

SUMMARY AUXILIARY VALVES



- QUICK EXHAUST VALVE SERIES VSR

E4.2



- STOP VALVE SERIES STP

E4.3



- SLIDE VALVE SERIES VCS

E4.6



- CIRCUIT SELECTOR VALVE SERIES VOR

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- CHECK VALVE SERIES VNR

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- PNEUMATIC LOGIC
- TIMER

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E4.11

QUICK EXHAUST VALVE SERIES VSR

New, more compact and lighter version.

Used to evacuate air in the cylinder quickly, which increases cylinder speed.

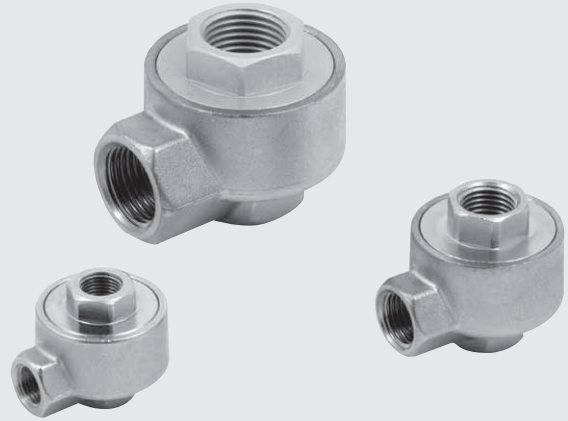
- Temperature 0-80°C (32°-176°F)
- Max. pressure 12 bar (1200 KPa)
- Min. pressure 0.5 bar (50 KPa)

Nominal flow rate (P → A) $\Delta P = 1$ bar [Nl/min]:

Pm [bar]	1/8	1/4	1/2
2.5	550	800	2400
4	700	1200	2800
6.3	900	1400	3600

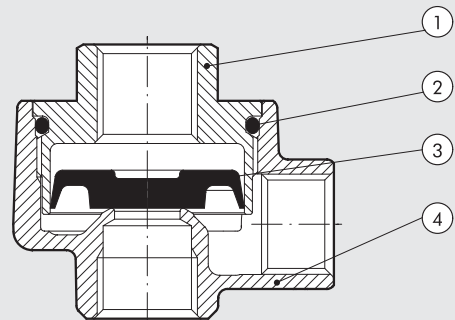
Empty flow rate (A → R) [Nl/min]:

Pm [bar]	1/8	1/4	1/2
2.5	800	1500	4400
4	1200	2450	6300
6.3	1800	3500	8000

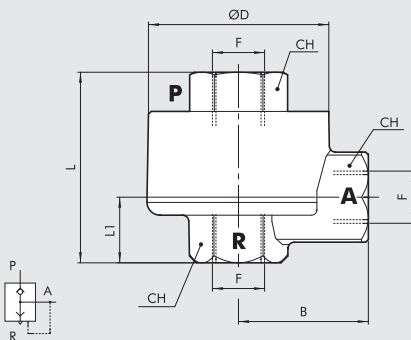


COMPONENTS

- ① Cap: nickel-plated brass for 1/8-1/4
anodised aluminium for 1/2
- ② O-ring: NBR
- ③ Lip-seal: Polyurethane
- ④ Body: nickel-plated brass

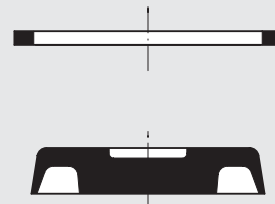


OVERALL DIMENSIONS AND ORDERING CODES



Code	Ref.	F	B	D	CH	L	L1	Weight [g]
9101201	VSR 1/8	1/8	18.5	29.5	14	32.5	13.4	80
9201201	VSR 1/4	1/4	23.3	34	17	40.5	16.9	115
9401201	VSR 1/2	1/2	35	47	27	45.7	16.2	230

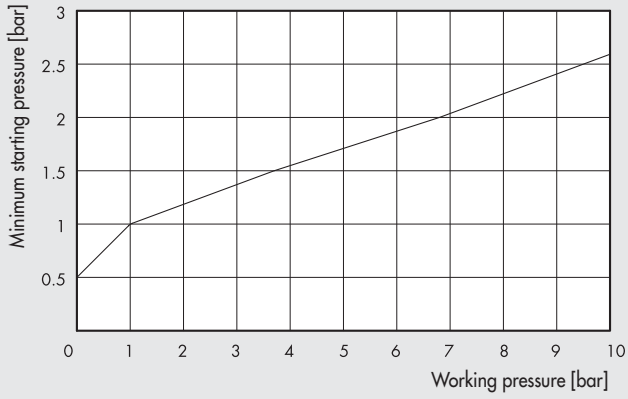
SPARE GASKETS



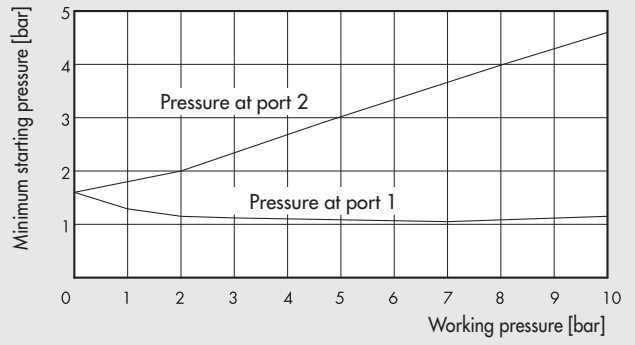
Code	Ref.
9151501	Spare gaskets VSR 1/8
9251501	Spare gaskets VSR 1/4
9451501	Spare gaskets VSR 1/2

STARTING PRESSURE

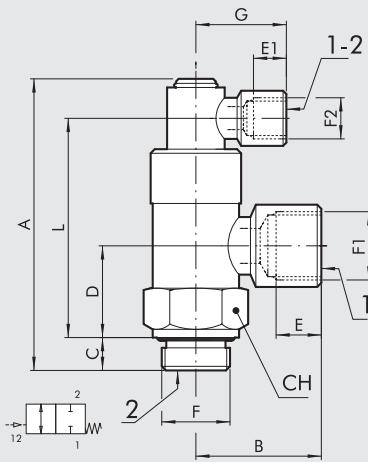
UNIDIRECTIONAL VALVE



BIDIRECTIONAL VALVE

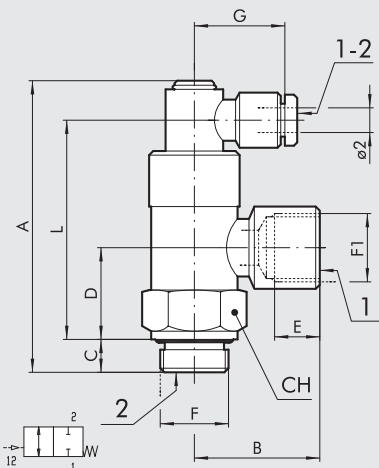


BIDIRECTIONAL THREADED STOP VALVE



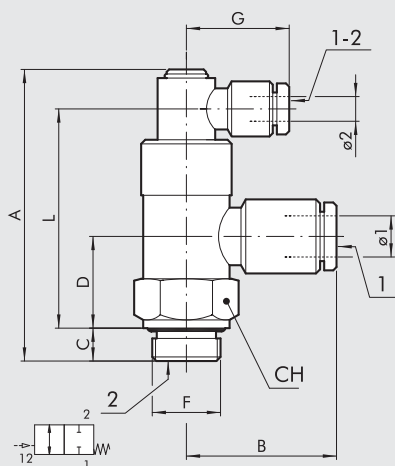
Code	Description	F	F1	F2	A	B	C	D	E	E1	G	L	CH
W6001101001	STP-B 1/8 108	G 1/8	G 1/8	G 1/8	57.5	21.5	6.9	16	7	7	21.5	41.9	14
W6001111011	STP-B 1/4 104	G 1/4	G 1/4	G 1/8	65.7	25.5	8	19.5	8	7	21.5	48.1	17
W6001121021	STP-B 3/8 138	G 3/8	G 3/8	G 1/8	70.9	31	8	22.3	10	7	21.5	53.3	22
W6001131031	STP-B 1/2 112	G 1/2	G 1/2	G 1/8	83.5	40	12	27	14	7	21	61.5	27
W6001141041	STP-B 3/4 134	G 3/4	G 3/4	G 1/8	93.5	39	12	32.5	16	7	21	74	32

THREAD + PIPE BIDIRECTIONAL STOP VALVE



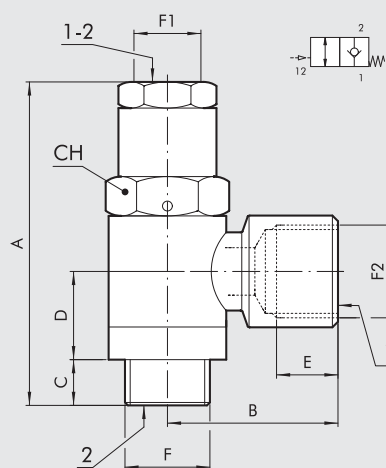
Code	Description	F	F1	ø 2	A	B	C	D	E	G	L	CH
W6001101002	STP-BX 1/8-1/8 04	G 1/8	G 1/8	4	57.5	21.5	6.9	16	7	25	41.9	14
W6001111012	STP-BX 1/4-1/4 04	G 1/4	G 1/4	4	65.7	25.5	8	19.5	8	25	48.1	17
W6001121022	STP-BX 3/8-3/8 04	G 3/8	G 3/8	4	70.9	31	8	22.3	10	25	53.3	22

PIPE BIDIRECTIONAL STOP VALVE



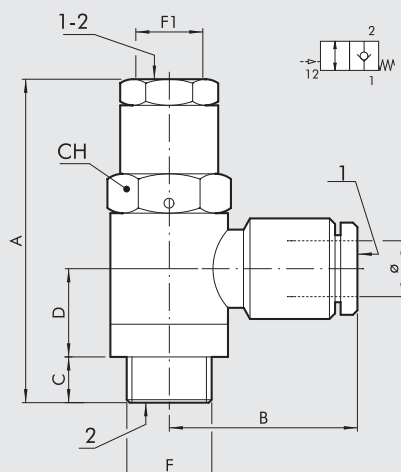
Code	Description	F	Ø 1	Ø 2	A	B	C	D	G	L	CH
W6001101106	STP-B 1/8 006	G 1/8	6	4	57.5	25	6.9	16	25	41.9	14
W6001111106	STP-B 1/4 006	G 1/4	6	4	65.7	27.5	8	19.5	25	48.1	17
W6001111108	STP-B 1/4 008	G 1/4	8	4	65.7	32	8	19.5	25	48.1	17
W6001121108	STP-B 3/8 008	G 3/8	8	4	70.9	31.5	8	22.3	25	53.3	22
W6001121110	STP-B 3/8 010	G 3/8	10	4	70.9	36.5	8	22.3	25	53.3	22
W6001131112	STP-B 1/2 012	G 1/2	12	4	83.5	41.5	12	27	25	71.5	27

UNIDIRECTIONAL THREADED STOP VALVE



Code	Description	F	F2	A	B	C	D	E	F1	CH
W6001001001	STP-U 1/8 108	G 1/8	G 1/8	43.5	21.5	6	13	7	M5	14
W6001011011	STP-U 1/4 114	G 1/4	G 1/4	49.5	25.5	7	13.5	8	G 1/8	17
W6001021021	STP-U 3/8 138	G 3/8	G 3/8	54.9	31	9	15	10	G 1/8	19

UNIDIRECTIONAL PIPE STOP VALVE



Code	Description	F	Ø	A	B	C	D	F1	CH
W6001001106	STP-U 1/8 006	G 1/8	6	43.5	25	6	13	M5	14
W6001011106	STP-U 1/4 006	G 1/4	6	49.5	27.5	7	13.5	G 1/8	17
W6001011108	STP-U 1/4 008	G 1/4	8	49.5	32	7	13.5	G 1/8	17
W6001021108	STP-U 3/8 008	G 3/8	8	54.9	31.5	9	15	G 1/8	19
W6001021110	STP-U 3/8 010	G 3/8	10	54.9	36.5	9	15	G 1/8	19
W6001031112	STP-U 1/2 012	G 1/2	12	61.4	41.5	10	17	G 1/8	24

SLIDE VALVE SERIES VCS

The 3/2 slide valve is normally used as a circuit on-off valve. When the ring nut is moved back, the system downstream is relieved; when the ring nut is moved forward, the system is supplied with compressed air.

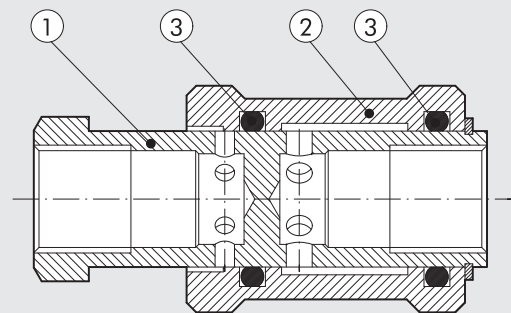


TECHNICAL DATA

		1/8"	1/4"	3/8"	1/2"
Operating pressure		0 - 10 bar (0 - 1 MPa)			
Operating temperature range	°C	-10 to + 80			
Fluid		Lubricated or unlubricated filtered air			
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar	Nl/min	430	680	1400	2200
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar	Nl/min	630	1040	2070	3330
Conductance C	Nl/min · bar	170	247	537	833
Critical ratio b	bar/bar	0.2	0.3	0.1	0.2

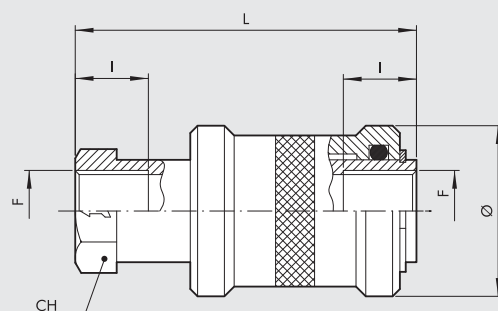
COMPONENTS

- ① Body: chromium-plated brass
- ② Ring nut: anodized aluminium
- ③ Seals: NBR



DIMENSIONS AND ORDERING CODES

Code	Description	F	Ø	I	L	CH
W0970050001	Slide valves 3/2	1/8"	25	10	48	11
W0970050002	Slide valves 3/2	1/4"	30	12	58	19
W0970050003	Slide valves 3/2	3/8"	35	12	68	22
W0970050004	Slide valves 3/2	1/2"	40	15	80	27



CIRCUIT SELECTOR VALVE SERIES VOR

**METAL
WORK**[®]
P N E U M A T I C

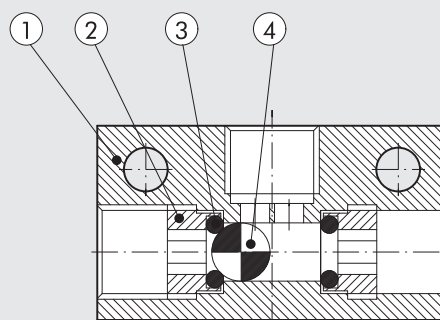
Circuit selector valves select two separate input signal without creating reciprocal interference, giving a single output signal.



TECHNICAL DATA		1/8"		1/4"	
		Nl/min	500	1300	
Nominal flow rate at 6.3 bar ΔP 1 bar	Nl/min	500		1300	
Operating temperature range	$^{\circ}C$		-10 to + 80		
	$^{\circ}F$		14 to 176		
Operating pressure	bar		2 - 10		
	MPa		0.2 - 1		
Fluid		Lubricated or unlubricated filtered air			

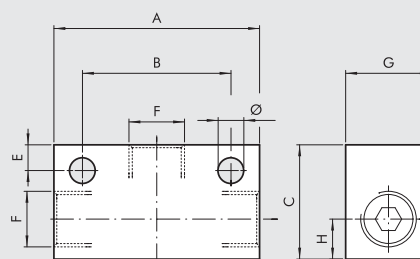
COMPONENTS

- ① Body: passivated aluminium
- ② Insert: brass
- ③ Seal: NBR
- ④ Ball: stainless steel



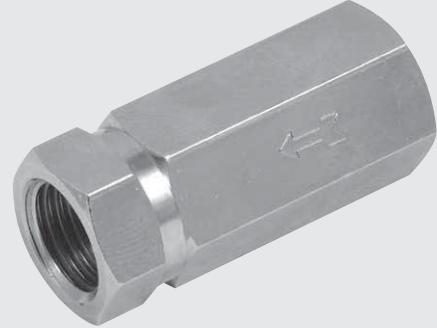
DIMENSIONS AND ORDERING CODES

Code	Description	A	C	G	H	E	B	F	\varnothing
W3603000001	VOR 1/8	36	20	15	7.5	4	25	G 1/8	4.5
W3603000002	VOR 1/4	43	25	20	8.5	6.5	25	G 1/4	4.5



CHECK VALVE SERIES VNR

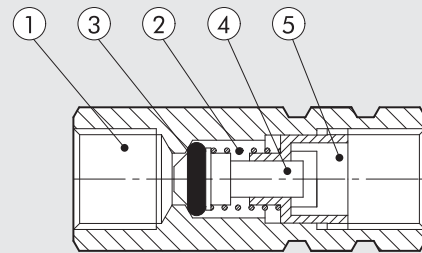
This allow air flow in only one of the two directions.



TECHNICAL DATA		1/8"	1/4"
Ports		G 1/8"	G 1/4"
Nominal diameter	mm	5.2	7
Nominal flow rate	NI/min	900	1100
Operating temperature range	°C	-10 to + 70	
	°F	14 to 158	
Operating pressure	bar	2 - 10	
	MPa	0.2 - 1	
Opening pressure	bar	0.05 (5 KPa)	
Fluid		Lubricated or unlubricated filtered air	

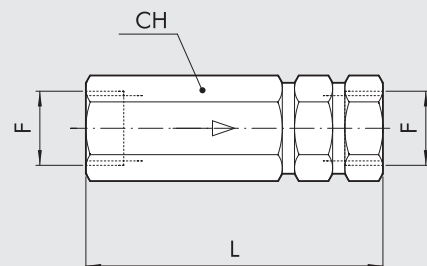
COMPONENTS

- ① Body: OT58 brass
- ② Valve spring: steel
- ③ Seal: NBR
- ④ Stem with OT58 brass valve
- ⑤ Stem insert: OT58 brass



DIMENSIONS AND ORDERING CODES

Code	Description	F	L	CH
W3601000001	VNR 1/8	1/8	35	13
W3601000002	VNR 1/4	1/4	41	17



PNEUMATIC LOGIC

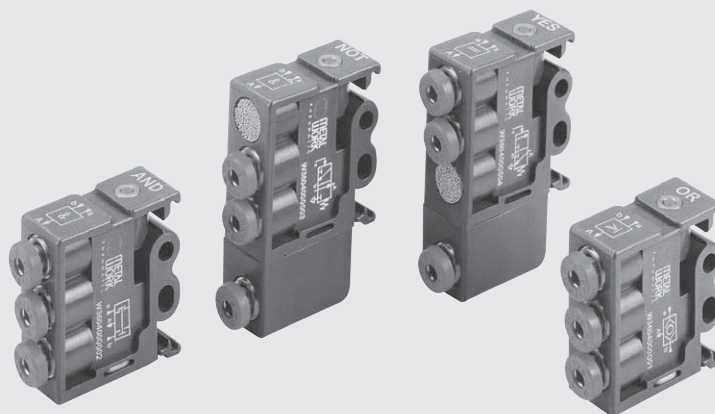


Metal Work logic elements are available with 5 different functions:

OR, AND, NOT, YES, MEMORY.

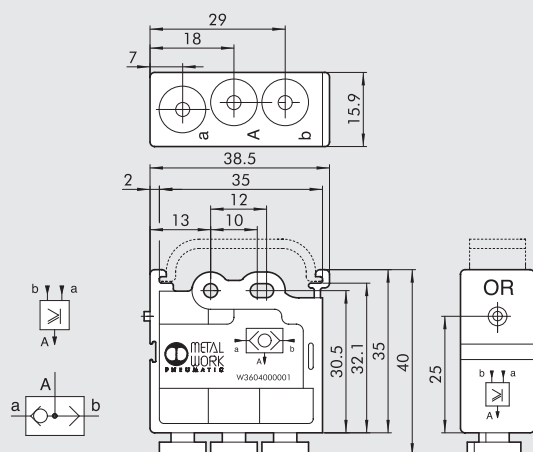
Main features common to all elements:

- Adaptor for Ω bar (DIN EN 50022) integral with the body.
- Built-in pressure indicator.
- Pipe locking system using $\varnothing 4$ built-in fittings.



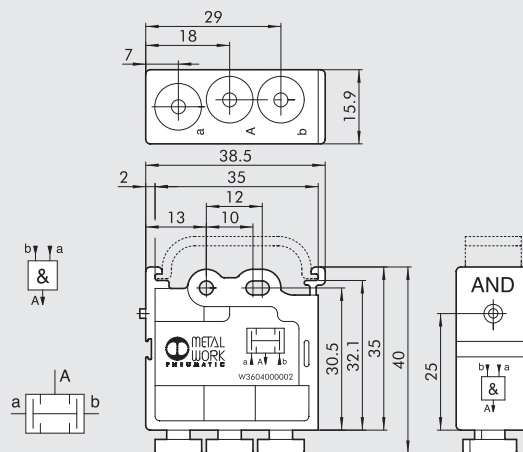
TECHNICAL DATA	
Operating temperature	°C
Valve fitting	Push-in fitting for $\varnothing 4$ pipe
Pressure range	bar
	OR - AND: from 1.5 to 8 bar
	YES-NOT - MEMORY: from 0 to 8 bar, pilot pressure from 1.5 to 8 bar
	NOT: 6 bar switching threshold = 0.4
Nominal diameter	mm
Flow rate at 6 bar (0.6 MPa-87 psi) ΔP 1 bar (0.1 Mpa-14.5 psi)	NI/min
Fluid	2.7
Recommended lubricant	100
Actionment	Lubricated or unlubricated filtered compressed air; must be uninterrupted when lubricated
Reset	ISO and UNI FD22
	Via compressed air
	AND-OR: via compressed air
	YES-NOT via mechanical spring
	MEMORY: via compressed air
Installation	In any position
Mounted	On Omega bar (DIN EN 50022) size 35 x 7 or 35 x 15
	Wall-mounted with $\varnothing 4.2$ holes
MATERIALS	
Body	Technopolymer
Spool	Aluminium
Seal	NBR

LOGIC ELEMENT: OR



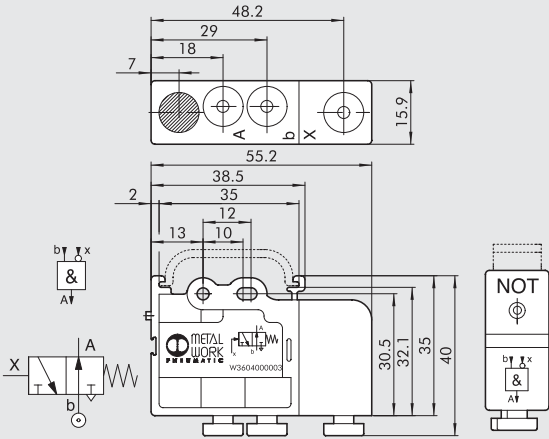
Code W3604000001 Description OR - logic product

LOGIC ELEMENT: AND



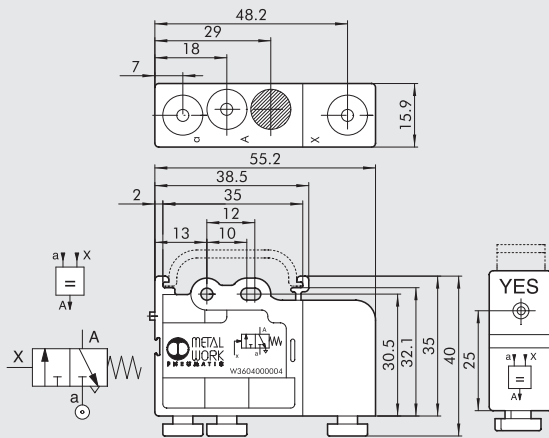
Code W3604000002 Description AND - logic sum

LOGIC ELEMENT: NOT



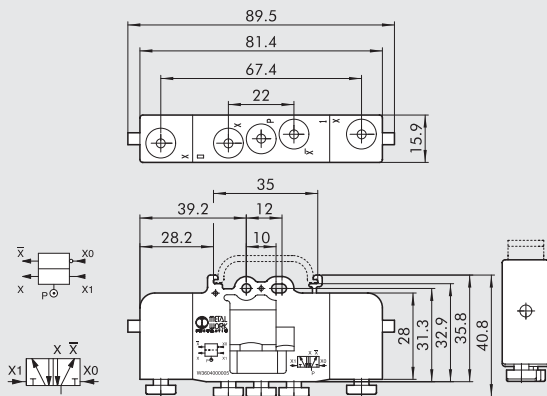
Code	Description
W360400003	NOT - Negation

LOGIC ELEMENT: YES



Code	Description
W360400004	YES - Affirmation

LOGIC ELEMENT: MEMORY



Code	Description
W360400005	Memory

NOTES

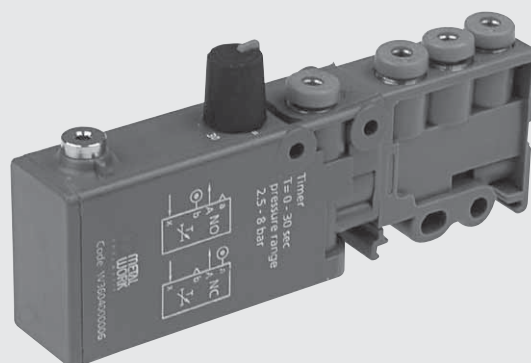
TIMER

The Timer is part of Metal Work range of logic elements, which also includes OR, AND, NOT, YES, MEMORY.

The value of the signal output delay is set by rotating a knob. It can work both as 3/2 NC and 3/2 NO, depending on whether feeding is through port "a" or port "b".

The maximum delay time can be increased by unscrewing a plug and connecting the port to an external auxiliary tank.

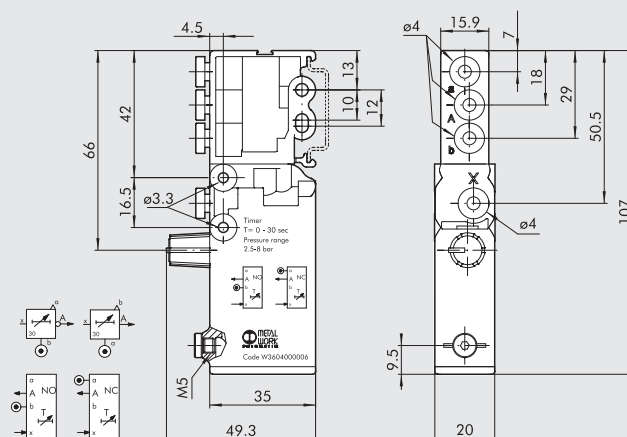
- Adaptor for Ω bar (DIN EN 50022) integrated in the body.
- Pressure indicator via an orange pin
- Pipe clamping system using $\varnothing 4$ built-in push-on fittings.



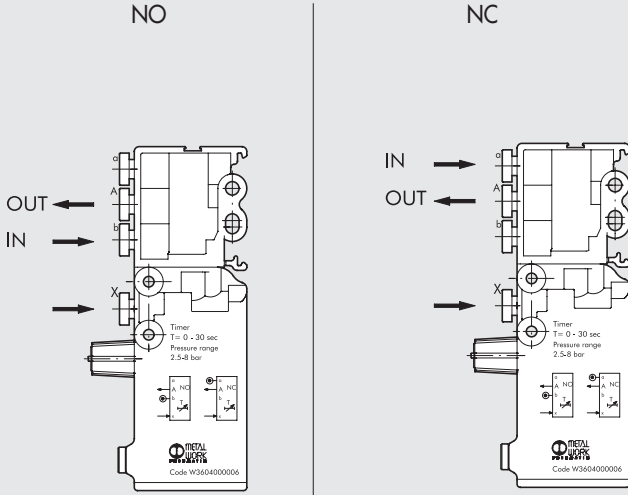
TECHNICAL DATA		
Temperature range	°C	- 10 to + 60
Valve coupling	mm	Push-in fitting for $\varnothing 4$ pipe
Pressure range	bar	From 2.5 to 8
Nominal diameter	mm	2.7
Flow rate at 6 bar (0.6 Mpa, 87 psi) ΔP 1 bar (0.1 Mpa, 14.5 psi)	l/min	100
Delay setting range	s	From 0 to 30, at 6 bar
Signal shutoff time	s	< 0.1
Repeatability	s	± 0.4
Fluid		Filtered, lubricated or unlubricated compressed air. If used, must be continuous
Operating		By compressed air
Repositioning		By mechanical spring
Installation		In any direction
Assembly		On Ω bar (DIN EN 50022) size 35 x 7 or 35 x 15 - Wall mounting using $\varnothing 4.2$ holes
MATERIALS		
Body		Anodised aluminium / Technopolymer
Internal parts		Brass / Technopolymer
Gaskets		NBR
Spring		Spring steel

DIMENSIONS AND ORDERING CODES

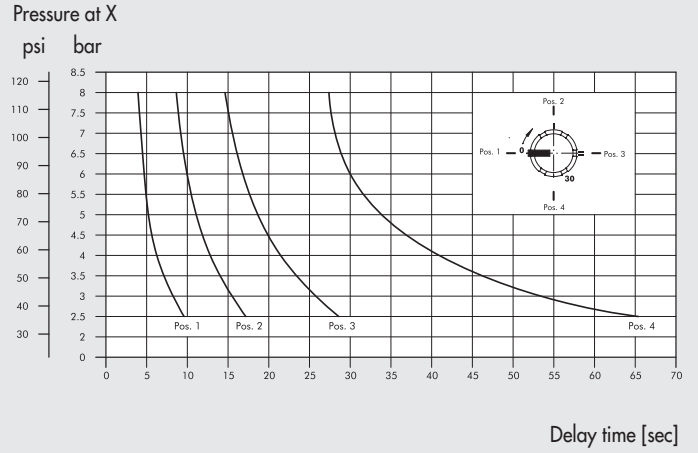
Code	Description
W3604000006	Timer



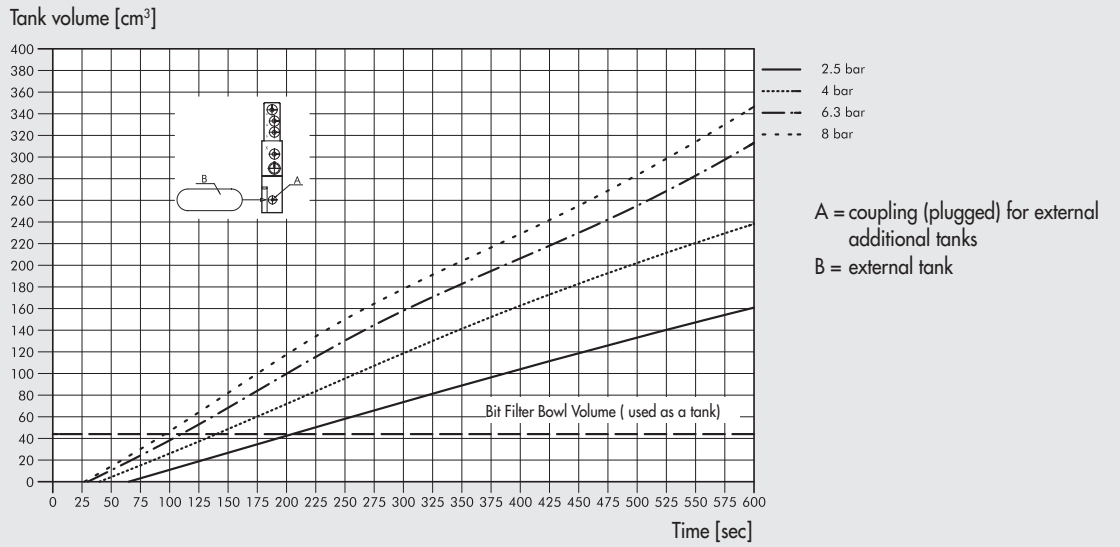
NORMALLY OPEN AND NORMALLY CLOSED OPERATION



CHANGE IN THE DELAY WITH CHANGE IN PRESSURE AND KNOB POSITION



HOW TO INCREASE THE DELAY



NOTES

Blank area for notes.