

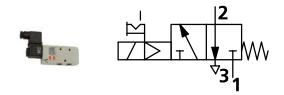
# 3/2-way valve

electropneumatic, with connector and coil, series 70 low temperature

## PLUS

Art. No. 150023

Type No. 517.TT.32.14.NC.24A



Exemplary illustration

The series 70 low temperature valves in electropneumatic version complement our range of traditional way valves of series 70. They represent a selection of the most commonly used electropneumatic way valves, which are manufactured with components for special low temperature applications. These valves have a wide range of applications as bushing valves, direct mounting on the cylinder with special adapters or as series valves with multi-base plates and individual interlinking plates (supply strips).

## **Technical data**

Function	3/2 NC
Operation	monostable
Control air supply	internal
Connection	G 1/4 IT
Voltage	24 V AC
Frequency	50/60 Hz
DN	7.5
Flow rate measurement 1	flow rate at 6 bar and $\Delta p$ 0.5 bar
Flow rate 1	750 Nl/min
Flow rate measurement 2	flow rate at 6 bar and $\Delta p$ 1 bar
Flow rate 2	1100 NI/min
Medium	filtered, dry and unlubricated compressed air
Required purity class in accordance w. ISO 8573-1	4.2.3
Min. operating pressure at -40 to -10 °C	5 bar
Min. operating pressure at -10 to 60 °C	3 bar
Operating pressure	max. 10 bar
Medium temperature	-40 to 60 °C
Ambient temperature	-40 to 50 °C
Valve body	aluminium
Piston	nickel-plated aluminium
Sealant	NBR



## **Technical data**

Spring	special steel
Control air port	- ·
Manual control	latching

Series 70 low temperature valves require the use of 22 mm coils with 5 W or 5 VA.

## **Commercial data**

Customs tariff number	84818079
Country of origin	IT
eCl@ss 5.1.4	27291501
eCl@ss 9.0	27291390
UNSPSC_Code_v190501	40141603
UNSPSC_CodeDesc_v190501	Pneumatic valves



# VALVES SERIES 70

**B1** 

VALVES

**VALVES SERIES 70** 

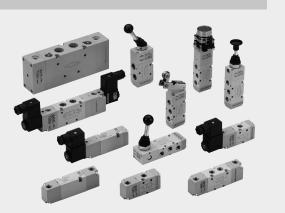
The Series 70 forms part of Metal Work's full range of traditional valves.

They are available in sizes 1/8", 1/4", 3/8" and 1/2", versions 3/2, 5/2, 5/3 and double 3/2, with mechanical, manual, pneumatic and electric drives.

They can be installed in line, onto a wall, on the cylinder (using a special bracket) or in series (on a multiple or modular base) to suit all possible applications.

A range of valves (Series 70 LT) designed using components for specific low-temperature applications is now available for the most commonly used types and sizes.

These highly reliable valves comply with the main applicable standards, including Atex, ISO 13489 and SIL, as stated in the documents and certificates available online.

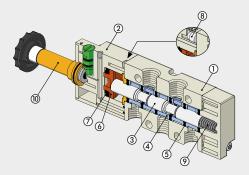


TECHNICAL DATA		1/8″	1/4″	3/8″	1/2″
Thread on the valve ports		1/8″	1/4″	3/8″	1/2″
Operating pressure series 70 versions monostable and bistable differential	bar		2.51	to 10	
bistable			1 tc	5 10	
asserved			vacuur	n to 10	
Operating pressure series 70 LT (low temp	perature) versions bar				
hand operated		vacuun	n to 10		
pneumatic and solenoid/pneumatic	t = -40°C to -10°C	5 to	10		
	t = -10°C to +60°C	3 to	10		
Minimum pilot pressure	bar		2	.5	
Operating temperature range	°C				
series 70 versions			-10 t	o +60	
series 70 LT (low temperature) versions			-40 t	o +60	
Nominal diameter	mm	5	7.5	13.3	15
Conductance C	Nl/min · bar	121.43	264.26	505.52	971.43
Critical ratio b	bar/bar	0.32	0.27	0.32	0.43
Flow rate at 6 bar ∆P 0.5 bar	NI/min	400	750	1560	3200
Flow rate at 6 bar ∆P 1 bar	NI/min	550	1100	2150	4600
Installation				nended for bistable valves sub	
Fluid				ication, if used, must be cont	
		For series 70 LT (low-t		recommended to use of p	erfetamente dried air.
Recommended lubricant				JNI FD 22	
		For series 70 LT	(low-temperature) it is no	ot expected to be used with	n lubricated air.
Maximum coil nut torque	Nm			1	
Compatibility with oils			See cho	upter Z1	

#### **COMPONENTS SERIES 70**

- VALVE BODY: Aluminium
- ② CONTROL/END CAP: plastic

- 2 CONTROL/END CAP: plastic
  3 SPOOL: chemically nickel-plated aluminium
  4 DISTANCE PLATES: plastic
  5 GASKETS: NBR
  6 PISTONS: Hostaform®
  7 PISTON GASKET: NBR
  8 FILTER: plastic
  9 SPRINGS: special steel
  10 OPERATOR: Brass pipe Stainless steel core



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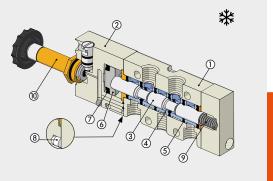
VALVES

**VALVES SERIES 70** 



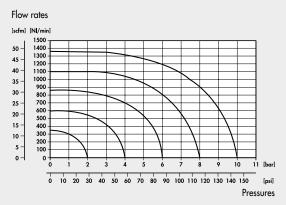
### COMPONENTS SERIES 70 LT (LOW TEMPERATURE)

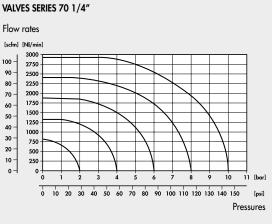
- 1) ALVE BODY: aluminium
- ALVE BODT: aluminium
   CONTROL/END CAP: aluminium
   SPOOL: chemically nickel-plated aluminium
   DISTANCE PLATES: plastic
- 5 GASKETS: HNBR
- 6 PISTONS: aluminium
- ⑦ PISTON GASKET: HNBR
- 8 FILTER: plastic
- ③ SPRINGS: special steel
- OPERATOR: brass pipe Stainless steel core (version specific for low-temperature applications)



#### FLOW CHARTS

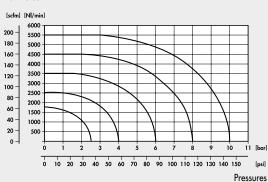
### VALVES SERIES 70 1/8"



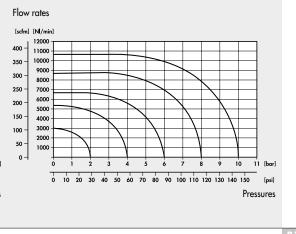


### VALVES SERIES 70 3/8"





#### VALVES SERIES 70 1/2"



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VALVES

VALVES SERIES 70 LT (LOW TEMPERATURE)



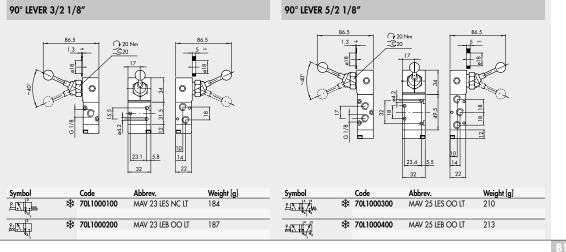
## **VALVES SERIES 70 LT (LOW TEMPERATURE)**

TECHNICAL DATA		1/8″	1/4″	3/8″	
Operating pressure standard	bar				_
hand operated		١	acuum to 10	0	
pneumatic and solenoid/pneumatic t = -40°	C to -10°C		5 to 10		
t = -10°C	to +60°C		3 to 10		
Operating temperature range	°C		-40 to +60		
Nominal diameter	mm	5	7.5	13.3	
Conductance C NI	/min · bar	121.43	264.26	505.52	
Critical ratio b	bar/bar	0.32	0.27	0.32	the state of the second
Flow rate at 6 bar ∆P 0.5 bar	Nl/min	400	750	1560	1000
Flow rate at 6 bar ΔP 1 bar	Nl/min	550	1100	2150	
PNEUMATIC					0 0 0
Minimum pilot pressure	bar				
t = -40°C to -10°C			5		
t = -10°C to +60°C			3		
TRA / TRR monostable at 6 bar (at 20°C)	ms	6/15	7/15	5/28	
TRA / TRR bistable at 6 bar (at 20°C)	ms	7/7	7/7	13/13	
SOLENOID/PNEUMATIC					
TRA / TRR monostable at 6 bar (at 20°C)	ms	15/35	19/45	21/72	θ
TRA / TRR bistable at 6 bar (at 20°C)	ms	20/20	21/21	18/18	1
Coil voltage values			12; 24 VDC		
0		24: 110	220V AC 5	50/60Hz	
Power $t = -40^{\circ}$ C	to -10°C		(DC) - 5 VA		
t = -10°C	to +60°C	2 W (	DC) - 3.5 VA	A (AC)	
Voltage tolerance	%		-10 to +15		2 st.
Insulation class			F 155		1 - Aller
Maximum coil nut torque	Nm		1		A ES: 1021102
Hand operator			Bistable		
Notes: after a long stop and with very low tempera	tures the mo	vement of th	e first		6
drives may be slower. It recommends the use of per					

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B 111/		

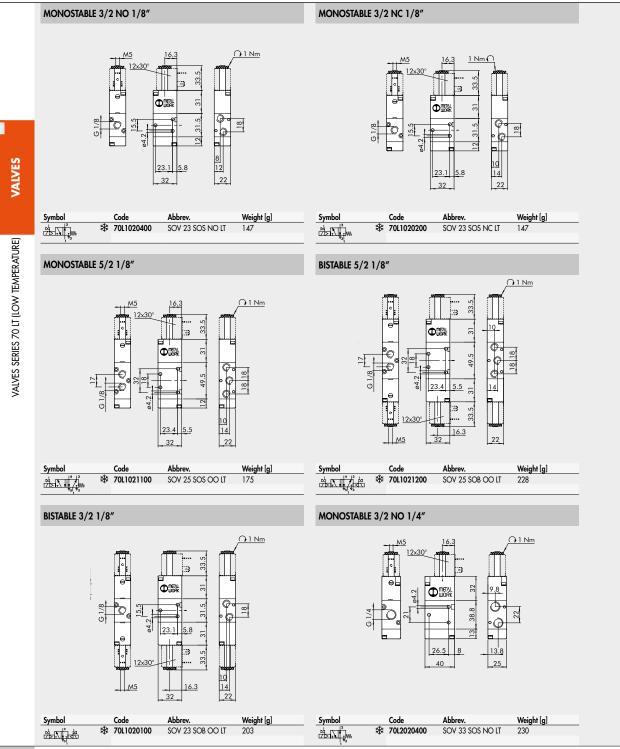
PNV	2	3	PN	S	00	LT
FAMILY	DIMENSIONS	FUNCTION	OPERATORS 14	RESETTING (12)	FURTHER DETA	ALS
MAV manual valves PNV pneumatic valves SOV solenoid/ pneumatic	2 1/8" 3 1/4" C 3/8"	3 3/2 5 5/2 6 5/3	LE leva 90° PN pneumatic SO solenoid	<ul> <li>S mechanical springs</li> <li>B bistable</li> <li>O stable for 5/3</li> </ul>	OO         no indication           NC         normally closed           NO         normally open           CC         closed centres           OC         open centres           PC         pressure centres	LT low temperature

## VALVES SERIES 70 LT, HAND OPERATED (LOW TEMPERATURE)





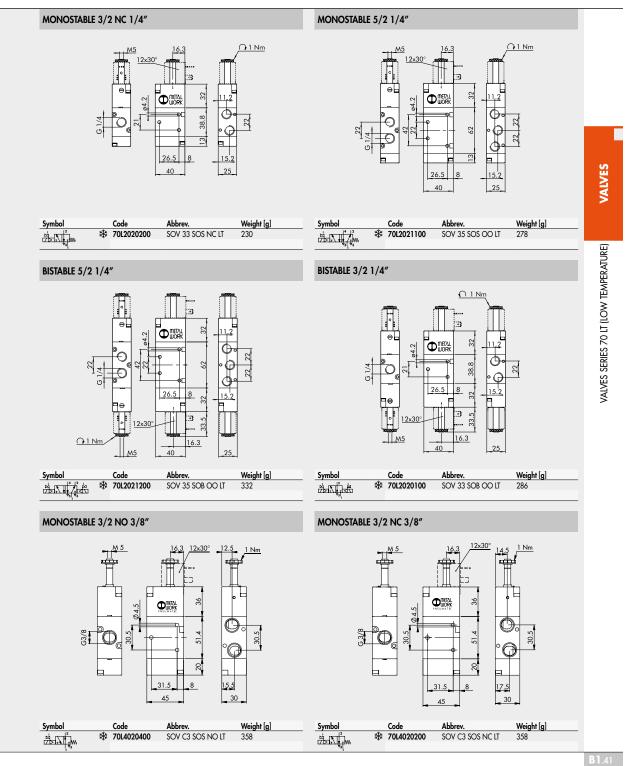
## VALVES SERIES 70 LT, SOLENOID/PNEUMATIC (LOW TEMPERATURE)



**B1**.40



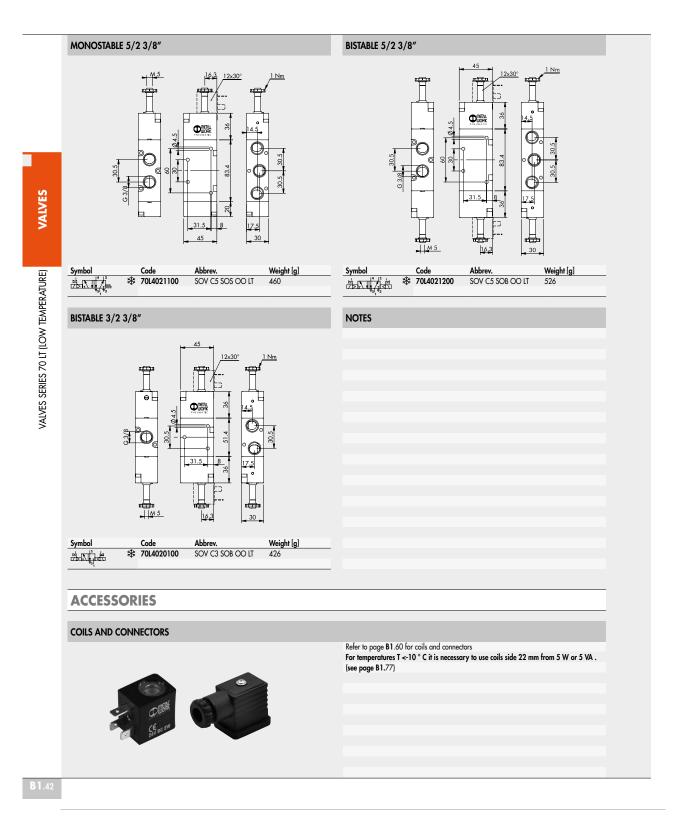




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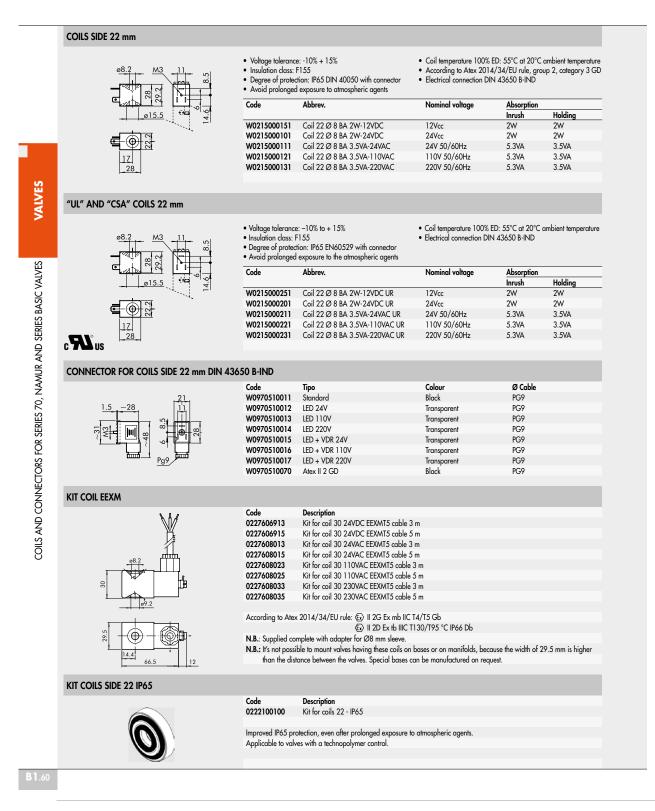




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## COILS AND CONNECTORS FOR SERIES 70, NAMUR AND SERIES BASIC VALVES







		Р	NEU/	MATI
NC/NO ADAPTER FOR PIV.T VALVES				
	Code	Description	Abbrev.	Weight [g]
	W0400101190	NC/NO adapter	I-9000	15
_22				
BASE BLANKING PLATE FOR PIV.T VALVES, UNUSED POSITIONS				
. 8	Code	Description	Abbrev.	Weight [g]
	W0400112000	Blanking plate	B6000	5
4				
MULTIPLE BASES FOR PIV.B VALVES				
	Code	Description	Abbrev.	Weight [g]
	W0400101201	Base 1 position	B4001	42
	W0400101202	Base 2 positions	B4002	94
<u>G1/8</u> (9) (9) <u>G1/4</u>	W0400101203	Base 3 positions	B4003	142
	W0400101204	Base 4 positions	B4004	188
17.5 33 33 17.5 v 18	W0400101205 W0400101206	Base 5 positions	B4005 B4006	234 280
	W0400101208 W0400101207	Base 6 positions Base 7 positions	B4008 B4007	326
	W0400101208	Base 8 positions	B4008	372
33	W0400101209	Base 9 positions	B4009	418
BASE BLANKING PLATE FOR PIV.B VALVES, UNUSED POSITIONS				
32	Code W0400112001	Description Blanking plate		Weight [g] 14
04.5	W0400112001	bidriking pidle		14
8 8 8 M4				
_24				
∞⊨				
COILS, SIDE 22 mm FOR PIV.I SOLENOID VALVES, OPERATOR Ø 8				
	N. L. L			
	<ul> <li>Voltage tolerand</li> <li>Insulation class:</li> </ul>			
in		ction: IP65 – EN60529 with c	connector	
	<ul> <li>Avoid prolonge</li> </ul>	d exposure to the atmospheric	agents.	
		emperature at 100% use: 70° ex 2014/34/EU rule, group		nperature
		ction DIN 43650 B-IND	2, calogory 5 GD	
<u>-    -  -  -  -  -  -  -  -  -  -  -  - </u>			Mandard	Abaanst
	Code	Abbrev.	Nominal voltage	Absorption Inrush Holding
	W0215000051	Coil 22 Ø 8 5W-12VDC	12Vcc	5W 5W
117	W0215000001	Coil 22 Ø 8 5W-24VDC	24Vcc	5W 5W
		C 100 C 0 D 4 0 0 4 C	24V 50/60Hz	8VA 5VA
	W0215000011			
	W0215000021	Coil 22 Ø 8 5VA-24VAC Coil 22 Ø 8 5VA-110VAC Coil 22 Ø 8 5VA-220VAC	110V 50/60Hz 220V 50/60Hz	8VA 5VA 8VA 5VA



## Accessories

	Art. No.	Type No.
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 110 V AC, 50/60 Hz, 5 VA	118634	400-517-07
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 230 V AC, 50/60 Hz, 5 VA	118635	400-517-17
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 12 V DC, 5 W	118636	400-517-41
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 24 V DC, 5 W	118637	400-517-42
plug connector with LED, 230 V, 22 mm, type B, housing transparent, with seal and screw	117314	1920.9PL.17
plug connector with LED, 24 V, 22 mm, type B, housing transparent, with seal and screw	117316	1920.9PL.42
plug connector with LED, varistor 230 V, 22 mm, type B, housing transparent, with seal and screw	117317	1920.9PLV17
plug connector with LED, varistor 24 V, 22 mm, type B, housing transparent, with seal and screw	117318	1920.9PLV42
plug connector, 22 mm, type B, housing standard black, ATEX II 2 GD, with seal and screw	151011	1920.9PL110
plug connector with LED, 110 V, 22 mm, type B, housing transparent, with seal and screw	129849	1920.9PLV110
Supply strip for the way valves, mounting bracket set, height 120 mm, for valves connection G 1/4, exhaust/supply connection G 3/8	106607	518.120-14
Supply strip for the way valves, mounting bracket set, height 60 mm, for valves connection G 1/4, exhaust/supply connection G 3/8	106608	518.60-14
Supply strip for the way valves, mounting bracket set, height 30 mm, for valves connection G 1/4, exhaust/supply connection G 3/8	106609	518.30-14
Supply strip for the way valves, supply strip with 2 valve positions, for valves connection G 1/ 4, exhaust/supply connection G 3/8	106616	519.02-14
Supply strip for the way valves, supply strip with 3 valve positions, for valves connection G 1/ 4, exhaust/supply connection G 3/8	106617	519.03-14
Supply strip for the way valves, supply strip with 4 valve positions, for valves connection G 1/ 4, exhaust/supply connection G 3/8	106618	519.04-14
Supply strip for the way valves, supply strip with 5 valve positions, for valves connection G 1/ 4, exhaust/supply connection G 3/8	106619	519.05-14
Supply strip for the way valves, supply strip with 6 valve positions, for valves connection G 1/ 4, exhaust/supply connection G 3/8	106620	519.06-14
Supply strip for the way valves, supply strip with 7 valve positions, for valves connection G 1/ 4, exhaust/supply connection G 3/8	106621	519.07-14
Multi-base plate for the way valves, with 2 valve positions, for valves connection G 1/4, exhaust/supply connection G 3/8	106632	520.02-14
Multi-base plate for the way valves, with 3 valve positions, for valves connection G 1/4, exhaust/supply connection G 3/8	106633	520.03-14
Multi-base plate for the way valves, with 4 valve positions, for valves connection G 1/4, exhaust/supply connection G 3/8	106634	520.04-14
Multi-base plate for the way valves, with 5 valve positions, for valves connection G 1/4, exhaust/supply connection G 3/8	106635	520.05-14
Multi-base plate for the way valves, with 6 valve positions, for valves connection G 1/4, exhaust/supply connection G 3/8	106636	520.06-14
Multi-base plate for the way valves, with 7 valve positions, for valves connection G 1/4, exhaust/supply connection G 3/8	106637	520.07-14
Multi-base plate for the way valves, with 8 valve positions, for valves connection G 1/4, exhaust/supply connection G 3/8	106638	520.08-14
Multi-base plate for the way valves, with 9 valve positions, for valves connection G 1/4, exhaust/supply connection G 3/8	106639	520.09-14



## Accessories

	Art. No.	Type No.
Multi-base plate for the way valves, with 10 valve positions, for valves connection G 1/4, exhaust/supply connection G 3/8	106640	520.10-14
Modular base, for valves connection G 1/4, manifold base system for valves series 70/basic	146739	0226005150
Terminal outlet w/o seals, for valves G 1/4, exhaust/supply G 1/4, manifold base system for valves series 70/basic	146740	0226005201
Terminal inlet with seals, for valves G 1/4, exhaust/supply G 1/4, manifold base system for valves series 70/basic	146741	0226005200
Terminal intermediate/upper supply, for valves G 1/4, exhaust/supply G 1/4, manifold base system for valves series 70/basic	146742	0226005300

## **Spareparts**

	Art. No.	Type No.
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 24 V AC, 50/60 Hz, 5 VA	118633	400-517-01
plug connector, 22 mm, type B, housing standard black, with seal and screw	117313	1920.9P
3/2-way valve low temperature, electropneumatic, monostable, G 1/4, NC, pmax 10 bar, T = - 40 60 °C, alum., w/o connector/coil	149934	70L2020200