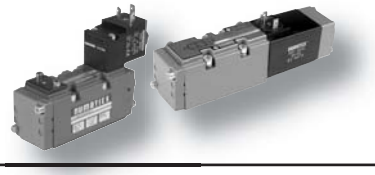


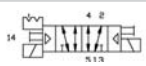
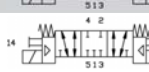
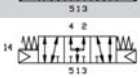
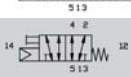
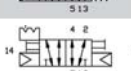
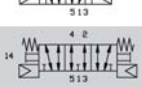
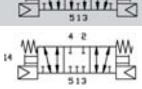
# Sub-base Mounted Valves to ISO 5599/1

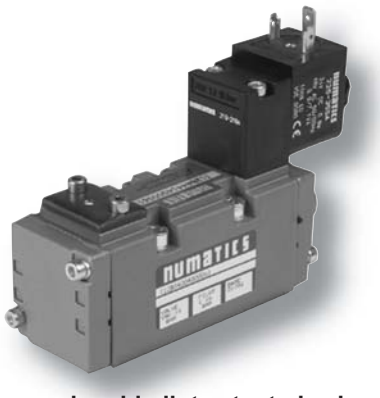
## ISO 1; ISO 2; ISO 3 Series • Overview

**How to Order:** (example)

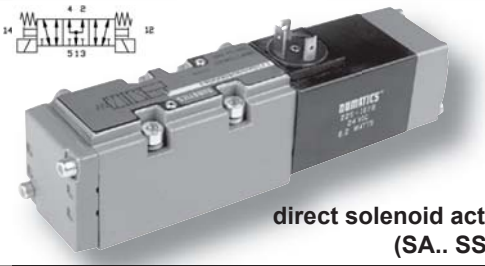
**I23** **BA4**

| | Valve Series | Port Size | Flow Capacity |
|---|---|---|---|
| **I12** = | ISO 1 | 1/4 | 1200 Nl/min $C_v$ 1.2 |
| **I23** = | ISO 2 | 3/8 | 1700 Nl/min $C_v$ 1.7 |
| **I34** = | ISO 3 | 1/2 | 4400 Nl/min $C_v$ 4.4 |

| Valve Function | | Valve Function | |
|---|---|---|---|
| **BA4** = |  | **PA4** = |  |
| **BW4** = |  | **PP4** = |  |
| **BB4** = |  | **PP5** = |  |
| **BB5** = |  | **PP6** = |  |
| **BB6** = |  | **PP7** = |  |
| **BB7** = |  | **JA4** = |  |
| **SA4** = |  | **JJ4** = |  |
| **SS4** = |  | **JJ5** = |  |
| **SS5** = |  | **JJ6** = |  |
| **SS6** = |  | **JJ7** = |  |
| **SS7** = |  | | |



**solenoid pilot actuated valves (BA.. BW.. BB..)**

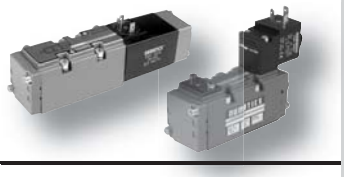


**direct solenoid actuated valves (SA.. SS..)**

**Technical Data**

| | | | | |
|---|---|---|---|---|
| | **Solenoid Pilot Actuated ISO 1; ISO 2; ISO 3 Series** | | | |
| Power input: | Low-wattage DC 2.7 W; AC 5.2/3.9 VA<br>Standard DC 6.8 W; AC 10.9/7.6 VA | | | |
| Pilot pressure range: | Low-wattage 1 to 10 bar<br>Standard 1 to 16 bar | | | |
| Operating pressure: | Vacuum to 21 bar | | | |
| Voltage: | 24 VDC ± 10% | | 24 V,-110V,-230 V, 50-60 Hz ± 10% | |
| | **Response Time [ms]** | | | |
| Single actuated (5-port., 2 pos.) | Energise 20 | De-energise 32 | Energise 15 | De-energise 36 |
| Double actuated (5-port., 2 pos.) | Energise 20 | — | Energise 15 | — |
| Double actuated (5-port., 3 pos.) | Energise 20 | De-energise 32 | Energise 15 | De-energise 36 |
| | **Direct Solenoid Actuated** | | | |
| | **ISO 1; ISO 2 Series** | | **ISO 3 Series** | |
| Power input: | — | | 5-port., 2-pos. valve AC 300/34 VA | |
| | Standard DC 6.0 W; | AC 50.0/9.6 VA | 5-port., 3-pos. valve AC 300/34 VA | |
| Pilot pressure range: | Low-wattage | — | — | |
| | Standard | 1 to 16 bar | 1 to 16 bar | |
| Operating pressure: | Vacuum to 21 bar | | Vacuum to 21 bar | |
| Voltage: | 24 VDC ± 10% | 24 V,-110V,-230 V, 50-60 Hz ± 10% | 24 V,-110V,-230 V, 50-60 Hz ± 10% | |
| | **Response Time [ms]** | | | |
| Single actuated (5-port., 2 pos.) | Energise 32 | De-energise 12 | Energise 15 | De-energise 30 |
| Double actuated (5-port., 2 pos.) | Energise 32 | — | Energise 18 | — |
| Double actuated (5-port., 3 pos.) | Energise 32 | De-energise 12 | Energise 18 | De-energise 30 |

# Sub-base Mounted Valves to ISO 5599/1



## ISO 1; ISO 2; ISO 3 Series • Overview

**00** **4** **0** **000** **61**

| Bases | |
|---|---|
| **00** | = Without base |
| **1A** | = Mounted on manifold block form C |
| **11** | = Mounted on connector plate form E, incl. manifold block "1A" |
| **15** | = Mounted on manifold block with side and bottom ports |
| **25** | = Mounted on sandwich speed control and manifold block "15" |
| **41** | = Mounted on individual base form A |
| **56** | = Mounted on individual base form B |
| **58** | = Mounted on sandwich speed control and individual base "56" |

*** On request:** other bases

| Base Ports | |
|---|---|
| **0** | = Without base |
| **G** | = G-thread |
| **N** | = NPTF-thread |

| Solenoid Type | |
|---|---|
| **00** | = Air pilot actuated |
| **61** | = 24 VDC |
| **40** | = 230 VAC/50-60 Hz |
| **30** | = 110 VAC/50-60 Hz |
| **20** | = 24 VAC/50-60 Hz |

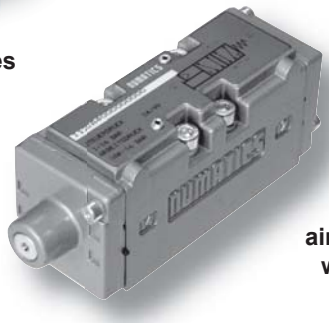
| Valve Actuation | |
|---|---|
| **0** | = Air pilot actuated |
| **2** | = AC |
| **4*** | = DC |
| **7** | = M12 DESINA standard connector (DC only) Type 30 mm |
| **C** | = Solenoid with UL- and CSA-approval |
| **T** | = M12 connector with LED (DC only) type 30 mm |

* not for SA / SS valves size 3

| Options* | |
|---|---|
| **000** | = Manual override in the cover acting directly on the spool, BA/BB-valves and SA/SS-valves |
| **000** | = Indirectly acting manual override, BW-valves without manual override |
| **000** | = PA/PP-valves |
| **11M** | = Without manual override, BA/BB-valves |
| **17P** | = Indirectly acting non-locking manual override, BA/BB-valves |
| **18W** | = Indirectly acting manual override push/locking, BA/BB-valves |
| **26Y** | = Indirectly acting non-locking manual override and low-wattage, BA/BB-valves |
| **44Q** | = Indirectly acting manual override push/locking and low-wattage, BA/BB-valves |
| **26Z** | = Without manual override and low-wattage, BA/BB-valves |

*** On request:** other options

**air pilot actuated valves w/o manual override (PA.. PP..)**



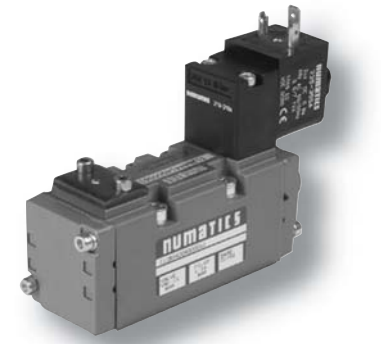
**air pilot actuated valves with manual override (JA.. JJ..)**

Order example: **I23BA4004000061**

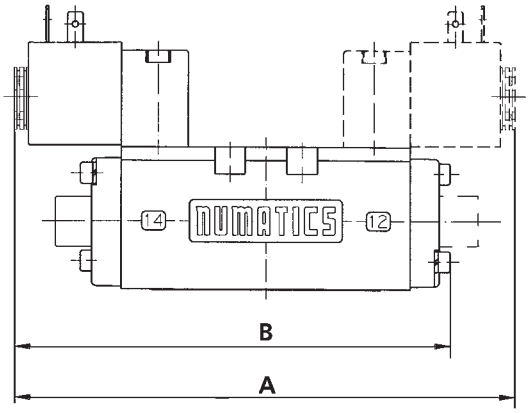
This refers to a ISO 2 series single solenoid pilot actuated 5-ported, 2-pos. valve with spring return.
The manual override acting directly on the spool is standard.
Voltage of the solenoid is 24 VDC.
The valve is supplied without base.

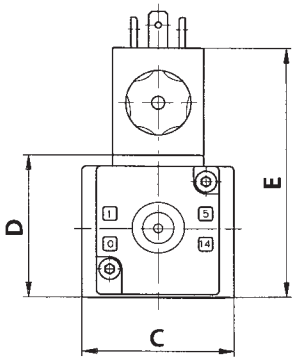
## ISO 1; ISO 2; ISO 3 Series • Dimensions

### Single or Double Solenoid Pilot Actuated Directional Valves



solenoid pilot actuated valves
(BA.. BW.. BB)



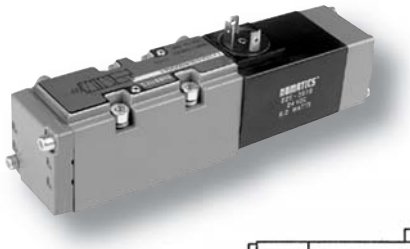

**Dimensions [mm]**

| Series | Type | A | B | C | D | E | Weight approx. [kg] |
|---|---|---|---|---|---|---|---|
| ISO 1 | I12BA4/BW4... | — | 143.0 | 42.0 | 48.0 | 83.0 | 0.700 |
| | I12BB4/5/6/7... | 172.0 | — | 42.0 | 48.0 | 83.0 | 0.800 |
| ISO 2 | I23BA4/BW4... | — | 155.0 | 50.0 | 48.0 | 83.0 | 0.800 |
| | I23BB4/5/6/7... | 183.0 | — | 50.0 | 48.0 | 83.0 | 1.000 |
| ISO 3 | I34BA4/BW4... | — | 180.0 | 63.5 | 60.5 | 97.0 | 1.600 |
| | I34BB4/5/6/7... | 197.0 | — | 63.5 | 60.5 | 97.0 | 1.700 |

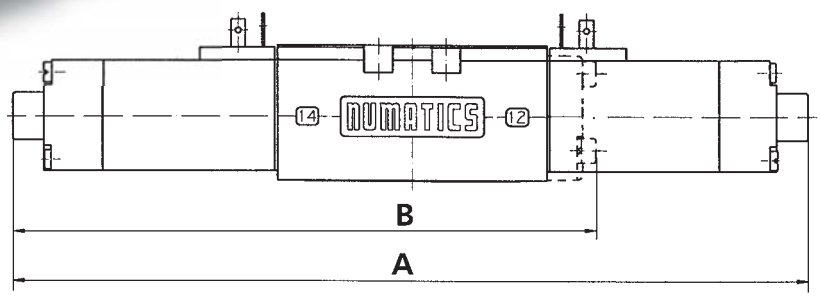
inc. bolts and gaskets

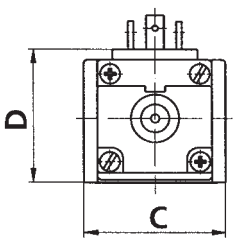
**Note:** Pilot plugging arrangements see page 450

### Single or Double Direct Solenoid Actuated Directional Valves



direct solenoid actuated valves
(SA.. SS.. )

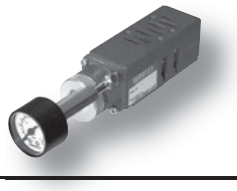



**Dimensions [mm]**

| Series | Type | A | B | C | D | Weight approx. [kg] |
|---|---|---|---|---|---|---|
| ISO 1 | I12SA4..4....61 | — | 200.0 | 42.0 | 48.0 | 0.800 |
| | I12SA4..2....40/30/20 | — | 180.0 | 42.0 | 48.0 | 0.800 |
| | I12SS4/5/6/7..4....61 | 280.0 | — | 42.0 | 48.0 | 1.000 |
| | I12SS4/5/6/7..2....40/30/20 | 240.0 | — | 42.0 | 48.0 | 1.000 |
| ISO 2 | I23SA4..4....61 | — | 208.0 | 50.0 | 48.0 | 1.000 |
| | I23SA4..2....40/30/20 | — | 188.0 | 50.0 | 48.0 | 1.000 |
| | I23SS4/5/6/7..4....61 | 288.0 | — | 50.0 | 48.0 | 1.200 |
| | I23SS4/5/6/7..2....40/30/20 | 248.0 | — | 50.0 | 48.0 | 1.200 |
| ISO 3 | I34SA4..2....40/30/20 | — | 234.0 | 63.5 | 60.5 | 1.700 |
| | I34SS4/5/6/7..2....40/30/20 | 305.0 | — | 63.5 | 60.5 | 1.700 |

incl. bolts and gaskets





numatics

## Sandwich Pressure Regulators ISO 1; ISO 2 and ISO 3 Series • Overview

**How to Order:** (example)

**I23 RD 1 00 0 P 16N 00**

| Regulator Series | | Port Size |
|---|---|---|
| **I12** | = ISO 1 | 1/4 |
| **I23** | = ISO 2 | 3/8 |
| **I34** | = ISO 3 | 1/2 |

| Pressure Range | |
|---|---|
| **1** | = 0.7 to 9 bar |
| **3** | = 0.2 to 2 bar |
| **4** | = 0.35 to 4 bar |
| **6** | = 1.4 to 17 bar |

| Type | |
|---|---|
| **0** | = Regulator |

| Options** | |
|---|---|
| **000** | = Without options |
| **12H** | = Without gauge |
| **16P*** | = Jumper on regulator end 12, port “5“ regulation |
| **16N*** | = Jumper on regulator end 14, port “3“ regulation |
| **27J*** | = 12H and 16N |
| **27K*** | = 12H and 16P |

* only with dual regulator
**** Other options:** on request

| Regulator Type | |
|---|---|
| **RS** | = Single type for port “1“ regulation |
| **RD*** | = Dual type for “3“ and “5“ regulation |
| **NS**** | = Single type, piston design for “1“ port regulation |
| **ND**** | = Dual type, piston design for “1“ and “3 regulation |

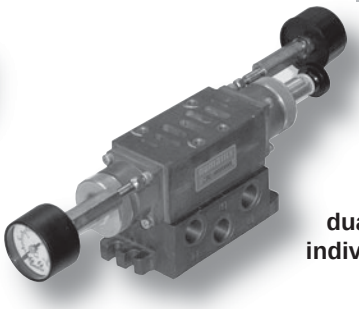
* Not available with sandwich speed controls
** only for Series ISO 3, with pressure range 1.4 to 17 bar

| Bases* | |
|---|---|
| **00** | = Without base |
| **1A** | = Mounted on manifold block form C |
| **11** | = Mounted on connector plate form E, incl. mounting block "1A" |
| **15** | = Mounted on manifold block with side and bottom ports |
| **25** | = Mounted on sandwich speed control and manifold block "15" |
| **41** | = Mounted on individual base form A |
| **56** | = Mounted on individual base form B |
| **58** | = Mounted on sandwich speed control and individual base "56" |

*** On request:** other bases

| Base Ports | |
|---|---|
| **0** | = **Regulator unit only (Only Series ISO 3, Regulatortype NS and ND)** |
| **P** | = Regulator unit only or bases with NPTF- thread |
| **Q** | = Bases with G-thread |

**single regulator (RS.. NS..)**



**dual regulator with individual base form A (RD.. ND..)**

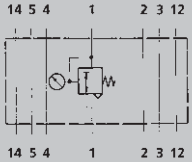
Order example: **I23RD1000P16N00**

This refers to a double sandwich pressure regulator of ISO 2 series. The pressure range is 0.7 to 9 bar.
The regulator is equipped with a jumper on regulator end 14, port “3“ regulation.
The regulator is supplied without base.

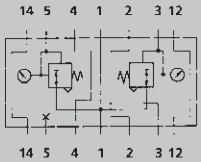
### Regulator Symbols

**Valve End**

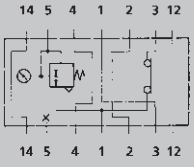
**RS**-Regulator



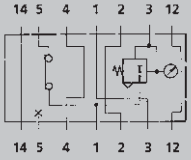

**RD**-Regulator



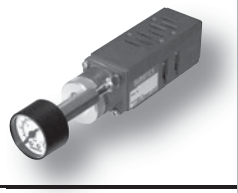

**RD**-Regulator
with jumper
on End 12 (16P)




**RD**-Regulator
with jumper
on End 14 (16N)



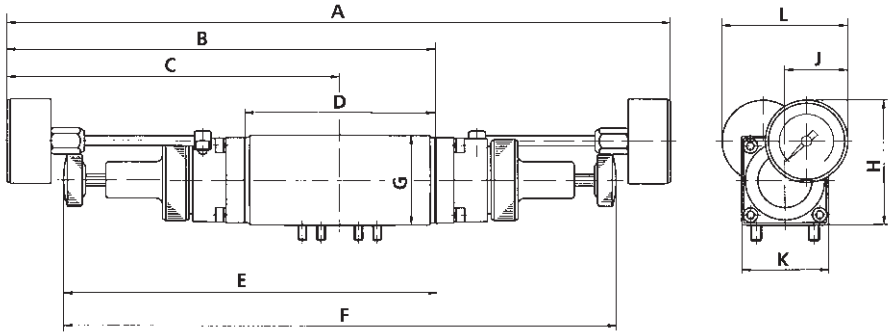

**Connector Plate End**



## Sandwich Pressure Regulators ISO 1; ISO 2 and ISO 3 Series • Dimensions

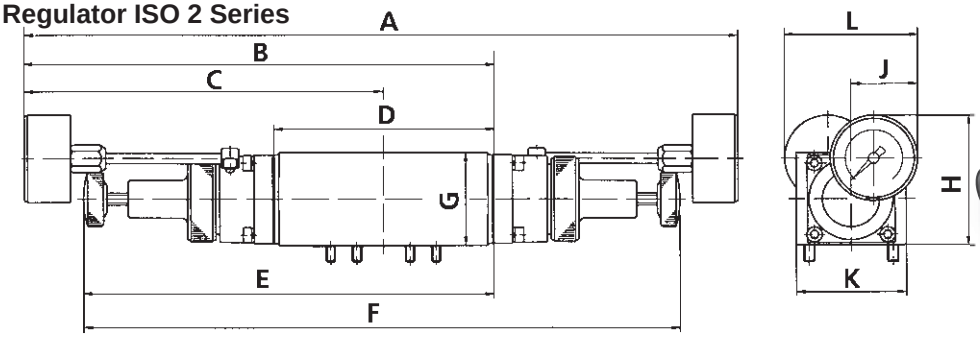
### Sandwich Pressure Regulator, Single or Double Actuated

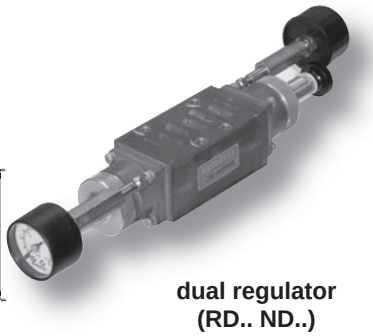
### Regulator ISO 1 Series




single regulator
(RS.. NS..)

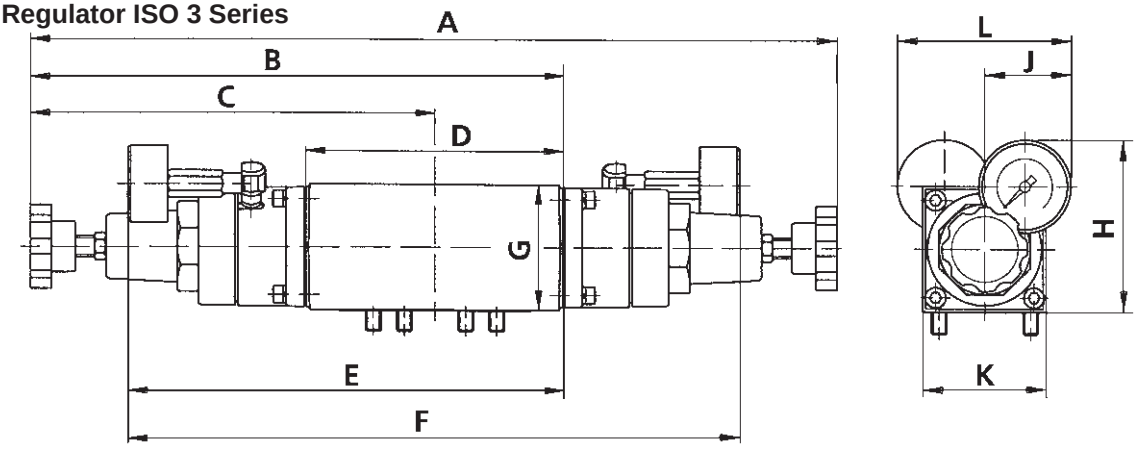
### Regulator ISO 2 Series



dual regulator
(RD.. ND..)

### Regulator ISO 3 Series



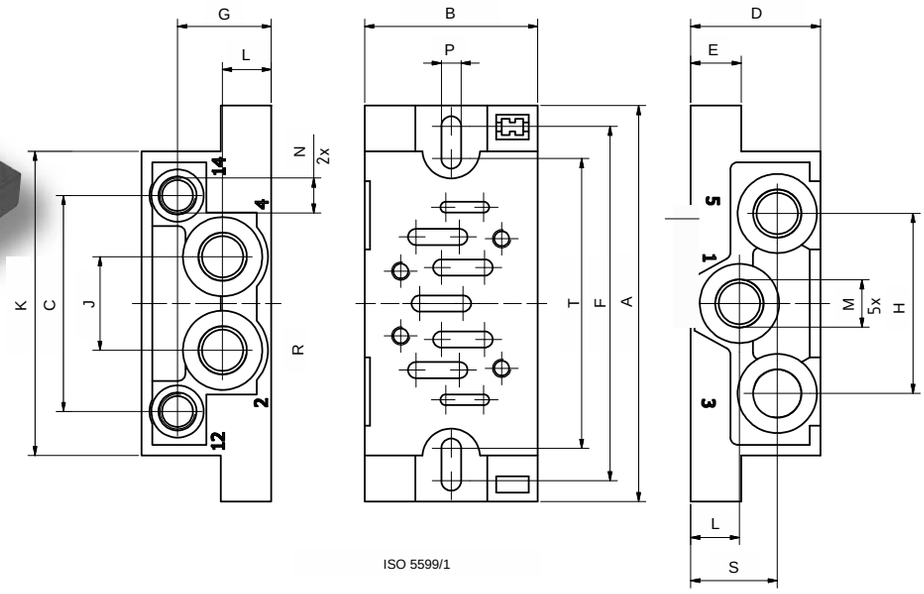

Dimensions [mm]

| Series | Type | A | B | C | D | E | F | G | H | J | K | L | Weight approx. [kg] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ISO 1 | I12RS... | — | 204.7 | 158.8 | 92.0 | 180.0 | — | 43.2 | 60.0 | 37.5 | 42.0 | — | 0.600 |
| ISO 1 | I12RD... | 317.6 | — | 158.8 | 92.0 | — | 268.0 | 43.2 | 60.0 | 37.5 | 42.0 | 75.0 | 0.800 |
| ISO 2 | I23RS... | — | 212.7 | 162.8 | 100.0 | 188.0 | — | 43.2 | 60.0 | 37.5 | 50.0 | — | 0.700 |
| ISO 2 | I23RD... | 325.6 | — | 162.8 | 100.0 | — | 276.0 | 43.2 | 60.0 | 37.5 | 50.0 | 75.0 | 0.900 |
| ISO 3 | I34RS/NS... | — | 280.0 | 218.8 | 134.0 | 226.0 | — | 66.7 | 81.8 | 48.9 | 64.0 | — | 1.700 |
| ISO 3 | I34RD/ND... | 423.6 | — | 218.8 | 134.0 | — | 318.0 | 66.7 | 81.8 | 48.9 | 64.0 | 97.8 | 2.320 |

incl. bolts, gaskets and gauge

## Accessories

### Individual Base Form A to VDMA 24345, with Side Ports



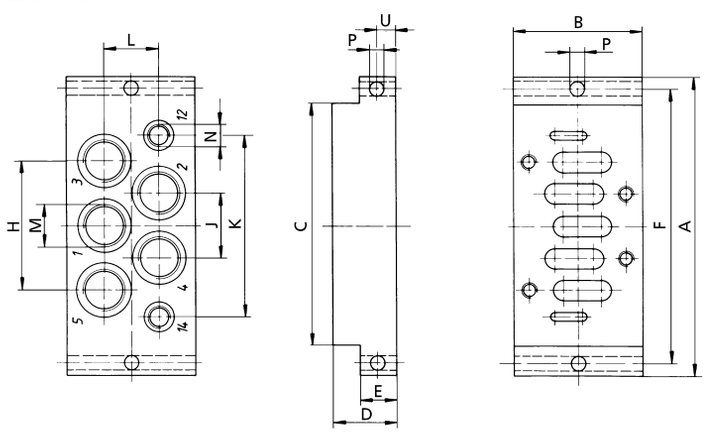

**Dimensions [mm]**

| Series | A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ISO 1 | 110.0 | 48.0 | 84.5 | 36.0 | 14.0 | 89.0 | 26.0 | 50.0 | 26.0 | 60.0 | 13.5 | G 1/4 | G 1/8 | 5.5 | 15.0 / 0.3 | **19.00 (5X)** |
| ISO 2 | 124.0 | 57.0 | 95.0 | 40.0 | 13.0 | 113.0 | 31.0 | 56.0 | 30.0 | 74.0 | 15.0 | G 3/8 | G 1/8 | 6.5 | 15.0 / 0.3 | |
| ISO 3 | 149.0 | 71.0 | 119.0 | 32.0 | 18.0 | 136.0 | 22.0 | 68.0 | 32.0 | 90.0 | 17.0 | G 1/2 | G 1/8 | 6.5 | 15.0 / 0.3 | |

| Series | S | T | Weight app. [kg] | Order Code |
|---|---|---|---|---|
| ISO 1 | 24.0 | 80.0 | 0.200 | **103-544** |
| ISO 2 | 25.0 | 103.0 | 0.300 | **103-549** |
| ISO 3 | - | - | 0.400 | **103-545** |

**On request:** individual bases with NPTF-thread

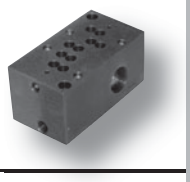
### Individual Base Form B to VDMA 24345, with Bottom Ports




**Dimensions [mm]**

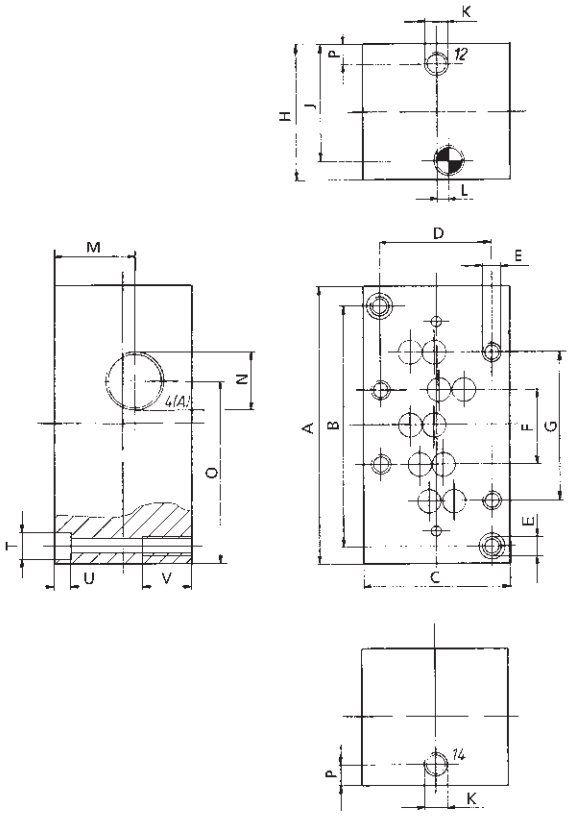
| Series | A | B | C | D | E | F | G | H | J | K | L | M | N | P | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ISO 1 | 110.0 | 46.0 | 84.0 | 30.0 | 10.0 | 98.0 | 5.0 | 46.0 | 23.0 | 62.0 | 23.0 | G 1/4 | G 1/8 | 5.5 | 0.190 | **103-542** |
| ISO 2 | 124.0 | 56.0 | 95.0 | 35.0 | 13.0 | 112.0 | 6.5 | 56.0 | 26.0 | 74.0 | 27.0 | G 3/8 | G 1/8 | 6.6 | 0.320 | **103-557** |
| ISO 3 | 149.0 | 64.0 | 119.0 | 32.0 | 18.0 | 136.0 | 9.0 | 64.0 | 32.0 | 90.0 | 27.0 | G 1/2 | G 1/8 | 6.6 | 0.410 | **103-543** |

**On request:** individual bases with NPTF-thread

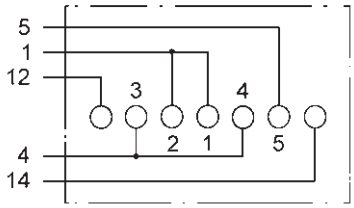


## Accessories

### Individual Base 3-ported, 2-pos. Function, with Increased Flow Capacity (NC)




Symbol



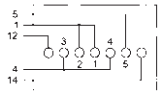

**Dimensions [mm]**

| Series | A | B | C | D | E | F | G | H | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ISO 3 | 120.0 | 100.0 | 64.0 | 48.0 | M8 | 32.0 | 64.0 | 59.5 | 50.5 | G 1/8 | 5.0 | 34.0 | G 3/4 | 79.0 |

| Series | P | Q | R | S | T Ø | U | V | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|---|---|
| ISO 3 | 9.0 | 52.0 | 92.0 | G 1/2 | 11.0 | 8.0 | 20.0 | 1.065 | **10.4935** |
| **On request:** individual bases with NPTF-thread | | | | | | | | | |

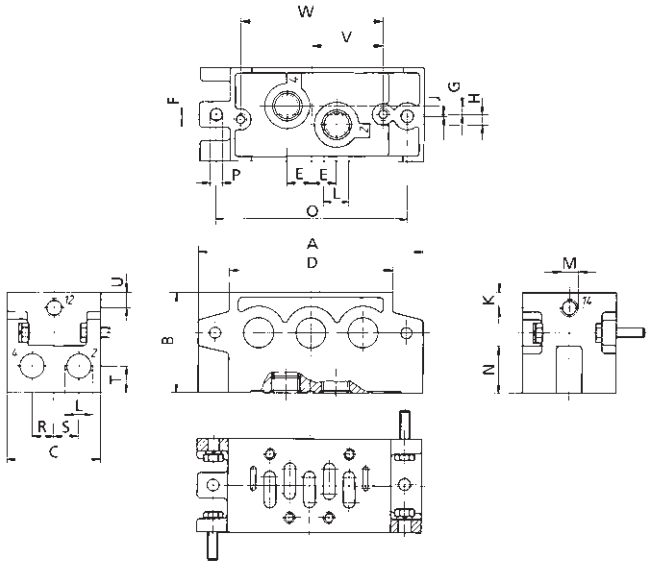
### Without picture: Individual bases

**Dimensions [mm]**

| Symbol | Description | Ports | Length | Width | Height | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|
|  | Individual base with increased ow capacity ISO 1 series | "1" + "4" = G 3/8 "5" = G 1/4 | 110.0 | 45.0 | 45.0 | 0.500 | **239-357** |
| — | Individual base for poppet valves ISO 3 series | "1", "4" + "5" = G 1/2 | 120.5 | 70.0 | 69.5 | 1.400 | **13.7964** |

## Accessories

### Manifold Block with Side and Bottom Ports



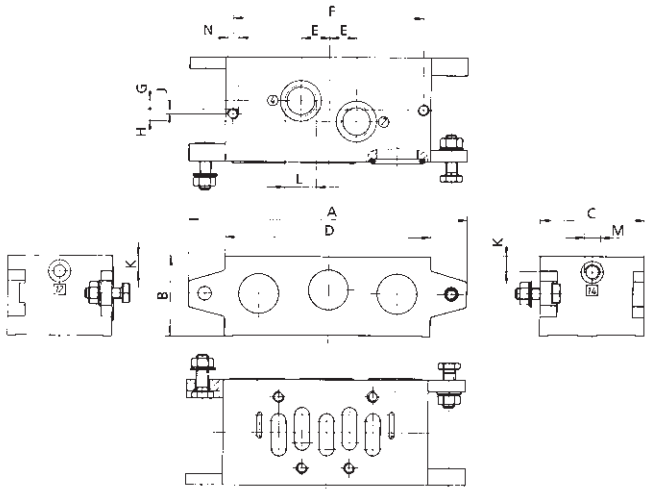

**Dimensions [mm]**

| Series | A | B | C | D | E | F | G | H | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ISO 1 | 110.0 | 50.0 | 43.0 | 84.0 | 13.0 | 3.0 | 1.5 | 7.5 | 1.2 | 10.0 | G 1/4 | G 1/8 | 23.0 | 95.0 |
| ISO 2 | 135.0 | 60.0 | 56.0 | 98.5 | 15.0 | 3.0 | 5.0 | 6.0 | 1.0 | 9.0 | G 3/8 | G 1/8 | 28.0 | 115.0 |
| ISO 3 | 190.0 | 66.0 | 71.0 | 140.0 | 19.0 | 3.0 | 6.0 | 8.0 | 1.3 | 9.5 | G 1/2 | G 1/8 | 32.0 | 168.0 |

| Series | P | R | S | T | U | V | W | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|---|---|
| ISO 1 | 5.4 | 9.5 | 12.0 | 13.0 | 10.0 | 35.5 | 71.0 | 0.400 | **239-241** |
| ISO 2 | 6.6 | 13.0 | 15.0 | 16.0 | 9.0 | 43.0 | 86.0 | 0.600 | **239-245** |
| ISO 3 | 8.6 | 16.5 | 19.0 | 18.0 | 9.5 | 65.0 | 130.0 | 1.200 | **239-249** |
| incl. bolts and gaskets | | | | | | | | | |

**On request:** individual bases with NPTF-thread

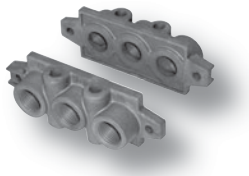
### Manifold Block Form C to VDMA 24345, with Bottom Ports




**Dimensions [mm]**

| Series | A | B | C | D | E | F | G | H | J | K | L | M | N | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ISO 1 | 110.0 | 44.0 | 43.0 | 85.0 | 13.0 | 71.0 | 1.5 | 7.5 | 3.0 | 9.0 | G 1/4 | G 1/8 | M5 | 0.300 | **239-239** |
| ISO 2 | 135.0 | 45.0 | 56.0 | 98.5 | 15.0 | 86.0 | 5.0 | 6.0 | 3.0 | 9.0 | G 3/8 | G 1/8 | M6 | 0.400 | **239-243** |
| ISO 3 | 190.0 | 54.0 | 71.0 | 140.0 | 19.0 | 130.0 | 6.0 | 8.0 | 3.0 | 10.0 | G 1/2 | G 1/8 | M8 | 0.800 | **239-247** |
| incl. bolts and gaskets | | | | | | | | | | | | | | | |

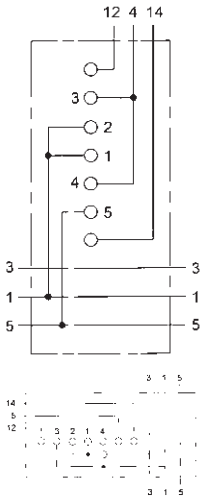
**On request:** individual bases with NPTF-thread



## Accessories

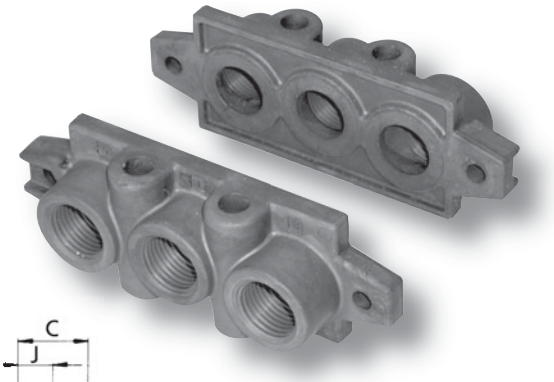
### Without picture: Manifold blocks

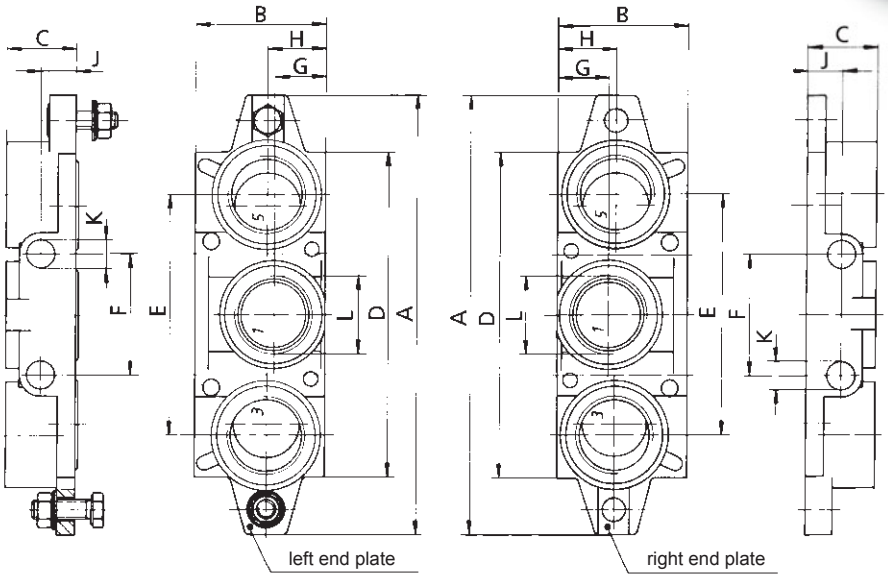
**Dimensions [mm]**

| Symbol | Description | Length | Width | Height | Weight approx. [kg] | Order code |
|---|---|---|---|---|---|---|
|  | Manifold block with increased ow capacity ISO 1 series | 110.0 | 43.0 | 50.0 | 0.550 | **239-353** |
| | Manifold block with increased ow capacity (NC) ISO 2 series | 135.0 | 56.0 | 59.0 | 1.010 | **239-902** |
| | Manifold block with increased ow capacity (NC) ISO 3 series | 190.0 | 71.0 | 74.0 | 1.700 | **10.6062** |
| | Manifold block with increased ow capacity ISO 2 series | 95.0 | 50.0 | 49.5 | 0.650 | **10.5070** |
| | Manifold block with port "1" locked (NC) ISO 2 series | 190.0 | 88.0 | 70.0 | 2.200 | **10.6915** |



### End Plate Kits Form D to VDMA 24345

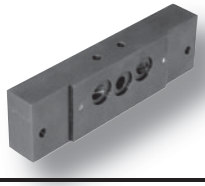





**Dimensions [mm]**

| Series | A | B | C | D | E | F | G | H | J | K | L | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ISO 1 | 110.0 | 46.0 | 22.0 | 85.0 | 56.0 | 28.0 | 22.0 | 25.0 | 11.0 | 7.0 | G 3/8 | 0.300 | **239-257** |
| ISO 2 | 135.0 | 47.0 | 26.0 | 98.5 | 70.0 | 35.0 | 23.0 | 25.0 | 13.0 | 9.0 | G 1/2 | 0.400 | **239-255** |
| ISO 3 | 190.0 | 56.0 | 30.0 | 140.0 | 104.0 | 52.0 | 22.0 | 25.0 | 15.0 | 12.0 | G 1 | 0.700 | **239-259** |
| incl. bolts and gaskets | | | | | | | | | | | | | |

**On request:** end plate kits with NPTF-thread





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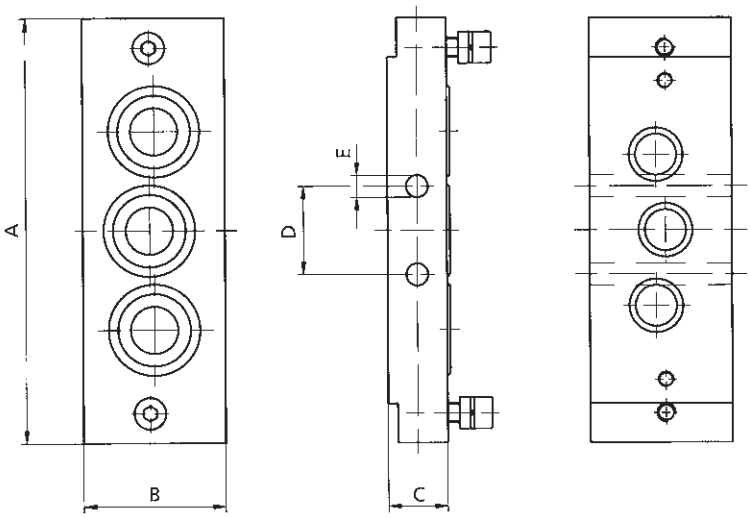
## Accessories

### Adapter Plates for mounting different ISO Valves



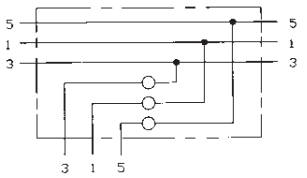

**Dimensions [mm]**

| ISO-Series Lefthand Side | ISO-Series Righthand Side | A | B | C | D | E | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|---|
| ISO 1 | ISO 2 | 135.0 | 45.0 | 19.0 | 28.0 | 7.0 | 0.900 | **239-186** |
| ISO 1 | ISO 3 | 190.0 | 55.0 | 32.0 | 28.0 | 7.0 | 1.100 | **239-149** |
| ISO 2 | ISO 1 | 135.0 | 45.0 | 19.0 | 28.0 | 7.0 | 0.900 | **239-181** |
| ISO 2 | ISO 3 | 190.0 | 55.0 | 32.0 | 35.0 | 9.0 | 1.100 | **239-179** |
| ISO 3 | ISO 1 | 190.0 | 55.0 | 32.0 | 28.0 | 7.0 | 1.100 | **239-152** |
| ISO 3 | ISO 2 | 190.0 | 60.0 | 40.0 | — | — | 1.100 | **239-183** |

incl. bolts and gaskets

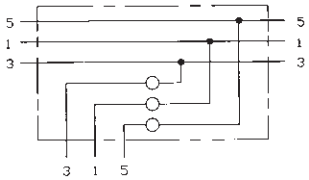
### Adapter plates (without picture)

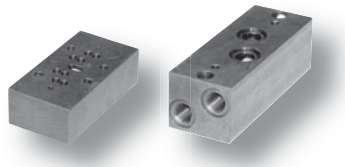
**Dimensions [mm]**

| Symbol | Description | Length | Width | Height | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|
|  | Adapter plate with side ports<br>ISO 1 series on ISO 3 series | 190.0 | 55.0 | 55.0 | 1.550 | **239-177** |
| | Adapter plate with G 3/4 ports top and bottom<br>ISO 3 series on ISO 1 series | 190.0 | 55.0 | 55.0 | 1.550 | **10.6394** |

### Intermediate plates (without picture)

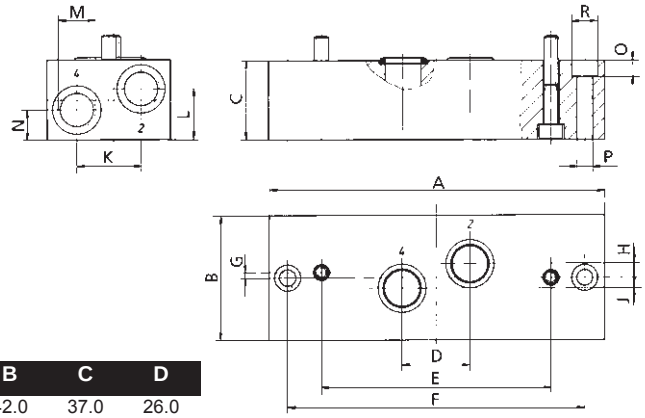
**Dimensions [mm]**

| Symbol | Description | Ports "1" "3" "5" | Length | Width | Height | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|
|  | Mid plate<br>ISO 1 series | G 1/4 | 110.0 | 29.0 | 40.0 | 0.040 | **10.5239** |
| | Mid plate<br>ISO 2 series | G 3/8 | 135.0 | 30.0 | 50.0 | 0.500 | **10.5688** |
| | Mid plate<br>ISO 3 series | G 3/4 | 190.0 | 40.0 | 60.0 | 1.070 | **239-182** |



## Accessories

### Connector Plate Form E to VDMA 24345, with Side and Bottom Ports



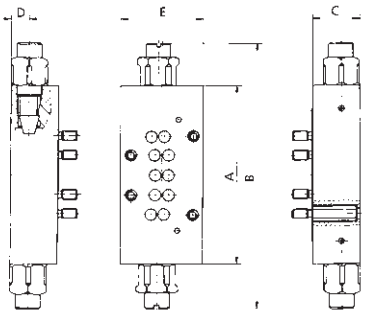

**Dimensions [mm]**

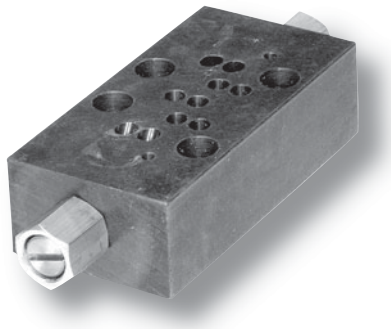
| Series | A | B | C | D |
|---|---|---|---|---|
| ISO 1 | 110.0 | 42.0 | 37.0 | 26.0 |
| ISO 2 | 135.0 | 55.0 | 40.0 | 30.0 |
| ISO 3 | 190.0 | 70.0 | 45.0 | 38.0 |

| Series | E | F | G | H | J | K | L | M | N | O | P | R | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ISO 1 | 71.0 | 95.0 | 3.0 | 7.5 | 1.5 | 22.0 | 25.0 | G 1/4 | 12.0 | 5.7 | 5.5 | 10.0 | 0.500 | **239-143** |
| ISO 2 | 86.0 | 115.0 | 3.0 | 6.0 | 5.0 | 29.0 | 26.0 | G 3/8 | 14.0 | 6.8 | 6.6 | 11.0 | 0.800 | **239-180** |
| ISO 3 | 130.0 | 168.0 | 3.0 | 8.0 | 6.0 | 36.0 | 29.0 | G 1/2 | 17.0 | 9.0 | 9.0 | 15.0 | 1.600 | **239-144** |
| incl. bolts and gaskets | | | | | | | | | | | | | | |

**On request:** connector plates with NPTF-thread

### Sandwich Speed Control

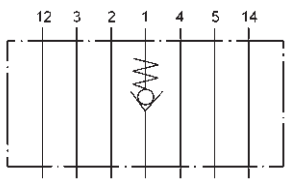


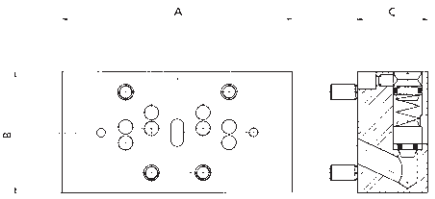



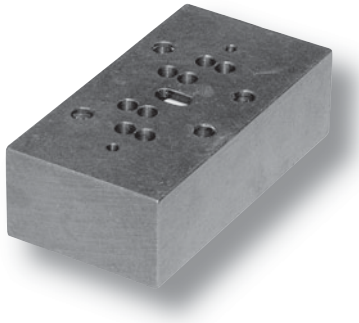
**Dimensions [mm]**

| Series | A | B | C | D | E | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|
| ISO 1 | 89.0 | 126.5 | 24.5 | 12.5 | 42.0 | 0.600 | **239-321** |
| ISO 2 | 110.0 | 169.0 | 29.5 | 11.0 | 50.0 | 0.700 | **239-322** |
| ISO 3 | 128.0 | 188.0 | 34.5 | 14.0 | 64.0 | 0.900 | **239-323** |
| incl. studs and gaskets | | | | | | | |

### Non-Return Plate for Port 1

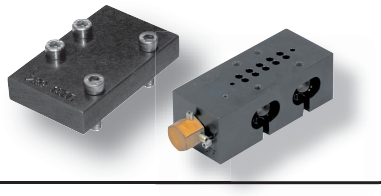


**Dimensions [mm]**

| Series | A | B | C | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|
| ISO 1 | 80.0 | 42.0 | 24.5 | 0.500 | **239-324** |
| ISO 2 | 96.0 | 50.0 | 29.5 | 0.600 | **239-325** |
| ISO 3 | 120.0 | 69.0 | 38.5 | 0.700 | **239-326** |
| incl. studs and gaskets | | | | | |





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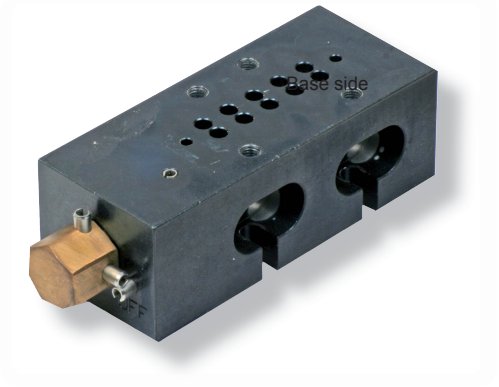
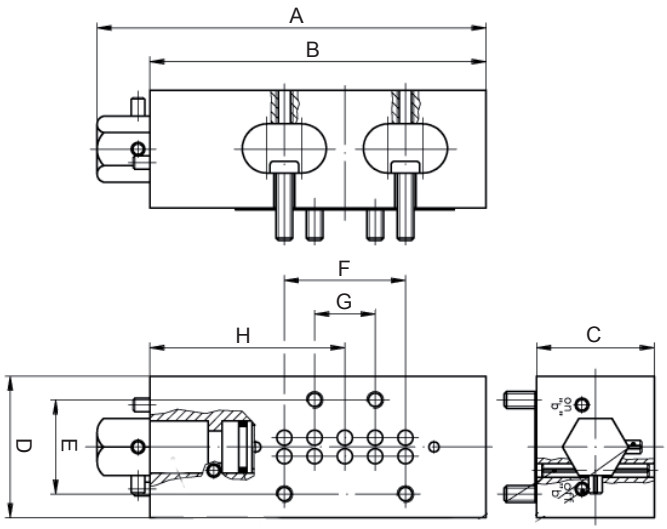
## Accessories

### Valve Isolating Plate

Valve side

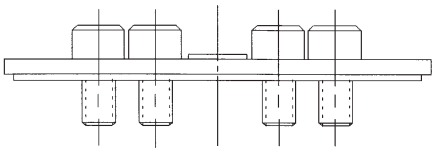


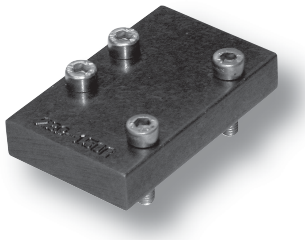




**Dimensions [mm]**

| Series | Operating pressure | A | B | C | D | E | F | G | H | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ISO 1 | vacuum to 10 bar* | 116 | 100 | 35 | 42 | 28 | 36 | 18 | 58 | 0.452 | **10.6328** |
| ISO 2 | vacuum to 10 bar* | 122 | 106 | 40 | 50 | 25 | 55 | 25 | 58 | on request | **10.8071** |
| ISO 3 | vacuum to 10 bar* | 159 | 143 | 40 | 64 | 40 | 64 | 32 | 78 | on request | **10.7389** |
| *Higher pressures on request. | | | | | | | | | | | |

### Blank Station Plate

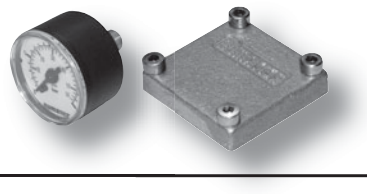




| Series | Weight approx. [kg] | Order Code |
|---|---|---|
| ISO 1 | 0.100 | **239-150** |
| ISO 2 | 0.200 | **239-178** |
| ISO 3 | 0.300 | **239-153** |
| incl. bolts and gaskets | | |

### Blocking Disc

| Series | Order Code |
|---|---|
| ISO 1 | **239-1598*** |
| ISO 2 | **239-2263*** |
| ISO 3 | **239-253*** |
| * incl. o-ring | |



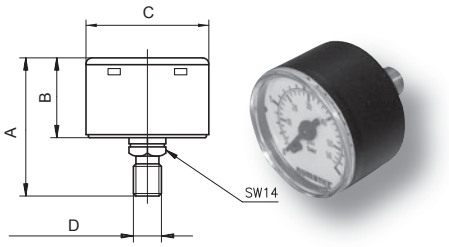
## Accessories

### Gauge for Sandwich Pressure Regulator

**Dimensions [mm]**

| Pressure Range | A | B | C Ø | D | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|
| 0 to 2.5 bar | 42.0 | 26.0 | 40.0 | R 1/8 | 0.040 | **214-151** |
| 0 to 4 bar | 42.0 | 26.0 | 40.0 | R 1/8 | 0.040 | **214-152** |
| 0 to 10 bar | 42.0 | 26.0 | 40.0 | R 1/8 | 0.040 | **214-153** |
| 0 to 16 bar | 42.0 | 26.0 | 40.0 | R 1/8 | 0.040 | **214-154** |

**On request:** other pressure ranges



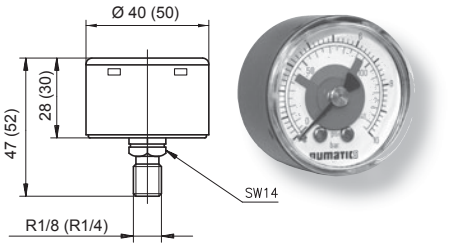

| Pressure Range | A | B | C Ø | D NPTF | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|
| 0 to 2.5 bar | 42.0 | 26.0 | 40.0 | 1/8 | 0.040 | 214-138 |
| 0 to 4 bar | 42.0 | 26.0 | 40.0 | 1/8 | 0.052 | 214-139 |
| 0 to 10 bar | 42.0 | 26.0 | 40.0 | 1/8 | 0.040 | 214-140 |
| 0 to 16 bar | 42.0 | 26.0 | 40.0 | 1/8 | 0.052 | 214-141 |

### Gauge for Sandwich Pressure Regulator with adjustable Scale

**Dimensions [mm]**

| Pressure Range | A | B | C Ø | D R | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|
| 0 to 10 bar | 47.0 | 28.0 | 40.0 | 1/8 | 0.040 | **214-274** |
| 0 to 10 bar | 52.0 | 30.0 | 50.0 | 1/4 | 0.052 | **214-275** |
| 0 to 4 bar | 52.0 | 30.0 | 50.0 | 1/4 | 0.052 | **214-276** |
| 0 to 16 bar | 52.0 | 30.0 | 50.0 | 1/4 | 0.052 | **214-277** |
| 0 to 4 bar | 47.0 | 28.0 | 40.0 | 1/8 | 0.040 | **214-278** |
| 0 to 16 bar | 47.0 | 28.0 | 40.0 | 1/8 | 0.040 | **214-279** |

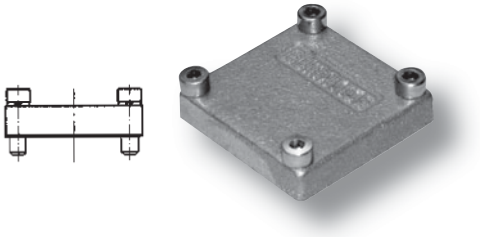
**On request:** Gauges with adjustable Scale and G-thread



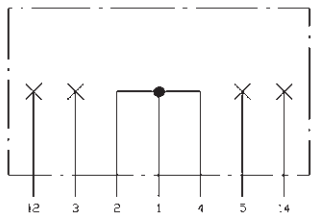
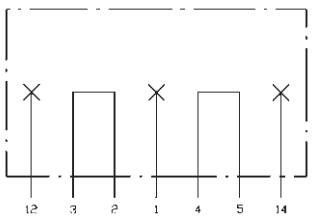

### Jumper Plate for Sandwich Pressure Regulator "RD/ND"

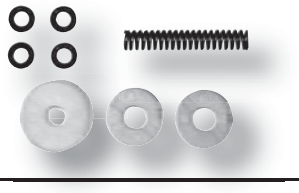
| Description | Series | Weight approx. [kg] | Order Code |
|---|---|---|---|
| Jumper plate option "16P" or "16N" | ISO 1+ISO 2 | 0.035 | **239-363** |
| Jumper plate option "16P" or "16N" | ISO 3 | 0.105 | **239-364** |

incl. bolts and gaskets



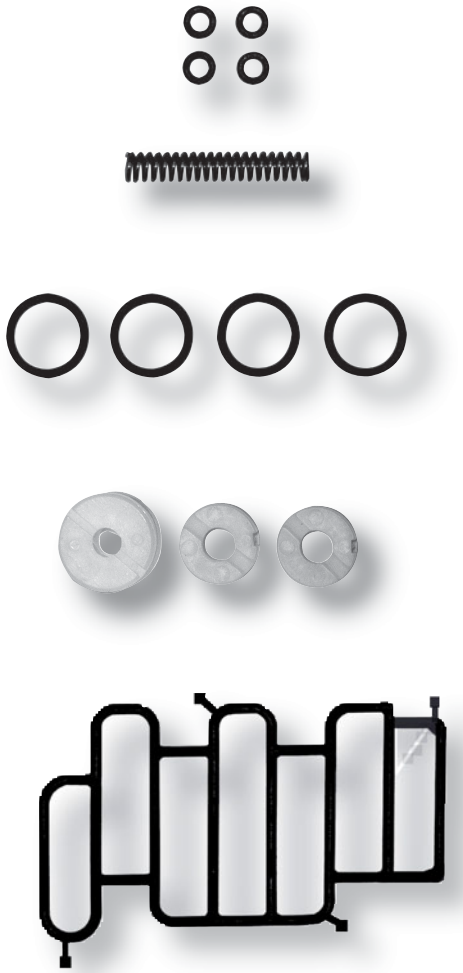
### Without picture: Jumper Plate to Mount on Sandwich Pressure Regulator

| Symbol | Description | Length | Width | Height | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|
|  | Jumper plate, connecting "1" to "2" and "4" ISO 1 series | 74.0 | 42.0 | 10.0 | 0.100 | **10.5267** |
| | Jumper plate, connecting "1" to "2" and "4" ISO 2 series | 90.0 | 50.0 | 10.0 | 0.130 | **10.6118** |
| | Jumper plate, connecting "1" to "2" and "4" ISO 3 series | 120.0 | 66.0 | 10.0 | 0.244 | **10.5826** |
|  | Jumper plate, connecting "2" to "3" and "4" to "5" ISO 1 series | 65.0 | 40.0 | 12.0 | 0.100 | **10.6847** |
| | Jumper plate, connecting "2" to "3" and "4" to "5" ISO 3 series | 120.0 | 66.0 | 10.0 | 0.244 | **10.6065** |



## Accessories

### Spare Part Kits for Valves



**ISO 1; ISO 2 and ISO 3 Series**

| Valve Type | Order Code | | |
|---|---|---|---|
| | ISO 1 | ISO 2 | ISO 3 |
| BA4.. / ZA4..<br>PA4.. / JA4.. | **I1B-K1** | **I2B-K1** | **I3B-K1** |
| BB4.. / ZZ4..<br>PP4.. / JJ4.. | **I1B-K2** | **I2B-K2** | **I3B-K2** |
| BB5 / 6 / 7.. / ZZ5 / 6 / 7..<br>PP5 / 6 / 7.. / JJ5 / 6 / 7.. | **I1B-K3** | **I2B-K3** | **I3B-K3** |
| BW4.. / ZW4.. | **I1B-K4** | **I2B-K4** | **I3B-K4** |
| SA4.. | **I1S-K1** | **I2S-K1** | **I3S-K1** |
| SS4.. | **I1S-K2** | **I2S-K2** | **I3S-K2** |
| SS5 / 6 / 7.. | **I1S-K3** | **I2S-K3** | **I3S-K3** |
| incl. Gasket, O-Rings, Spring or Bumper | | | |

**ISO 1; ISO 2 and ISO 3 Compact Series**

| Valve Type | Order Code | | |
|---|---|---|---|
| | ISO 1 | ISO 2 | ISO 3 |
| BA4.. / ZA4.. PA4.. | **C1B-K1** | **C2B-K1** | **C3B-K1** |
| BB4.. / ZZ4.. / PP4.. | **C1B-K2** | **C2B-K2** | **C3B-K2** |
| BB5 / 6 / 7.. / ZZ5 / 6 / 7..<br>PP5 / 6 / 7.. | **C1B-K3** | **C2B-K3** | **C3B-K3** |
| BW4.. / ZW4.. | **C1B-K4** | | |
| incl. Gasket, O-Rings, Spring or Bumper | | | |

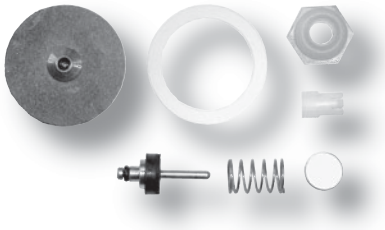
**Poppet Valves Series ISO 3**

| Valve Type | Order Code<br>Series ISO 3 |
|---|---|
| G34B.... | **G3B-K1** |
| G34P.... | **G3P-K1** |
| incl. O-Rings, gaskets, spring | |

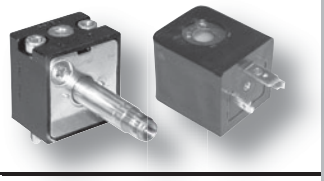
**Slow-Start-Valve**

| Valve-Type | Order Code |
|---|---|
| P01794000.... | **40.7069** |

### Spare Part Kits for Regulators



| Series | Type | | Order Code |
|---|---|---|---|
| ISO 1 | I12RS... / I12RD... | | **229-640** |
| ISO 2 | I23RS... / I23RD... | | **229-640** |
| ISO 3 | I34RS... / I34RD... | **< Nov. 2004** | **229-907** |
| ISO 3 | I34RS... / I34RD... | **> Nov. 2004** | **239-2277** |
| ISO 3 | I34NS... / I34ND | | **239-2259** |



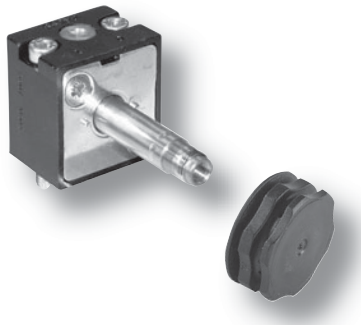
## Accessories

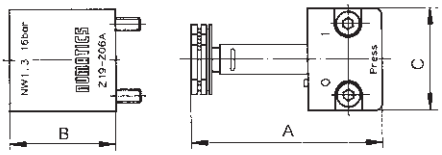
### Pilot Systems

#### Dimensions [mm]

| Type | A | B | C | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|
| 10 bar, without manual override | 59.0 | 32.0 | 30.0 | 0.063 | **219-216** |
| 10 bar, non-locking manual override | 59.0 | 32.0 | 30.0 | 0.063 | **219-217** |
| 10 bar, manual override push/locking | 59.0 | 32.0 | 30.0 | 0.063 | **219-218** |
| 16 bar*, without manual override | 59.0 | 32.0 | 30.0 | 0.063 | **219-219** |
| 16 bar*, non-locking manual override | 59.0 | 32.0 | 30.0 | 0.063 | **219-220** |
| 16 bar*, manual override push/locking | 59.0 | 32.0 | 30.0 | 0.063 | **219-221** |
| 16 bar*, non-locking manual override | 59.0 | 32.0 | 30.0 | 0.063 | **219-489** |

* only available with 16 bar solenoid






### Exhaust Protection Screw

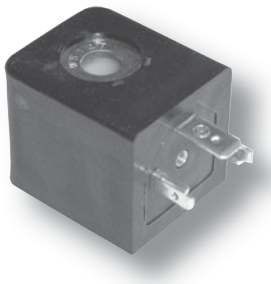
| Description | Weight approx. [gr] | Order Code |
|---|---|---|
| Exhaust protection screw for valve system | 1.850 | **125-1027** |

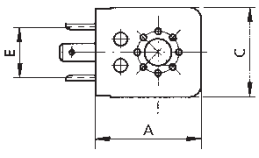
### Plug-in Solenoids for Connector Sockets to DIN 43650, Form A, Type 30 mm

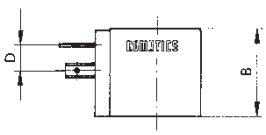
#### Dimensions [mm]

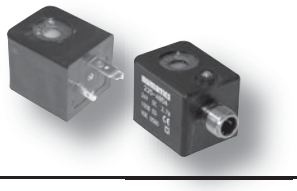
| Voltage | A | B | C | D | E | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|
| 10 bar, 2.7 W 24 VDC | 35.5 | 30.0 | 30.0 | 9.0 | 18.8 | 0.10 | **225-354** |
| 10 bar, 5.2/3.9 VA 24 VAC, 50-60 Hz | 35.5 | 30.0 | 30.0 | 9.0 | 18.8 | 0.10 | **228-772** |
| 10 bar, 4.8/3.6 VA 110 VAC, 50-60 Hz and 42/48/60 VDC, 2.5/3.4/5.3 W | 35.5 | 30.0 | 30.0 | 9.0 | 18.8 | 0.10 | **228-773** |
| 10 bar, 4.9/3.7 VA 230 VAC, 50-60 Hz and 110 VDC, 3.9 W | 35.5 | 30.0 | 30.0 | 9.0 | 18.8 | 0.10 | **228-774** |
| 16 bar*, 6.8 W 24 VDC and 48/42-V, 50-60 Hz, 9.9/7.1 VA | 35.5 | 30.0 | 30.0 | 9.0 | 18.8 | 0.10 | **225-355** |
| 16 bar*, 10.8/7.6 VA 24 VAC, 50-60 Hz and 12 VDC, 7.8 W | 35.5 | 30.0 | 30.0 | 9.0 | 18.8 | 0.10 | **228-775** |
| 16 bar*, 10.5/7.6 VA 110 VAC, 50-60 Hz and 48/60 VDC, 5.3/8.3 W | 35.5 | 30.0 | 30.0 | 9.0 | 18.8 | 0.10 | **228-776** |
| 16 bar*, 10.5/7.6 VA 230 VAC, 50-60 Hz and 110 VDC, 6.3 W | 35.5 | 30.0 | 30.0 | 9.0 | 18.8 | 0.10 | **228-777** |

* only available with 16 bar pilot system



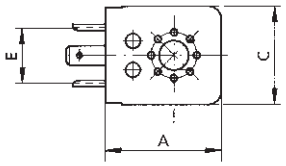


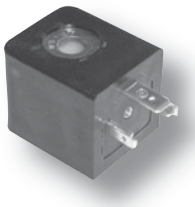



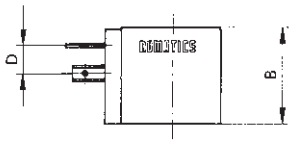


## Accessories

### Solenoids to DIN EN 175301-803 (before DIN 43650) Form A, with UL- and CSA-Approval, Type 30 mm



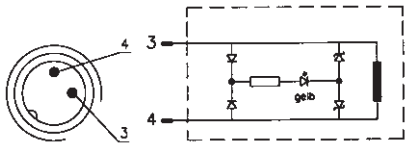





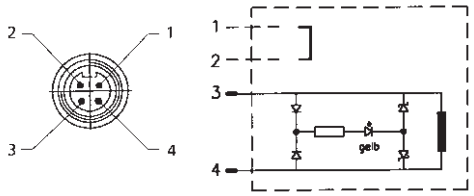

**Dimensions [mm]**

| Voltage | A | B | C | D | E | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|
| 10 bar, 2.7 W ; 24 VDC | 35.5 | 30.0 | 30.0 | 9.0 | 18.8 | 0.10 | **225-480** |
| 10 bar, 4.9/3.6 VA; 110 VAC, 50-60 Hz | 35.5 | 30.0 | 30.0 | 9.0 | 18.8 | 0.10 | **228-792** |

### Solenoids to ISO 20401 with M12 Connector and LED or M12 DESINA Standard Connector and LED, Type 30 mm

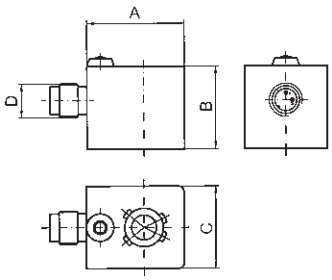



2 Pin M12 Connector with LED




4 Pin M12 DESINA Standard connector with LED

DESINA



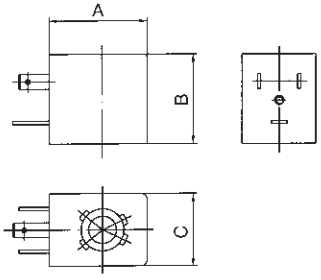

Drawing shows M12 connector with LED, 2 pins (same dimensions)

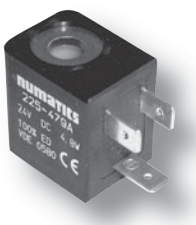
**Dimensions [mm]**

| Description | Voltage | A | B | C | D | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|
| M12 connector with LED, 2 pins | 10 bar, 24 VDC, 2.7 W | 38.4 | 29.5 | 30.0 | M12x1 | 0.110 | **225-485** |
| M12 connector with LED, 2 pins | 16 bar*, 24 VDC, 6.8W | 38.4 | 29.5 | 30.0 | M12x1 | 0.110 | **225-486** |
| M12 connector DESINA standard, 4 pins | 10 bar, 24 VDC, 2.7 W | 38.4 | 29.5 | 30.0 | M12x1 | 0.110 | **225-483** |
| M12 connector DESINA standard, 4 pins | 16 bar*, 24 VDC, 6.8 W | 38.4 | 29.5 | 30.0 | M12x1 | 0.110 | **225-484** |

* only available with 16 bar 3-port., 2-pos. function NO pilot system

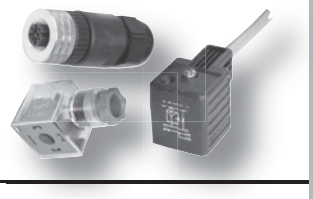
### Solenoids to Industrial Standard, Type 22 mm



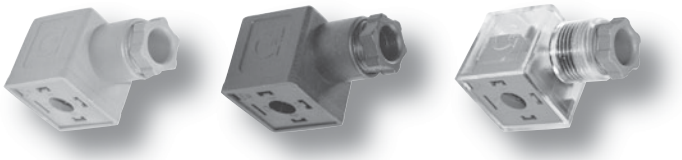
**Dimensions [mm]**

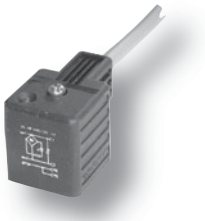
| Voltage | A | B | C | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|
| 10 bar, 24 VDC, 4.8 W | 28.8 | 29,5 | 22.0 | 0.054 | **225-479** |
| 10 bar, 24 VAC, 50-60 Hz; 8.5/6.9 VA | 28.8 | 29,5 | 22.0 | 0.054 | **228-794** |
| 10 bar, 110 VAC. 50-60 Hz; 8.5/6.9 VA | 28.8 | 29,5 | 22.0 | 0.054 | **228-791** |
| 10 bar, 230 VAC, 50-60 Hz; 8.5/6.9 VA | 28.8 | 29,5 | 22.0 | 0.054 | **228-790** |



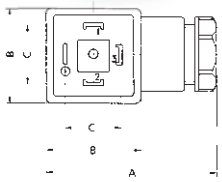
## Accessories

### Connector Sockets to DIN EN 175301-803 (before DIN 43650) Form A

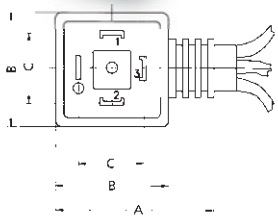




with PG 9 screw tting cable
for cable with
Ø 6 to 8 mm



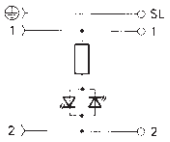
with 2-m-cable



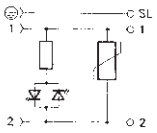
### Technical Data and Dimensions [mm]

| Nominal Voltage | Wiring Type | Colour Diagram | | Peak Cut-off Voltage | A | B | C | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|---|---|
| **With PG 9 screw fitting cable** | | | | | | | | | |
| Up to 250 V | — | — | grey | unlimited | 49.0 | 28.0 | 18.0 | 0.02 | **230-592** |
| Up to 250 V | — | — | black | unlimited | 49.0 | 28.0 | 18.0 | 0.02 | **230-593** |
| 10-50 V | LED red | a | transparent | unlimited | 49.0 | 28.0 | 18.0 | 0.02 | **230-582** |
| 10-30 V | LED red + Varistor | b | transparent | 65 V | 49.0 | 28.0 | 18.0 | 0.02 | **230-567** |
| 70-250 V | LED red | a | transparent | unlimited | 49.0 | 28.0 | 18.0 | 0.02 | **230-584** |
| 70-250 V | LED red + Varistor | b | transparent | 440 V | 49.0 | 28.0 | 18.0 | 0.02 | **230-585** |
| 10-30 V | LED green + Varistor | b | transparent | 65 V | 49.0 | 28.0 | 18.0 | 0.02 | **230-587** |
| 10-50 V | LED green | a | transparent | unlimited | 49.0 | 28.0 | 18.0 | 0.02 | **230-586** |
| 70-250 V | LED green | a | transparent | unlimited | 49.0 | 28.0 | 18.0 | 0.02 | **230-588** |
| 70-250 V | LED green + Varistor | b | transparent | 440 V | 49.0 | 28.0 | 18.0 | 0.02 | **230-589** |
| **With 2-m-cable** | | | | | | | | | |
| Up to 250 V | — | — | black | unlimited | 44.0 | 27.5 | 18.0 | 0.20 | **230-412** |
| 24 V | LED yellow + Varistor | b | black | 65 V | 44.0 | 27.5 | 18.0 | 0.20 | **230-413** |
| 110 V | LED yellow + Varistor | c | black | 260 V | 44.0 | 27.5 | 18.0 | 0.20 | **230-414** |
| 230 V | LED yellow + Varistor | c | black | 470 V | 44.0 | 27.5 | 18.0 | 0.20 | **230-415** |

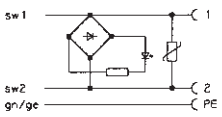
**Circuit diagram „a“**



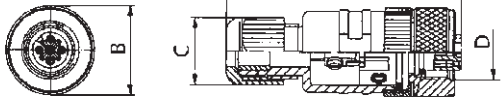

**Circuit diagram „b“**

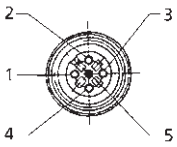



**Circuit diagram „c“**




### M12 Straight Female Connector




view on mating side

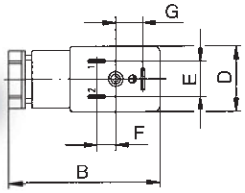
### Dimensions [mm]

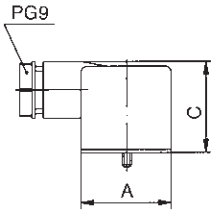
| Description | A | B | C | D | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|
| M12 straight 5 pin female connector, without cable | 52.5 | 20.0 | SW19 | M12x1 | 0.033 | **230-957** |

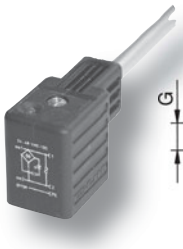
## Accessories

### Connector Sockets, Type 22 mm, Industrial Standard

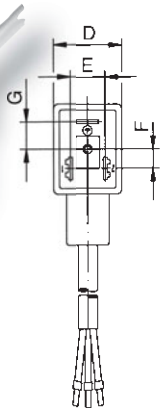
with PG 9 screw tting cable
for cable with
Ø 6 to 8 mm

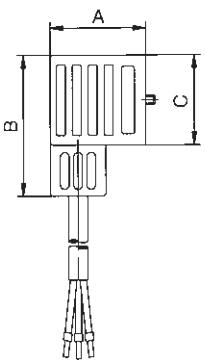


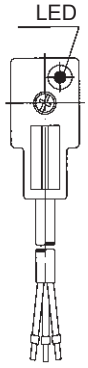



with 2-m-cable



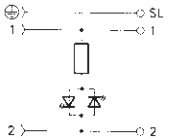




### Technical Data and Dimensions [mm]

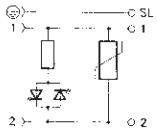
| Nominal Voltage | Wiring Type | Colour Diagram | Peak cut-off Voltage | A | B | C | D | E | F | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **With PG 9 screw fitting cable** | | | | | | | | | | | |
| Up to 250 V | — | — | grey | unlimited | 28.3 | 49.0 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-363** |
| Up to 250 V | — | — | black | unlimited | 28.3 | 49.0 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-364** |
| 10-50 V | LED red | a | translucent | unlimited | 28.3 | 49.0 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-391** |
| 10-30 V | LED red + Varistor | b | translucent | 65 V | 28.3 | 49.0 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-392** |
| 70-250 V | LED red | a | translucent | unlimited | 28.3 | 49.0 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-393** |
| 70-250 V | LED red + Varistor | b | translucent | 440 V | 28.3 | 49.0 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-394** |
| 10-30 V | LED green + Varistor | b | translucent | 65 V | 28.3 | 49.0 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-400** |
| 10-50 V | LED green | a | translucent | nicht begrenzt | 28.3 | 49.0 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-401** |
| 70-250 V | LED green | a | translucent | unlimited | 28.3 | 49.0 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-402** |
| 70-250 V | LED green + Varistor | b | translucent | 440 V | 28.3 | 49.0 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-403** |
| **with 2-m-Cable** | | | | | | | | | | | |
| bis 250 V | — | — | black | unlimited | 28.3 | 41.2 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-408** |
| 24 V | LED yellow + Varistor | b | black | 65 V | 28.3 | 41.2 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-409-xxm** |
| 110 V | LED yellow + Varistor | b | black | 260 V | 28.3 | 41.2 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-410** |
| 230 V | LED yellow + Varistor | b | black | 470 V | 28.3 | 41.2 | 28.7 | 20.8 | 12.0 | 7.0 | 9.4 | 0.020 | **230-411** |

**xxm =** add the required cable length in **m** (e. g. 230-409-**05m**), standard lengths: 2, 5 and 10 m

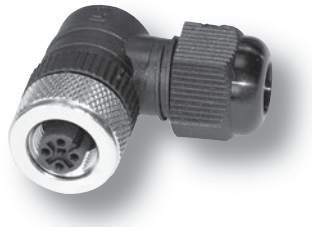
**Circuit diagram „a“**

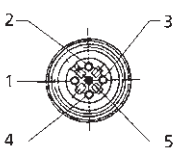



**Circuit diagram „b“**

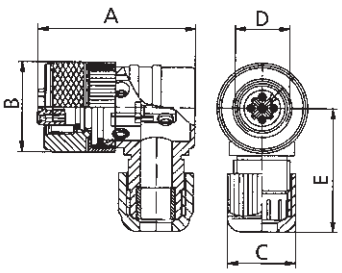



### M12 Elbow Female Connector





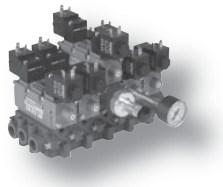

view on mating side




### Dimensions [mm]

| Description | A | B | C | D | E | Weight approx. [kg] | Order Code |
|---|---|---|---|---|---|---|---|
| M12 elbow 5 pin female connector, without cable | 35.0 | 20.0 | SW19 | M12x1 | 27.5 | 0.025 | **230-956** |

# Sub-base Mounted Valves to ISO 5599/1



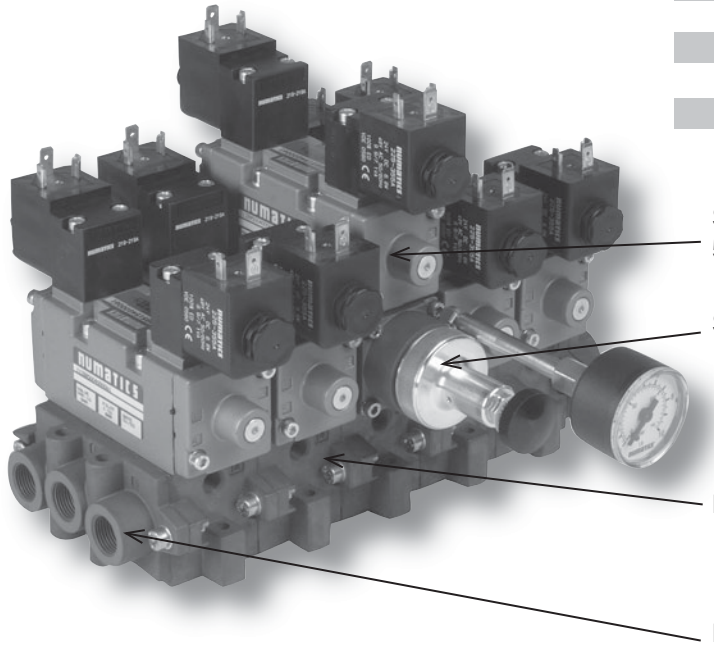
## Technical Information

**Completely Assembled Manifolds**
All manifolds offer side and/or bottom cylinder ports.
These ports and the end plates are available with G-threads or NPTF-threads.
To order a completely assembled manifold, it is necessary to order the assembly kit and the valve or regulator required at each station. All kits are pre xed **AKI**, followed by the valve series, a dash and the number of stations.
Put in "N" for NPTF-thread.
Select assembly kits from the following chart. A maximum of 12 stations is recommended.

**How to order:** (example)

**AKI** **1C** — **05**

| Version | Valve Series | Number of Stations | Port Type |
|---|---|---|---|
| **AKI** = Completely assembled manifolds | **1C** = ISO 1 | **02** = 2 stations | = G-thread |
| | **2D** = ISO 2 | **03** = 3 stations | **N** = NPTF-thread |
| | **3E** = ISO 3 | **04** = 4 stations | |
| | | **05** = 5 stations | |
| | | **06** = 6 stations | |
| | | **07** = 7 stations | |
| | | **08** = 8 stations | |
| | | **09** = 9 stations | |
| | | **10** = 10 stations | |
| | | **11** = 11 stations | |
| | | **12** = 12 stations | |



**Solenoid Pilot Actuated 5-ported, 3-position Valve**

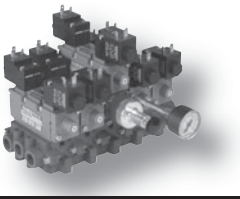
**Sandwich Pressure Regulator with Gauge**

**Manifold Block with Bottom Ports (form C)**

**End Plates with Ports „1", „3" and „5"**

**Order example: AKI1C-05**

| Stations | Valve Position Code | Denomination |
|---|---|---|
| Station 1: | (1) I12BB51AG00061 | 1 BB-valve with manifold block form C |
| Station 2: | (1) I12BB51AG00061 | 1 BB-valve with manifold block form C |
| Station 3: | (1) I12BB500G00061 | 1 BB-valve without manifold block |
| | (1) I12RS11A0P00000 | 1 regulator with gauge and manifold block form C |
| Station 4: | (1) I12BB51AG00061 | 1 BB-valve with manifold block form C |
| Station 5: | (1) I12BB51AG00061 | 1 BB-valve with manifold block form C |



# Sub-base Mounted Valves to ISO 5599/1

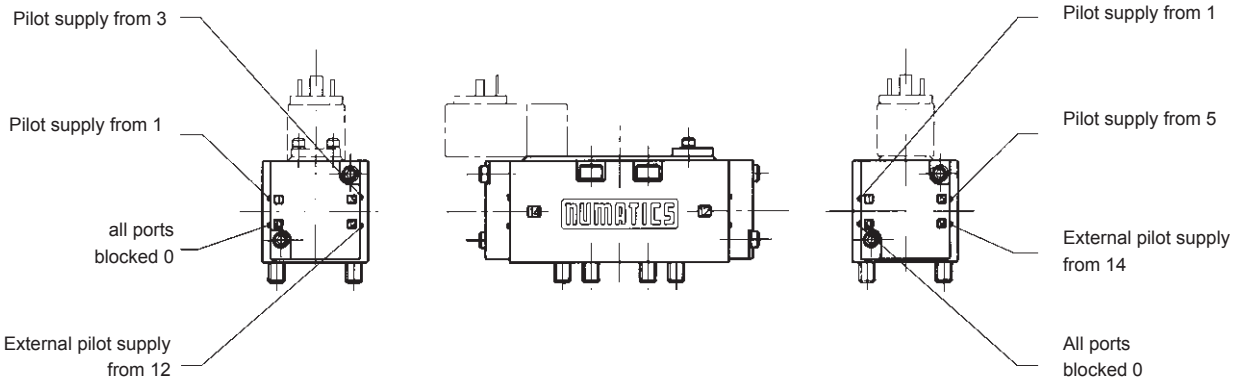
numatics

## Technical Information



### Conversion of Pilot Air Supply
### Pilot Plugging Arrangements (only for type ISO1 / ISO2 / ISO3-valves)

Air pilot actuated valves are shipped with external pilot supply to ports 12 and 14.
All solenoid pilot actuated valves are shipped with internal pilot supply from port 1. If supply air is piped to ports 3 and 5, or if external pilot supply is required, the valve must be converted (for example, if an RD regulator is used).
Conversion is simple - remove the end caps and position the gasket so that the tab points toward the appropriate port number, install end caps. Please refer to the chart and drawing below.




| Pilot Supply Options | | Gasket Tap Location "14" End | Gasket Tap Location "12" End |
|---|---|---|---|
| 1. | All air pilot actuated valves | | |
| | External pilot to ports 12 and 14 | 0 | 0 |
| 2. | Single solenoid pilot actuated valves | | |
| | a. Internal supply from port 1 | 1 | 0 |
| | b. Internal supply from port 3 | 0 | 3 |
| | c. Internal supply from port 5 | 5 | 0 |
| | d. External pilot from port 14 | 14 | 0 |
| | e. External pilot from port 12 | 0 | 12 |
| 3. | Double solenoid pilot actuated valves | | |
| | a. Internal supply from port 1 | 1 | 1 |
| | b. Internal supply from port 3 | 0 | 3 |
| | c. Internal supply from port 5 | 5 | 0 |
| | d. External pilot from port 14 | 14 | 0 |
| | e. External pilot from port 12 | 0 | 12 |

For use of RD-regulators, the pilot plugging arrangement is as described under b. and c.

### Interface to ISO 5599/1

**Dimensions [mm]**

| Series | A | B | C | D | G [1] | $L_1$ min. | $L_T$ min. | P |
|---|---|---|---|---|---|---|---|---|
| ISO 1 | 4.5 | 9.0 | 9.0 | 14.0 | 3.0 | 32.5 | 65.0 | 8.5 |
| ISO 2 | 7.0 | 12.0 | 10.0 | 19.0 | 3.0 | 40.5 | 81.0 | 10.0 |
| ISO 3 | 10.0 | 16.0 | 11.5 | 24.0 | 4.0 | 53.0 | 106.0 | 13.0 |

| Series | R max. | T [2] | W | X | Y [3] | Cross-section Slots [mm²] |
|---|---|---|---|---|---|---|
| ISO 1 | 2.5 | M5x0.8 | 38.0 | 16.5 | 43.0 | 70.0 |
| ISO 2 | 3.0 | M6x1.0 | 50.0 | 22.0 | 56.0 | 143.0 |
| ISO 3 | 4.0 | M8x1.25 | 64.0 | 29.0 | 71.0 | 269.0 |

1) G is the minimum width of the slots
2) The thread depth is at least twice the nominal threaded diameter
3) Dimension Y is the distance between the centrelines of adjacent blocks.