3/2 and 4/2 Multi-Way Valves; Servo-Assisted; Flow Rate: 10.6 ft³/min.; NAMUR Flange



Advantages / Benefits

- **Easy direct assembly to process valves**
- **High flow rate in a compact design**
- **Long service life even with non-lubricated air**
- **Manual override, standard**
- **Various options for the supply ports 1 and 3**
- **High cycle life reliability**
- **Wide selection of cable plugs available with built-in circuitry**
- **Light weight**

Design/Function

Type 5470 NAMUR can be easily mounted directly to a process valve.

High cycle life, diaphragm seat design valves in 3/2 and 4/2 way versions. The main valve consists of three modules; the valve body with servo-diaphragm, plungers and seat seals; solenoid operator with P/R connections and NAMUR manifold.

The body and valve internal parts are made of high quality thermoplastic and the return spring is made of stainless steel.

A 16 mm rocker solenoid valve Type 6106 with rectifier is used as the pilot.

Type 6106 impulse version is a bistable valve used as pilot valve for Type 5470. The operation has to be done through external pole reversal (e.g. PLC).

The advantages of the impulse version are functional safety at short time power failure, saving of energy and low heat generation.

It is applicable for switching systems with impulse control.

Applications

Fluids

Lubricated and non-lubricated air, neutral gases

Applications

Control valves for pneumatic linear and rotary actuators ideal for:

- Food and beverage industry
- General processing industry
- Packaging machine manufacturers
- Textile industry
- Machine tool manufacturers
- Wood working machine manufacturers

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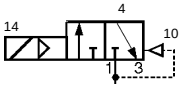
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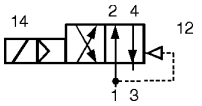
Technical Data Type 5470 NAMUR

Circuit Functions

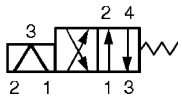
C – 3/2 way valve,
when de-energized,
outlet port 4 exhausted



G – 4/2 way valve
when de-energized,
pressure inlet port 1 connected
to outlet port 2,
outlet port 4 exhausted



G – 4/2 way valve
with **impulse** at terminal 1 outlet
port A exhausted,
with **impulse** at terminal 2 outlet
port A pressurized



Specifications

Circuit Function	Orifice [mm]	C_v [1]	Pressure Range [PSI]	Power Consumption [W]	Port Connections
C (3/2)	4.0	.32	28 - 145	1	Supply ports 1 and 3: Push-in coupling for 1/4″ O.D. tubing or threaded 1/8″ NPT port
			28 - 145	2 and 3	Service ports 2 and 4: NAMUR flange
G (4/2)	4.0	.32	28 - 145	1	Supply ports 1 and 3: Push-in coupling for 1/4″ O.D. tubing or threaded 1/8″ NPT port
			28 - 145	2 and 3	Service ports 2 and 4: NAMUR flange

[1] Q = 10.6 ft³/min. with 85 PSI upstream and 15 PSI pressure drop across the valve at 68°F.

Valve Specifications

Body material	PA (Polyamide)
Valve internal parts	Ultramid
Return spring	Stainless steel
Seal material	NBR
Fluids	Lubricated, non-lubricated compressed air, or neutral gases
Media temperature	14°F to 122°F (-10°C to 50°C)
Ambient temperature	14°F to 130°F (-10°C to 55°C)
Port connections	
Connection 2 and 4	NAMUR flange
Connection 1 and 3	• Push-in coupling for 1/4″ O.D. tubing
(variation)	• 1/8″ NPT

Response times [3] [4]

Opening	DC	15 ms	AC*	15 ms
Closing	DC	12 ms	AC*	20 ms

* = with rectifier

Response times for impulse versions

Minimum duration of impulse:	
Release coil (tag 1 and 3)	20 ms
Operating coil (tag 2 and 4)	20 ms

[3] Measured at connection 2; time from electrical switching to pressure increase to 90% (opening) or pressure drop to 10% (closing) of operational pressure of 85 PSI.
The valves given apply for DC and AC.

Solenoid Specifications

Operating voltage	24 VDC 24 V impulse* (*external pole reversal necessary) 110-120 VDC 220-240 VDC (for alternating current cable plug Type 2506 with rectifier is necessary)[4]
Voltage tolerance	±10%
Electrical power consumption	1 W, 2 W, 3 W
Duty cycle	100% continuously rated
Electrical connection	Spade connectors per DIN 43650 Form C, for cable plug Type 2526
Rating	NEMA 4 (with cable plug)
Ex-approval	(see datasheet Ex-versions)

[4] When using electronics (diodes for controlling LEDs or for rectifying), the closing time is delayed 8 up to 10 ms.

Installation

Mounting position:	Any, preferably solenoid system upright

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Ordering Chart Valves Type 5470 NAMUR (Other Versions on Request)

Standard delivery: All valves have manual override and NBR seals; spade connectors per DIN 43 650 C sidewards; **with cable plug** (see accessories)
For DC-version cable plug 2506 Item No. 008 353 P (standard)

Service port connections 2 and 4: NAMUR flange

Circuit Function	Orifice Air [mm]	C_v	Supply Port Connections 1 and 3	Pressure Range [PSI]	Voltage/ Frequency [V/Hz]	Electrical Power Consumption [W]	Item No.	Item No. with One-Way Flow Restrictor
C	4.0	.32	Threaded 1/8″ NPT port	28 - 116	24/DC	1	458 364 R	
				28 - 145	24/DC	2	458 273 N	
					110-120/DC	3	458 365 J	
					220-240/DC	3	458 366 K	
			Push-in coupling for 1/4″ O.D. tubing	28 - 116	24/DC	1	458 367 L	
				28 - 145	24/DC	2	458 368 V	
					110-120/DC	3	458 369 W	
					220-240/DC	3	458 370 T	
G	4.0	.32	Threaded 1/8″ NPT port	28 - 116	024/DC	2	458 371 Q	
					110-120/DC	3	458 372 R	
					220-240/DC	3	458 373 J	
			Push-in coupling for 1/4″ O.D. tubing	28 - 116	024/DC	1		458 377 N
				28 - 145	024/DC	2	458 374 K	
					110-120/DC	3	458 375 L	
					220-240/DC	3	458 376 M	
			Threaded 1/8″ NPT port	28 - 116	024/DC	1		458 378 X
				28 - 145	024/DC	2		458 379 Y
					110-120/DC	3		458 380 N
					220-240/DC	3		458 381 B

Standard of delivery: All valves have manual override and NBR seals;
spade connectors per DIN 43 650 C sidewards, above supply ports

Service port connections 2 and 4: NAMUR flange / Impulse version

Circuit Function	Orifice Air [mm]	C_v	Supply Port Connections 1 and 3	Pressure Range [PSI]	Voltage/ Frequency [V/Hz]	Electrical Power Consumption [W]	Item No.	Item No. with One-Way Flow Restrictor
G	4.0	.32	Threaded 1/8″ NPT port	28 - 116	024/DC	1	458 868 K	
					110-120/DC	1		458 869 L

*) For AC current the cable plug Type 2506 with rectifier must be used, see accessories.

Ordering Chart Accessories

Accessory Part	Description	**Order No.**
Cable plug Type 2506 [1)]	without circuit, 0 - 250 V	008 353 P
Cable plug Type 2506 [1)]	with rectifier and varistor, 12 - 240 V	008 412 T
Cable plug Type 2506 [1)]	with LED, 12 - 24 V	008 402 A
Cable plug Type 2506 [1)]	with LED and varistor, 12 - 24 V	008 408 Q
Cable plug Type 2506 [1)]	with LED, rectifier and varistor, 12 - 24 V	008 354 Q
Cable plug Type 2506 [1)]	with LED, rectifier and varistor, 110 - 120 V	008 355 R
Cable plug Type 2506 [1)]	with LED, rectifier and varistor, 200 - 240 V	008 356 J

[1)] With these accessories, only a minimum of possible cable plugs with circuit are being mentioned. For other versions see data sheet Type 2506.
A flat seal and a mounting screw are included.

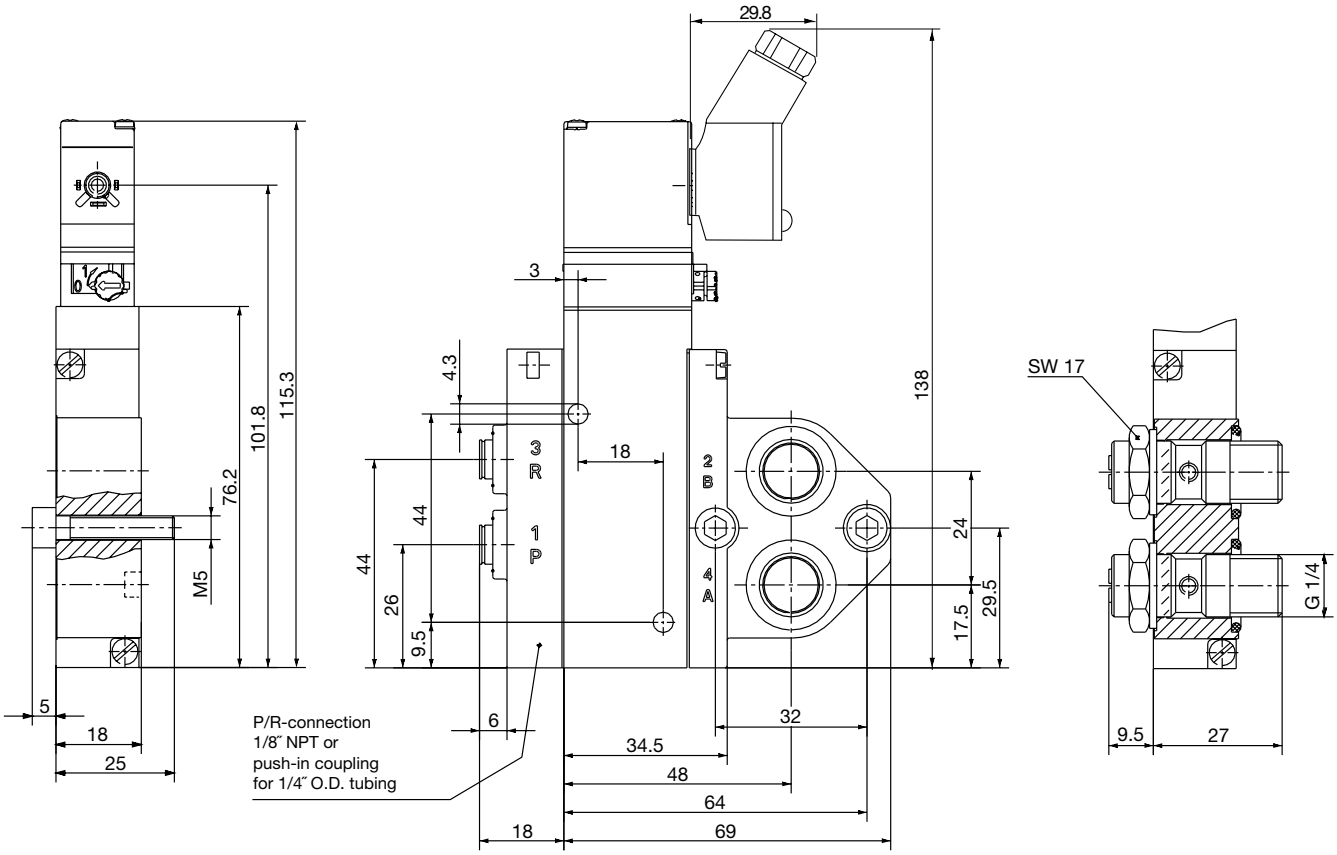
Operation of Impulse Versions

- Standard cable plug Type 2506 - through external pole reversal (e.g. PLC)
- Cable plug - with internal pole reversal

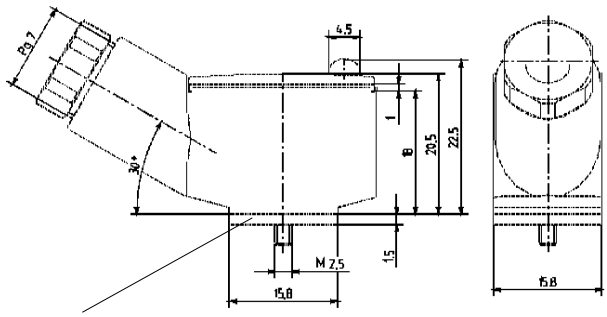
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Dimensions [mm]

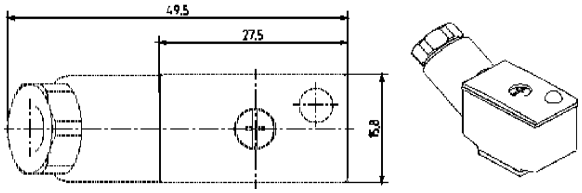
3/2 and 4/2 way valves, service ports 2 and 4 as NAMUR flange, spade connectors sidewards

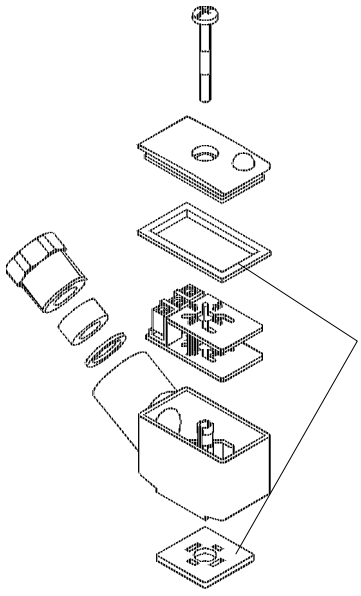


Cable plug Type 2506



Flat seal





Attention!
Pay attention to a correct fit of the flat seal when mounting the cable plug!

Cable plug Type 2506, pin assignment per DIN 43650, Form C

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