

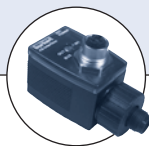
Type 6518/6519 can be combined with...



Type 2508
Cable plug



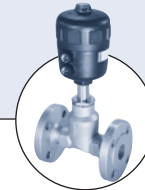
Type 1078
Timer unit



Type 2511/12
ASI cable plug



Type 8600
Dosing control



Type 2012
Single-seat
globe valve



Type 2030
Diaphragm valve

3/2-, 5/2- and 5/3-way Solenoid Valves for process pneumatics

- High flow-rate capacity
- Reduced power consumption
- Single or manifold mounting
- Standard-, EEx m and EEx i versions
- Threaded port G 1/4" or NAMUR flange

The Type 6518 is a servo-assisted 3/2-way valve and the Type 6519 is a 5/2 or 5/3-way valve. Together, they form a product line. The valves can be used individually or in blocks.

The valves work without a continuous air consumption and are used for the pneumatic control of double or single-acting actuators. A solenoid valve Type 6014 is used as a pilot.

The use of high quality materials makes it possible to use these valves in the open air and under chemical atmospheres. The product line contains units with Ex-Approvals and NAMUR flange interface.

Valves with circuit function C, D and H monostable are certified acc. IEC 61508 as SIL2.

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General technical data

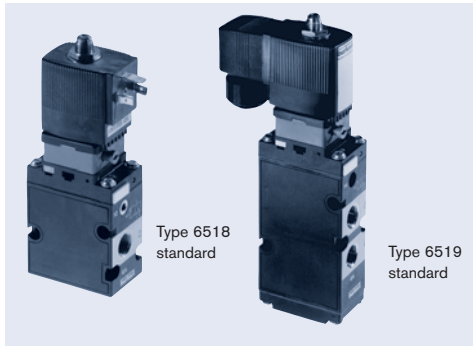
| | | |
|-------------------------------|--|---|
| Orifice | Type 6518 Type 6519 | DN 8 DN 6, 8 and 9 |
| Body material | Type 6518 Type 6519 | Polyamide, reinforced Polyamide (5/2-way), aluminium (5/3-way) |
| Thread insert material | | Brass or stainless steel |
| Seal material | Type 6518 Type 6519 | NBR and PUR NBR, NBR and PUR |
| Pneumatic connection | Supply ports 1,3,5 Service ports 2 and 4 | Threaded port G1/4, can also be flanged Threaded port G1/4 or NAMUR flange |
| Electrical connection | | Tag connectors acc. to DIN EN 175301-803 (previously DIN 43650) Form A |
| Operating voltage | | 24 V DC 24/110/230 V, 50-60 Hz |
| Voltage tolerance | | ±10% |
| Media | | Lubricated or non-lubricated compressed air, neutral gases. Technical vacuum on request |
| Media temperature | | -10 to +50°C |
| Ambient temperature | Standard version EEx m version EEx i version | -25 to +55° C -25 to +50° C -25 to +55° C |
| Ambient conditions | | Open air, chemical atmosphere |
| Protection class | | IP 65 with cable plug |
| Installation | | As required, preferably with actuator upright |

Further versions on request



Approvals
FM-Ex
EC Gas Appliances Directive

Type 6518/6519 standard (with tag connector acc. to DIN EN 175301-803 Form A, without cable plug)



Type 6518 and the Type 6519 together form a product line. Both types can be mounted on a pneumatic module. The valve width of 32 mm allows high flow rates. A solenoid valve Type 6014 is used as a pilot. The valves can be used individually or in blocks.

| Power consumption | | |
|-------------------|---------------------------|--------|
| Inrush AC [VA] | Hold (hot coil) AC [VA/W] | DC [W] |
| 11 | 6/2 | 2 |

| Response times ¹⁾ | |
|------------------------------|---------|
| Opening | 20 [ms] |
| Closing | 40 [ms] |

¹⁾ Measured at valve outlet at 6 bar and +20°C acc. to ISO 12238.
 Opening: Pressure rise 0 to 90%
 Closing: Pressure drop 100 to 10%

| Technical data | |
|--------------------------------------|---|
| Orifice | DN 8.0 and 9.0 |
| Body materials | |
| Type 6518 Pilot valve and main valve | Polyamide, reinforced |
| Type 6519 Pilot valve | Polyamide |
| Main valve | 5/2-way; polyamide, 5/3-way; aluminium |
| Thread insert material | Brass (stainless steel on request) |
| Seal materials | NBR, NBR and PUR |
| Pneumatic connection | |
| Supply ports 1,3,5 | Threaded port G 1/4, can also be flanged |
| Service ports 2 and 4 | Threaded port G 1/4 (on request NPT 1/4) |
| Electrical connection | Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) |
| Protection class | IP65 with cable plug |
| Operating voltage | 24 V/DC, 24/110/230 V, 50-60 Hz |
| Voltage tolerance | ±10% |
| Power consumption coil | 2 W (100% continuous rating) |
| Ambient temperature | -25 to +55°C |
| Media | Lubricated or non-lubricated compressed air, neutral gases on request |
| Environmental conditions | Open air, chemical atmosphere |

Ordering chart valves with manual override (without manual override on request)

| Circuit function | Orifice [mm] | Seal material body | Port connection threaded port | Q _N value air [l/min] | Pressure range ²⁾ [bar] | Weight [g] | Nominal power [W] | Voltage/frequency [V/Hz] | Item no. |
|--|--------------|-------------------------|-------------------------------|----------------------------------|------------------------------------|------------|-------------------|--------------------------|----------|
| Type 6518 standard – thread insert material brass, threaded port 1 and 3 can also be flanged; without cable plug (see Accessories p. 10) | | | | | | | | | |
| C 3/2-way valve, servo-assisted, in de-energized position port 2 exhausted | 8.0 | NBR and PUR (polyamide) | G 1/4 | 1300 | 2-8 | 370 | 2 | 024/DC | 132 457 |
| | | | | | | | | 024/50-60 | 132 458 |
| | | | | | | | | 110/50-60 | 132 459 |
| | | | | | | | | 230/50-60 | 132 460 |
| D 3/2-way valve, servo-assisted, in de-energized position port 2 pressurized | 8.0 | NBR and PUR (polyamide) | G 1/4 | 1300 | 2-8 | 370 | 2 | 024/DC | 132 461 |
| | | | | | | | | 024/50-60 | 132 462 |
| | | | | | | | | 110/50-60 | 132 463 |
| | | | | | | | | 230/50-60 | 132 464 |
| Type 6519 standard – thread insert material brass, threaded port 1, 3 and 5 can also be flanged; without cable plug (see Accessories p. 10) | | | | | | | | | |
| H 5/2-way valve, servo-assisted, in de-energized position port 2 pressurized, port 4 exhausted | 8.0 | NBR and PUR (polyamide) | G 1/4 | 1300 | 2-8 | 450 | 2 | 024/DC | 132 465 |
| | | | | | | | | 024/50-60 | 132 466 |
| | | | | | | | | 110/50-60 | 132 467 |
| | | | | | | | | 230/50-60 | 132 468 |
| L 5/3-way valve, servo-assisted, in middle position all ports locked | 9.0 | NBR (aluminium) | G 1/4 | 1300 | 3-10 | 720 | 2 | 024/DC | 132 469 |
| | | | | | | | | 024/50-60 | 132 470 |
| | | | | | | | | 110/50-60 | 132 471 |
| | | | | | | | | 230/50-60 | 132 472 |
| N 5/3-way valve, servo-assisted, in middle position ports 2 and 4 exhausted | 9.0 | NBR (aluminium) | G 1/4 | 1300 | 3-10 | 720 | 2 | 024/DC | 132 473 |
| | | | | | | | | 024/50-60 | 132 474 |
| | | | | | | | | 110/50-60 | 132 475 |
| | | | | | | | | 230/50-60 | 132 476 |

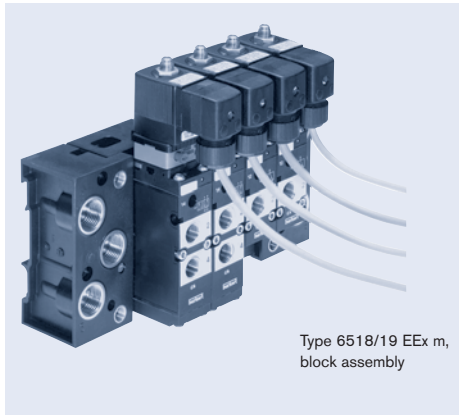
1) Flow rate: Q_N value air [l/min]: Measured at +20°C, 6 bar pressure at valve inlet, 1 bar pressure difference
 2) Pressure values [bar]: Gauge pressures with respect to the prevailing atmospheric pressure

Manifold assembly see page 8

Accessories see page 10

Dimensions see page 11

Type 6518/6519 EEx m (with moulded cable, 3 m long, terminal box on request)



Type 6518/19 EEx m, block assembly

The approval EEx m is achieved by the mounting of an approved push-over coil. The cable connection and the cable are non-detachable and sealed together with the valve. The valves can be used individually or in blocks.

| Response times ¹⁾ | |
|------------------------------|---------|
| Opening | 20 [ms] |
| Closing | 50 [ms] |

¹⁾ Measured at valve outlet at 6 bar and +20°C acc. to ISO 12238.
 Opening: Pressure rise 0 to 90%,
 Closing: Pressure drop 100 to 10%

| Technical data | |
|---|--|
| Orifice | DN 8.0 and 9.0 |
| Body materials | |
| Type 6518 Pilot valve and main valve | Polyamide, reinforced |
| Type 6519 Pilot valve Main valve | Polyamide 5/2-way; polyamide, 5/3-way; aluminium |
| Thread insert material | Brass (stainless steel on request) |
| Seal materials | NBR, NBR and PUR |
| Pneumatic connection | |
| Supply ports 1,3,5 | Threaded port G 1/4, can also be flanged |
| Service ports 2 and 4 | Threaded port G 1/4 (on request NPT 1/4) |
| Electrical connection | Moulded cable, 3 m (non-detachable), Terminal box on request |
| Protection class | IP65 |
| Approval | II 2G EEx m II T 5 PTB 00 ATEX 2129X II 2DIP 65T 100°C |
| Operating voltage | 24/110/230 V/UC |
| Voltage tolerance | ±10% |
| Power consumption coil | 3 W (100% continuous rating) |
| Ambient temperature | -25 to +50°C |
| Media | Lubricated or non-lubricated compressed air, neutral gases on request technical vacuum |
| Environmental conditions | Open air, chemical atmosphere |
| For use in zone | 1, 2, 21 and 22 |

Ordering chart valves with manual override (without manual override on request)

| Circuit function | Orifice [mm] | Seal material body | Port connection threaded port | Q ₉₀ value air ¹⁾ [l/min] | Pressure range ²⁾ [bar] | Weight [g] | Nominal power [W] | Voltage/frequency [V/Hz] | Item no. |
|---|--------------|-------------------------|-------------------------------|---|------------------------------------|------------|-------------------|--------------------------|----------|
| Type 6518 EEx m – thread insert material brass, threaded port 1 and 3 can also be flanged; with moulded cable, 3 m long ³⁾ | | | | | | | | | |
| C 3/2-way valve, servo-assisted, in de-energized position port 2 exhausted | 8.0 | NBR and PUR (polyamide) | G 1/4 | 1300 | 2-8 | 600 | 3 | 024/UC | 134 716 |
| | | | | | | | | 110/UC | 134 717 |
| | | | | | | | | 230/UC | 134 718 |
| D 3/2-way valve, servo-assisted, in de-energized position port 2 pressurized | 8.0 | NBR and PUR (polyamide) | G 1/4 | 1300 | 2-8 | 600 | 3 | 024/UC | 134 719 |
| | | | | | | | | 110/UC | 134 720 |
| | | | | | | | | 230/UC | 134 721 |
| Type 6519 EEx m – thread insert material brass, threaded port 1, 3 and 5 can also be flanged; with moulded cable, 3 m long ⁴⁾ | | | | | | | | | |
| H 5/2-way valve, servo-assisted, in de-energized position port 2 pressurized, port 4 exhausted | 8.0 | NBR and PUR (polyamide) | G 1/4 | 1300 | 2-8 | 700 | 3 | 024/UC | 134 722 |
| | | | | | | | | 110/UC | 134 723 |
| | | | | | | | | 230/UC | 134 724 |
| L 5/3-way valve, servo-assisted, in middle position all ports locked | 9.0 | NBR (aluminium) | G 1/4 | 1300 | 3-10 | 1,100 | 3 | 024/UC | 134 725 |
| | | | | | | | | 110/UC | 134 726 |
| | | | | | | | | 230/UC | 134 727 |
| N 5/3-way valve, servo-assisted, in middle position ports 2 and 4 exhausted | 9.0 | NBR (aluminium) | G 1/4 | 1300 | 3-10 | 1,100 | 3 | 024/UC | 134 728 |
| | | | | | | | | 110/UC | 134 729 |
| | | | | | | | | 230/UC | 134 730 |

1) Flow rate: Q₉₀ value air [l/min]: Measured at +20°C, 6 bar pressure at valve inlet, 1 bar pressure difference **2) Pressure values [bar]:** Gauge pressures with respect to the prevailing atmospheric pressure
3) Versions with terminal box on request **4) Circuit function H (5/2-way) as impulse version on request**

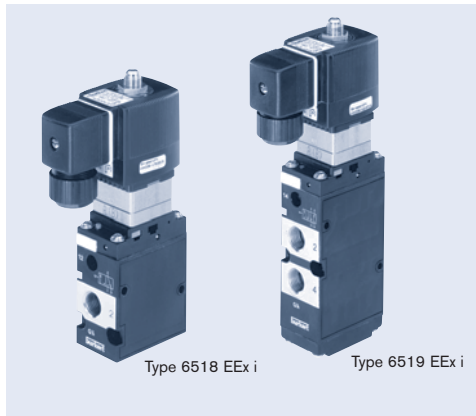
Manifold assembly see page 8

Accessories see page 10

Dimensions see page 13



Type 6518/6519 EEx i (with tag connector acc. to DIN EN 175301-803 Form A, without cable plug)



The intrinsically-safe Type 6518 EEx i and 6519 EEx i valves consist of an intrinsically-safe pilot control and a pneumatic amplifier. The diaphragm-controlled valve seats work with very low friction, ensuring reliable switching of the valve, even after long shutdown periods.

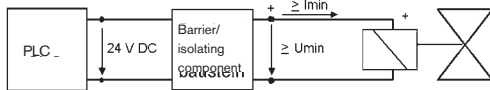
| Technical data | |
|---------------------------------|--|
| Orifice | DN 8.0 |
| Body materials | Pilot valve Main valve |
| | Stainless steel 1.4305 or brass Polyamide, glass-fibre reinforced |
| Thread insert material | Stainless steel or brass, nickel-plated |
| Seal materials | FPM, NBR and PUR |
| Pneumatic connection | Supply ports 1,3,5 Service ports 2 and 4 |
| | Threaded port G 1/4 Threaded port G 1/4 |
| Electrical connection | Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) for cable plug Type 2508 (see Accessories). Ensure correct polarity! |
| Protection class | IP65 with cable plug |
| Ambient temperature | -25 to +55°C |
| Media | Lubricated or non-lubricated compressed air, instrument air, nitrogen |
| Environmental conditions | Open air, chemical atmosphere |
| For use in zone | 1, 2, 21 and 22 |

| Response times ¹⁾ | |
|------------------------------|----------|
| Opening | 75 [ms] |
| Closing | 115 [ms] |

¹⁾ Measured at valve outlet at 6 bar and +20°C acc. to ISO 12238.
Opening: Pressure rise 0 to 90%,
Closing: Pressure drop 100 to 10%

Note

These units may only be used in explosive atmospheres in the manner approved by the Federal Institute of Physics and Technology (PTB), i.e., the permissible maximum electrical values must be complied with. Suitable barriers and isolating modules are available for this.



The valve is intended for operation on 24 VDC outputs via the intermediate switching of a corresponding intrinsically-safe operating resource (isolating module or barrier). If required, request the "Recommended Barrier and Isolating Module" data sheet.

Electrical data - Coil AC10 EEx i

| | | | |
|--|--|-----------------|-------|
| Approval | II 2G EEx ia IIC T6 PTB 01 ATEX 2101 II 2D Ex ia D21 T 80°C | | |
| Functional values for the valve switching function¹⁾ | at +20°C | at +55°C | |
| | Minimum switching current | 29 mA | 29 mA |
| | Nominal resistance of the coil | 310 Ω | 360 Ω |
| Minimum terminal voltage | 9.0 V | 10.4 V | |
| Permissible maximum values acc. to certificate of conformity | | | |
| U _i | 35 V | | |
| I _i | 0.9 A | | |
| P _i | 1.1 W | | |

¹⁾ With high-impedance coil on request

Ordering chart valves without manual override (with manual override and high-impedance coil on request)

| Circuit function | Orifice [mm] | Seal material body | Port connection threaded port | Q _{Nn} value air ¹⁾ [l/min] | Pressure range ²⁾ [bar] | Weight [g] | Body material pilot valve | Pilot air thread insert material | Item no. |
|--|--------------|-------------------------|-------------------------------|---|------------------------------------|------------|---------------------------|----------------------------------|----------|
| Type 6518 EEx i | | | | | | | | | |
| C 3/2-way valve, servo-assisted, in de-energized position port 2 exhausted | 8.0 | NBR and PUR (polyamide) | G 1/4 | 1300 | 2-8 | 580 | St. st. 1.4305 | St. st. | 145 111 |
| | | | | | | | | brass, nickel plated | 144 486 |
| | | | | | | | | brass, nickel plated | 147 253 |
| Type 6519 EEx i | | | | | | | | | |
| H 5/2-way valve, servo-assisted, in de-energized position port 2 pressurized, port 4 exhausted | 8.0 | NBR and PUR (polyamide) | G 1/4 | 1300 | 2-8 | 670 | St. st. 1.4305 | St. st. | 144 484 |
| | | | | | | | | brass, nickel plated | 144 485 |
| | | | | | | | | brass, nickel plated | 147 252 |

1) Flow rate: Q_{Nn} value air [l/min]: Measured at +20°C, 6 bar pressure at valve inlet, 1 bar pressure difference

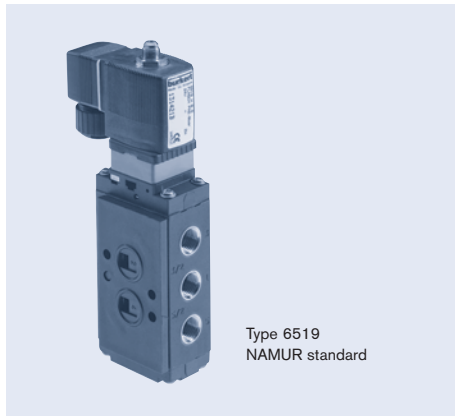
2) Pressure values [bar]: Gauge pressures with respect to the prevailing atmospheric pressure

Manifold assembly see page 8

Accessories see page 10

Dimensions see page 14

Type 6519 NAMUR standard (with tag connector acc. to DIN EN 175301-803 Form A, without cable plug)



The valve bodies of Type 6519 NAMUR are identical with the EEx m variants. The difference is in the coils, which are laid out and approved in different ways. By changing the coil on the valve body, it is possible to easily convert from Non-Ex operation to Ex operation (or vice versa). The coils are designed to be push-over and can be locked in 4 x 90° displaced positions and be positioned any where in-between.

| Technical data | |
|---------------------------------|---|
| Orifice | DN 6.0 |
| Body materials | Polyamide (PA) |
| Pilot valve and main valve | |
| Thread insert material | Brass, nickel-plated or stainless steel |
| Seal material | NBR and PUR |
| Pneumatic connection | Threaded port G 1/4 |
| Supply ports 1,3,5 | |
| Service ports 2 and 4 | NAMUR flange |
| Electrical connection | Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) |
| Protection class | IP65 with cable plug |
| Operating voltage | 24/110/230 V/UC (direct or universal current) |
| Voltage tolerance | ±10% |
| Duty cycle | 100 % continuous rating |
| Ambient temperature | -25 to +55°C |
| Media | Compressed air, nitrogen, instrument air |
| Environmental conditions | Slightly aggressive, also open air |

| Power consumption | | |
|-------------------|-----------------|--------|
| Inrush | Hold (hot coil) | |
| AC [VA] | AC [VA/W] | DC [W] |
| 11 | 6/2 | 2 |

| Response times ¹⁾ | |
|------------------------------|---------|
| Opening | 20 [ms] |
| Closing | 40 [ms] |

¹⁾ Measured at valve outlet at 6 bar and +20°C acc. to ISO 12238.
Opening: Pressure rise 0 to 90%,
Closing: Pressure drop 100 to 10%

Ordering chart valves with manual override (without manual override on request)

| Circuit function | Orifice [mm] | Seal material body | Thread insert material ¹⁾ | Port connection threaded port | Q ₉₀ value air ²⁾ [l/min] | Pressure range ³⁾ [bar] | Weight [g] | Power consumption [W] | Voltage/frequency [V/Hz] | Item no. |
|---|--------------|--------------------|--------------------------------------|-------------------------------|---|------------------------------------|------------|-----------------------|--------------------------|----------|
| C 3/2-way valve with exhaust recycling, in de-energized position port 2 fed back internally | 6.0 | NBR and PUR | stainless steel | G 1/4 | 900 | 2-8 | 460 | 2 | 024/DC | 131 425 |
| | | | | | | | | | 024/50-60 | 131 426 |
| | | | | | | | | | 110/50-60 | 131 427 |
| | | | | | | | | | 230/50-60 | 131 428 |
| H 5/2-way valve, servo-assisted, in de-energized position pressure port 1 connected to port 2, output 4 exhausted | 6.0 | NBR and PUR | brass, nickel-plated | G 1/4 | 900 | 2-8 | 460 | 2 | 024/DC | 131 421 |
| | | | | | | | | | 024/50-60 | 131 422 |
| | | | | | | | | | 110/50-60 | 131 423 |
| | | | | | | | | | 230/50-60 | 131 424 |

¹⁾ If the connectors are from stainless steel, the mounting screws will also be from stainless steel

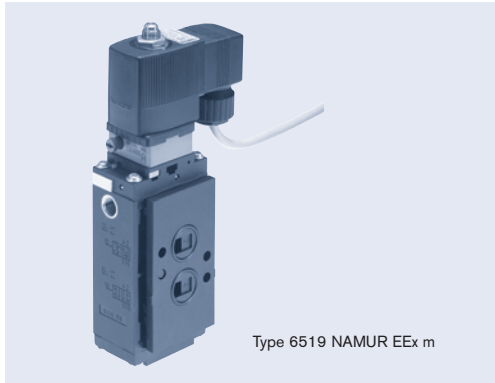
²⁾ **Flow rate: Q₉₀ value air [l/min]:** Measured at +20°C, 6 bar pressure at valve inlet, 1 bar pressure difference

³⁾ **Pressure values [bar]:** Gauge pressures with respect to the prevailing atmospheric pressure

All valves can be operated in circuit function C as well as in circuit function H. By replacing the adapter plate that comes with the valves, the change between the two circuit functions can be set up.



Type 6519 NAMUR EEx m (with moulded cable) or EEx me (with terminal box)



Type 6519 NAMUR EEx m

Type 6519 NAMUR EEx m NAMUR valve for process plants switches reliably, even when fully restricted. The valve made out of premium polyamide can be operated either as a 5/2 or a 3/2-way version through different mounting plates. The solenoid valve Type 6014 with a coil approved for use in hazardous areas is connected as a pilot. The NAMUR flange interface allows easy assembly on different pneumatic actuators on the spot.

The valve bodies are identical with the Type 6519 NAMUR standard version. The difference between the valves is in the coils, which are laid out and approved in different ways. By changing the coil on the valve body, it is possible to easily convert from Non-Ex operation to Ex operation (or vice versa). Both coil versions (with moulded cable or with terminal box) are designed to be push-over and can be locked in 4 x 90° displaced positions and be positioned anywhere in-between.

| Technical data | |
|----------------------------|---|
| Orifice | DN 6.0 |
| Body materials | |
| Pilot valve and main valve | Polyamide (PA) |
| Thread insert material | Brass, nickel-plated or stainless steel |
| Seal material | NBR and PUR |
| Pneumatic connection | |
| Supply ports 1,3,5 | Threaded port G 1/4 |
| Service ports 2 and 4 | NAMUR flange |
| Electrical connection | Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) |
| Protection class | IP65 with cable plug |
| Approval | II 2G EEx m II T 5 PTB 00 ATEX 2129X II 2DIP 65T 100°C |
| Operating voltage | 24/110/230 V/UC (direct or universal current) |
| Voltage tolerance | ±10% |
| Duty cycle | 100% continuous rating |
| Ambient temperature | -25 to +55°C |
| Media | Lubricated or non-lubricated compressed air, nitrogen, instrument air |
| Environmental conditions | Slightly aggressive, also open air |

| Response times ¹⁾ | |
|------------------------------|---------|
| Opening | 20 [ms] |
| Closing | 40 [ms] |

¹⁾ Measured at valve outlet at 6 bar and +20°C acc. to ISO 12238.

Opening: Pressure rise 0 to 90%,

Closing: Pressure drop 100 to 10%

Ordering chart valves with manual override (without manual override on request)

| Circuit function | Orifice [mm] | Seal material body | Thread insert material ¹⁾ | Port connection threaded port | Qn value air ²⁾ [l/min] | Pressure range ³⁾ [bar] | Weight [g] | Power consumption [W] | Voltage/frequency [V/Hz] | Item no. | | | |
|---|--------------|--------------------|--------------------------------------|-------------------------------|------------------------------------|------------------------------------|------------|-----------------------|--------------------------|----------|---|--------|---------|
| Version acc. to EEx m, with 3 m long moulded cable | | | | | | | | | | | | | |
| C 3/2-way valve, with exhaust air return, in de-energized position port 2 exhausted internally | 6.0 | NBR and PUR | stainless steel | G 1/4 | 900 | 2-8 | 650 | 3 | 024/UC | 131 631 | | | |
| | | | | | | | | | 110/UC | 131 632 | | | |
| | | | | | | | | | 230/UC | 131 633 | | | |
| | | | | | | brass, nickel-plated | G 1/4 | 900 | 2-8 | 650 | 3 | 024/UC | 131 627 |
| | | | | | | | | | | | | 110/UC | 131 628 |
| | | | | | | | | | | | | 230/UC | 131 629 |
| Version acc. to EEx me, with terminal box without fuse (see Accessories p. 10) | | | | | | | | | | | | | |
| H 5/2-way valve, servo-assisted, in de-energized position pressure port 1 connected to port 2, port 4 exhausted | 6.0 | NBR and PUR | stainless steel | G 1/4 | 900 | 2-8 | 690 | 3 | 024/UC | 139 067 | | | |
| | | | | | | | | | 110/UC | 139 068 | | | |
| | | | | | | | | | 230/UC | 139 069 | | | |
| | | | | | | brass, nickel-plated | G 1/4 | 900 | 2-8 | 690 | 3 | 024/UC | 427 978 |
| | | | | | | | | | | | | 110/UC | 139 065 |
| | | | | | | | | | | | | 230/UC | 139 066 |

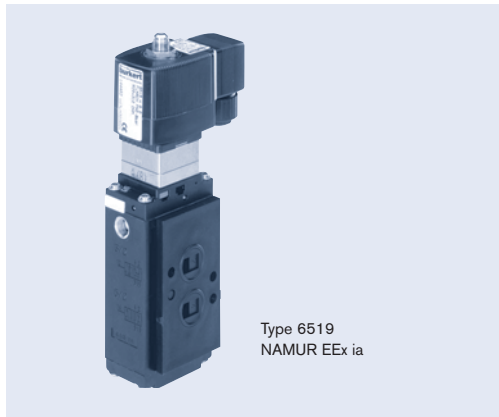
1) If the connectors are from stainless steel, the mounting screws will also be from stainless steel

2) Flow rate: Qn value air [l/min]: Measured at +20°C, 6 bar pressure at valve inlet, 1 bar pressure difference

3) Pressure values [bar]: Gauge pressures with respect to the prevailing atmospheric pressure.

All valves can be operated in circuit function C as well as in circuit function H. By replacing the adapter plate that comes with the valves, the change between the two circuit functions can be set up.

Type 6519 NAMUR EEx i (with tag connector acc. to DIN EN 175301-803 Form A, without cable plug)

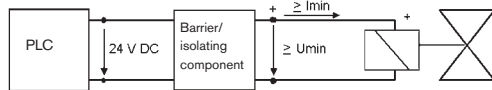


Type 6519
NAMUR EEx ia

The Type 6519 NAMUR EEx i valve is used for the pneumatic control of double or single-acting actuators with a NAMUR adapter plate flange. The circuit function can easily be changed using an adapter plate. In the 3/2-way function, feedback of the exhaust air takes place in the spring area of the armature drive. The diaphragm-controlled valve seats work with very low friction, ensuring reliable switching of the valve even after long shutdown periods and at ambient temperatures below 0 °C. The valves work without a continuous air consumption.

Note

The units may only be used in explosive atmospheres in the manner approved by the Federal Institute of Physics and Technology (PTB), i.e., the permissible maximum electrical values must be complied with. Suitable barriers and isolating modules are available for this.



The valve is intended for operation on 24 VDC outputs via the intermediate switching of a corresponding intrinsically-safe operating resource (isolating module or barrier). If required, request the "Recommended Barrier and Isolating Module" data sheet.

| Technical data | |
|---------------------------------|--|
| Orifice | DN 6.0 |
| Body materials | Pilot valve: Stainless steel 1.4305 or brass Main valve: Polyamide, glass-fibre reinforced |
| Thread insert material | Stainless steel or brass, nickel-plated |
| Seal materials | FPM, NBR and PUR |
| Pneumatic connection | Supply ports 1,3,5: Threaded port G 1/4 Service ports 2 and 4: NAMUR flange acc. to VDI/VDE 3845 |
| Electrical connection | Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) for cable plug Type 2508 (see Accessories). Ensure correct polarity! |
| Protection class | IP65 with cable plug |
| Ambient temperature | -25 to +55°C |
| Media | Lubricated or non-lubricated compressed air, instrument air, nitrogen |
| Environmental conditions | Open air, chemical atmosphere |

| Response times ¹⁾ [ms] | | ¹⁾ Measured at valve outlet at 6 bar and +20°C acc. to ISO 12238. Opening: Pressure rise 0 to 90%, Closing: Pressure drop 100 to 10% |
|-----------------------------------|-----|---|
| Opening | 75 | |
| Closing | 115 | |

| Electrical data | | |
|---|--|-----------------|
| Approval | II 2G EEx ia IIC T6 PTB 01 ATEX 2101 II 2D Ex ia D21 T 80°C | |
| Functional values for valve switching function ¹⁾ | at +20°C | at +55°C |
| Minimum switching current | 29 mA | 29 mA |
| Nominal resistance of the coil | 310 Ω | 360 Ω |
| Minimum terminal voltage | 9.0 V | 10.4 V |
| Permissible maximum values acc. to certificate of conformity | | |
| Ui | 35 V | |
| Ii | 0.9 A | |
| Pi | 1.1 W | |

¹⁾ With high-impedance coil on request

Ordering chart valves without manual override (with manual override and high-impedance coil on request)

| Circuit function | Orifice [mm] | Seal material body | Port connection threaded port | Q _{in} value air ¹⁾ [l/min] | Pressure range ²⁾ [bar] | Weight [g] | Body material pilot valve | Material for control air bush | Item no. |
|--|--------------|-------------------------|-------------------------------|---|------------------------------------|------------|---------------------------|-------------------------------|----------|
| C 3/2-way valve, with exhaust air return, in de-energized position port 2 exhausted internally | 6.0 | NBR and PUR (polyamide) | G 1/4 | 900 | 2-8 | 670 | St. st. 1.4305 | St. st. | 144 482 |
| | | | | | | | | brass, nickel-plated | 144 483 |
| or H 5/2-way valve, servo-assisted, in de-energized position pressure port 1 connected to port 2, port 4 exhausted | | | | | | | brass | brass, nickel-plated | 147 244 |

1) **Flow rate: Q_{in} value air [l/min]:** Measured at +20°C, 6 bar pressure at valve inlet, 1 bar pressure difference
 2) **Pressure values [bar]:** Gauge pressures with respect to the prevailing atmospheric pressure.

All valves can be operated in circuit function C as well as in circuit function H. By replacing the adapter plate that comes with the valves, the change between the two circuit functions can be set up. All valves have mounting plates and tag connectors acc. to DIN EN 175301-803 Form A (previously DIN 43650) and are supplied without cable plug (see Accessories p. 10)

Manifold assembly see page 8

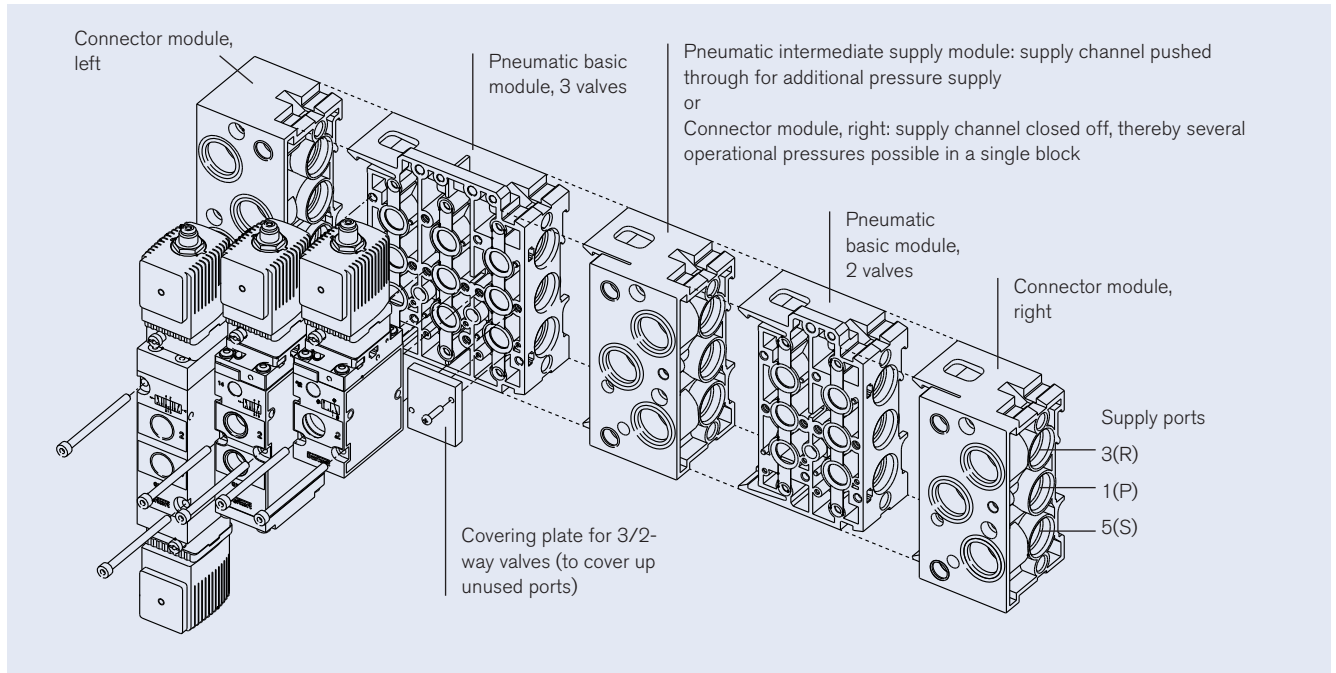
Accessories see page 10

Dimensions see page 16

Pneumatic modules Type MP07

Single modules or pre-mounted blocks are available.

Example of a complete valve block



Note when ordering complete valve blocks:

Please list the modules in the block assembly from right to left, as shown in the ordering example.

Ordering example for Type 6518 with Type MP07

| No. | Unit | Item no. |
|-----|----------------------------------|----------|
| 1 | Connector module right, G1/2 | 635 331 |
| 1 | Pneumatic basic module, 2 valves | 635 319 |
| 1 | Pneumatic basic module, 3 valves | 635 343 |
| 1 | Connector module left, G1/2 | 635 324 |
| 5 | Valves | 132 457 |

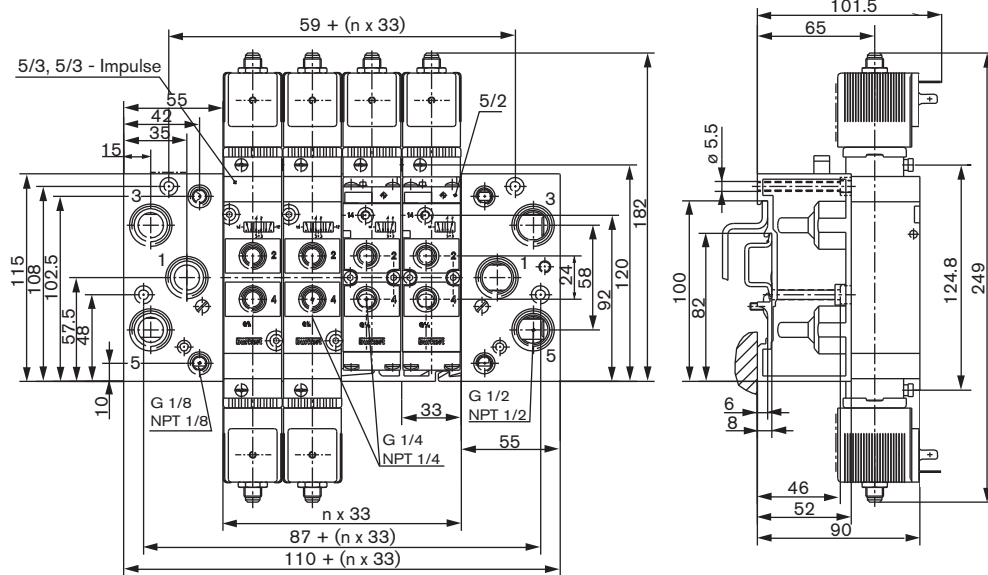
Ordering chart for Type MP07 pneumatic modules

| Version | Item no. |
|---|----------|
| Connector module right G1/2 | 635 331 |
| Intermediate supply module | 637 505 |
| Pneumatic basic module, 2 valves universal (for 3/2-, 5/2- and 5/3-way) | 635 319 |
| Pneumatic basic module, 3 valves universal (for 3/2-, 5/2- and 5/3-way) | 635 343 |
| Connector module left G1/2 | 635 324 |
| Covering plate for 5/2- and 5/3-way (to cover unused valve positions) | 635 335 |
| Covering plate for 3/2-way (to cover unused connections) | 635 337 |

Type MP07 pneumatic modules, *continued*

Dimensions Type MP07 pneumatic modules [mm]

Manifold assembly either wall-mounted or standard mounting DIN rail 50022 or 50023



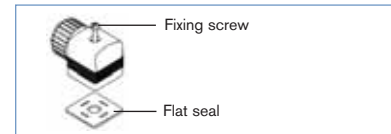
n=no. of valves, maximal 12

Valve assembly on pneumatic modules Type MP05 using the supplied M4 screws

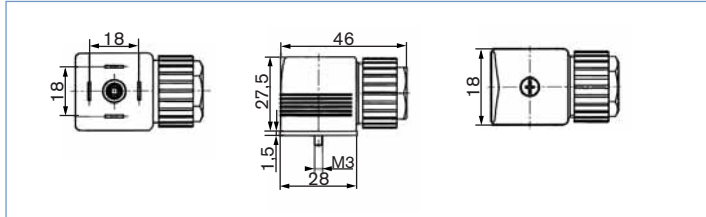
Accessories

Cable plug Type 2508 acc. to DIN EN 175301-803 Form A

The delivery of a cable plug includes the flat seal and the fixing screw. For other cable plug versions acc. to DIN EN 175301-803 Form A (previously DIN 43650) with integrated circuitry, see datasheet Type 2508.




Dimensions Type 2508 [mm]



Ordering chart cable plug Type 2508

| Circuitry | Voltage | Item no. |
|---|-------------|----------|
| For standard version 6518/19 | | |
| Fixing screw in steel (galvanised and chrome-plated) | | |
| without circuitry | 0 - 250 V | 008 376 |
| with LED | 12 - 24 V | 008 360 |
| with LED and varistor | 12 - 24 V | 008 367 |
| with LED and varistor | 200 - 240 V | 008 369 |
| For EEx i version 6519 | | |
| Fixing screw in stainless steel 1.4404 and blue compression gland nut | | |
| without circuitry | 0 - 250 V | 438 574 |
| for further versions see datasheet 2508 | | |

Ordering chart further Accessories

| Accessory | Feature | Item no. |
|---|--|----------|
| Cap nut  | Cap nut in stainless steel for additional protection of the exhaust air channel from the penetration of damp | 649 554 |
| Blanking plug | G 1/8 | 780 141 |
| | G 1/4 | 780 142 |
| | G 1/2 | 780 144 |
| Silencer | G 1/8 | 005 305 |
| | G 1/4 | 005 064 |
| | G 1/2 | 005 062 |
| Labelling plate | 64 pieces | 635 416 |

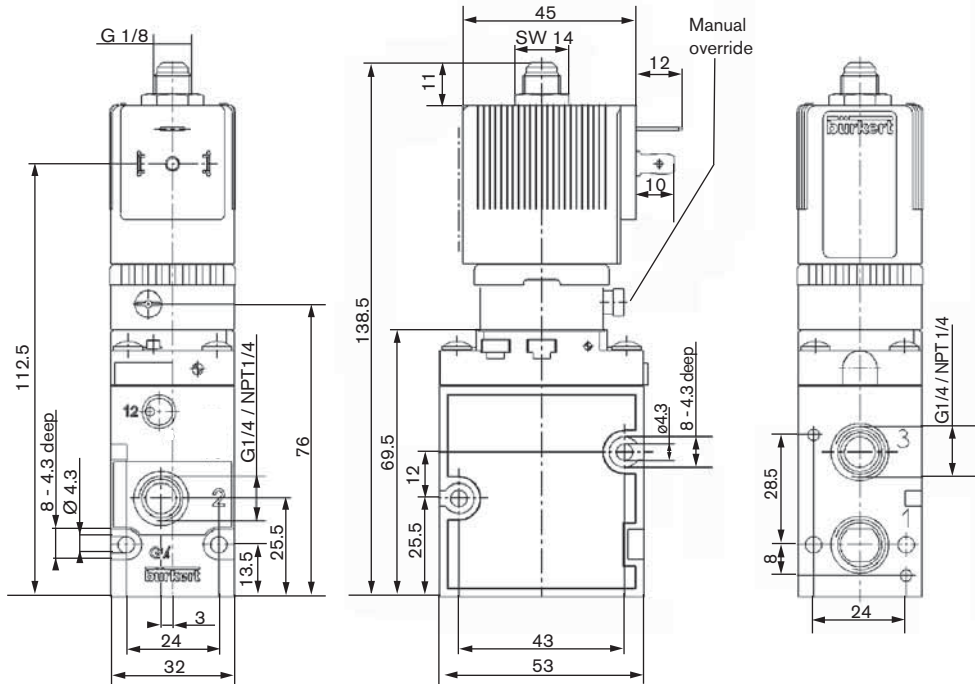
Semi-delay fuse for 6519 NAMUR EEx m

| Voltage [V] | Max. current [mA] | Item no. |
|-------------|-------------------|----------|
| 24 V | 315 mA | 153 733 |
| 110 V | 50 mA | 153 716 |
| 230 V | 32 mA | 153 715 |

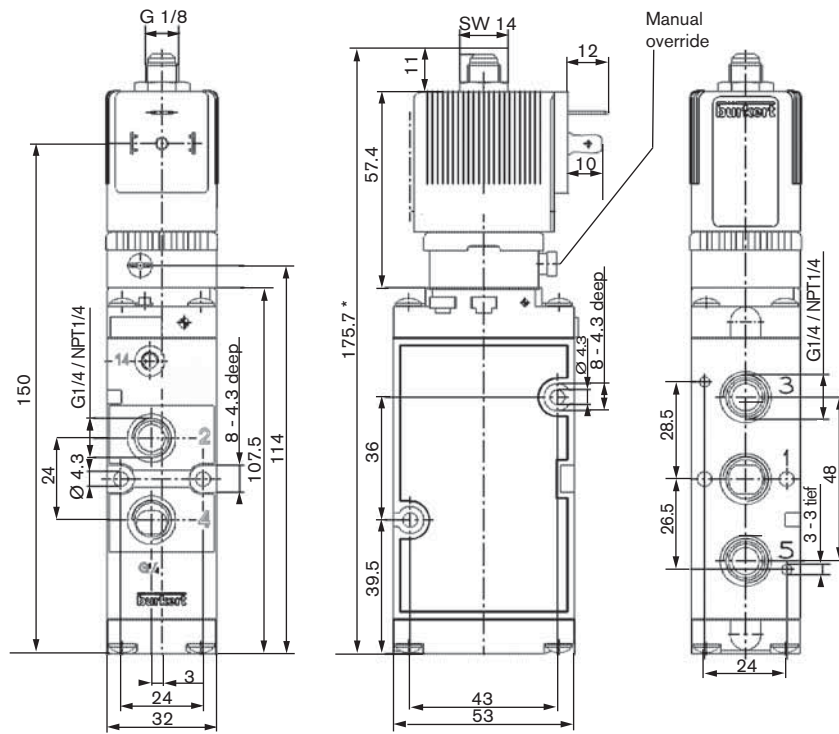
Dimensions [mm]

Standard versions

Type 6518
3/2-way valve, circuit function C and D



Type 6519
5/2-way valve, circuit function H

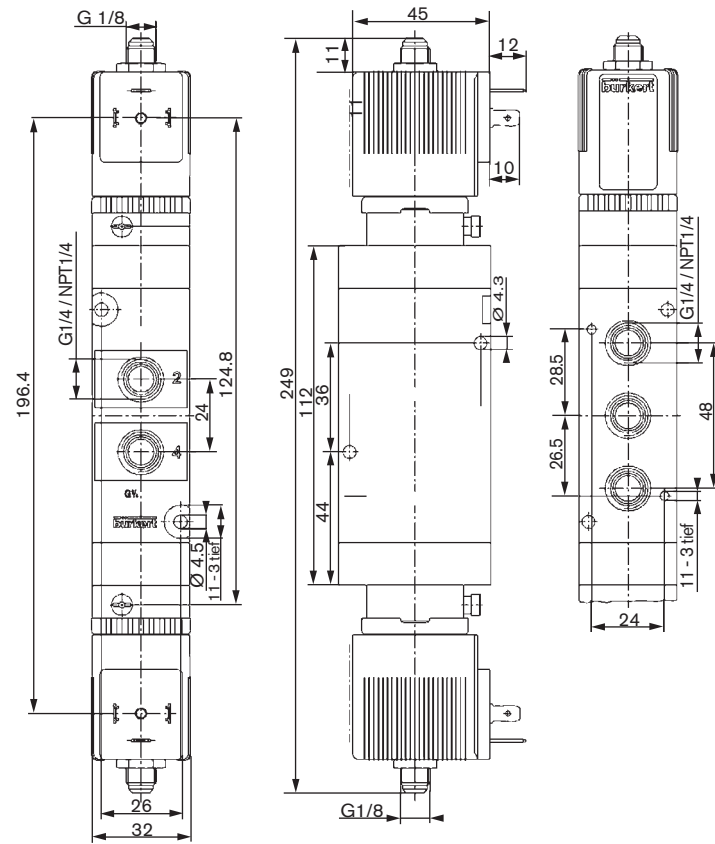


* Mounting length with 2 magnetic coils 249 mm

Dimensions [mm]

Standard versions

Type 6519
5/3-way valve, circuit function L and N



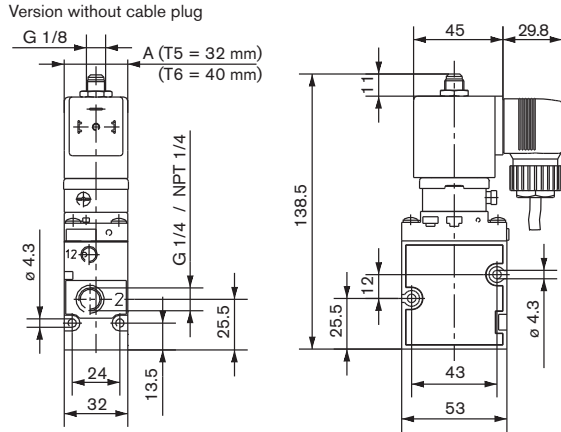
Dimensions [mm]

EEx m/me versions

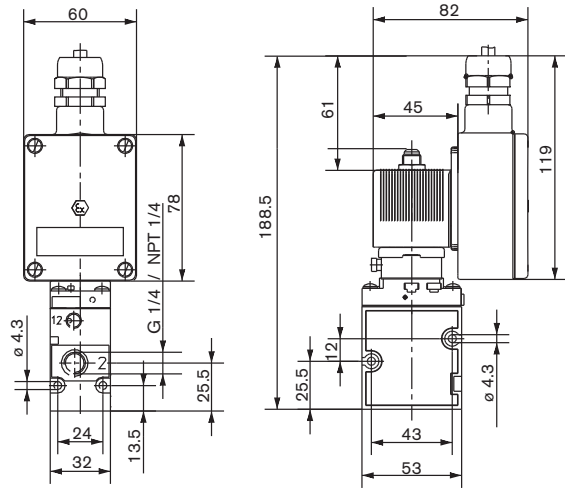


Type 6518
3/2-way valve, circuit function C and D

with moulded cable, 3 m long (EEx m)

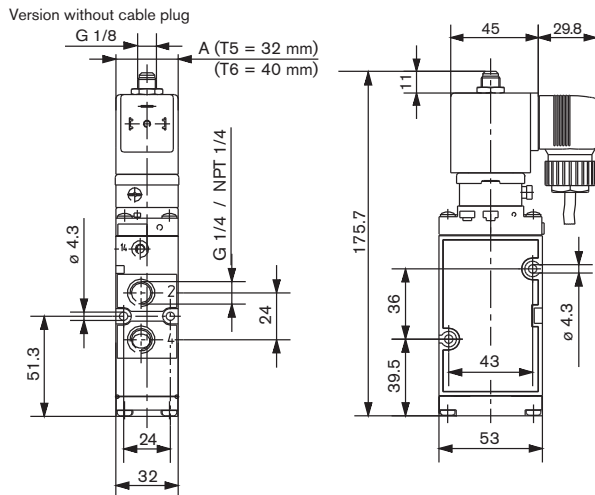


with terminal box (EEx me)

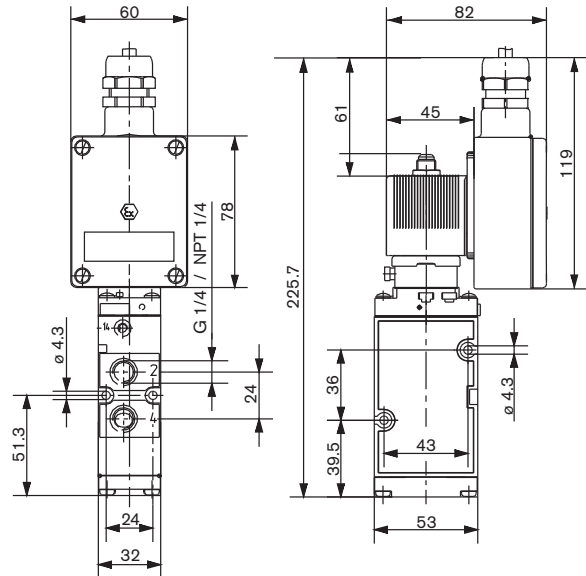


Type 6519
5/2-way valve, circuit function H, L and N

with moulded cable, 3 m long (EEx m)



with terminal box (EEx me)

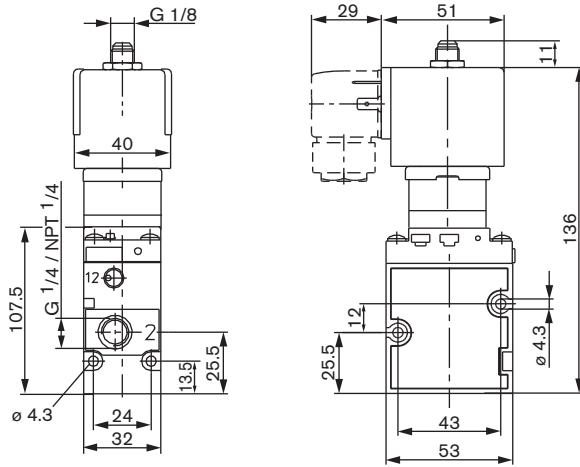


Dimensions [mm]

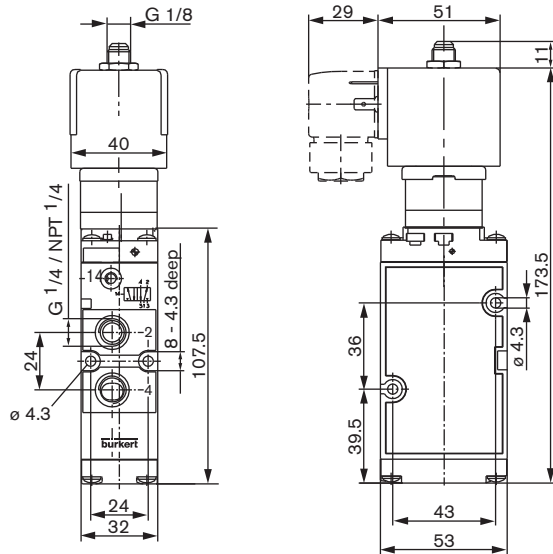
EEx i versions



Type 6518
3/2-way valve, circuit function C

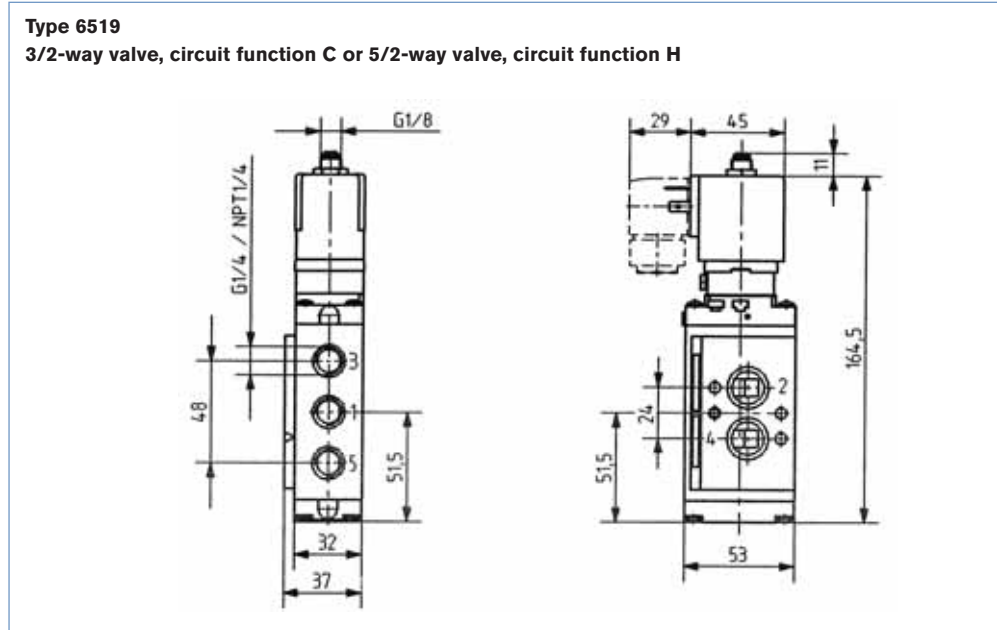


Type 6519
5/2-way valve, circuit function H



Dimensions [mm]

NAMUR standard version



NAMUR EEx m/me versions



Type 6519
3/2-way valve, circuit function C or 5/2-way valve, circuit function H

with moulded cable, 3 m long (EEx m) **with terminal box (EEx me)**

| | A | B | C | D | E |
|---------|-------|------|------|------|----|
| T5 coil | 164.5 | 57.5 | 41.0 | 45.0 | 32 |
| T6 coil | 164.9 | 57.9 | 41.4 | 51.0 | 40 |

| | A | B | C | D |
|---------|-------|------|----|----|
| T5 coil | 164.5 | 57.5 | 82 | 32 |
| T6 coil | 164.9 | 57.9 | 88 | 40 |

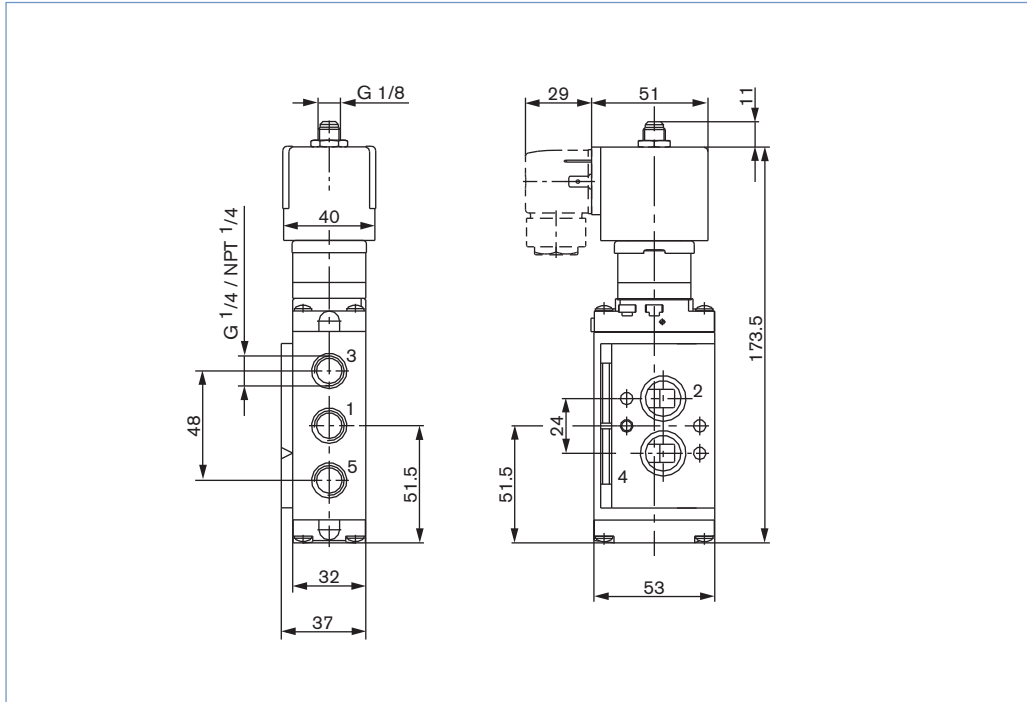
Dimensions [mm]

NAMUR EEx i version



Type 6519

3/2-way valve, circuit function C or 5/2-way valve, circuit function H



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