coax® data sheet - coaxial valve

type VSV-M 40 DR
VSV-F 40 DR

09/2022

⚠ Above stated body materials refer to the valve port connections that get in contact with the media only!

details needed for main valve
- orifice
- port
- function NC/NO
- operating pressure
- inlet pressure at A, B or C
- flow rate
- media
- media temperature
- ambient temperature
- type of actuation

details needed for pneumatic actuation
- nominal voltage
- type of protection
- actuation pressure range min/max
- pilot valve type

details needed for hydraulic actuation
- actuation pressure range min/max
- hydraulic control valve function

⚠ The valves' technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

⚠ If order or application specifications are incomplete or imprecise there exists a risk of an incorrect technical design of the valve for the required application. As a consequence, the physical and / or chemical properties of the materials or seals used, may not be suitable for the intended application. To avoid hydraulic shocks in pipelines, the flow velocities must be taken into account when designing valves for liquids.

■ specifications not highlighted are standard
specifications highlighted in grey are optional

3/2 way valve	**externally controlled**
pressure range	PN 0-40 bar
orifice	DN 40 mm
connection	thread/flange
function	valve normally closed (A ▶B) symbol **NC**
	valve normally open (A ▶B) symbol **NO**
operating principle	pressure balanced, with spring return, intersecting switch-over
body material	① ② steel galvanized ③ ⑤ without non-ferr. Metals ④ steel, nickel plated ⑥ stainless steel
valve seat	synthetic materials on metal
seal materials	NBR PTFE, FPM, CR, EPDM

general specifications		**options**
ports	VSV-M threads G 1 1/2 - G 2	special threads
	VSV-F flanges PN 16 / 40	special flanges
function	NC	NO
pressure range	bar 0-16 / 0-40	
	A ⇨ B max. 40 / B ⇨ A max. 16 / A ⇨ C max. 40 / C ⇨ A max. 40	
Kv value	m^3/h 29.1	
vacuum	leak rate	< 10^{-6} mbar•l•s^{-1}
pressure-vacuum	$P_1 \Leftrightarrow P_2$	pressure side max. 40 bar vacuum side leak rate upon request
back pressure	$P_2 > P_1$ see pressure range	
media	gaseous - liquid - highly viscous - gelatinous - pasty - contaminated	
abrasive media		available
damping	opening closing by throttles on pilot valve	
flow direction	see pressure range	
switching cycles	1/min 150	
switching time	ms opening 100-3000 closing 100-3000	
media temperature	°C direct mounted pilot valve 60	remote mounted pilot valve outside
ambient temperature	°C direct mounted pilot valve 50	temperatur range of media max. 160 °C
flush ports		available
leak ports		available
limit switches		inductive / mechanical upon request
manual override	via pilot valve	
approvals		LR/DNV/WAZ
mounting		mounting brackets
weight	kg VSV-M 8.9 VSV-F 11.6	
additional equipment		upon request

electrical specifications		**options**
nominal voltage	U_n DC 24 V	special voltage upon request
	U_n AC 230 V 50 Hz	special voltage upon request
power consumption	DC 4.8 W	2.5 W (actuation pressure range 4-7 bar)
	AC pick up 11.0 VA holding 8.5 VA	
protection	IP65 (P54) acc. DIN 40050	
energized duty rating	ED 100%	
connection	plug acc. DIN EN 175301-803 form B, 2 positions x180° / wire diameter 6-8 mm	
optional	M12x1 connector acc. DESINA	connector acc. VDMA
additional equipment	illuminated plug with varistor	
max. temperature	media 60°C ambient 50°C	
explosion proof	E Ex e II T5 nominal voltage U_n	DC 24 V 3.25 W
	power consumption	AC 230 V 50 Hz 2.90 W

pneumatic specifications		**options**
actuation pressure range	bar 4-8	
air consumption	cm^3/stroke 34	
cycle speed	main valve speed variable by throttleson pilot valve	
control	preferably 5/2 way pilot valve	
pilot valve interface	co-ax / Namur	ISO 1
actuator ports	2/4 G 1/8	G 1/4

hydraulic specifications		**options**
actuation pressure range	bar 15-30 / 30-60	
control	preferably 4/2 way control valve	
actuator ports	X/Y G 1/4	NPT 1/4
by media		

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type VSV-M 40 DR
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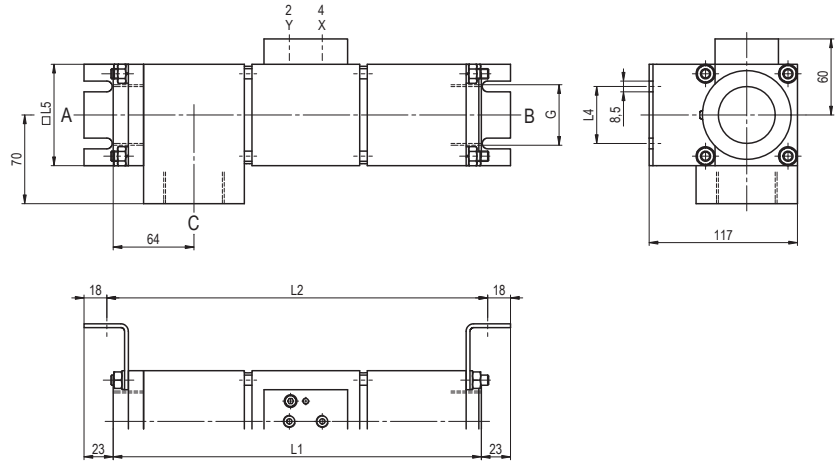
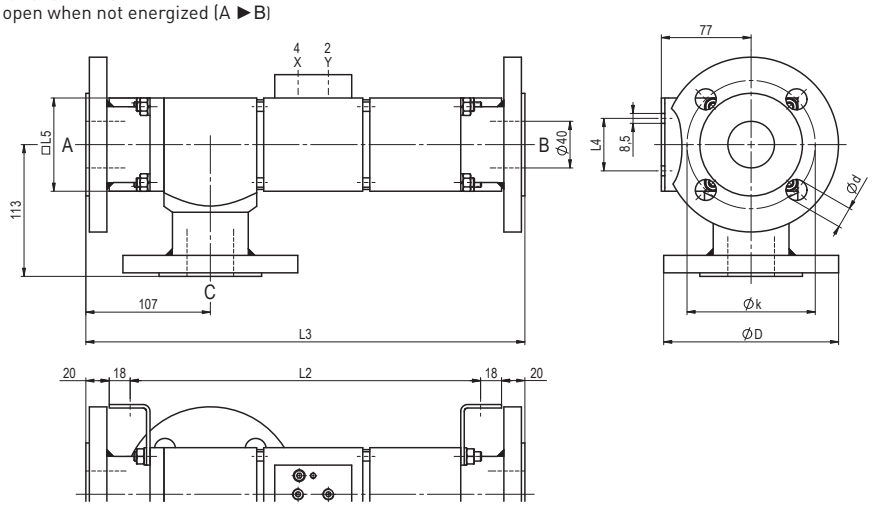
function: **NC**
closed when not energized (A ▶B)



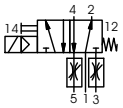
constructive length	L1	L2	L3	L4	L5
standard	291	301	377	45	80
with inductive limit switches	326	334	424	50	90
with force-feed lubrication nipple	-	-	-	-	-
with mechanical limit switches	-	-	-	-	-

flanges PN	DIN	ØD	Øk	Ød
16	EN 1092-1	150	110	18
40	EN 1092-1	150	110	18

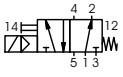
function: **NO**
open when not energized (A ▶B)



pneumatic specifications



5/2 way pilot valve
flow rate 700 l/min
pressure range 3-10 bar G 1/8



5/2 way pilot valve ISO 1
flow rate 700 l/min
pressure range 3-10 bar G 1/4