

Valve series KN-05

acc. to NAMUR, 3/2-way
G1/4 • 780 NI/min (0.792 Cv)

airtec



Order code

KN-05-310-HN-442

Series
and
function

Coil options

Standard coil¹⁾

441 = 12 V DC, 4.2 W
442 = 24 V DC, 4.2 W
452 = 24 V AC, 7/4 VA
456 = 115 V AC, 7/4 VA
457 = 230 V AC, 7/4 VA
461 = 12 V DC, 2.2 W²⁾
462 = 24 V DC, 2.2 W²⁾

Without coil and plug socket

570 = Power consumption 4.2 W, 7/4 VA
560 = Power consumption 2.2 W²⁾

Coils with M12 connector and LED

O42 = 24 V DC, 4.8 W
O62 = 24 V DC, 2.5 W²⁾

¹⁾ Plug socket see page 5.042.

In high humidity environments please use the KN-55-... series with special coils and seals.

All dimensions are equal to the KN-05 series.

Information about electrical datas see page 4.280.

Design, function and technical data

Spool valve for single acting actuators switched by an electrical signal.

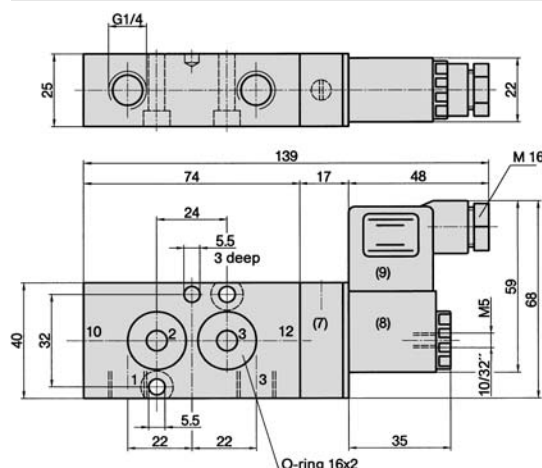
The exhaust air is guided into the spring chamber of the actuator. The locating pin, screws and seals are included.

For outdoor applications or in areas with high humidity use coil 23-SP-011-1 or 23-SP-012-1 (see page 4.280).

Please specify required control voltage when ordering.

Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 13 of this catalogue.

KN-05-310-HN, KN-05-311-HN



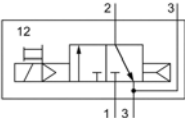
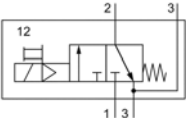
Due to the bigger dimension of the ATEX coils, the KN-valves with ATEX specification are delivered with a bigger end cover.



For further details see chapter 13 of this catalogue.

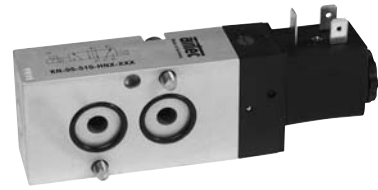
- 1 = pressure inlet
- 2 = outlet
- 3 = exhaust

- (7) = manual override (detent) can be repositioned by 180°
- (8) = plug socket can be repositioned by 180°
- (9) = solenoid coil can be repositioned 4 x 90°

Order number	KN-05-310-HN	KN-55-310-HN	KN-05-311-HN	KN-55-311-HN
Please complete according to order code.				
Function	 <p>3/2-way, normally closed single solenoid, air spring return</p>		 <p>3/2-Wege single solenoid, spring return</p>	
Connection	G1/4 at 1 and 3; flange to NAMUR at 2 and 3			
Nominal size	6 mm			
Flow rate	780 NI/min (0.792 Cv)			
Pressure range	3 ... 10 bar (8 bar at 2.2 W); 43 ... 145 psi (116 psi at 2.2 W)			
Response time at 6 bar	on 16 ms off 18 ms		on 13 ms off 16 ms	
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)			
Materials	Body: Al (anodized), Seals: NBR and POM, Inner parts: Al, stainless steel, brass			
Medium	Compressed air in accordance with ISO 8573-1: 2001, Class 7 4 – and free of aggressive additives			
Degree of protection	IP 65 according to EN 60529			
Weight	0.320 kg (0.705 lb.)			

²⁾ max. 8 bar (max. 116 psi) at 2.2 W and 2.5 W.

acc. to NAMUR, 5/2- and 5/3-way
G1/4 • 680 to 900 NI/min (0.691 to 0.915 Cv)



KN-05-510-HN-442

Coil options

Without coil and plug socket

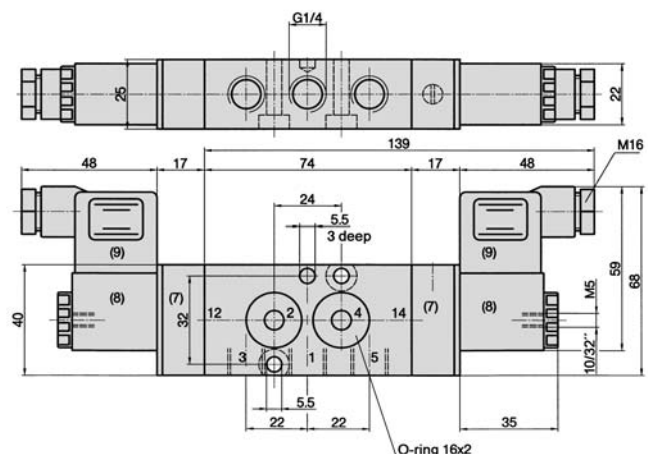
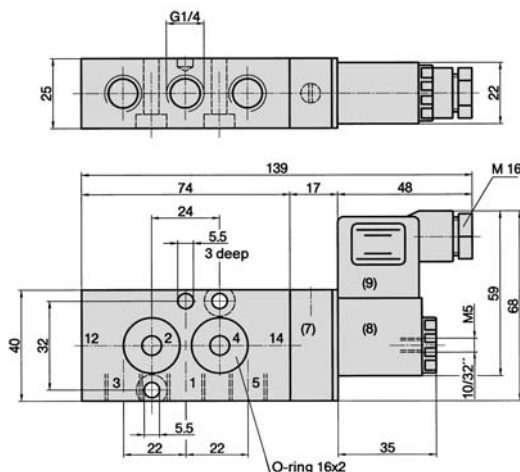
570 = Power consumption 4.2 W, 7/4 VA
560 = Power consumption 2.2 W²⁾

O42 = 24 V DC, 4.8 W
O62 = 24 V DC, 2.5 W

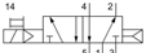
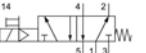
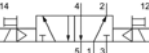
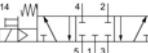
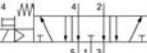
Information about electrical datas see page 4.280.

Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 13 of this catalogue.

KN-05-520-HN, KN-05-530-HN, KN-05-533-HN



(9) = plug socket can be repositioned by 180°

Order number Please complete according to order code.	KN-05-510-HN KN-55-510-HN	KN-05-511-HN KN-55-511-HN	KN-05-520-HN KN-55-520-HN	KN-05-530-HN KN-55-530-HN	KN-05-533-HN KN-55-533-HN
Function	 5/2-way single solenoid air spring return	 5/2-way single solenoid spring return	 5/2-way double solenoid	 5/3-way center position closed	 5/3-way center position exhausted
Connection	G1/4 at 1, 3 and 5; flange to NAMUR at 2 and 4				
Nominal size	6 mm				
Flow rate	900 NI/min (0.915 Cv)	800 NI/min (0.813 Cv)	900 NI/min (0.915 Cv)	680 NI/min (0.691 Cv)	
Pressure range	3 ... 10 bar ²⁾ (43 ... 145 psi)		2...10 bar ²⁾ (29...145 psi)	3 ... 10 bar ²⁾ (43 ... 145 psi)	
Response time at 6 bar	on 16 ms off 17 ms	on 16 ms off 18 ms	14 ms	on 14 ms off 16 ms	
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)				
Materials	Body: Al (anodized), Seals: NBR and POM, Inner parts: Al, stainless steel, brass				
Medium	Compressed air in accordance with ISO 8573-1:2001, Class 7 4 – and free of aggressive additives				
Degree of protection	IP 65 according to EN 60529				
Weight	0.320 kg (0.705 lb.)		0.440 kg (0.970 lb.)		

Subject to change

Solenoid coils, actuators

Solenoid coils	23-SP-011-...	Standard coil	page 4.280
	23-SP-012-...	Coil with 2,2 W power consumption	page 4.280
	23-SP-011-5-012	Coil with M12 plug connection, 4,8 W, LED and circuit protection	page 4.282
	23-SP-012-5-032	Coil with M12 plug connection, 2,5 W, LED and circuit protection	page 4.282
	Ex-explosion proof	Valves with explosion proof actuator see chapter 13	
Actuators	23-R-011	Standard actuator	
	23-R-012	Low power actuator	
Plug sockets	28-ST-01	Standard plug socket	page 4.283
	28-ST-04-...	Plug socket with LED	page 4.283
	28-ST-06-...	Plug socket with LED and circuit protection	page 4.283
	28-ST-06-K3-...	Plug socket with LED, circuit protection and cable	page 4.283

User information

Low power consumption coils (2.2 W or 2.5 W) are for pressures up to 8 bar (116 psi) only. Valve actuator 23-R-012 is required. The actuator 23-R-012 is nickel plated. Make sure that the coils with the right power consumption are used.

For outdoor applications or in areas with high humidity use coil 23-SP-011-1-... or 23-SP-012-1-... (see page 4.280).

The following types are available on request

Coils and sockets with contacts according to DIN EN 175301-803 type B (U-form).

Plug sockets with molded cable.

Speed regulation plates



Speed regulator plate for
single acting actuators
(manually adjustable)
KN-063-DRH
Page 5.043



Speed regulator plate for
double acting actuators
(manually adjustable)
KN-065-DRH
Page 5.043

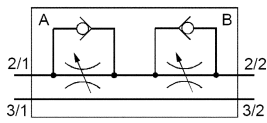


Speed regulator plate for
single acting actuators
(adjustable with screwdriver)
KN-063-DRS
Page 5.044

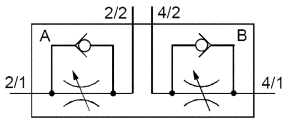


Speed regulator plate for
double acting actuators
(adjustable with screwdriver)
KN-065-DRS
Page 5.044

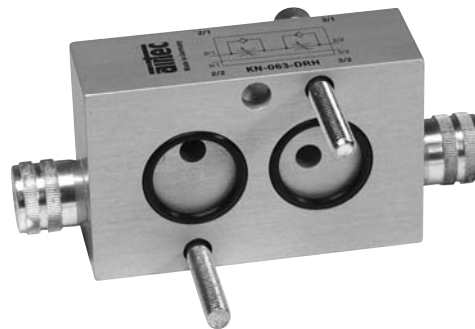
Manually adjustable speed regulation plates



KN-063-DRH



KN-065-DRH



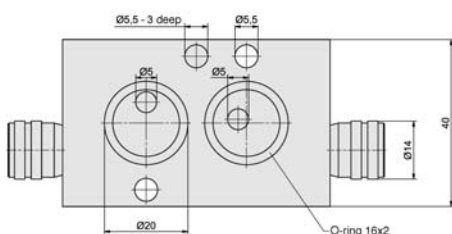
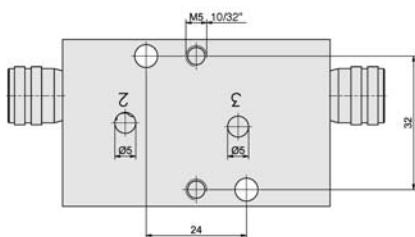
Design, function and technical data

The locating pin, screws and seals are included.

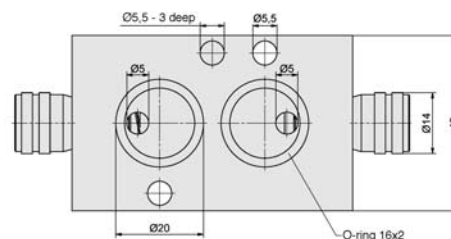
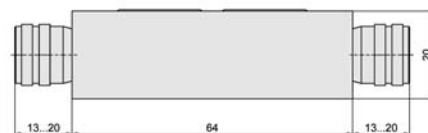
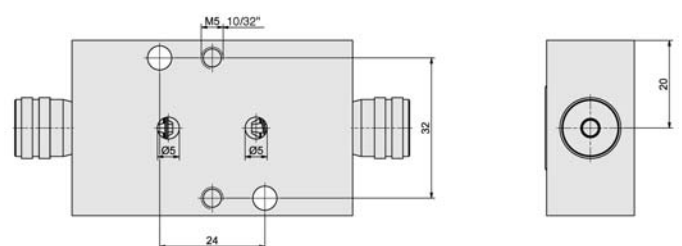
Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 13 of this catalogue.

Order number	KN-063-DRH	KN-065-DRH
Function	Speed regulator plate for single acting actuators (manually adjustable)	Speed regulator plate for double acting actuators (manually adjustable)
Nominal size	5 mm	
Nominal flow	210 NI/min (0.204 Cv)	290 NI/min (0.295 Cv)
Temperature range/environment	- 25 °C ... + 70 °C (-13 °F ... + 158 °F) (below - 15 °C (+5 °F) the leakages increase up to 100 ml/min)	
Materials	Body: Al, Inner parts: brass, Seals: NBR	
Weight	0.170 kg (0.375 lb.)	0.170 kg (0.375 lb.)
Medium	Filtered, oil free and dried compressed air according to ISO 8573-1: 2001, class 74-, Instrument air, each free of corrosive components.	

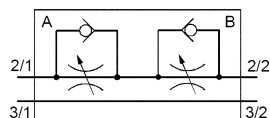
KN-063-DRH



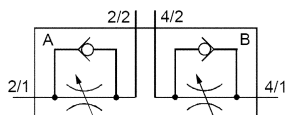
KN-065-DRH



Speed regulation plates adjustable with screwdriver



KN-063-DRS



KN-065-DRS



Design, function and technical data

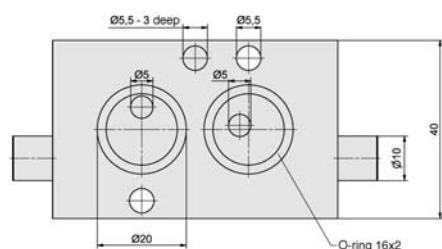
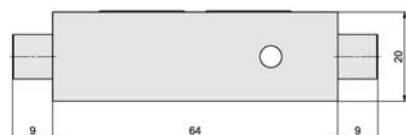
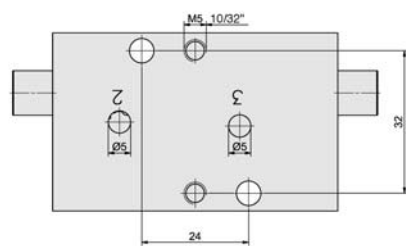
The locating pin, screws and seals are included.

Valves of this series are available in explosion proof design in accordance with 94/9/EG (ATEX). For further details see chapter 13 of this catalogue.

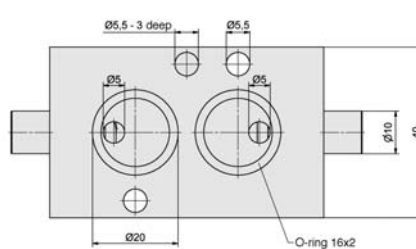
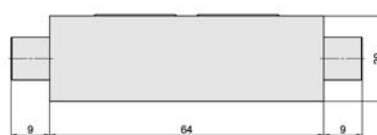
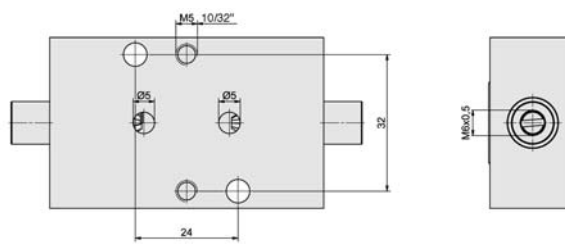
The unit can only be adjusted with a screwdriver.

Order number	KN-063-DRS	KN-065-DRS
Function	Speed regulator plate for single acting actuators (adjustable with screwdriver)	Speed regulator plate for double acting actuators (adjustable with screwdriver)
Nominal size	5 mm	
Nominal flow	210 NI/min (0.204 Cv)	290 NI/min (0.295 Cv)
Temperature range/environment	- 25 °C ... + 70 °C (-13 °F ... + 158 °F) (below - 15 °C (+5 °F) the leakages increase up to 100 ml/min)	
Materials	Body: Al, Inner parts: brass, Seals: NBR	
Weight	0.170 kg (0.375 lb.)	0.170 kg (0.375 lb.)
Medium	Filtered, oil free and dried compressed air according to ISO 8573-1: 2001, class 74-, Instrument air, each free of corrosive components.	

KN-063-DRS

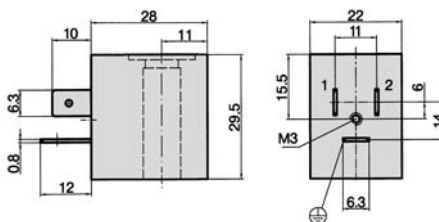


KN-065-DRS



Accessories for electrically operated valves

Solenoid coils



Solenoid coils with connection pattern pursuant to DIN EN 175301-803 Shape B

Order number	23-SP-011-411	23-SP-011-412	23-SP-011-422	23-SP-011-426	23-SP-011-427	23-SP-012-431	23-SP-012-432
Standard voltage	12 V DC	24 V DC	24 V AC	115 V AC	230 V AC	12 V DC	24 V DC
Power consumption DC	4.2 W	4.2 W				2.2 W	2.2 W
Power consumption 50 Hz			4 VA	4 VA	4 VA		
Degree of protection	IP 65 according to EN 60529 with connected plug socket						
Duty cycle	100 %						
Temperature range	- 20 °C ... + 50 °C (- 4 °F ... + 122 °F)						
Voltage tolerance	± 10 %						
Standard for series	MS-18, M-04, M-05, M-07, M-22, KM-09, KM-10, MF-05, MF-07, MN-06, KN-05, MI-01, MI-02, MI-03						

Other voltages on request.

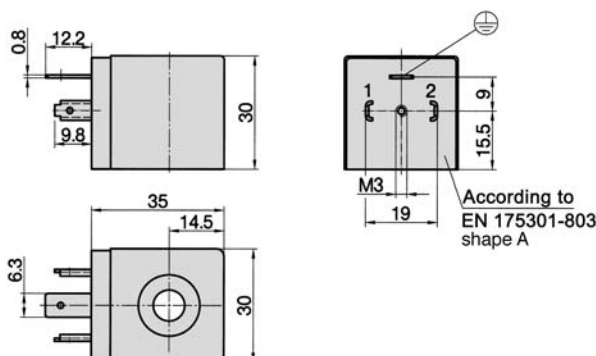
Solenoid coils with connection pattern pursuant to DIN EN 175301-803 Shape B

(with enhanced humidity resistance)

Order number	23-SP-011-1-711	23-SP-011-1-712	23-SP-011-1-712	23-SP-011-1-722	23-SP-011-1-725	23-SP-011-1-727	23-SP-012-1-732
Standard voltage	12 V DC/24 V AC	24 V DC	48 V AC	12 V DC/24 V AC	110 V AC	230 V AC	24 V DC
Power consumption DC	4.6 W	4.8 W	–	5.5 W	–	–	2.5 W
Power consumption 50 Hz	7.1 VA	–	7.7 VA	8.9 VA	8.5 VA	7.9 VA	
Degree of protection	IP 65 according to EN 60529 with connected plug socket *1						
Duty cycle	100 %						
Temperature range	- 20 °C ... + 50 °C (- 4 °F ... + 122 °F)						
Voltage tolerance	± 10 %						
Standard for series	KMX-09, KMX-10, ICK-09, ICK-10, KN-55, KNX-55, ICKN-55						

*1: IP67 pursuant to EN 60529 with plug socket and sealing set 20-SP-011/012-02

Solenoid coils with connection pattern pursuant to DIN EN 175301-803 Shape A



Order number	23-SP-016-712	23-SP-016-722	23-SP-016-726	23-SP-016-726	23-SP-016-727	23-SP-016-727
Standard voltage	24 V DC	24 V AC	110 V AC	115 V AC	230 V AC	110 V DC
Power consumption DC	4.5 W	–	–	–	–	5.3 W
Power consumption 50 Hz	–	8.0 VA	7.6 VA	8.6 VA	7.9 VA	–
Degree of protection	IP 65 according to EN 60529 with connected plug socket					
Duty cycle	100 %					
Temperature range	- 20 °C ... + 50 °C (- 4 °F ... + 122 °F)					
Voltage tolerance	± 10 %					
Standard for series	MC-07					

Accessories for electrically operated valves

Solenoid coils



Solenoid coils with connection pattern pursuant to DIN EN 175301-803 Shape B (cranked contacts)



Order number	23-SP-011-G-412	23-SP-011-G-427
Standard voltage	24 V DC	230 V AC
Power consumption DC	4.2 W	
Power consumption 50 Hz		4 VA
Degree of protection	IP 65 according to EN 60529 with connected plug socket	
Duty cycle	100 %	
Temperature range	– 20 °C ... + 50 °C (– 4 °F ... + 122 °F)	
Voltage tolerance	± 10 %	

Solenoid coils with connection pattern pursuant to DIN EN 175301-803 Shape C

Degree of protection	IP 65 according to EN 60529 with connected plug socket
Duty cycle	100 %
Temperature range	– 20 °C ... + 50 °C (– 4 °F ... + 122 °F)
Voltage tolerance	± 10 %
Standard for series	BM-01, BM-02



Order number	23-M-09-19-461-T	23-M-09-19-462-T	23-M-09-19-452-T	23-M-09-19-456-T	23-M-09-19-457-T
Standard voltage	12 V DC	24 V DC	24 V AC	115 V AC	230 V AC
Power consumption	1 W	1 W	3 VA	3 VA	3 VA
Ambient temperature	– 10 °C ... + 50 °C (+ 14 °F ... + 122 °F)				
Manual override	non detented				
Position of manual override	Side of the contacts				

Order number	23-M-09-19-461-R	23-M-09-19-462-R	23-M-09-19-452-R	23-M-09-19-456-R	23-M-09-19-457-R
Standard voltage	12 V DC	24 V DC	24 V AC	115 V AC	230 V AC
Power consumption	1 W	1 W	3 VA	3 VA	3 VA
Ambient temperature	– 10 °C ... + 50 °C (+ 14 °F ... + 122 °F)				
Manual override	detented				
Position of manual override	Side of the contacts				



Order number	23-M-09-19-431-T	23-M-09-19-432-T	23-M-09-19-422-T	23-M-09-19-426-T	23-M-09-19-427-T
Standard voltage	12 V DC	24 V DC	24 V AC	115 V AC	230 V AC
Power consumption	1 W	1 W	3 VA	3 VA	3 VA
Manual override	non detented				
Position of manual override	Opposite the contacts				

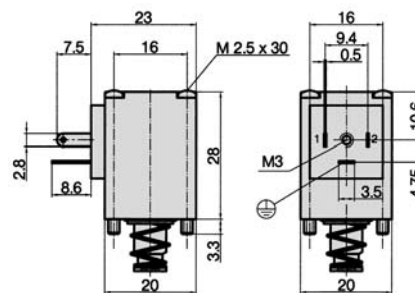
Order number	23-M-09-19-431-R	23-M-09-19-432-R	23-M-09-19-422-R	23-M-09-19-426-R	23-M-09-19-427-R
Standard voltage	12 V DC	24 V DC	24 V AC	115 V AC	230 V AC
Power consumption	1 W	1 W	3 VA	3 VA	3 VA
Manual override	detented				
Position of manual override	Opposite the contacts				

Accessories for electrically operated valves

Solenoid coils and plug sockets

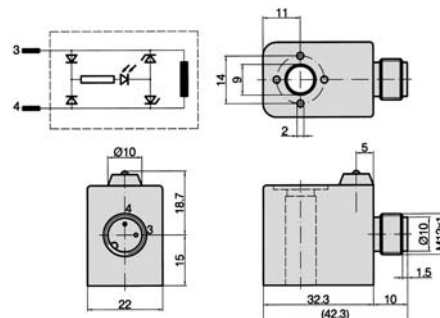


Solenoid coils with connection pattern pursuant to DIN EN 175301-803 Shape C



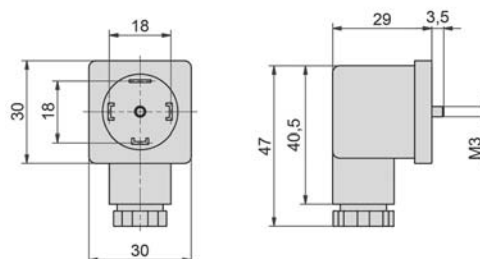
Order number	23-M-20-411	23-M-20-412
Standard voltage	12 V DC	24 V DC
Power consumption	2 W	2 W
Degree of protection	IP 65 according to EN 60529 with connected plug socket	
Duty cycle	100 %	
Temperature range	- 20 °C ... + 50 °C	
Voltage tolerance	± 10 %	
Standard for series	MS-20, MF-04	

Solenoid coils with M12 connection, with LED and protective circuit.



Order number	23-SP-011-5-O12	23-SP-012-5-O32
Standard voltage	24 V DC	24 V DC
Power consumption	4.8 W	2.5 W
Degree of protection	IP 65 according to EN 60529 with connected cable	
Duty cycle	100 %	
Temperature range	- 20 °C ... + 50 °C	
Voltage tolerance	± 10 %	

Plug sockets pursuant to DIN EN 175301-803 Shape A (2pol. + PE, 27 x 27 mm, Contact distance 18 mm)



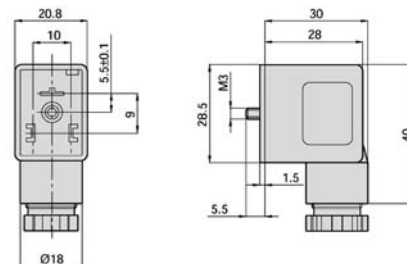
Order number	28-ST-03	28-ST-11-112
Standard voltage	all	24 V DC
Protective circuit	no	yes
Status indicator	without	yes
Degree of protection	IP 65 pursuant to EN 60529 requires a flat gasket	
Connecting cable	without	
Ø Connecting cable	6 – 8 mm	
Max. wire cross section	1,5 mm²	
for coil	23-SP-016	

Accessories for electrically operated valves

Plug sockets for coil

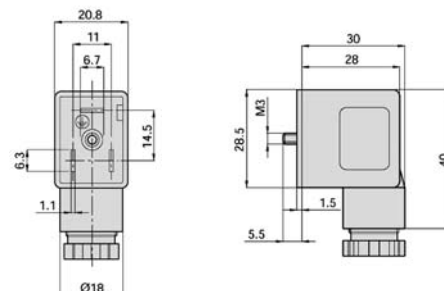


Plug sockets pursuant to DIN EN 175301-803 Shape B with cranked contacts (2pol. + PE, 21 x 28 mm, Contact distance 10 mm)



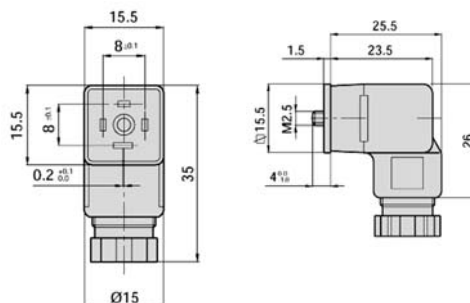
Order number	28-ST-01-G
Standard voltage	all
Protective circuit	no
Status indicator	without
Degree of protection	IP 65 pursuant to EN 60529 requires a flat gasket
Connecting cable	without
Ø Connecting cable	6 – 8 mm
Max. wire cross section	1,5 mm ²
for coil	23-SP-011-G

Plug sockets pursuant to DIN EN 175301-803 Shape B (2pol. + PE, 21 x 28 mm, Contact distance 11 mm)



Order number	28-ST-01	28-ST-04-112	28-ST-04-127	28-ST-06-112	28-ST-06-127	28-ST-06-K3-112	28-ST-06-K3-127
Standard voltage	all	24 V DC	230 V AC	24 V DC	230 V AC	24 V DC	230 V AC
Protective circuit	no	no	no	yes	yes	yes	yes
Status indicator	without	yes	yes	yes	yes	yes	yes
Degree of protection	IP 65 pursuant to EN 60529 requires a flat gasket						
Connecting cable	without					3 m	3m
Ø Connecting cable	6 – 8 mm					–	–
Max. wire cross section	1,5 mm ²					–	–
for coil	23-SP-011, 23-SP-011-1						

Plug sockets pursuant to DIN EN 175301-803 Shape C (2pol. + PE, 15,5 x 15,5 mm, Contact distance 8 mm)



Order number	28-ST-02-1	28-ST-09-1-112	28-ST-09-1-127	28-ST-10-1-112	28-ST-10-1-127	28-ST-10-1-K3-112
Standard voltage	all	24 V DC	230 V AC	24 V DC	230 V AC	24 V DC
Protective circuit	no	no	no	yes	yes	yes
Status indicator	without	yes	yes	yes	yes	yes
Degree of protection	IP 65 pursuant to EN 60529 requires a flat gasket					
Connecting cable	without					3 m
max. Ø Connecting cable	6,5 mm					–
Max. wire cross section	0,75 mm ²					–
for coil	23-M-09-19					

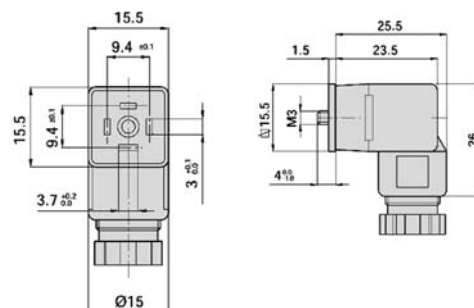
Accessories for electrically operated valves

Plug sockets for coil



Plug sockets pursuant to DIN EN 175301-803 Shape C

(2pol. + PE, 15,5 x 15,5 mm, Contact distance 9,4 mm)

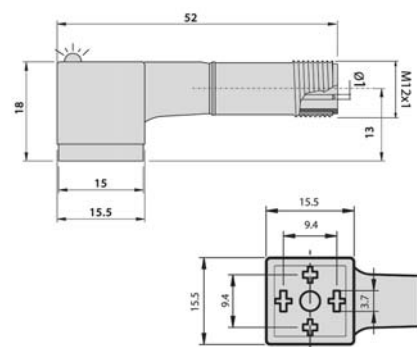
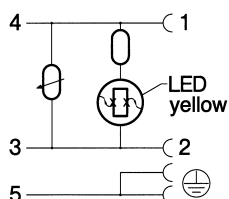


Order number	28-ST-02-01	28-ST-09-112	28-ST-09-127	28-ST-10-112	28-ST-10-127	28-ST-10-K3-112	28-ST-10-K3-127
Standard voltage	all	24 V DC	230 V AC	24 V DC	230 V AC	24 V DC	230 V AC
Protective circuit	no	no	no	yes	yes	yes	yes
Status indicator	without	yes	yes	yes	yes	yes	yes
Degree of protection	IP 65 pursuant to EN 60529 requires a flat gasket						
Connecting cable	without					3 m	3m
max. Ø Connecting cable	6,5 mm					—	—
Max. wire cross section	0,75 mm ²					—	—
for coil	23-M-20						

Plug sockets with integrated adaptor for M8/M12

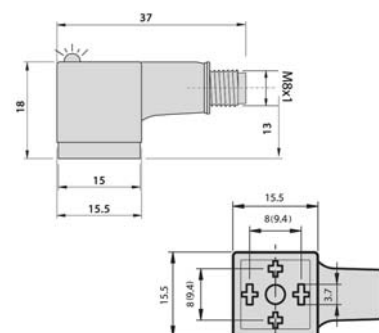
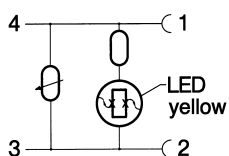
(2pol. + PE, 15,2 x 15,8 mm, Contact distance 8 bzw. 9,4 mm)

Plug socket 28-ST-02-2-07



2 = not connected 4 = +24 Volt (+)
3 = 0 Volt (-) 5 = ⚡

Plug socket 28-ST-02-1-05 and 28-ST-02-2-05



2 = +24 Volt (+)
3 = 0 Volt (-)
4 = not connected

Order number	28-ST-02-1-05	28-ST-02-2-05	28-ST-02-2-07
Standard voltage	24 V DC		
Protective circuit	yes		
Status indicator	yes		
Degree of protection	IP 65 pursuant to EN 60529 requires a flat gasket		
Contact distance	8 mm	9,4 mm	9,4 mm
for plug sockets	M8	M8	M12
for coil	23-M-09-19	23-M-20	