

Silo filling device

Shut-off valve for filling process of silos

SFA

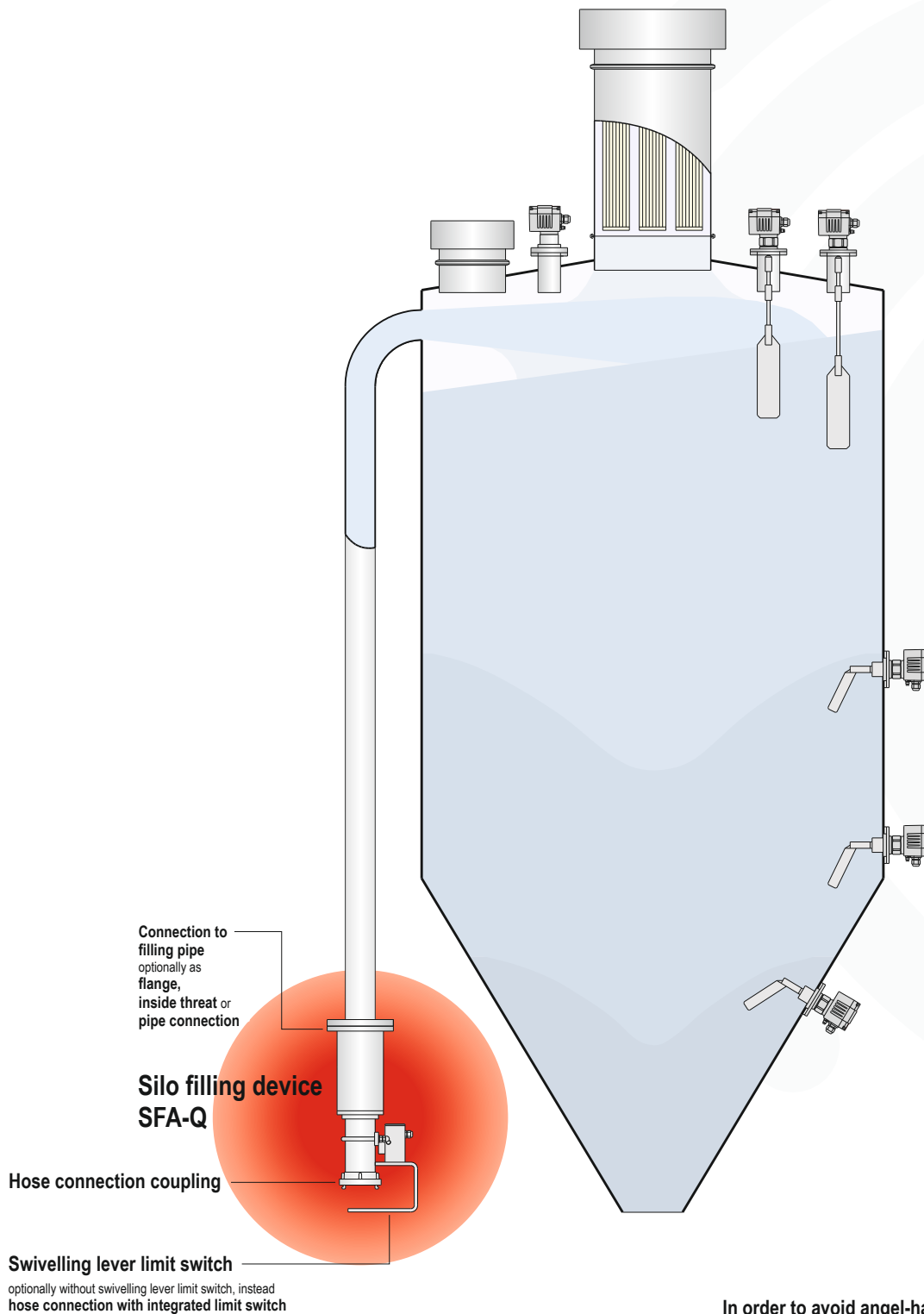
Appliance information

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Appendix 3/2-way solenoid valves (control valves)	
Quick exhaust valve Pressure switch	

Application

Shut-off valve with connection coupling and swivelling lever

Silo filling device for shut-off the filling pipe in order to protect the silo plant against overload and overpressure



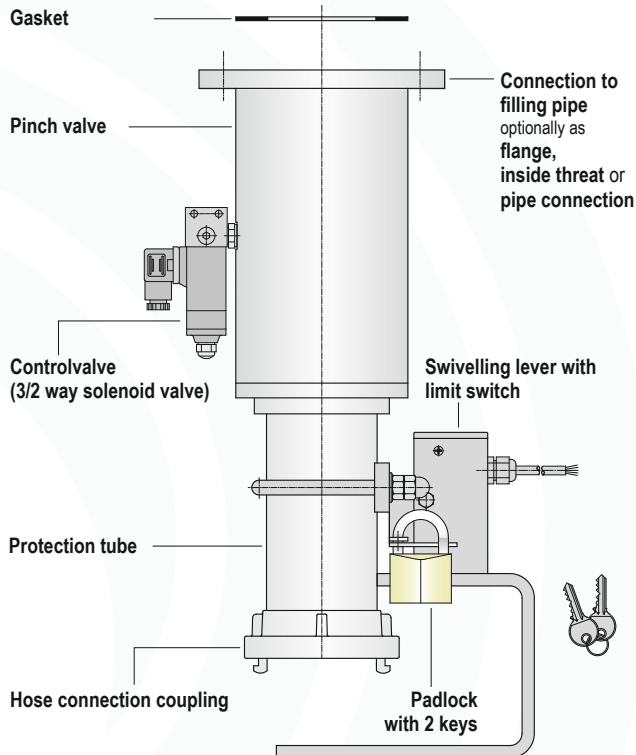
In order to avoid angel-hair, turbulences or change of core structure we supply optionally the silo filling device completely seamless.

Appliance information

Silo filling device to connect the filling pipe and to shut-off the filling pipe while pneumatic filling process of silos from silo vehicles.

Silo filling device with pinch valve

Type: SFA065Q, SFA080Q and SFA100Q



011-0200

Blank cap with chain
(Seal cap)

Design variants

optional on customer's request

Filling pipe connection	Flange Internal thread Tube
Pinch valve	
Housing and filling pipe connection	Aluminium AIMgS1 Stainless steel 1.4571 / 316 Ti
Clamping sleeve (product touching)	Aluminium AIMgSi1 Stainless steel 1.4571 / 316 Ti
Hoses	NR NR, resistant to abrasion NW NR, inside white for food VI Viton® (FKM) EP EPDM for food NRE NR, resistant to abrasion, ATEX compliant EPE EPDM for food, ATEX compliant
3/2-way solenoid valve for sine pinch valve (Control valve)	3/2-way solenoid valve normally closed NC (SFA ...Q normally open) 3/2-way solenoid valve normally open NO (SFA ...Q normally closed)
Protection tube	Steel, galvanized Stainless steel 1.4571 / 316 Ti
Hose connection coupling (system and material)	Storz, Aluminium Storz, Aluminium/Stainless steel 1.4571 / 316 Ti Storz, Stainless steel 1.4571 / 316 Ti TW coupling, DIN 28450, Brass TW coupling, DIN 28450, Stainless steel 1.4408 Camlock DIN 2828, Stainless steel 1.4408 Guillemin, Aluminium
Limit switch (Filling hose connected)	Swivelling lever limit switch mechanical Swivelling lever limit switch inductive Swivelling lever limit switch NAMUR Limit switch mechanical mounted on couplings* Limit switch inductive mounted on couplings* Limit switch NAMUR mounted on couplings* * not available with Camlock or Guillemin couplings
Cable length for limit switches	2 m / 5 m / 10 m cable (not all lengths are available for every limit switch)

Accessories for silo filling device

Quick exhaust valve	Air release valve mounted on SFA ...Q (incl. silencer)
Compressed air switch	Compressed air switch mounted on SFA ...Q (for position indication or for signal "hose malfunction")
Padlock (with 2 keys)	keyed alike or keyed different for swivelling lever and Storz couplings
Covering hose connection	
Blank cap with chain	Storz couplings/Swivelling lever limit switch Storz couplings/built-in limit switch
Mother end cap for	Camlock couplings/Swivelling lever limit switch
End cap for	Road tanker couplings (TW coupling, DIN 28450)
Further accessories	on request

ATEX option

B3 Dust  II 1/3D IIIB

ATEX option

B1 Dust  II 1/2D IIIB

Single parts

Silo filling device with pinch valve

Type SFA065Q, SFA080Q and SFA100Q

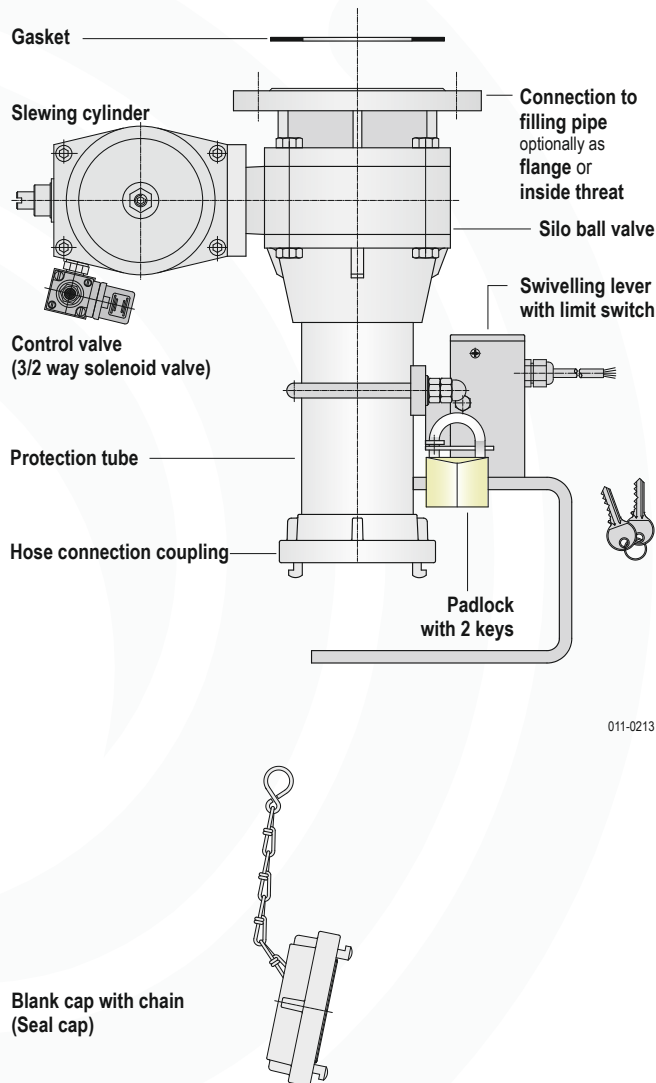
	DN 65	DN 80	DN 100
	077-002-DIR-ABF	090-002-DIR-ABF	115-002-DIR-ABF
	0934-05-000-STV	0934-05-000-STV	0934-05-000-STV
	0912-05-045-STV	0912-05-045-STV	0912-05-045-STV
	for example: 230 V AC 0 820 005 250B 24 V DC 0 820 005 251B		
	QV-065-FG-AX-XX	QV-080-FG-AX-XX	QV-100-FG-AX-XX
	0914-06X010-V4A	0914-06X010-V4A	0914-06X010-V4A
	065-200-NIP-V4A	080-200-NIP-STV 080-200-NIP-V4A	100-200-NIP-STV 100-200-NIP-V4A
	SES-065-X SIS-065-X SNS-065-X	SES-080-X SIS-080-X SNS-080-X	SES-100-X SIS-100-X SNS-100-X
	2=2 m, 5=5 m, 0=10 m Cable length		
	KS-VS025-G, or optional KS-VS025-U,	the same key for all locks a separate key for every lock	
	0914-05X010-V4A	0914-05X010-V4A	0914-05X010-V4A
	K-FSZ075IG2½-AL K-FSZ075IG2½-VA	K-FSZ075IG3-AL K-FSZ075IG3-VA	K-FSZ110IG4-AL K-FSZ110IG4-AV K-FSZ110IG4-VA

011-0800

Appliance information

Silo filling device with ball valve

Type SFA080K and SFA100K



Manufacturing modification

optional on customer's request

Filling pipe connection	Flange
Ball valve	
Housing and filling pipe connection	Aluminium
Ball	Stainless steel
Seal rings	PTFE / VITON
Actuator	single acting (Valve closes in case of power and/or compressed air failure)
Position switch (position indication „open/closed“)	without position switch 1 switch signal ball valve „closed“ 2 switches signals ball valve „open“ / „closed“
Control valve for ball valve (3/2 way solenoid valve)	normally closed, 230 V AC (SFA ... K normally closed) normally closed, 24 V DC (SFA ... K normally closed) normally closed, 24 V AC (SFA ... K normally closed)
Protection tube	Steel, galvanized Stainless steel 1.4571 / 316 Ti
Hose connection coupling (system and material)	Storz, Aluminium Storz, Aluminium/Stainless steel 1.4571 / 316 Ti Storz, Stainless steel 1.4571 / 316 Ti TW coupling, DIN 28450, Brass TW coupling, DIN 28450, Stainless steel 1.4408 Camlock DIN 2828, Stainless steel 1.4408 Guillemin, Aluminium
Limit switch (Filling hose connected)	Swivelling lever limit switch mechanical Swivelling lever limit switch inductive Limit switch mechanical mounted on couplings* Limit switch inductive mounted on couplings* * not available with Camlock or Guillemin couplings
Cable length for limit switches	2 m / 5 m / 10 m cable (not all lengths are available for every limit switch)

Accessories for silo filling device

Quick exhaust valve (incl. silencer)	Valve installed at SFA ... K Valve as separate component
Padlock (with 2 keys)	keyed alike or keyed different for for swivelling lever and Storz couplings

Covering hose connection

Blank cap with chain	Storz couplings/Swivelling lever limit switch Storz couplings/built-in limit switch
Mother end cap for	Camlock couplings/Swivelling lever limit switch
End cap for	Road tanker couplings (TW coupling, DIN 28450)

Further accessories on request

ATEX option

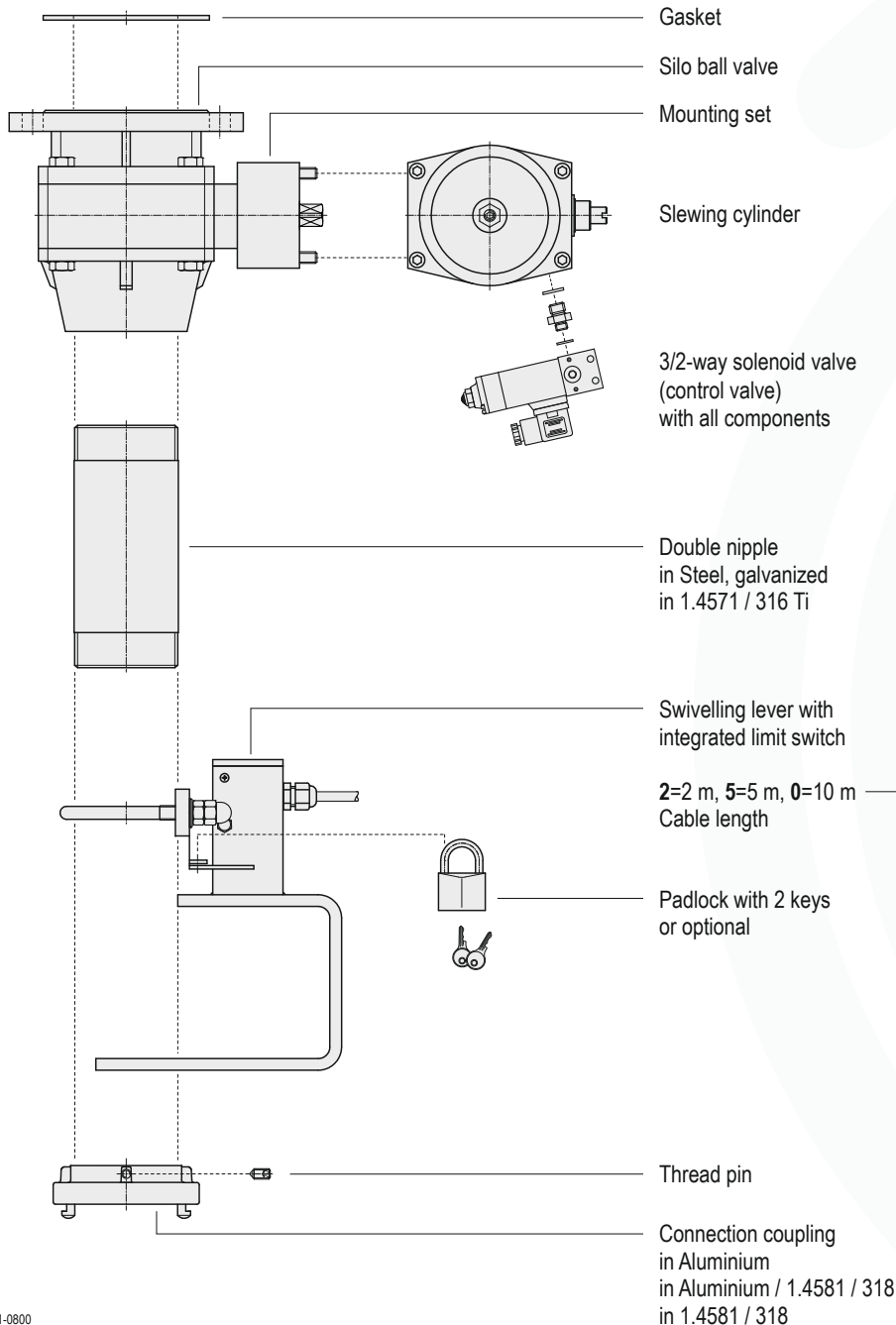
B7

Dust  II 2/3D IIIB

Single parts

Silo filling device with ball valve

Type SFA ... K ... DN 80 and 100



DN 80	DN 100
090-002-DIR-ABF	115-002-DIR-ABF
SKVP080-FG-AE-TN	SKVP100-FG-AE-TN
SKVP080-SET	SKVP100-SET

GTE110	GTE127
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for example:	
230 V AC	0 820 005 150B
24 V DC	0 820 005 151B

080-200-NIP-STV 080-200-NIP-V4A	100-200-NIP-STV 100-200-NIP-V4A
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SES-080-X SIS-080-X SNS-080-X	SES-100-X SIS-100-X SNS-100-X
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KS-VS025-G,	the same key for all locks
KS-VS025-U,	separate key for every lock

0914-05X010-V4A	0914-05X010-V4A
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K-FSZ075IG3-AL K-FSZ075IG3-VA	K-FSZ110IG4-AL K-FSZ110IG4-AV K-FSZ110IG4-VA
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011-0800

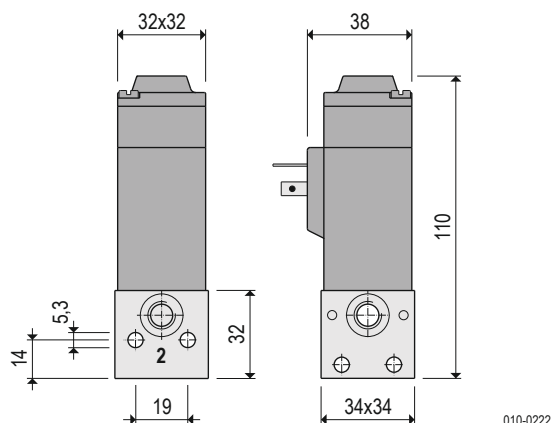
Accessories
for pinch valves and
silo filling devices

QV / SFA

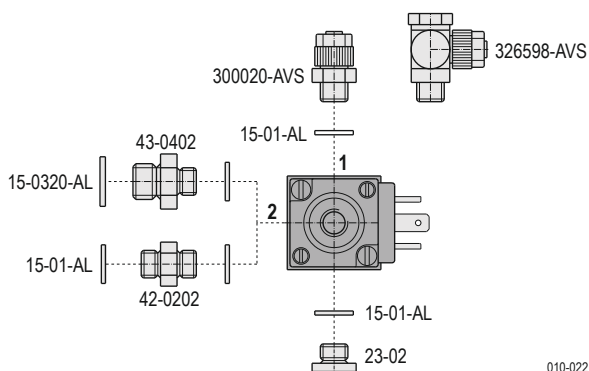
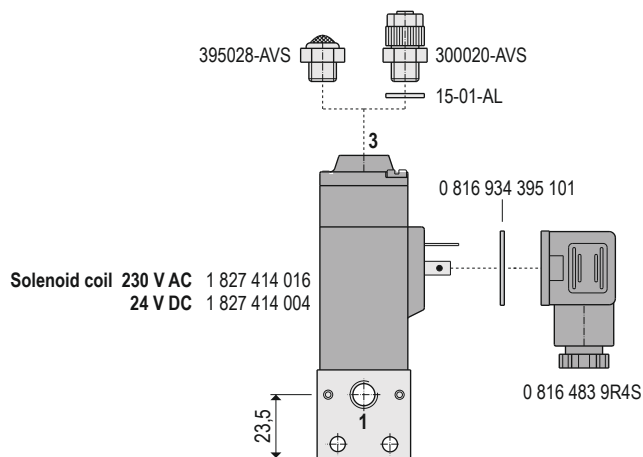
Appliance information

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3/2 way solenoid valve (AVENTICS) normally open	03
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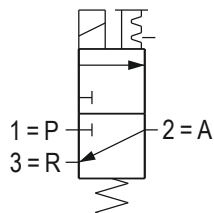
Dimensions



Components



Control scheme



Technical data

Type of construction	poppet valve with manual override for unlubricated compressed air
Sealing	elastic soft rubber seal (Viton®)
Solenoid coil	4 x 90° turnable
Connection thread	G 1/8
Mounting position	any
Ambient temperature	0 °C ... +50 °C
Nominal pressure	0 ... 10 bar
Nominal flow	from 1 to 2 100 l/min from 2 to 3 120 l/min
Nominal size	1.8
Type of protection	IP00 without socket connector IP65 with socket connector

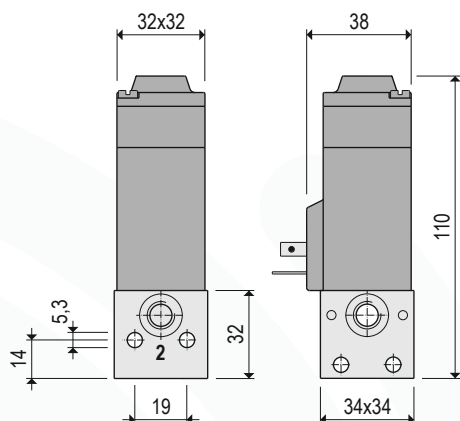
Electrical data

Power supply	230 V AC 24 V DC 24 V AC
Power consumption	with AC pick-up power 21 VA holding power 14 VA with DC 8 W
Operating time	ED 100 %
Electrical connection	socket connector, 4 x 90° turnable

Type designation

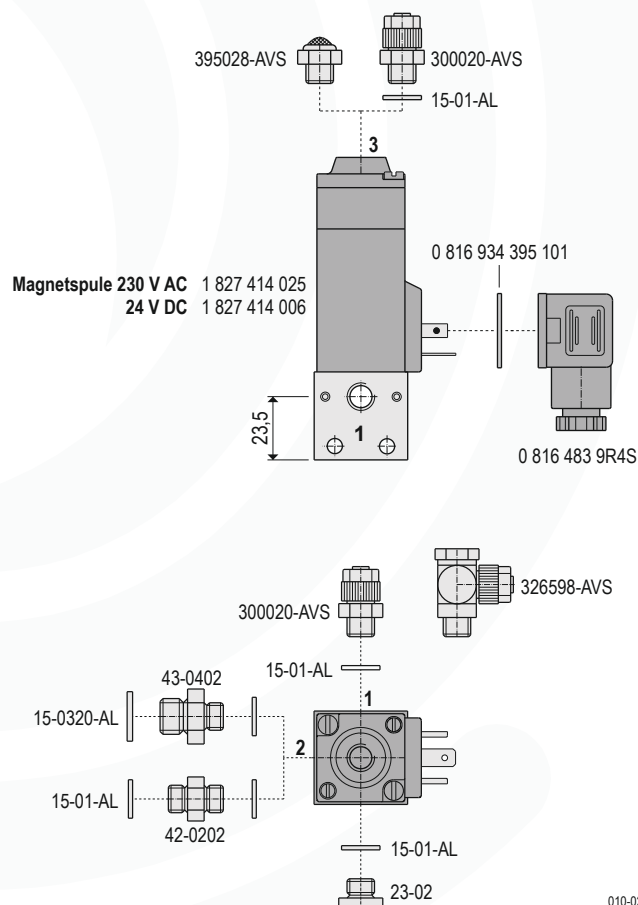
Solenoid valve	Order code
Power supply 230 V AC	0 820 005 150
Power supply 24 V DC	0 820 005 151

Dimensions



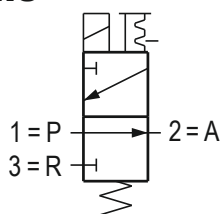
010-0224

Components



010-0223

Control scheme



010-AP01

Technical data

Type of construction	poppet valve with manual override for unlubricated compressed air
Sealing	elastic soft rubber seal (Viton®)
Solenoid coil	4 x 90° turnable
Connection thread	G 1/8
Mounting position	any
Ambient temperature	0 °C ... +50 °C
Nominal pressure	0 ... 10 bar
Nominal flow	from 1 to 2 100 l/min from 2 to 3 120 l/min
Nominal size	1.8
Type of protection according to DIN EN 60529	IP00 without socket connector IP65 with socket connector

Electrical data

Power supply	230 V AC 24 V DC 24 V AC
Power consumption	with AC pick-up power 21 VA holding power 14 VA with DC 8 W
Operating time	ED 100 %
Electrical connection	socket connector, 4 x 90° turnable

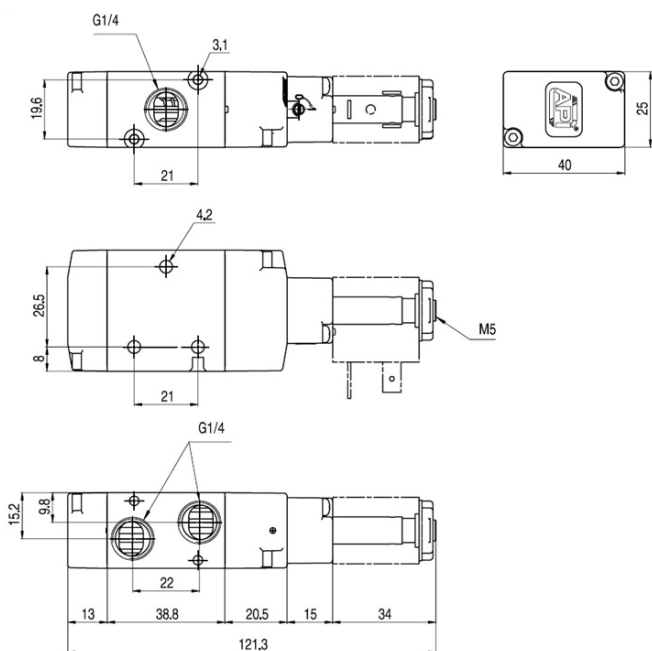
Type designation

Solenoid valve	Order code
Power supply 230 V AC	0 820 005 250
Power supply 24 V DC	0 820 005 251

Illustration



Dimensions/illustrations



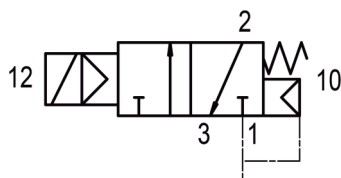
Solenoid coil



Socket connector



Control scheme



Technical data

Type of construction	servo controlled valve with manual override for filtered, lubricated or unlubricated compressed air
Sealing	HNBR (hydrogenated nitrile butadiene rubber)
Solenoid coil	4 x 90° turnable
Connection thread	G 1/4
Mounting position	any
Ambient temperature	-10 °C ... +50 °C
Nominal pressure	1.5 ... 10 bar
Nominal flow	1100 l/min at 6 bar with 1 bar differential pressure
Nominal size	8 mm
Type of protection	IP65 according to DIN EN 60529

Electrical data

Power supply	230 V AC 24 V DC
Power consumption	5 VA with AC 3 W with DC
Operating time	ED 100 %
Electrical connection	socket connector, 2 x 180° turnable

Type designation

Solenoid valve	Order code
Power supply 230 V AC	0 200 107 583
Power supply 24 V DC	0 200 107 580

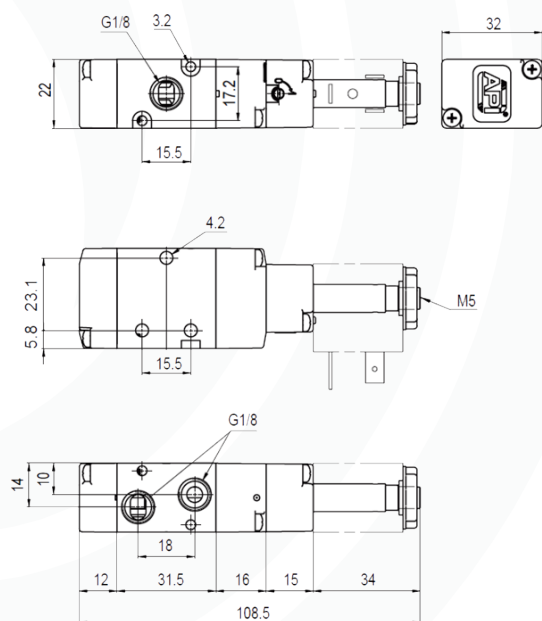
ATEX approval

B8 Gas Dust **Ex** II 3G Ex nA IIB T5 Gc X
and
II 3D Ex tc IIIC T 95°C Dc X

Illustration



Dimensions/illustrations



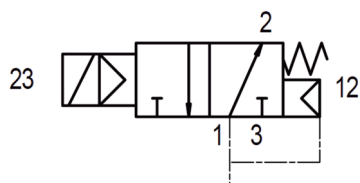
Solenoid coil



Socket connector



Control scheme



Technical data

Type of construction	servo controlled valve with manual override for filtered, lubricated or unlubricated compressed air
Sealing	HNBR (hydrogenated nitrile butadiene rubber)
Solenoid coil	4 x 90° turnable
Connection thread	G 1/8
Mounting position	any
Ambient temperature	-10 °C ... +50 °C
Nominal pressure	1.5 ... 10 bar
Nominal flow	650 l/min at 6 bar with 1 bar differential pressure
Nominal size	6,5 mm
Type of protection	IP65 according to DIN EN 60529

Electrical data

Power supply	230 V AC 24 V DC
Power consumption	5 VA with AC 3 W with DC
Operating time	ED 100 %
Electrical connection	socket connector, 2 x 180° turnable

Type designation

Solenoid valve	Order code
Power supply 230 V AC	0 200 107 548
Power supply 24 V DC	0 200 107 545

ATEX approval

B8 Gas Dust **Ex** II 3G Ex nA IIB T5 Gc X
and II 3D Ex tc IIIC T 95°C Dc X

Illustration



Technical data

Type of construction	servo controlled valve with manual override for lubricated or unlubricated compressed air
Sealing	NBR and PUR
Solenoid coil	4 x 90° turnable
Connection thread	G 1/4
Mounting position	any
Ambient temperature	-25 °C ... +50 °C
Nominal pressure	2 ... 8 bar
Nominal flow	1,300 l/min at 6 bar with 1 bar differential pressure
Nominal size	8 mm
Type of protection	IP65 according to DIN EN 60529

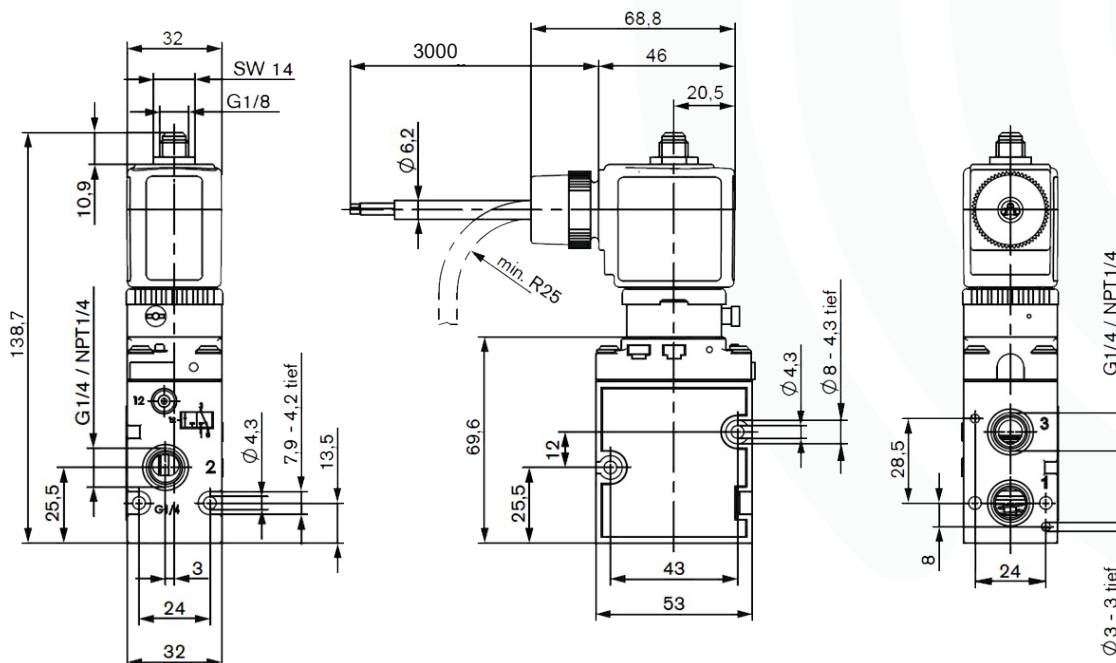
Type designation

Solenoid valve	Order code
Power supply 230 V UC	0 200 41 371
Power supply 24 V UC	0 003 50 452

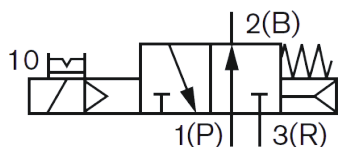
Electrical data

Power supply	230 V/UC (AC 50-60 Hz and DC)
	24 V/UC (AC 50-60 Hz and DC)
Power consumption	3 W
Operating time ED	100%
Electrical connection	3m cable, cast

Dimensions



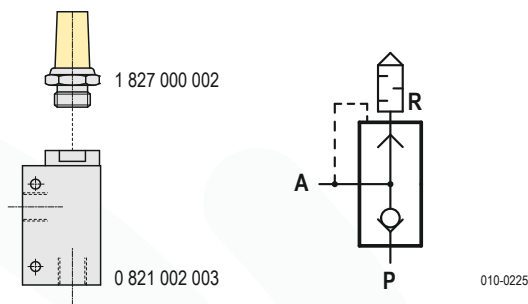
Control scheme



ATEX approval

B6 Gas Dust  II 2G Ex mb IIC T5 Gb
and II 2D Ex mb IIIC T 95°C Db

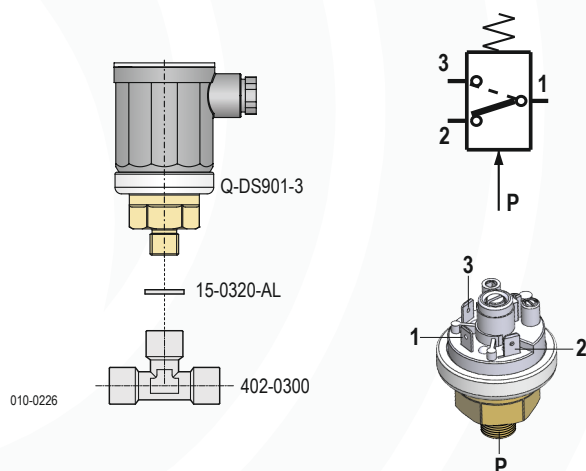
Quick exhaust valve



Accessories	Order code
Quick exhaust valve G ¹ / ₄	0 821 002 003
Silencer G ³ / ₈	1 827 000 002
Quick exhaust valve with silencer	0 821 002 003.B

Construction type	Seat valve for oil-free compressed air
Sealing	NBR rubbery-elastic
Connection thread	A and P = G ¹ / ₄ , R = G ³ / ₈
Mounting position	any
Ambient temperature	max. +40 °C
Control medium temperature	max. +40 °C
Nominal pressure	0.5 ... 10 bar
Nominal flow	from P to A 1000 l/min from A to R 2050 l/min
Nominal size	6
Silencer	Thread G ³ / ₈

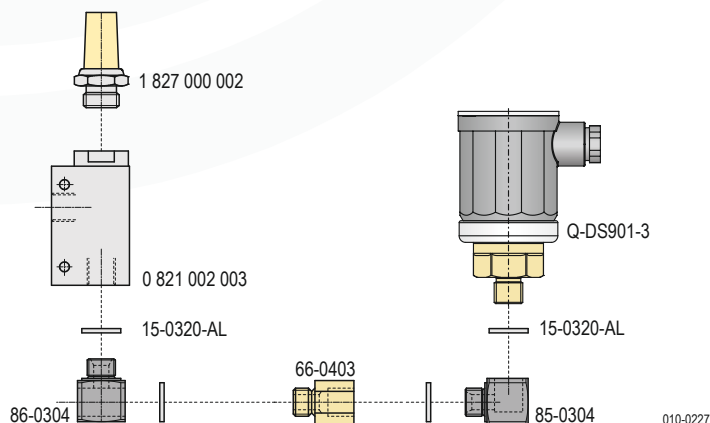
Compressed air switch



Accessories	Order code
Compressed air switch	Q-DS901-3
T-fitting G ¹ / ₄	402-0300
Compressed air switch with T-fitting and double nipple	Q-DS901-3.B

Materials	Housing PA/PC Connection thread Brass Membrane NBR
Connection thread	G ¹ / ₄
Mounting position	any
Ambient temperature	-20 °C ... +85 °C
Control medium temperature	max. +85 °C
Max. working pressure	10 bar
Switching point	3,0 bar (Works setting)
Capacity of the contact	6 A / 250 V AC
Switching function	change-over contact
Cable entry	M16x1.5
Electrical connection	AMP plug pins 6.35
Type of protection	IP65 according to DIN EN 60529

Quick exhaust valve and compressed air switch as a complete assembly



Accessories assembly	Bestellcode
Quick exhaust valve and compressed air switch	Q-DS901-3.S

Compressed air switch - Type PDC



Technical data

Materials

Housing	Galvanized steel
Membrane	Low-temperature NBR
Device socket	PA6 GF30

Connection thread

G 1/4

Mounting position

any

Ambient temperature

with device socket	-20 °C ... +50 °C
with cable connection	-40 °C ... +80 °C

Control medium temperature

with device socket	max. +50 °C
with cable connection	max. +80 °C

Max. working pressure

60 bar

Switching point

3,0 bar (Works setting)

Contact

resistive load	4 A / 250 V AC or 4 A / 24 V DC
inductive load	2 A / 250 V AC or 2 A / 24 V DC

Switching function

change-over contact

Cable entry (device socket)

M16x1.5

Electrical connection

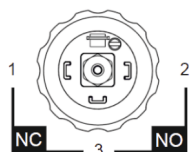
DIN EN 175301-803A incl.
device socket
or
cable connection, cable length 5m

Type of protection

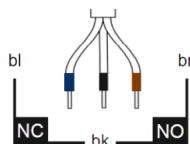
with device socket	IP65 according to DIN EN 60529
with cable connection	IP67 according to DIN EN 60529

Electrical connection

Standard electrical wire is sufficient for the connection cable

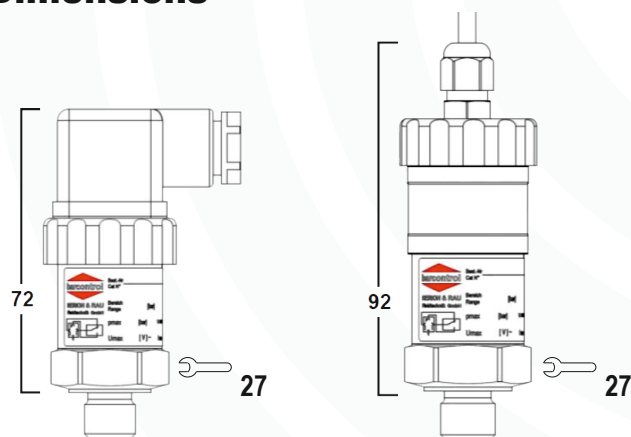


DIN EN 175301-803A
incl. device socket



Cable connection

Dimensions



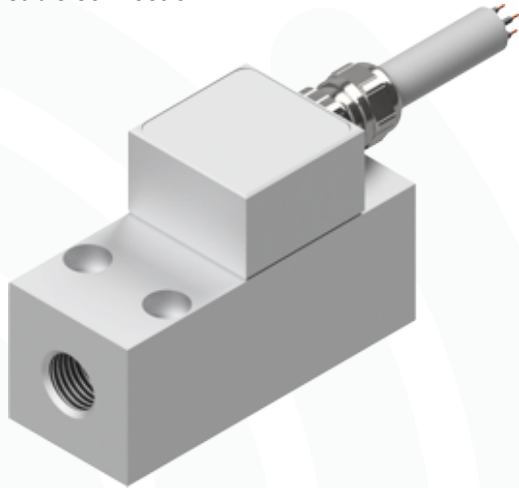
Type designation

Electrical connection	Order code
Device socket	PDC-1-008-T-3-1
Cable connection	PDC-1-008-T-3-5

Compressed air switch - Type C2051F

MINICOMB Compact pressure switch

with cable connection



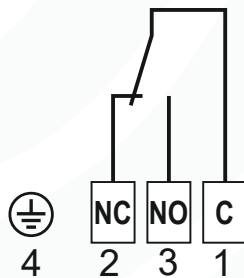
Electrical connection

Electrical connections

Cable connection

Cable length [L1]

5 m



Type designation

Compressed air switch

Order code

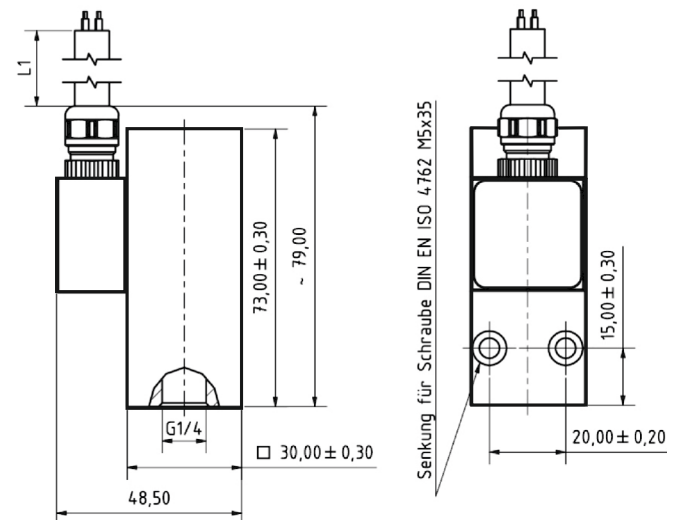
Cable connection

C2051F-3-5-B8

Technical data

Materials	Housing	Aluminium
	Sealings	FKM
Connection thread		G 1/4
Mounting position		any
Ambient temperature		0 °C ... +80 °C
Control medium temperature		-10 °C ... +80 °C
Pressure range (adjustment range)		0,2 ... 16 bar
Switching point		3,0 bar (Works setting)
Overpressure protection		25 bar
Contact	resistive load	3 A / 240 V AC or 3 A / 24 V DC
	inductive load	3 A / 240 V AC or 2 A / 24 V DC
Switching function		change-over contact
Type of protection		IP65 according to DIN EN 60529

Dimensions



ATEX approval

B8 Gas Dust  II 3G Ex nA nC IIC T4 Gc
and
II 3D Ex tc IIIC T 135°C Dc