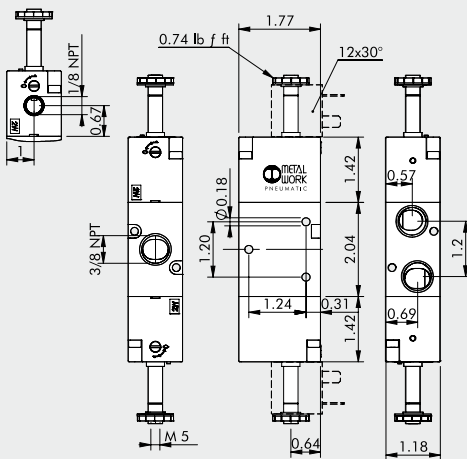
Symbol	Code	Abbrev.	Weight [lb]
	7040021100U	SOV C5 SOS OO U	0.796
	7040021500U	SOV C5 SES OO U	0.796

BISTABLE 5/2, 3/8" NPT



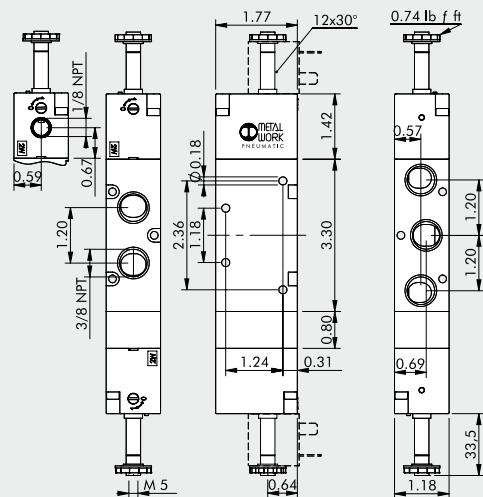
Symbol	Code	Abbrev.	Weight [lb]
	7040021200U	SOV C5 SOB OO U	0.882
	7040021300U	SOV C5 SOD OO U	0.937
	7040021600U	SOV C5 SEB OO U	0.882

BISTABLE 3/2, 3/8" NPT



Symbol	Code	Abbrev.	Weight [lb]
	7040020100U	SOV C3 SOB OO U	0.676
	7040020300U	SOV C3 SEB OO U	0.676

MONOSTABLE 5/3, 3/8" NPT

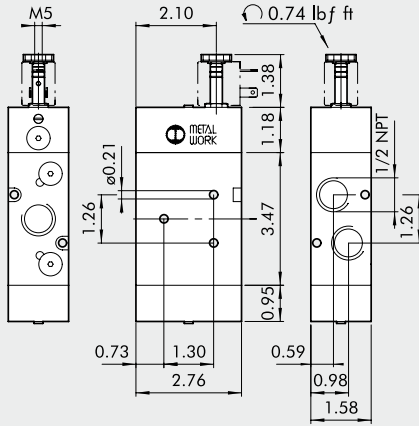


Symbol	Code	Abbrev.	Weight [lb]
	7040022100U	SOV C6 SOS CC U	1.049
	7040022200U	SOV C6 SOS OC U	1.045
	7040022300U	SOV C6 SOS PC U	1.045
	7040022400U	SOV C6 SES CC U	1.049
	7040022500U	SOV C6 SES OC U	1.045
	7040022600U	SOV C6 SES PC U	1.045

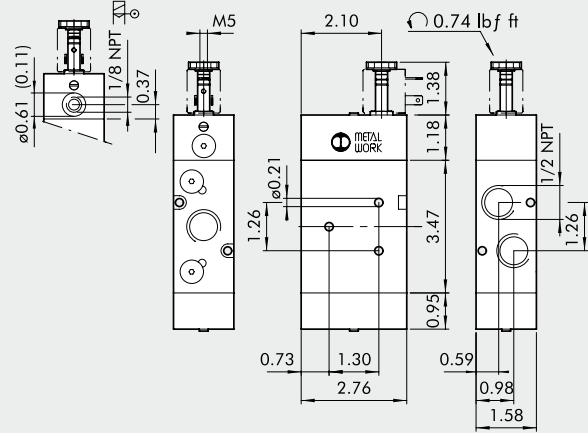
# VALVES SERIES 70, SOLENOID/PNEUMATIC, PILOT-ASSISTED SOLENOID/PNEUMATIC, 1/2" NPT



## MONOSTABLE 3/2 NO, 1/2" NPT



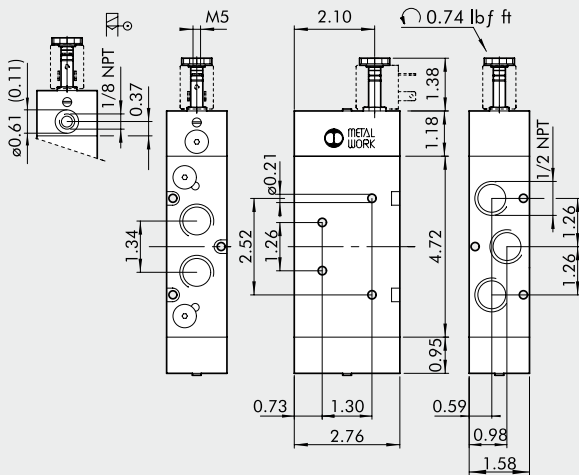
## MONOSTABLE 3/2 NC, 1/2" NPT



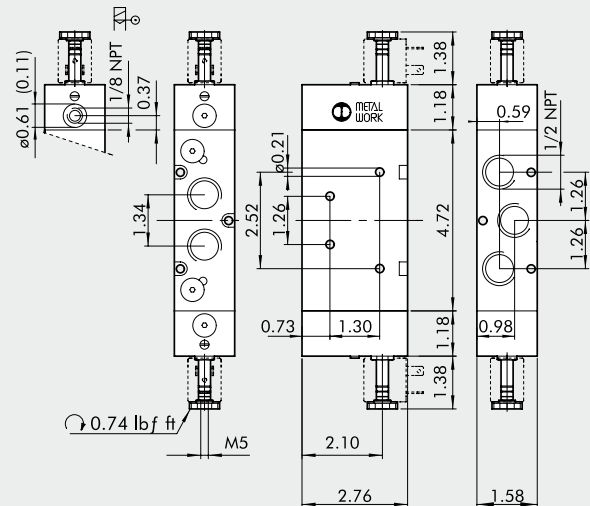
Symbol	Code	Abbrev.	Weight [lb]
	7030020400U	SOV 43 SOS NO U	2.051

Symbol	Code	Abbrev.	Weight [lb]
	7030020200U	SOV 43 SOS NC U	2.051
	7030020500U	SOV 43 SES NC U	2.035

## MONOSTABLE 5/2, 1/2" NPT



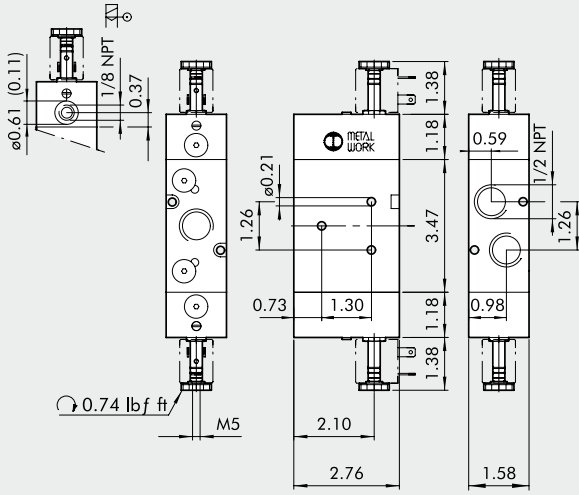
## BISTABLE 5/2, 1/2" NPT



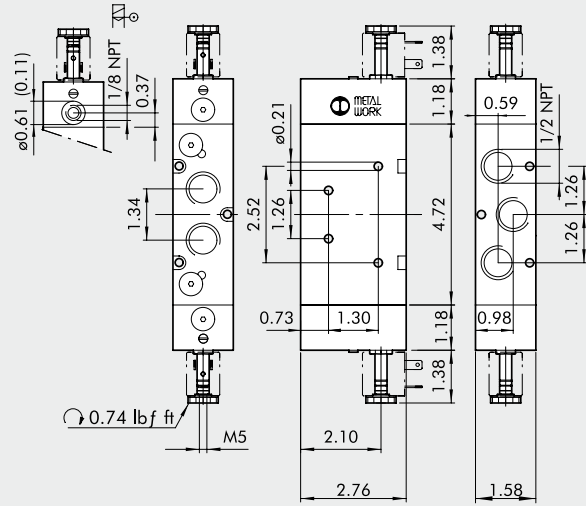
Symbol	Code	Abbrev.	Weight [lb]
	7030021100U	SOV 45 SOS OO U	2.470
	7030021500U	SOV 45 SES OO U	2.454

Symbol	Code	Abbrev.	Weight [lb]
	7030021200U	SOV 45 SOB OO U	2.514
	7030021300U	SOV 45 SOD OO U	2.540
	7030021600U	SOV 45 SEB OO U	2.485

**BISTABLE 3/2, 1/2" NPT**



**MONOSTABLE 5/3, 1/2" NPT**



Symbol	Code	Abbrev.	Weight [lb]
	7030020100U	SOV 43 SOB OO U	2.106
	7030020300U	SOV 43 SEB OO U	2.077

Symbol	Code	Abbrev.	Weight [lb]
	7030022100U	SOV 46 SOS CC U	2.789
	7030022200U	SOV 46 SOS OC U	2.789
	7030022300U	SOV 46 SOS PC U	2.789
	7030022400U	SOV 46 SES CC U	2.761
	7030022500U	SOV 46 SES OC U	2.761
	7030022600U	SOV 46 SES PC U	2.761

**ACCESSORIES FOR SERIES 70 SOLENOID/PNEUMATIC VALVES**

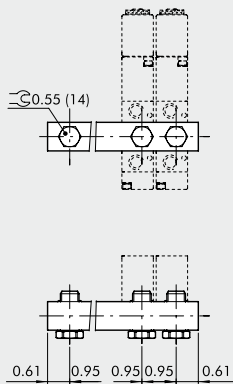
Refer to page 1-40 for coils and connectors



**NOTES**

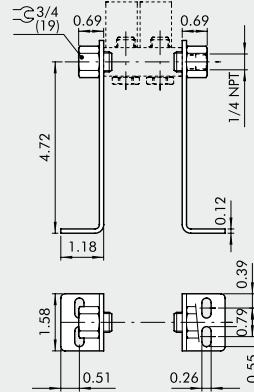
# ACCESSORIES: 1/8" NPT MANIFOLDS FOR SERIES 70 PNV-SOV VALVES

## MANIFOLD WITH 2 TO 7 POSITIONS + FITTINGS



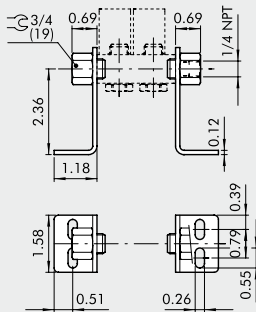
Code	Description	Weight [lb]
0221000200U	CSA-18-02 U	0.154
0221000300U	CSA-18-03 U	0.218
0221000400U	CSA-18-04 U	0.289
0221000500U	CSA-18-05 U	0.357
0221000600U	CSA-18-06 U	0.423
0221000700U	CSA-18-07 U	0.505

## BRACKET SET H120



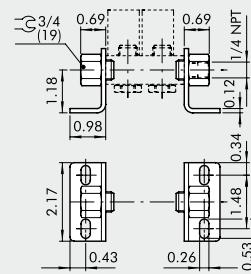
Code	Description	Weight [lb]
0221000190U	CSA-18-00 U	0.681

## BRACKET SET H60



Code	Description	Weight [lb]
0221000191U	CSA-18-0C U	0.470

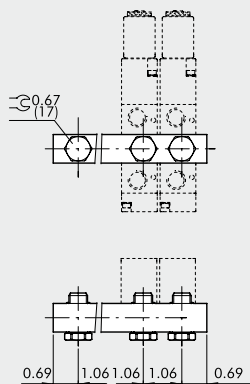
## BRACKET SET H30



Code	Description	Weight [lb]
0221000192U	CSA-18-0E U	0.399

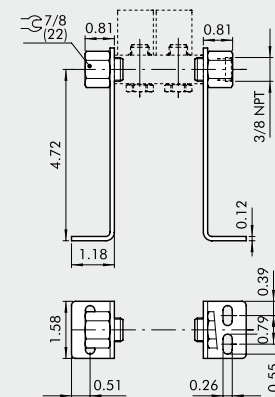
# ACCESSORIES: 1/4" NPT MANIFOLDS FOR SERIES 70 PNV-SOV VALVES

## MANIFOLD WITH 2 TO 7 POSITIONS + FITTINGS



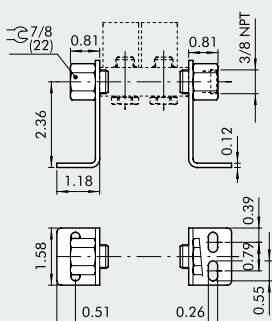
Code	Description	Weight [lb]
0222000200U	CSA-14-02 U	0.196
0222000300U	CSA-14-03 U	0.289
0222000400U	CSA-14-04 U	0.384
0222000500U	CSA-14-05 U	0.470
0222000600U	CSA-14-06 U	0.556
0222000700U	CSA-14-07 U	0.723

## BRACKET SET H120



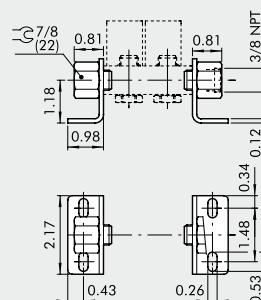
Code	Description	Weight [lb]
0222000190U	CSA-14-00 U	0.745

## BRACKET SET H60



Code	Description	Weight [lb]
0222000191U	CSA-14-0C U	0.534

## BRACKET SET H30



Code	Description	Weight [lb]
0222000192U	CSA-14-0E U	0.461

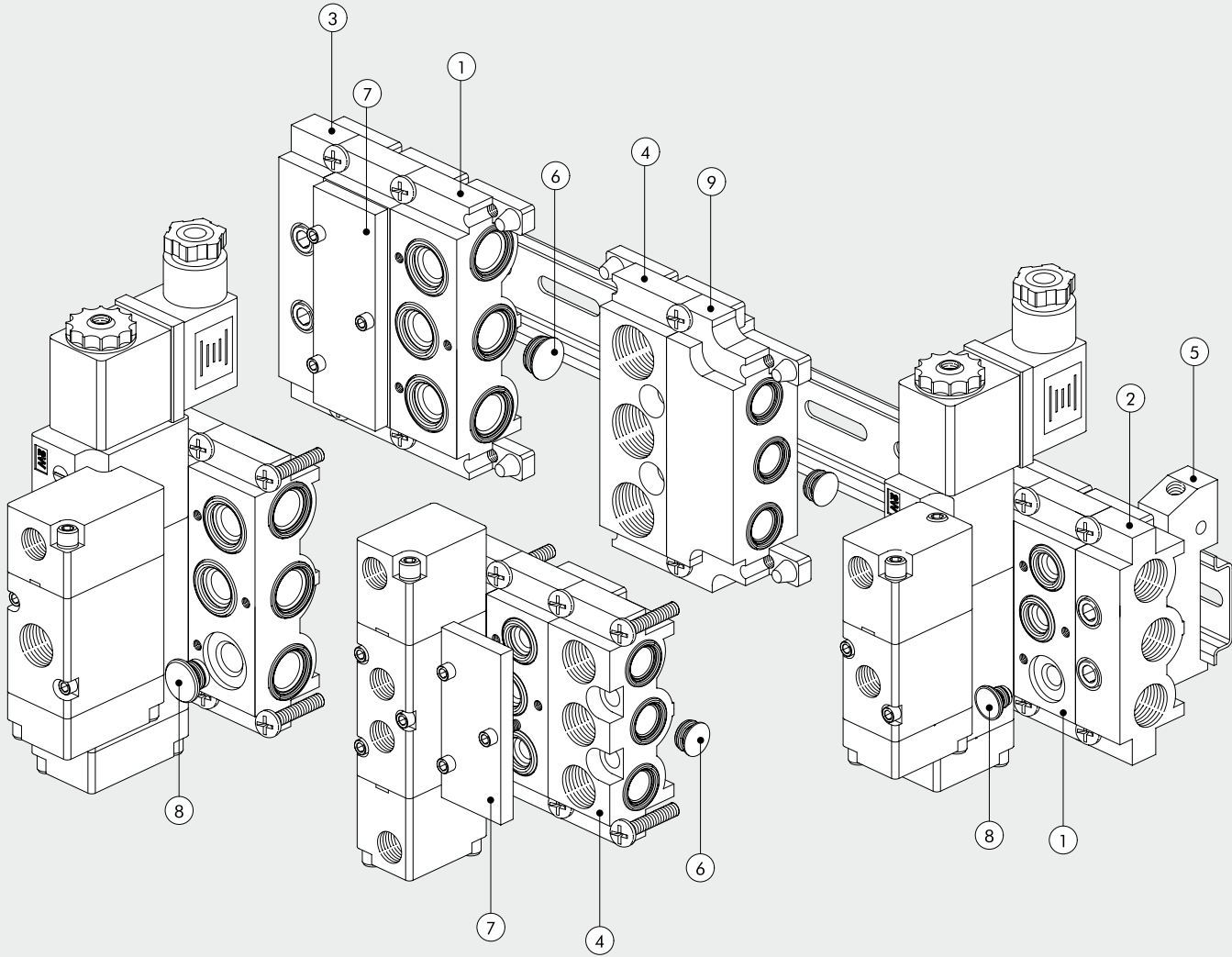


# ACCESSORIES: MANIFOLD BASES FOR SERIES 70 PNV-SOV VALVES WITH NPT PORTS

## MODULAR BASES FOR SERIES 70 SOV-PNV VALVES WITH NPT PORTS

VALVES

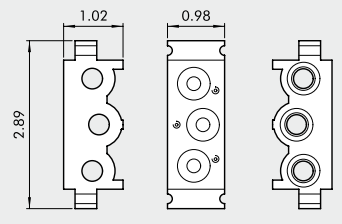
ACCESSORIES FOR VALVES SERIES 70



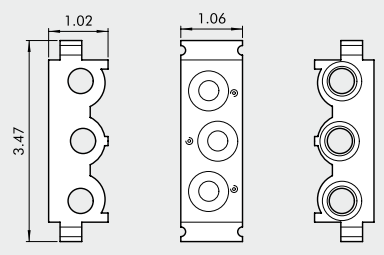
	1/8" NPT	1/4" NPT	
Reference	Code	Code	Description
①	0226004150	0226005150	Modular manifold base
②	0226004201U	0226005201U	End plate without OR U
③	0226004200U	0226005200U	End plate with OR U
④	0226004300U	0226005300U	Intermediate part for upper feed
⑤	0226004600	0226005600	Adapter for omega bar
⑥	0226004000	0226005000	Intermediate diaphragm
⑦	0226004500	0226005500	Blanking plate
⑧	0226004001	0226005001	3/2 cap
⑨	0226006600	-	Dimensional adapter

**1 MODULAR BASE**

1/8" NPT



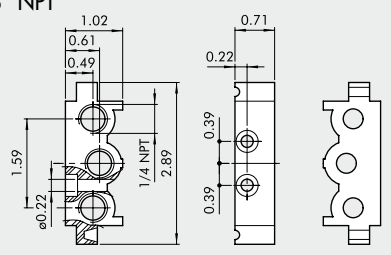
1/4" NPT



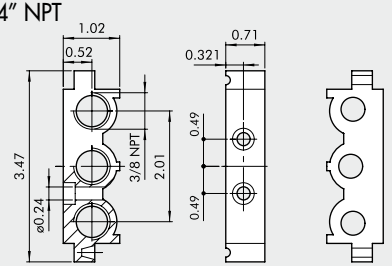
Code	Description	Weight [lb]
0226004150	Modular base MANIFOLD 1/8"	0.243
0226005150	Modular base MANIFOLD 1/4"	0.289

**2 END PLATE WITHOUT OR**

1/8" NPT



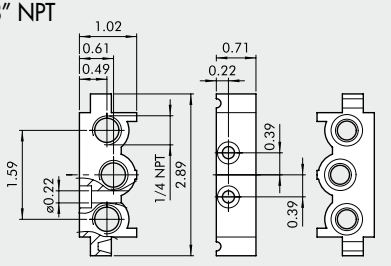
1/4" NPT



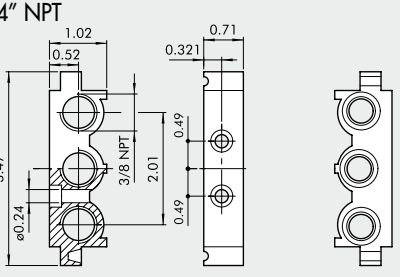
Code	Description	Weight [lb]
0226004201U	End plate without OR 1/8" U	0.115
0226005201U	End plate without OR 1/4" U	0.126

**3 END PLATE WITH OR**

1/8" NPT



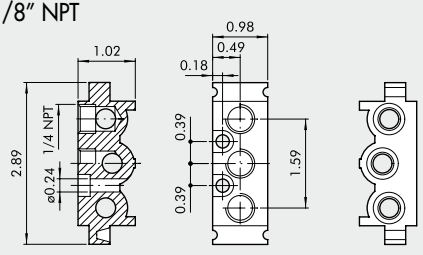
1/4" NPT



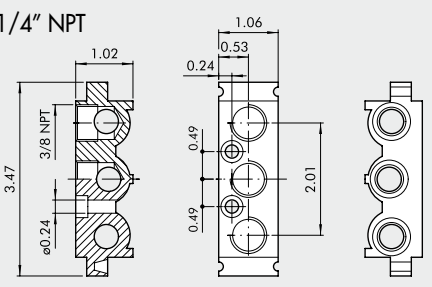
Code	Description	Weight [lb]
0226004200U	End plate with OR 1/8" U	0.163
0226005200U	End plate with OR 1/4" U	0.176

**4 INTERMEDIATE PART FOR UPPER FEED**

1/8" NPT



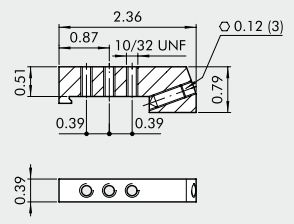
1/4" NPT



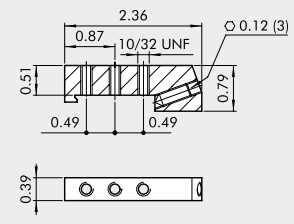
Code	Description	Weight [lb]
0226004300U	Intermediate part for upper feed 1/8"	0.205
0226005300U	Intermediate part for upper feed 1/4"	0.240

**5 ADAPTER FOR OMEGA BAR BASES (DIN EN 50022)**

1/8" NPT



1/4" NPT

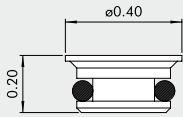


Code	Description	Weight [lb]
0226004600	Adapter 1/8"	0.101
0226005600	Adapter 1/4"	0.101

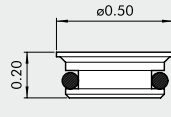
N.B.: Also for multiple bases

**6 INTERMEDIATE DIAPHRAGM**

1/8" NPT



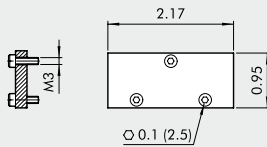
1/4" NPT



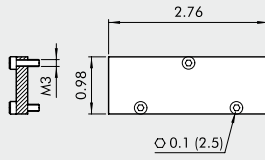
Code	Description	Weight [lb]
0226004000	Intermediate diaphragm 1/8"	0.004
0226005000	Intermediate diaphragm 1/4"	0.007

**7 BLANKING PLATE FOR UNUSED POSITIONS**

1/8" NPT



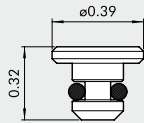
1/4" NPT



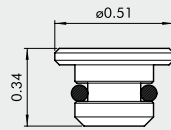
Code	Description	Weight [lb]
0226004500	Blanking plate pcs 1/8"	0.051
0226005500	Blanking plate pcs 1/4"	0.064

**8 PLUG FOR 3/2**

1/8" NPT

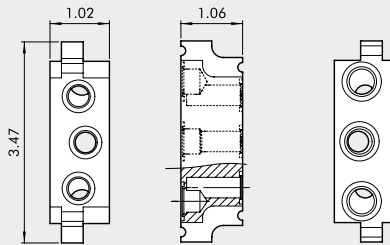


1/4" NPT



Code	Description	Weight [lb]
0226004001	Blanking plug 3/2 1/8"	0.004
0226005001	Blanking plug 3/2 1/4"	0.009

**9 DIMENSIONAL ADAPTER 1/8" - 1/4"**

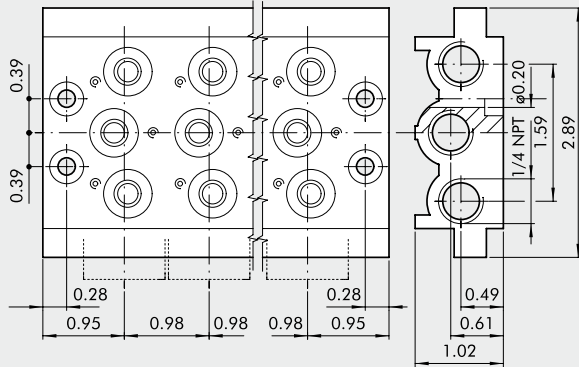


Code	Description	Weight [lb]
0226006600	Adapter 1/8", 1/4"	0.390

**NOTES**

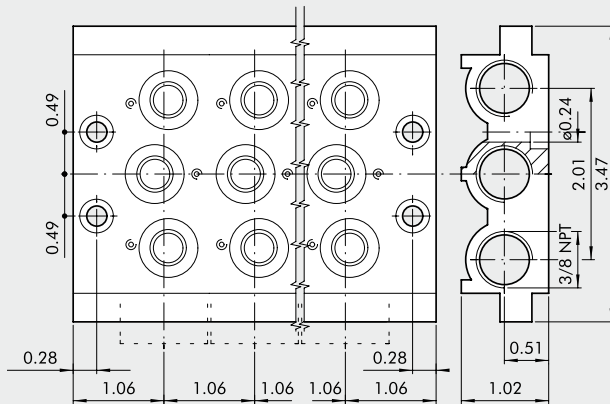
# ACCESSORIES: MULTIPLE BASES FOR SERIES 70 PNV-SOV VALVES

## MULTIPLE BASES 1/8" NPT



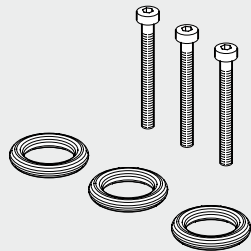
Code	Description	Abbrev.	Weight [lb]
0223000201U	2-position base U	CVM-18-02 U	0.520
0223000301U	3-position base U	CVM-18-03 U	0.708
0223000401U	4-position base U	CVM-18-04 U	0.897
0223000501U	5-position base U	CVM-18-05 U	1.089
0223000601U	6-position base U	CVM-18-06 U	1.294
0223000701U	7-position base U	CVM-18-07 U	1.568
0223000801U	8-position base U	CVM-18-08 U	1.676
0223000901U	9-position base U	CVM-18-09 U	1.857
0223001001U	10-position base U	CVM-18-10 U	2.035

## MULTIPLE BASES 1/4" NPT



Code	Description	Abbrev.	Weight [lb]
0224000201U	2-position base U	CVM-14-02 U	0.653
0224000301U	3-position base U	CVM-14-03 U	0.895
0224000401U	4-position base U	CVM-14-04 U	1.136
0224000501U	5-position base U	CVM-14-05 U	1.376
0224000601U	6-position base U	CVM-14-06 U	1.616
0224000701U	7-position base U	CVM-14-07 U	1.863
0224000801U	8-position base U	CVM-14-08 U	2.108
0224000901U	9-position base U	CVM-14-09 U	2.326
0224001001U	10-position base U	CVM-14-10 U	2.395

## GASKET KIT



Code	Description	Weight [lb]
0226004701	Gasket kit for 1/8" base	0.011
0226005701	Gasket kit for 1/4" base	0.011

# VALVES NAMUR

VALVES

VALVES NAMUR

## TECHNICAL DATA

Operating pressure:			
• monostable, electric	psi	36.3 to 145	
• bistable, electric	psi	14.5 to 145	
• pilot-assisted, electric	psi	Vacuum to 145	
Minimum actuation pressure:			
• monostable, pneumatic	psi	36.3	
• bistable, pneumatic	psi	14.5	
Operating temperature range			
	°F	14 to +140	
Nominal diameter			
	in	0.3	
Conductance C			
	scfm/psi	0.65	
Critical ratio b			
	psi/psi	6.27	
Flow rate at 87 psi ΔP 7.25 psi			
	scfm	26.5	
Flow rate at 87 psi ΔP 14.5 psi			
	scfm	39	
Response time at 87 psi:			
• TRA/TRR monostable, pneumatic at 87 psi	ms	7 / 15	
• TRA/TRR bistable, pneumatic at 87 psi	ms	7 / 7	
• TRA/TRR monostable electric at 87 psi	ms	19 / 45	
• TRA/TRR bistable electric at 87 psi	ms	21 / 21	
Compatibility with oils			
		Please refer to page 5-4 of the technical documentation	

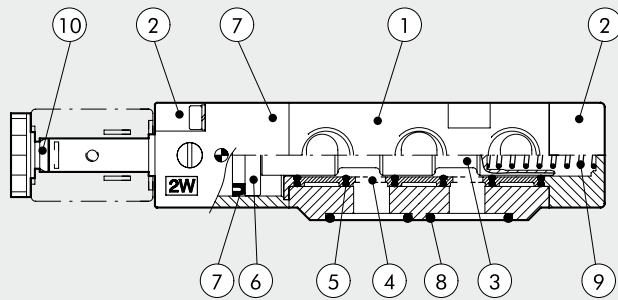


## KEY TO CODES

P N V		A	5	P N		S	O O
FAMILY		DIMENSIONS	FUNCTION		OPERATORS 14	RESETTING (12)	FURTHER DETAILS
PNV	pneumatic	A NAMUR	5	5/2	PN	S	OO 5/2
SOV	electro-pneumatic		4	4/2	SO	B	NC normally closed

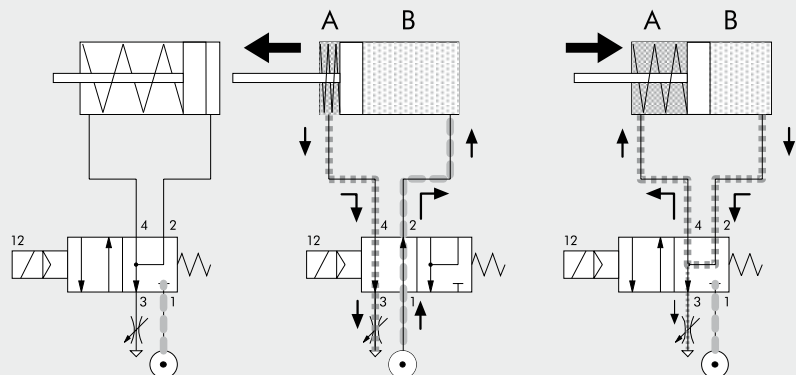
## COMPONENTS

- ① VALVE BODY: Aluminium
- ② CONTROL/BASE: Hostaform®
- ③ SPOOL: chemically nickel-plated aluminium
- ④ DISTANCE PLATES: plastic
- ⑤ GASKETS: NBR
- ⑥ PISTONS: Hostaform®
- ⑦ PISTON GASKET: NBR nitrile rubber
- ⑧ INTERFACE GASKETS: NBR
- ⑨ SPRINGS: special steel
- ⑩ OPERATOR: Brass pipe – Stainless steel core



## FUNCTIONING DIAGRAM 4/2 NAMUR VALVE

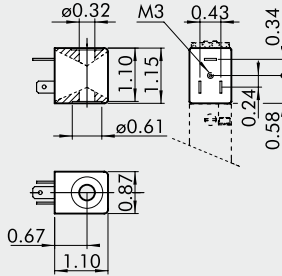
During the piston retraction stage, the air for chamber A is taken from the air leaving chamber B. This prevents the dirty air from getting in from the outside environment.





# COILS AND CONNECTORS FOR SERIES 70 AND NAMUR VALVES

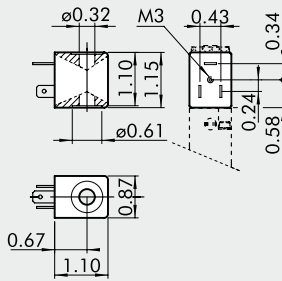
## COILS SIDE 22 mm



- Voltage tolerance: -10% + 15%
- Insulation class: F155
- Degree of protection: IP65 DIN 40050 with connector
- Avoid prolonged exposure to atmospheric agents
- Coil temperature 100% ED: from 131°F at 68°F – Ambient temperature
- According to Atex 94/9 CE rule, group II, category 3 GD

Code	Abbrev.	Nominal voltage	Absorption	
			Inrush	Holding
W0215000151	Coil 22 Ø 8 BA 2W-12VDC	12Vcc	2W	2W
W0215000101	Coil 22 Ø 8 BA 2W-24VDC	24Vcc	2W	2W
W0215000111	Coil 22 Ø 8 BA 3.5VA-24VAC	24V 50/60Hz	5.3VA	3.5VA
W0215000121	Coil 22 Ø 8 BA 3.5VA-110VAC	110V 50/60Hz	5.3VA	3.5VA
W0215000131	Coil 22 Ø 8 BA 3.5VA-220VAC	220V 50/60Hz	5.3VA	3.5VA

## "UL" AND "CSA" COILS SIDE 22 mm

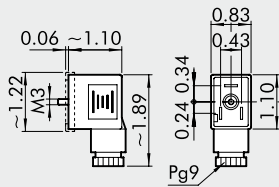


- Voltage tolerance: -10% + 15%
- Insulation class: F155
- Degree of protection: IP65 DIN 40050 with connector
- Avoid prolonged exposure to atmospheric agents
- Coil temperature 100% ED: from 131°F at 68°F – Ambient temperature

Code	Abbrev.	Nominal voltage	Absorption	
			Inrush	Holding
W0215000251	Coil 22 Ø 8 BA 2W-12VDC UR	12Vcc	2W	2W
W0215000201	Coil 22 Ø 8 BA 2W-24VDC UR	24Vcc	2W	2W
W0215000211	Coil 22 Ø 8 BA 3.5VA-24VAC UR	24V 50/60Hz	5.3VA	3.5VA
W0215000221	Coil 22 Ø 8 BA 3.5VA-110VAC UR	110V 50/60Hz	5.3VA	3.5VA
W0215000231	Coil 22 Ø 8 BA 3.5VA-220VAC UR	220V 50/60Hz	5.3VA	3.5VA

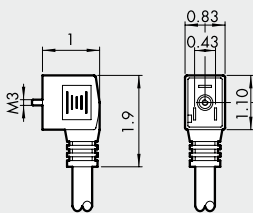


## CONNECTORS FOR COIL SIDE mm

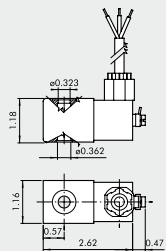


Code	Type	Colour	Ø Cable
W0970510011	Standard	Black	PG9
W0970510012	LED 24V	Transparent	PG9
W0970510013	LED 110V	Transparent	PG9
W0970510014	LED 220V	Transparent	PG9
W0970510015	LED + VDR 24V	Transparent	PG9
W0970510016	LED + VDR 110V	Transparent	PG9
W0970510017	LED + VDR 220V	Transparent	PG9
W0970510070	Atex II 2 GD	Black	PG9

## PRE WIRED DIN CONNECTORS 6 FEET CABLE



Code	Description
888776	DIN connector 110VAC led
888777	DIN connector standard black
888778	DIN connector 24VDC

**KIT COIL EEXM**


Code	Description
0227606913	Kit for coil 30 24 VDC EEXMT5 cable 118 in
0227606915	Kit for coil 30 24 VDC EEXMT5 cable 197 in
0227608013	Kit for coil 30 24 VAC EEXMT5 cable 118 in
0227608015	Kit for coil 30 24 VAC EEXMT5 cable 197 in
0227608023	Kit for coil 30 110 VAC EEXMT5 cable 118 in
0227608025	Kit for coil 30 110 VAC EEXMT5 cable 197 in
0227608033	Kit for coil 30 230 VAC EEXMT5 cable 118 in
0227608035	Kit for coil 30 230 VAC EEXMT5 cable 197 in

According to Atex 94/9 CE rule,  
 Ⓢ II 2G Ex mb IIC T4/T5 Gb  
 Ⓢ II 2D Ex tb IIIC T130/T95 °C IP66 Db

**N.B.:** It's not possible to mount valves having these coils on bases or on manifolds, because the width of 29.5 mm is higher than the distance between the valves. Special bases can be manufactured on request.

**KIT COILS SIDE 22 IP65**


Code	Description
0222100100	Kit for coils 22 - IP65

Improved IP65 protection, even after prolonged exposure to atmospheric agents.  
 Applicable to valves with a technopolymer control.

**NOTES**