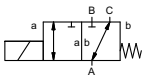
coax® data sheet - coaxial valve

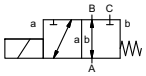
type MK 20 DR
FK 20 DR

08/2022

3/2 way valve	**direct acting**
pressure range	PN 0-40 bar
orifice	DN 20 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 brass ③ brass, nickel plated ④ steel, nickel plated ② steel galvanized ⑤ without non-ferr. Metals ⑥ stainless steel
valve seat	synthetic materials on metal
seal materials	NBR PTFE, FPM, CR, EPDM

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

details needed

- orifice
- port
- function NC/NO
- operating pressure
- inlet pressure at A, B or C
- flow rate
- media
- media temperature
- ambient temperature
- nominal voltage

	general specifications	options
ports	MK threads G 3/4 - G 1 1/4	special threads
	FK 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 6.7	
vacuum	leak rate	< 10^{-6} mbar•l•s^{-1}
pressure-vacuum	P_1 ⇔ P_2	upon request
back pressure	P_2 > P_1 see pressure range	
media	gaseous - liquid - highly viscous - gelatinous - contaminated	
abrasive media		upon request
damping	opening closing	
flow direction	see pressure range	
switching cycles	1/min 150	
switching time	ms opening 110	
	closing 110	
media temperature	°C DC: -20 to +80	-40 to +160
	AC: -20 to +80	-40 to +160
ambient temperature	°C DC: -20 to +80	
	AC: -20 to +80	
limit switches		inductive / mechanical
manual override		available
approvals		LR/DNV/WAZ
mounting		mounting brackets
weight	kg MK 6.0 FK 8.4	
additional equipment		upon request

⚠ 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.

	electrical specifications	options
nominal voltage	U_n DC 24 V +5%/-10%	special voltage upon request
	U_n AC 230 V +5%/-10% 40-60 Hz	special voltage upon request
actuation	DC direct-current magnet	
	AC direct-current magnet with integrated rectifier	above 100 °C with separate rectifier
insulating rating	H 180°C	
protection	IP65	
energized duty rating	ED 100%	
connection	plug acc. DIN EN 175301-803 form A, 4 positions x90° / wire diameter 6-8 mm	terminal box M16x1,5
optional	M12x1 connector acc. DESINA	connector acc. VDMA
additional equipment	illuminated plug with varistor	
current consumption	N-coil DC 24 V 1.56 A	
	AC 230 V 40-60 Hz 0.16 A	
	H-coil	DC 24 V 2.24 A
		AC 230 V 40-60 Hz 0.28 A
explosion proof		terminal box M16x1,5
		⟨Ex⟩ II 3G Ex ec IIC T3 Ta -20...+80°C Gc
		⟨Ex⟩ II 3D Ex tc IIIC T195°C Ta -20...+80°C Dc
		⟨Ex⟩ II 3G Ex h IIC T3 Gc
		⟨Ex⟩ II 3D Ex h IIIC T195°C Dc
limit switches	inductive (I)	normally open-PNP
	inductive (B)	normally open-PNP
	mechanical	single pole double throw-SPDT

⚠ 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

müller co-ax gmbh • Friedrich-Müller-Str. 1 • 74670 Forchtenberg • Germany • fon +49(0)7947/828-0 • fax +49(0)7947/828-11 • Email info@co-ax.com

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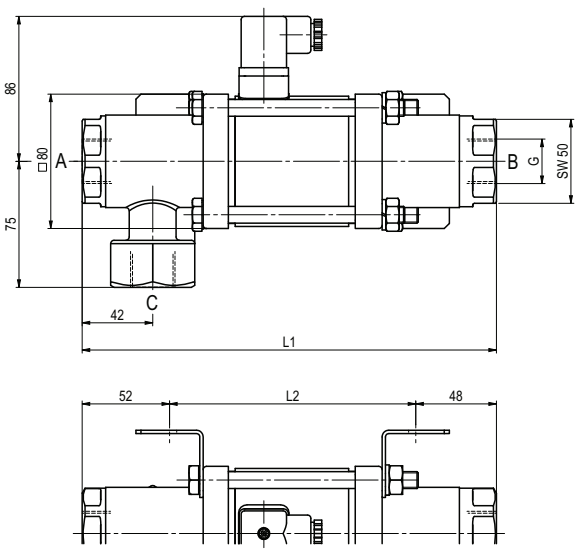
FK 20 DR

function: **NC**
closed when not energized (A ▶B)



constructive length	L1	L2	L3
standard	247	148	301
with inductive limit switches	291	192	345
with manual override / inductive limit switches	291	192	345
with mechanical limit switches	291	192	345

flanges PN	DIN	ØD	Øk	Ød
16	EN 1092-1	105	75	14
40	EN 1092-2	105	75	14

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