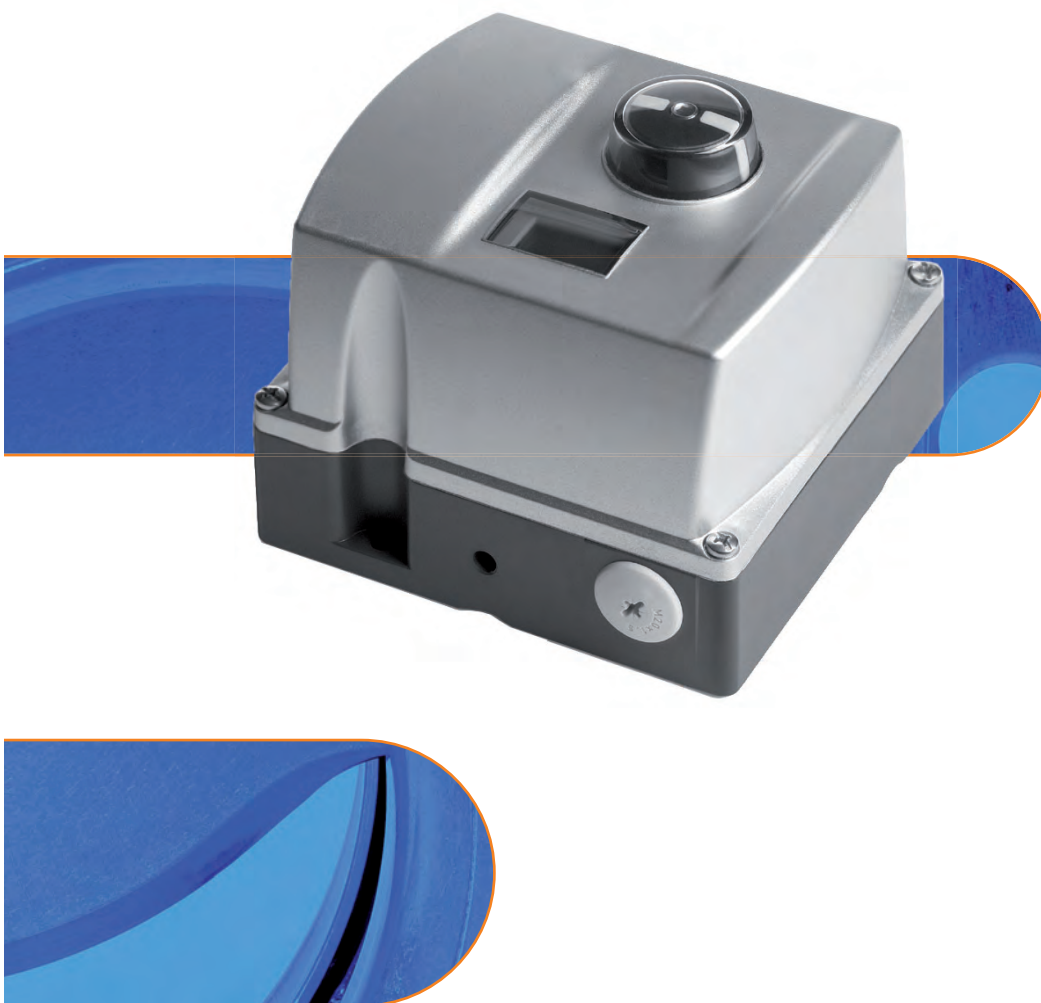


Accessories



MARTIN LOHSE GmbH
Unteres Paradies 63 · D-89522 Heidenheim
phone +49 7321 755-42
sales@lohse-gmbh.de
www.lohse-gmbh.de

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ND9000® INTELLIGENT VALVE CONTROLLER

ND9000 is a top class intelligent valve controller designed to operate on every control valve actuator and in all industry areas. It guarantees the end product quality in all operating conditions with unique diagnostics and incomparable performance features. ND9000 is a reliable and future-proof investment with FieldCare™ life-time support.



Key Features

- Benchmark control performance on rotary and linear valves
- Reliable and robust design
- Easy commissioning and operation
- Language selection: English, German and French
- Local / remote operation
- Expandable architecture
- Advanced device diagnostics including
 - Self-diagnostics
 - Online diagnostics
 - Performance diagnostics
 - Communication diagnostics
 - Extended off-line tests
 - Intelligent Valve Diamond

Options

- Interchangeable communication options:
 - HART
 - FOUNDATION fieldbus
 - Profibus PA
- Limit switches
- Position transmitter (in HART only)
- Full stainless steel enclosure
- Exhaust adapter

Total cost of ownership

- Low energy and air consumption
- Future proof design allows further options at a reduced cost
- Optimized spares program minimizes spare part inventory

- Retro-fit to existing installations

Minimised process variability

- Linearisation of the valve flow characteristics
- Excellent dynamic and static control performance
- Fast response to control signal change
- Accurate internal measurements

Easy installation and configuration

- Same device can be used for linear and rotary valves, double and single-acting actuators
- Simple fast calibration and configuration
 - using Local User Interface (LUI)
 - using FieldCare software in a remote location
 - using Distributed Control System (DCS) asset management tools
- Flush mounting capability to avoid tubing and mounting parts
- Low power consumption enables installation to all common control systems

Open solution

- Freely interface with software and hardware from a variety of manufacturers. This open architecture allows the ND9000 to be integrated with other field devices to give an unprecedented level of controllability.
- FDT and EDD based multi-vendor support configuration
- different drivers (gsd,DTM,DD,EDDL) available

SWITCHGUARD™ INTELLIGENT ON/OFF VALVE CONTROLLER

SwitchGuard™ SG9000 is a top class intelligent on/off valve controller designed to operate on any valve actuator. Unique embedded diagnostic features are integrated into its design and enables users to guarantee the availability of their switching valves in demanding processes. SwitchGuard can be easily fitted to the actuator and its controlled pneumatic capacity replaces any solenoid valve providing a simple, reliable interface with the process control system. Diagnostic information is presented in an easily understandable way using FDT technology, such as FieldCare™, to enable planned maintenance of potentially failing valve assemblies before they have a chance to impact on the process.



Key Features

- Reliable and robust design
- The rugged cover protects the unit from environmental hazards and external abuse
- Ease of use
- Language selection: English, German and French
- Local / remote operation
- Expandable architecture
- Advanced device diagnostics including
 - Self-diagnostics
 - Online diagnostics
 - Performance diagnostics
- Speed control for switching
- HART communication

Options

- Full stainless steel enclosure (SG9300)
- High pneumatic capacity (SG9200)
- Integrated limit switches
- Position transmitter
- U/I converter to support binary control

Total cost of ownership

- Low energy and air consumption
- Future proof design allows further options at a reduced cost
- Optimised spares program. Reduced number of spares



Designed to switch

- Several pre-selected opening and closing profiles
 - Opening and closing can be configured separately
 - Minimised pressure impacts in piping
- Excellent speed control performance
- Highly reliable pneumatics unit
- Wide pneumatics capacity

Easy installation and configuration

- Same unit for linear and rotary valves, double and single-acting actuators
- Simple calibration and configuration
 - Using Local User Interface (LUI)
 - Using FieldCare software in a remote location
- Low power design enables installation to all common control systems

Open solution

- Freely interface with software and hardware from a variety of manufacturers. This open architecture allows the SwitchGuard to be integrated with other field devices and systems.
- FDT and EDD based multi-vendor support configuration

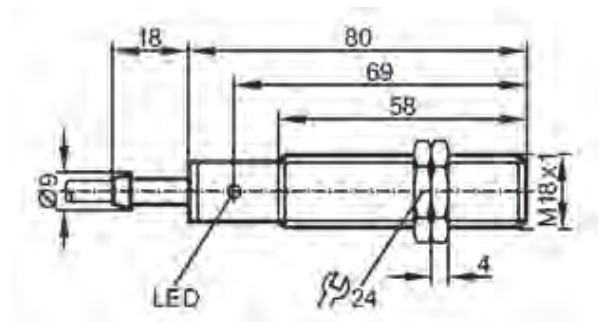
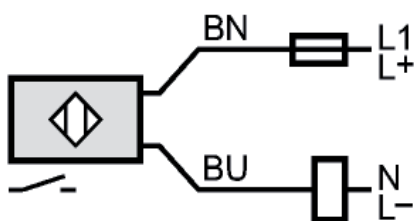
IG0006

IG-2008-ABOA
 Inductive sensor
 Plastic thread M18 x 1
 Cable
 Sensing range 8 mm
 non-flush mountable



Product characteristics		
Output function		normally open
Sensing range	[mm]	8
Housing		threded type
Dimensions	[mm]	M18 x 1 / L = 80
Electrical data		
Operating voltage	[V]	20...250 AC/DC
Prtection class		II
Revers polarity protection		no
Outputs		
Output function		normally open
Max. voltage drop switching output	[V]	6.5 AC / 6 DC
Minimum load current	[mA]	5
Max. leakage current	[mA]	2.5 (250 V AC) / 1,3 (110 V AC) / 0.8 (24 V DC)
Permanent current rating on switching output	[mA]	AC: 250; (350 (...50°C)) DC: 100
Short-time current rating on switching output	[mA]	2200; (20 ms / 0,5 Hz)
Switching frequency	[Hz]	AC: 25 / DC: 50
Short-circuit proof		no
Overload protection		no
Detection zone		
Sensing range	[mm]	8
Real sensing range Sr	[mm]	8 +/- 10%
Operating distance	[mm]	0..6.5
Accuracy / deviations		
Correction factor	[V]	steel = 1 / stainless steel: 0.7 / brass: 0.4 / aluminium: 0.3 / copper: 0.2
Hysteresis	[% of Sr]	1...15
Switch point drift	[% of Sr]	-10...10

Operating conditions		
EMC		EN 60947-5-2; EN 55011: class B
MTTF	[years]	604
UL approval		Ta: 0...40°C Enclosure type 1 power supply: Hazardous voltage File Number UL: E174191
Mechanical data		
Weight	[g]	68
Housing		threaded type
Mounting		non-flush mountable
Dimensions	[mm]	M18 x 1 / L = 80
Thread designation		M18 x 1
Materials		PBT
Displays / operating elements		
Display switching status		1 x LED, yellow
Electrical connection		
Required protection		miniature fuse to IEC6127-2 sheet 1; <= 2 A; fast acting
Accessories		
Items supplied		lock nuts: 2
Remarks		
Recommandation		Check the safe functioning of the unit after a short circuit.
Pack quantity		1 piece



Wiring

Core colors: BN – brown; BU – blue; BK – black

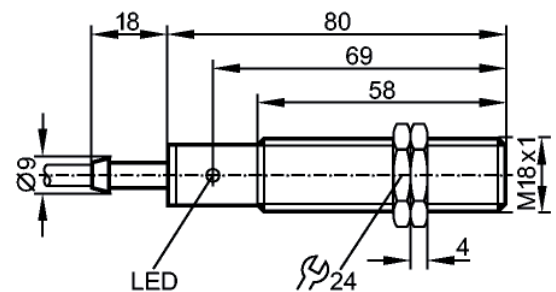
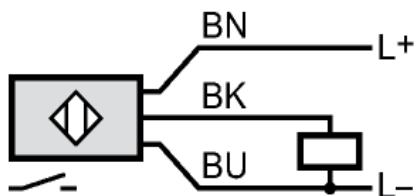
Cabel: 2m, PVC; 2 x 0,5 mm²

IG5401

IG-3008-BPKG
 Inductive sensor
 Plastic thread M18 x 1
 Cable
 Sensing range 8 mm [nf]
 non-flush mountable



Electrical design Output		DC PNP normally open
Operating voltage	[V]	10...36 DC
Current rating	[mA]	250
Short-circuit protection		yes (non-latching)
Reverse polarity protection / Overload protection		yes
Voltage drop	[V]	< 2,5
Current consumptio	[mA]	< 15 (24 V)
Real sensing range (Sr)	[mm]	8 ± 10 %
Operating distance	[mm]	0...6.5
Switch-point drift	[% of Sr]	-10...10
Hysteresis	[% of Sr]	1...15
Switching frequency	[Hz]	300
Correction factors		mild steel = 1 / stainless steel approx. 0.7 / brass approx. 0.4 / aluminium approx. 0.3 / copper approx. 0.2
Ambient temperature	[°C]	-25...80
Protection		IP 67, II
EMC		EN 60947-5-2
MTTF	[years]	1853
Housing materials		PBT
Function display Switching status	LED	yellow
Connection		PVC cable / 2 m; 3 x 0.5 mm ²
Weight	[kg]	0.117
Accessories (included)		2 lock nuts

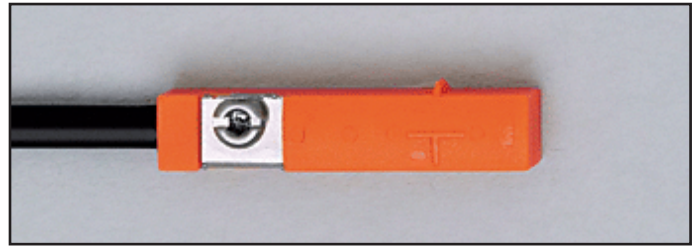


Wiring

Core colors: BN – brown; BU – blue; BK – black

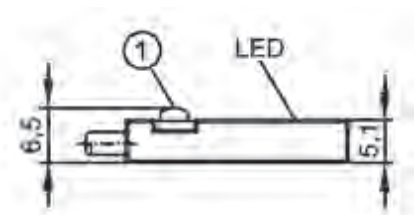
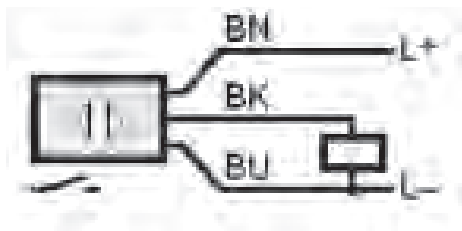
MK5100

cylinder sensor with GMR cell
 Plastic housing for T-slot cylinders
 Cable
 [f] flush mountable
 Magnetic sensitivity 2.8 mT
 Travel speed > 10 m/s



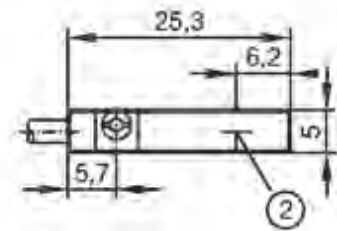
Electrical data		
Electrical design		DC PNP
Operating voltage	[V]	10...30 DC
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[ms]	< 30
Outputs		
Output function		normally open
Voltage drop	[V]	< 2.5
Current rating	[mA]	100
Short-circuit protection		yes
Overload protection		yes
Switching frequency	[Hz]	10000
Range		
Magnetic sensitivity	[mT]	2.8
Travel speed	[m/s]	> 10
Accuracy / deviations		
Hysteresis	[mm]	< 1.5
Repeatability	[mm]	< 0.2
Environment		
Ambient temperature	[°C]	-25...85
Protection		IP 65 / IP 67
Tests / approvals		
EMC		EN 61000-4-2 ESD: - CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m (80...2000 MHz) EN 61000-4-4 Burst: 2 kV EN 61000-4-6 HF conducted: 10 V (0.15...80 MHz) EN 55011: class B
MTTF	[Years]	3694
Mechanical data		
Mounting		flush mountable
Housing materials		housing: PA (polyamide); Fastening clamp: stainless steel
Weight	[kg]	0.027

Displays / operating elements		
Output status indication LED	LED	yellow
Electrical connection		
Connection		PUR cable / 2 m; 3 x 0.14 mm ²
Accessories		
Accessories (included)		rubber placeholder; cable clip
Remarks		
		cULus - Class 2 source required Clamping screw with combined slot/hexagon socket head AF 1.5
Pack quantity	[piece]	1



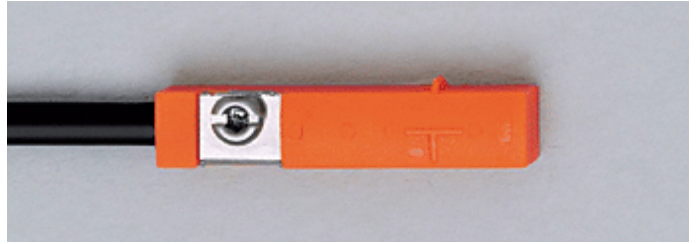
Wiring

Core colours: BK – black; BN – brown; BU – blue



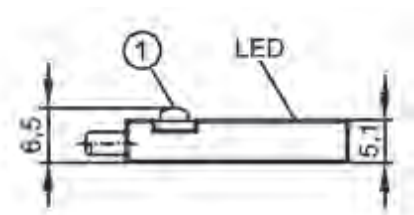
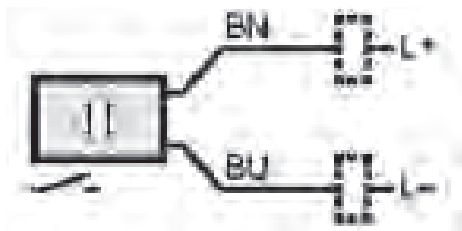
MK5103

cylinder sensor with GMR cell
 Plastic housing for T-slot cylinders
 Cable
 flush mountable
 Magnetic sensitivity 2.8 mT
 Travel speed > 10 m/s



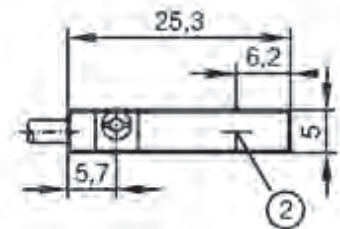
Electrical data		
Electrical design		DC PNP/NPN
Operating voltage	[V]	10...30 DC
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[ms]	30
Outputs		
Output function		normally open
Voltage drop	[V]	< 4.5
Minimum load current	[mA]	5
Leakage current	[mA]	< 0.8
Current rating	[mA]	100
Short-circuit protection		yes
Overload protection		yes
Switching frequency	[Hz]	4000
Range		
Magnetic sensitivity	[mT]	2.8
Travel speed	[m/s]	> 20
Accuracy / deviations		
Hysteresis	[mm]	1.5
Repeatability	[mm]	< 0.2
Environment		
Ambient temperature	[°C]	-25...85
Protection		IP 65 / IP 67
Tests / approvals		
EMC		EN 61000-4-2 ESD: - CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m (80...2000 MHz) EN 61000-4-4 Burst: 2 kV EN 61000-4-5 Surge: 0,5 kV EN 61000-4-6 HF conducted: 10 V (0.15...80 MHz) EN 55011: class B
MTTF	[Years]	3145
Mechanical data		
Mounting		flush mountable
Housing materials		PA (polyamide); Fastening clamp: stainless steel
Weight	[kg]	0.026

Displays / operating elements		
Output status indication LED	LED	yellow
Electrical connection		
Connection		PUR cable / 2 m; 2 x 0.14 mm ²
Accessories		
Accessories (included)		rubber placeholder; cable clip
Remarks		
		cULus - Class 2 source required Clamping screw with combined slot/hexagon socket head AF 1.5
Pack quantity	[piece]	1



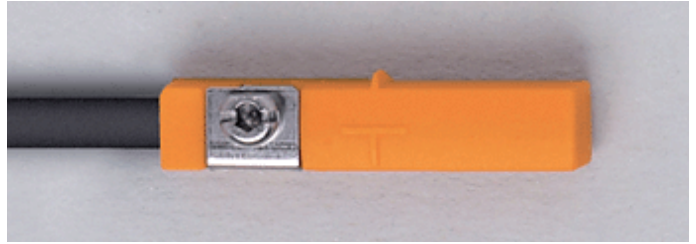
Wiring

Core colours: BN – brown; BU – blue



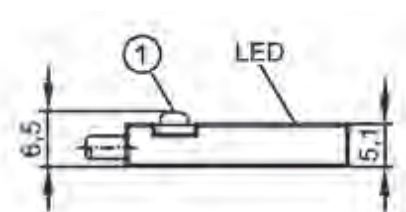
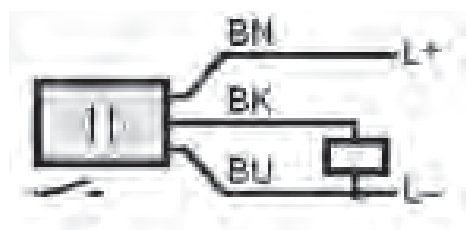
MK5158

cylinder sensor with AMR cell
 Plastic housing for T-slot cylinders
 Cable
 flush mountable
 Magnetic sensitivity 2.0 mT
 Travel speed > 10 m/s



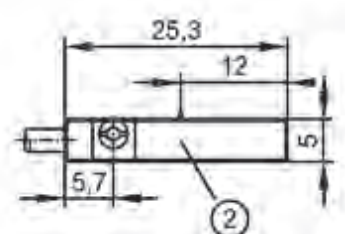
Electrical data		
Electrical design		DC PNP
Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 10
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[ms]	< 30
Outputs		
Output function		normally open
Voltage drop	[V]	< 2.5
Current rating	[mA]	100
Short-circuit protection		yes
Overload protection		yes
Switching frequency	[Hz]	6000
Range		
Magnetic sensitivity	[mT]	2.0
Travel speed	[m/s]	> 10
Accuracy / deviations		
Hysteresis	[mm]	1.0
Repeatability	[mm]	< 0.2
Environment		
Ambient temperature	[°C]	-25...85
Protection		IP 65 / IP 67 / IP 69K
Tests / approvals		
EMC		EN 61000-4-2 ESD: - CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m (80...2000 MHz) EN 61000-4-4 Burst: 2 kV EN 61000-4-6 HF conducted: 10 V (0.15...80 MHz) EN 55011: class B
MTTF	[Years]	2064
Mechanical data		
Mounting		flush mountable
Housing materials		PA (polyamide); Fastening clamp: stainless steel
Weight	[kg]	0.031

Displays / operating elements		
Output status indication LED	LED	yellow
Electrical connection		
Connection		PVC cable / 2 m; 3 x 0.14 mm ²
Accessories		
Accessories (included)		rubber placeholder; cable clip
Remarks		
		cULus - Class 2 source required Clamping screw with combined slot/hexagon socket head AF 1.5
Pack quantity	[piece]	1



Wiring

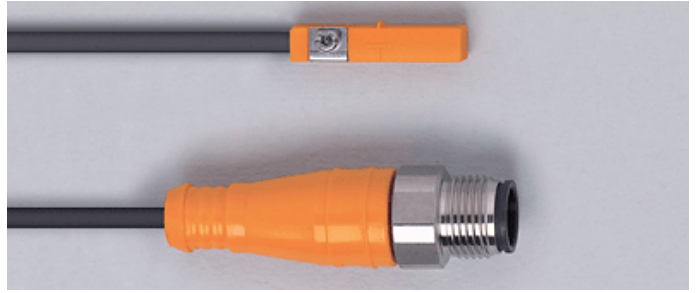
Core colours: BN – brown; BW – black; BU – blue



- 1: Fastening clamp
- 2: sensing face

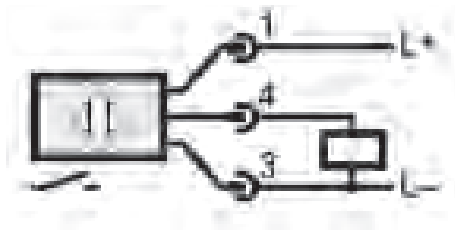
MK5157

cylinder sensor with AMR cell
 Plastic housing for T-slot cylinders
 Cable with connector
 flush mountable
 Magnetic sensitivity 2.0 mT
 Travel speed > 10 m/s

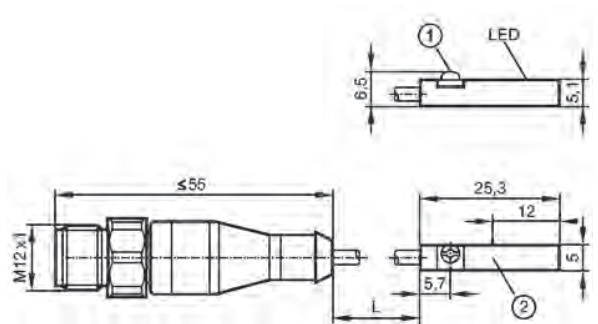


Electrical data		
Electrical design		DC PNP
Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 10
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[ms]	< 30
Outputs		
Output function		normally open
Voltage drop	[V]	< 2.5
Current rating	[mA]	100
Short-circuit protection		yes
Overload protection		yes
Switching frequency	[Hz]	6000
Range		
Magnetic sensitivity	[mT]	2.0
Travel speed	[m/s]	> 10
Accuracy / deviations		
Hysteresis	[mm]	1.0
Repeatability	[mm]	< 0.2
Environment		
Ambient temperature	[°C]	-25...85
Protection		IP 65 / IP 67 / IP 69K
Tests / approvals		
EMC		EN 61000-4-2 ESD: - CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m (80...2000 MHz) EN 61000-4-4 Burst: 2 kV EN 61000-4-6 HF conducted: 10 V (0.15...80 MHz) EN 55011: class B
MTTF	[Years]	2064
Mechanical data		
Mounting		flush mountable
Housing materials		PA (polyamide); Fastening clamp: stainless steel
Weight	[kg]	0.021

Displays / operating elements		
Output status indication LED	LED	yellow
Electrical connection		
Connection		PVC cable / 0.3 m; with M12 connector, with rotatable stainless steel hexagon nut
Accessories		
Accessories (included)		rubber placeholder; cable clip
Remarks		
		cULus - Class 2 source required Clamping screw with combined slot/hexagon socket head AF 1.5
Pack quantity	[piece]	1



Wiring



- 1: Fastening clamp
- 2: sensing face

Flexible plastic limit switch box with plastic bracket

PA6 / PC / PA6GF30

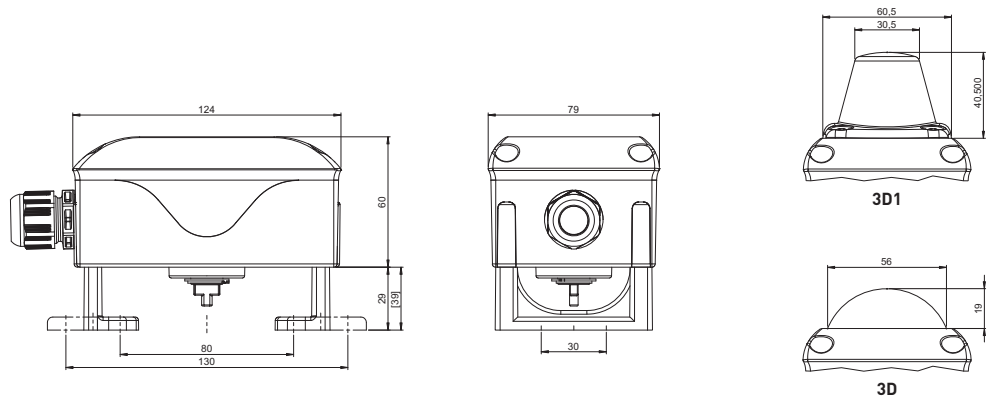
Model: EPP
 IP67
 -25°C bis +80°C



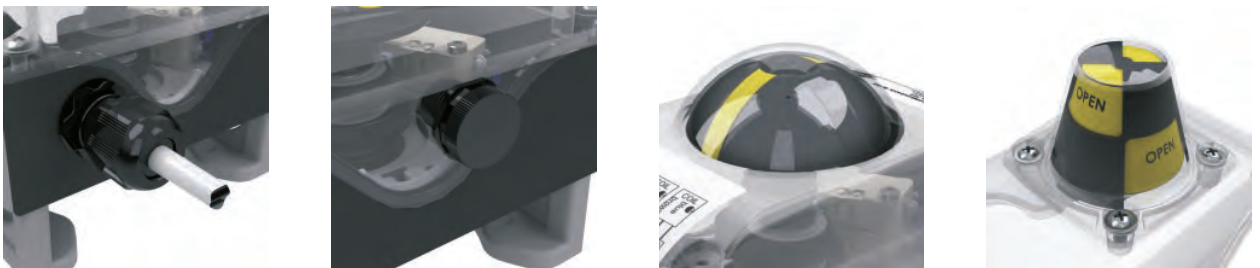
Description

- Compact and flexible limit switch box made of polyamide (PA6) with flat cover made of polycarbonate (PC) (Optional: 3D or 3D1 indicator)
- Adjustable polyamide mounting bracket (PA6) reinforced with 30% fiber glass for simple assembly on actuators according to VDI/VDE 3845: Hole spacings: 80x30mm and 130x30mm (optional: 50x25mm) Shaft heights: 20 and 30mm (IMPORTANT NOTE: As standard **no F05 interface** in the bottom. Optional available.)
- Enclosure IP67 according to DIN EN 60529
- Cable gland M20x1,5 black (for cable Ø 6-12mm)
- Sealings EPDM and NBR, Screws AISI 304, Shaft polyamide PA6
- Other colours of casing available on request
- Application: Standard applications without explosive atmosphere. 1-4 mechanical switches or proximity sensors in V3 design, 1-3 slot type sensors, 1-2 cylindrical sensors Ø 8-18mm

Dimensions



Optional executions



with inductive proximity switches

Versions

2-wire



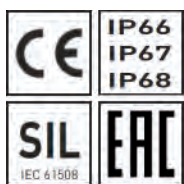
IFM
IS5026

3-wire



IFM
IS5001

Producer switch	IFM	IFM
Switch type	IS5026 (PNP/NPN, NO/NC)	IS5001 (PNP, NO)
Voltage	5–36 V DC	10–30 V DC
Operating current	4–200 mA	0–200 mA
Frequency	2000 Hz	800 Hz
No-load supply current I ₀		≤ 15 mA
Switching state indicator	LED yellow	LED yellow
SIL Level	SIL 1–3 (IEC 61508:2010)	SIL 1–3 (IEC 61508:2010)
Ambient temperature	-25°C ... +80°C	-25°C ... +80°C
Max. number of switches	4	4
Part number	EPP2102-020-19-ML1 / H647517	EPP2102-020-7-ML1 / H647527
Wiring diagram	<p>CLOSED OPEN</p> <p>I001:</p>	<p>CLOSED OPEN</p> <p>I001:</p>





technical data

material	glass fibre reinforced polyester
dimensions	75 x 110 x 55 mm
color	similar to RAL 7000, squirrel grey
ingress protection	IP 66 to EN 60529
impact resistance	>7 Joule, EN 50014
temperature range PUR (polyurethane) seal	-40°C to +90°C
surface resistances	>10 ¹² Ohm to DIN 53482
flammability	V0 / self-extinguishing, UL 94
insulation	fully insulated to VDE 0100
dielectric strength	18 KV / mm
toxicity	free from halogen

specification

Plastic enclosure consisting of

- lid
- seal, incl. captive +/- stainless steel screws
- base with earthing screws

connections

with DIN rail TS15 armed with 11 Phoenix terminals MBK 5/E

side A: 3 x M16x1.5, factory wired

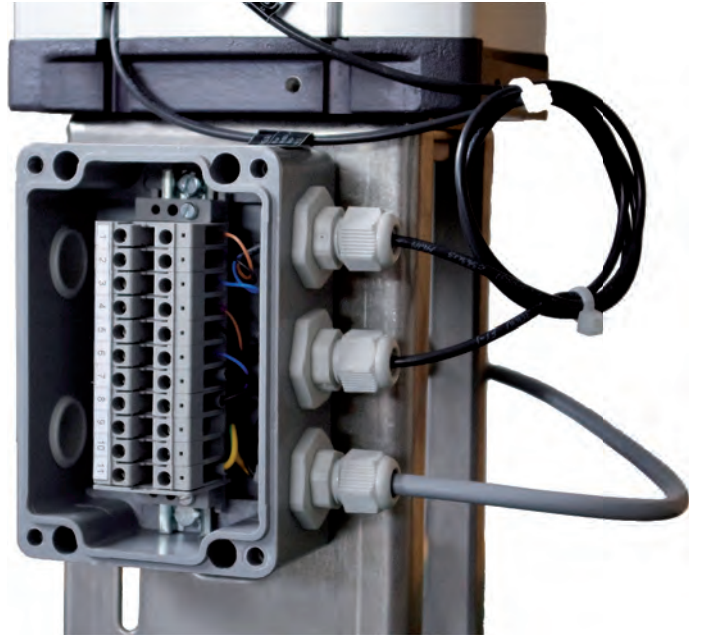
side B: 2 x M20x1.5, supplied with blind cover has to be wired by customer

bracket

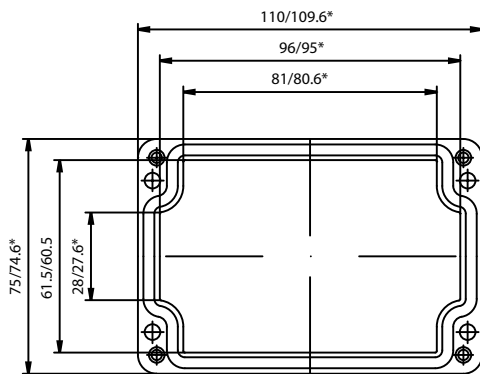
on pneumatic cylinder with stainless steel bracket

On request:

- box with housing of aluminium
- box with approval according to ATEX



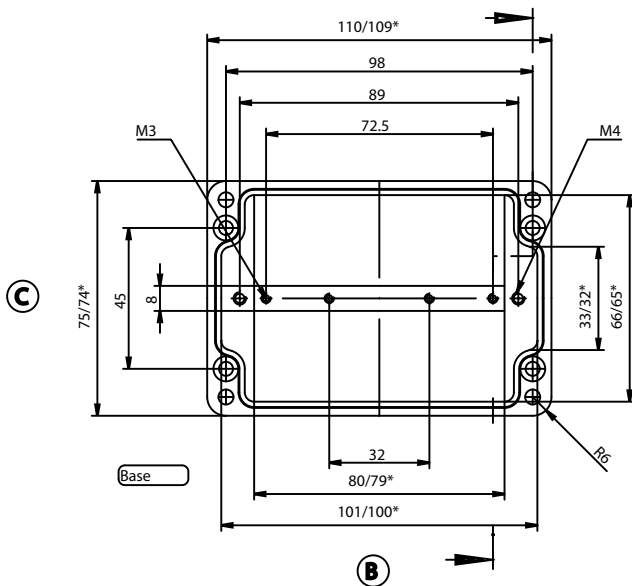
dimensions



* = Conical form tapering downwards.
Free dimensions-tolerance to DIN 16901-130

Lid

A



Base

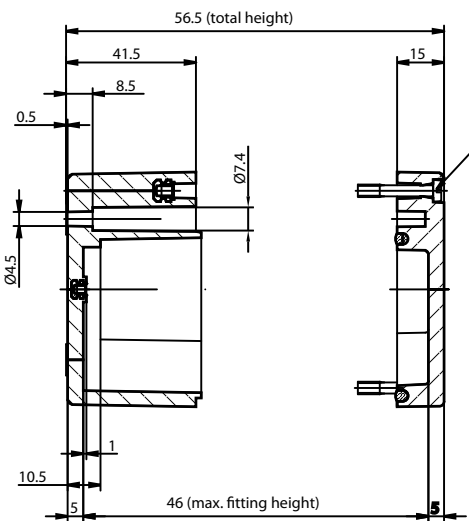
B

D

E

F

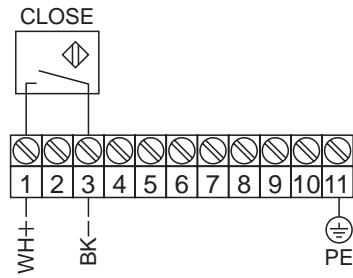
Cylinder screw M4 x 24/7
similar to DIN 84



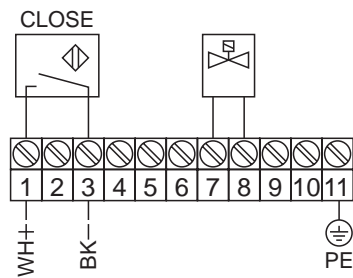
Connection diagrams

limit switches 2-wire

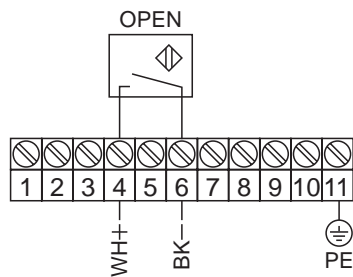
1 limit switch - position CLOSE / 2-wire



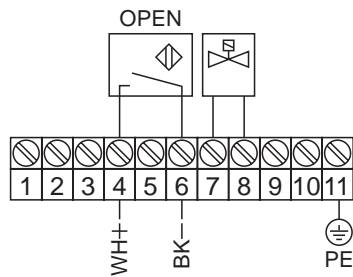
1 limit switch - position CLOSE / 2-wire
1 solenoid valve



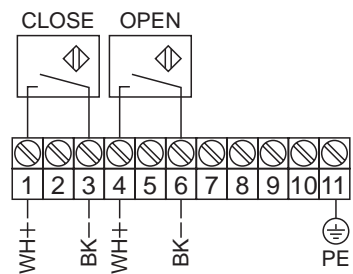
1 limit switch - position OPEN / 2-wire



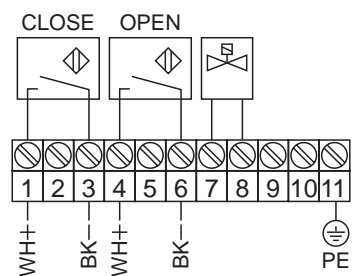
1 limit switch - position OPEN / 2-wire
1 solenoid valve



2 limit switches - position OPEN and CLOSE / 2-wire

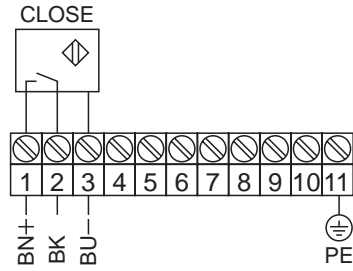


2 limit switches - position OPEN and CLOSE / 2-wire
1 solenoid valve

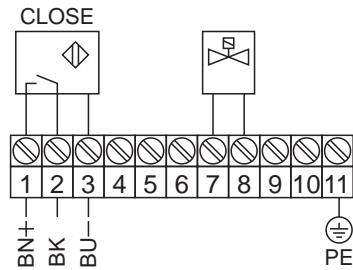


limit switches 3-wire

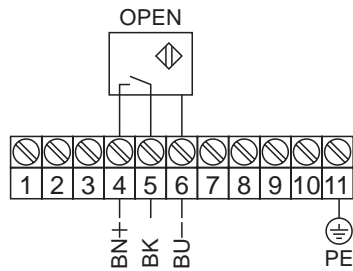
1 limit switch - position CLOSE / 3-wire



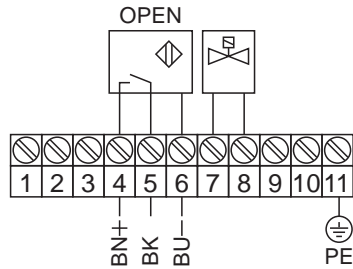
1 limit switch - position CLOSE / 3-wire
1 solenoid valve



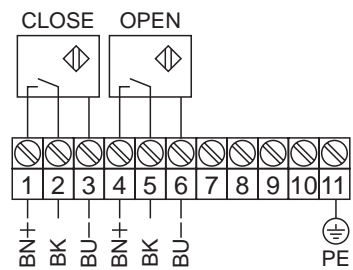
1 limit switch - position OPEN / 3-wire



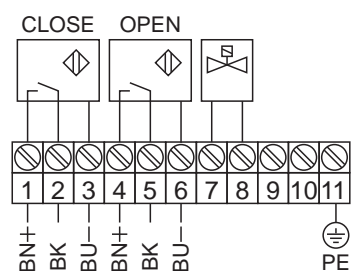
1 limit switch - position OPEN / 3-wire
1 solenoid valve



2 limit switches - position OPEN and CLOSE / 3-wire



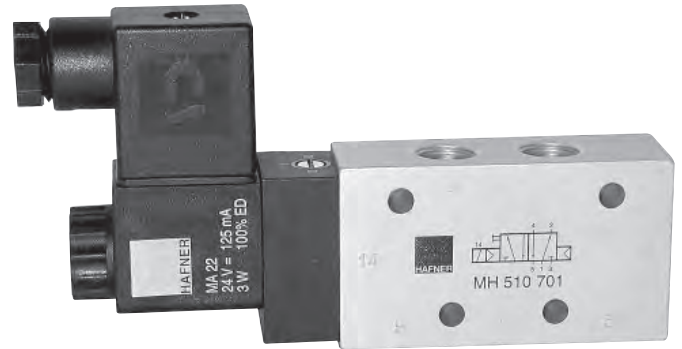
2 limit switches - position OPEN and CLOSE / 3-wire
1 solenoid valve



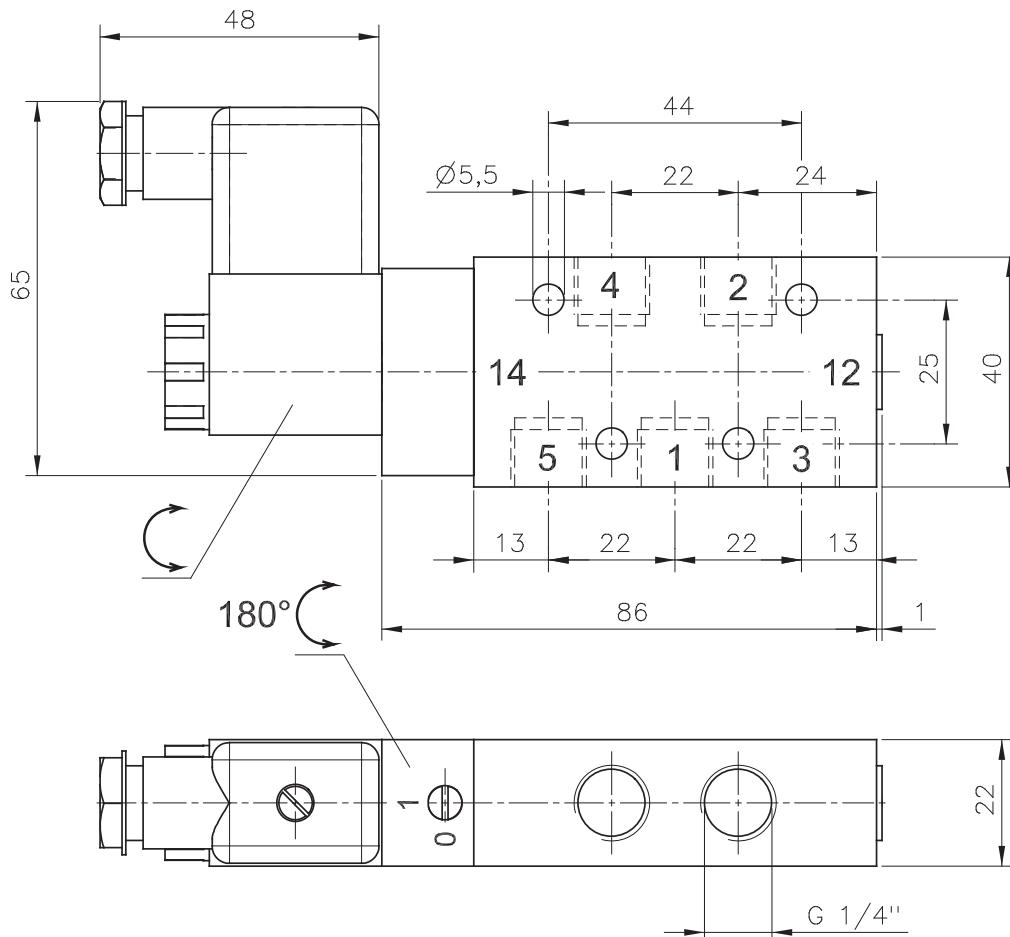
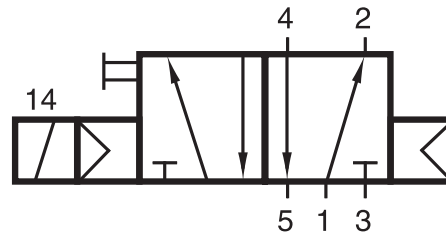
Standard Solenoid Valve, 5/2-way, G 1/4"

MH 510 701

5/2-way solenoid valve, actuated by permanent signal and equipped with air spring return. Generally with manual override.
 Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.
 Port 14: M5.
 Minimum actuation pressure: 3 bar.
 Version for vacuum on request.
 Connector as shown on the photo is included.
 Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/4"
air flow	1250 l/min
operating pressure	2 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.25 kg



Standard Solenoid Valve, 5/2-way, G 1/2"

MH 510 121

5/2-way solenoid valve actuated by permanent signal and equipped with air spring return.

Generally with manual override.

Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.

Port 14: G 1/8".

Minimum actuation pressure: 3 bar.

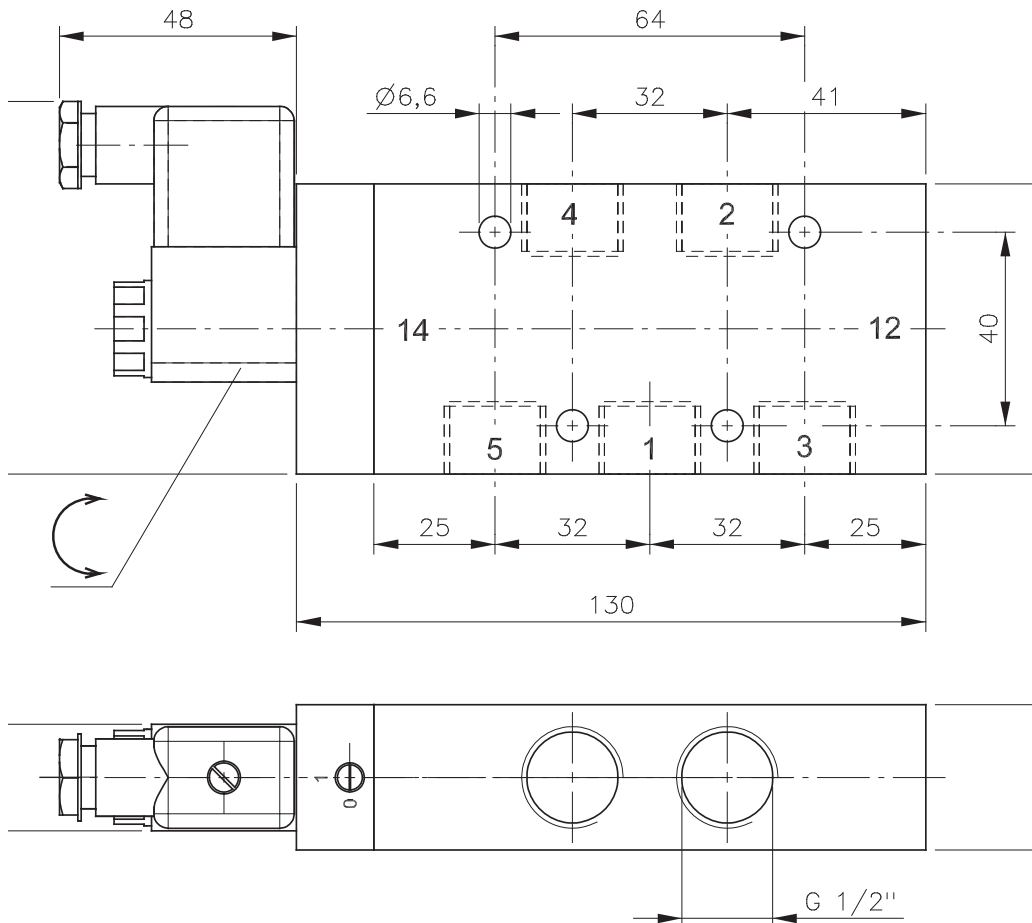
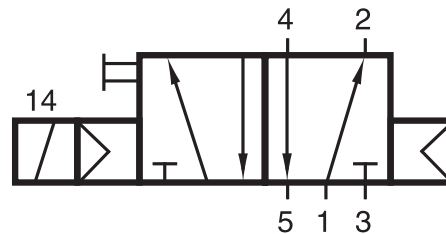
Version for vacuum on request.

Connector as shown on the photo is included.

Also available according ATEX (II2G/Dc T4 – 10°C ≤ TA ≤ 50°C resp. II3G/Dc T5 – 10°C ≤ TA ≤ 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/2"
air flow	3000 l/min
operating pressure	1 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.67 kg



Standard Solenoid Valve, 3/2-way, G 1/4"

MH 310 701

3/2-way solenoid valve normally closed actuated by permanent signal and equipped with air spring return. Generally with manual override.

Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.

Port 12: M5.

Minimum actuation pressure: 3 bar.

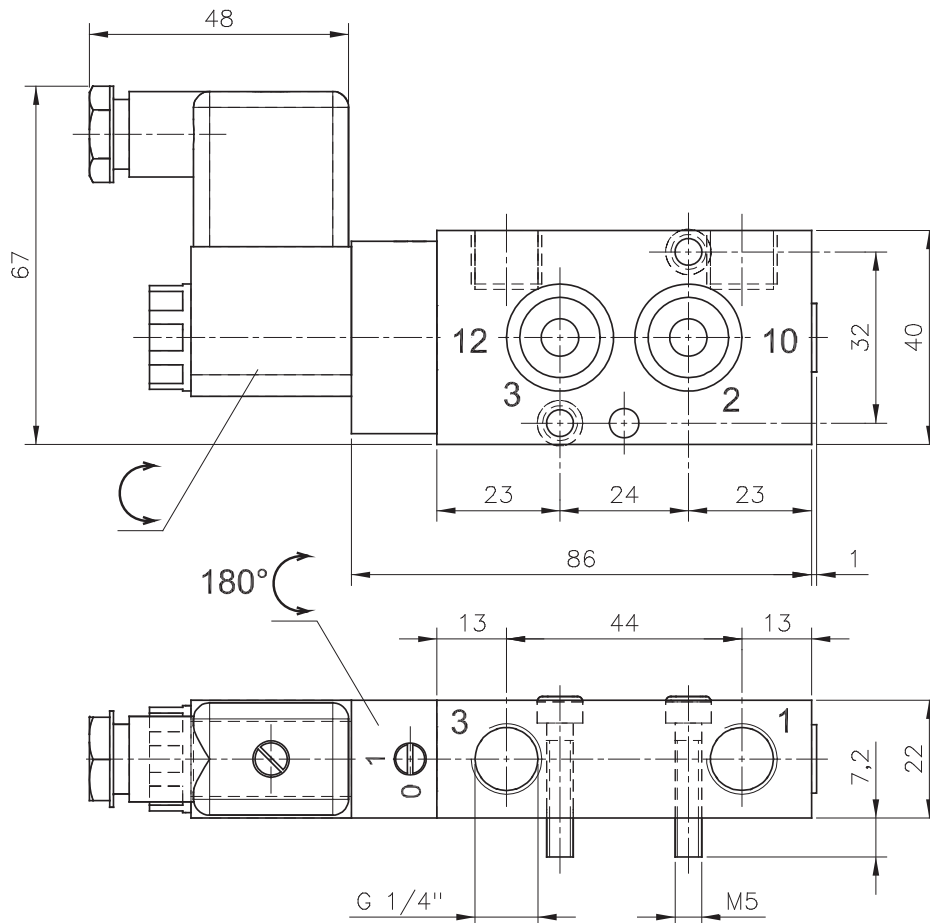
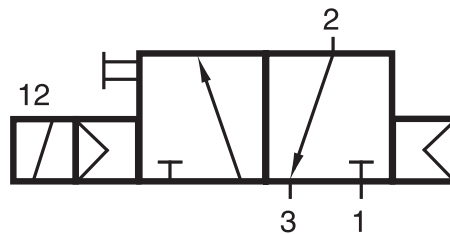
Version for vacuum on request.

Connector as shown on the photo is included.

Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/4"
air flow	1250 l/min
operating pressure	2 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.21 kg



Standard Solenoid Valve, 3/2-way, G 1/2"

MH 310 121

3/2-way solenoid valve normally closed actuated by permanent signal and equipped with air spring return. Mit pneumatischer Federrückstellung.

Generally with manual override.

Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.

Port 12: G 1/8".

Minimum actuation pressure: 3 bar.

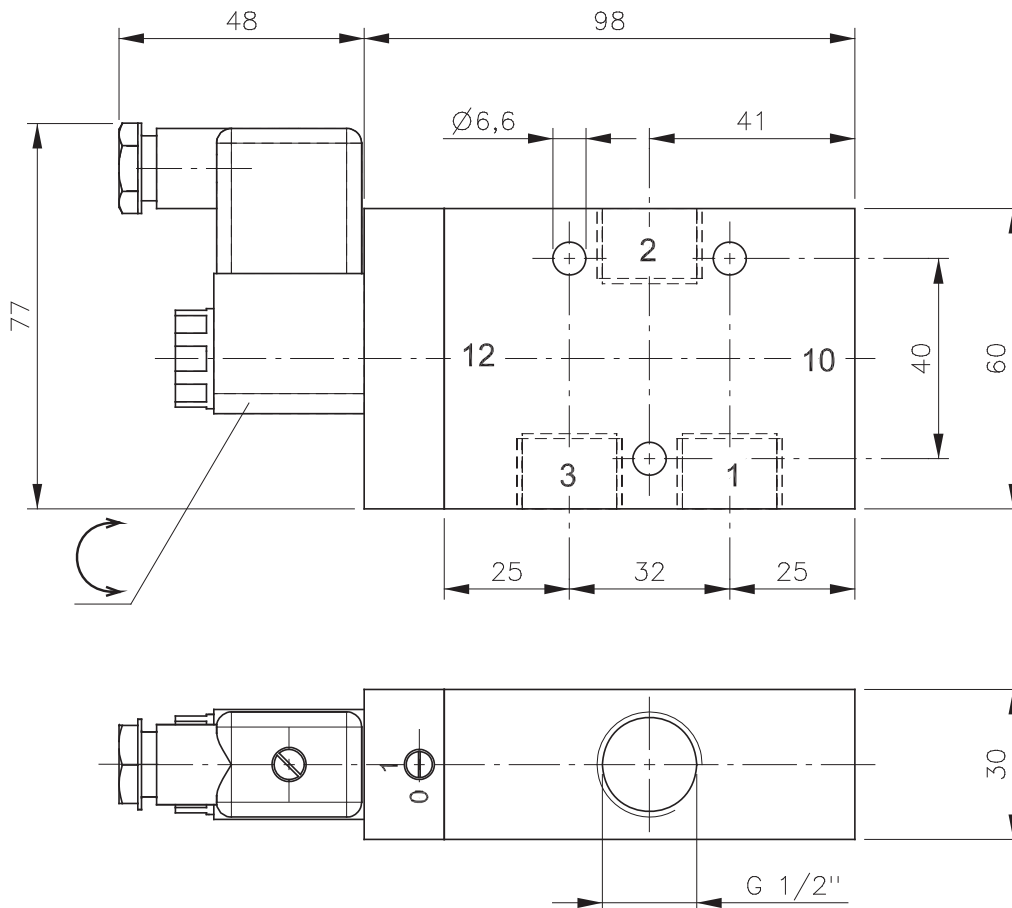
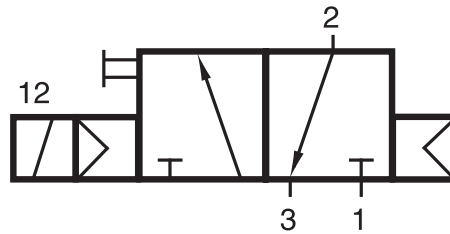
Version for vacuum on request.

Connector as shown on the photo is included.

Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/2"
air flow	3000 l/min
operating pressure	1 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.53 kg



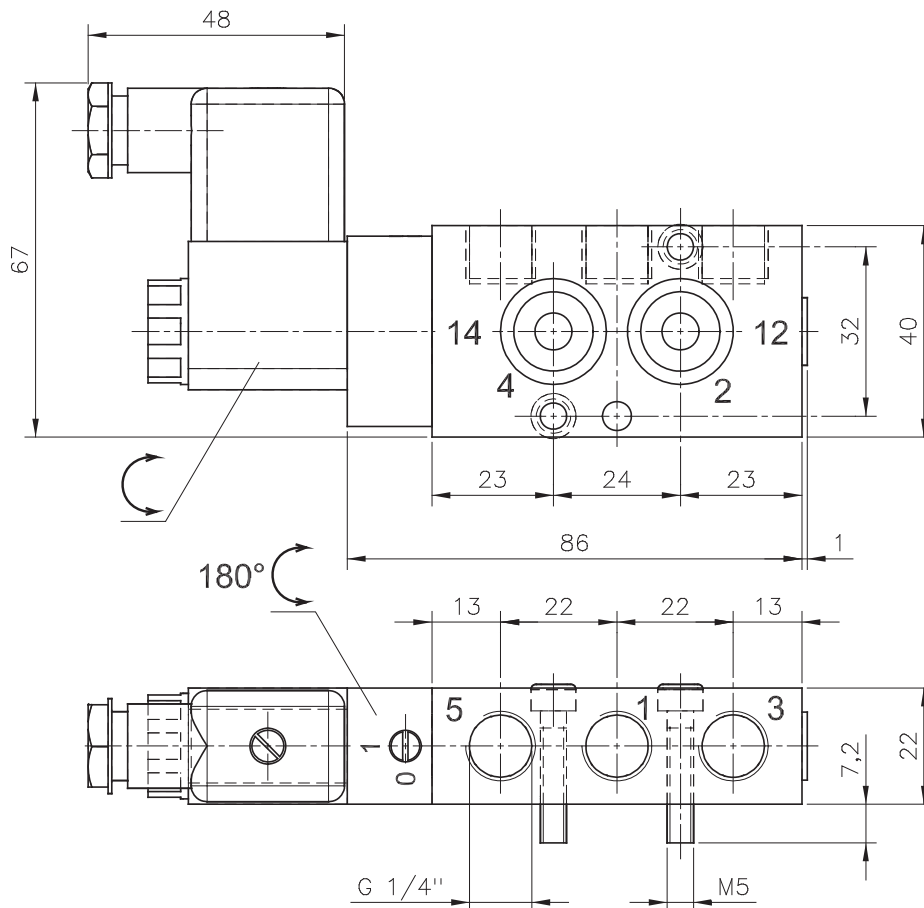
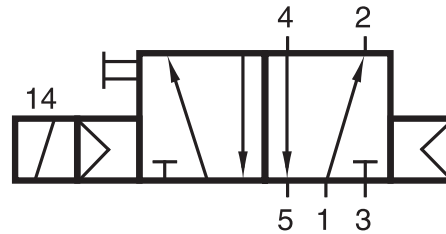
Namur Solenoid Valve, 5/2-way, G 1/4"

MNH 510 701

5/2-way solenoid valve, actuated by permanent signal.
 Interface according to 1/4" Namur standard.
 With pneumatic spring return.
 Generally with manual override.
 Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.
 Delivery includes 1 pin, 2 screws, 2 O-rings and 1 connector.
 Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/4"
air flow	1250 l/min
operating pressure	2 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.26 kg



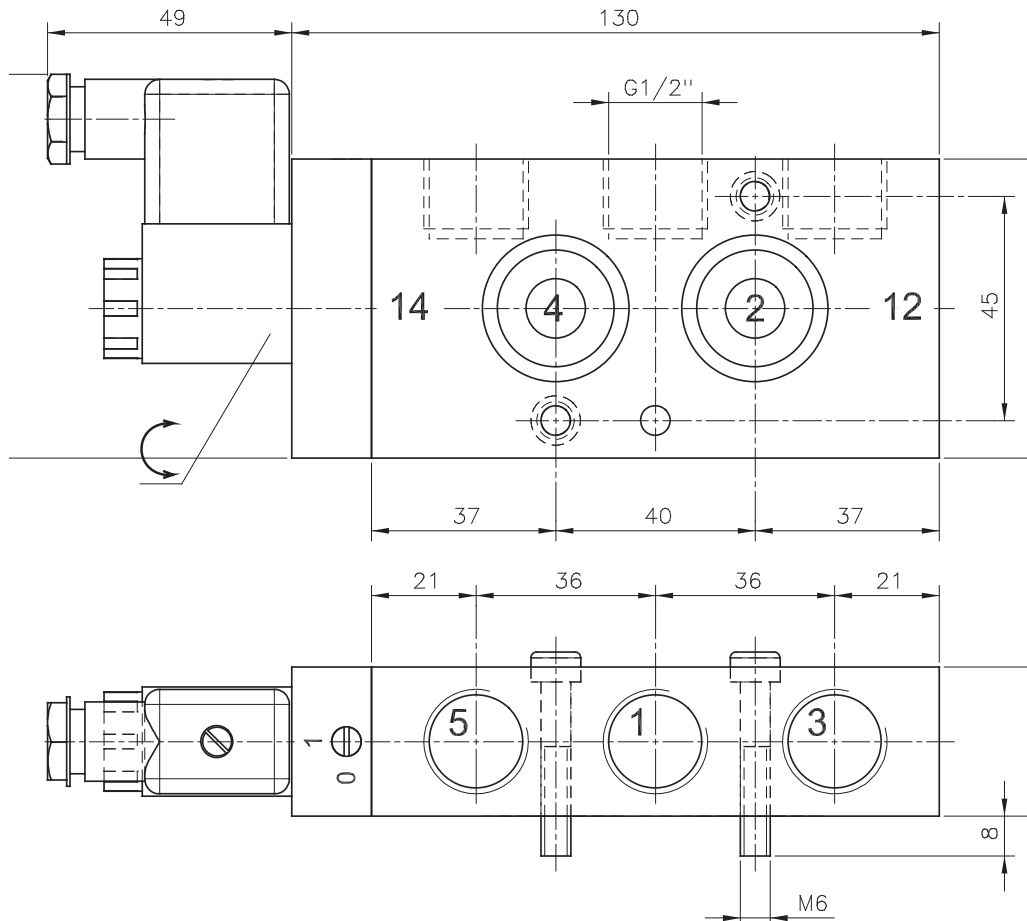
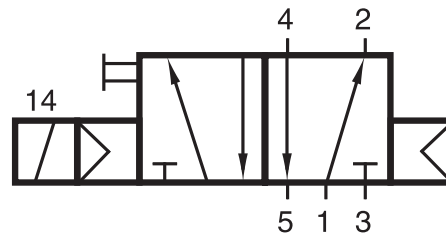
Namur Solenoid Valve, 5/2-way, G 1/2"

MNH 510 121

5/2-way solenoid valve, actuated by permanent signal.
 Interface according to 1/2" Namur standard.
 With pneumatic spring return.
 Generally with manual override.
 Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.
 Delivery includes 1 pin, 2 screws, 2 O-rings and 1 connector.
 Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/2"
air flow	3000 l/min
operating pressure	1.0 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.70 kg



Namur Solenoid Valve, 3/2-way, G 1/4"

MNH 310 701

3/2-way solenoid valve, actuated by permanent signal. Interface according to 1/4" Namur standard, with exhaust air recirculation („purge“).

Normally closed.

With pneumatic spring return.

Generally with manual override.

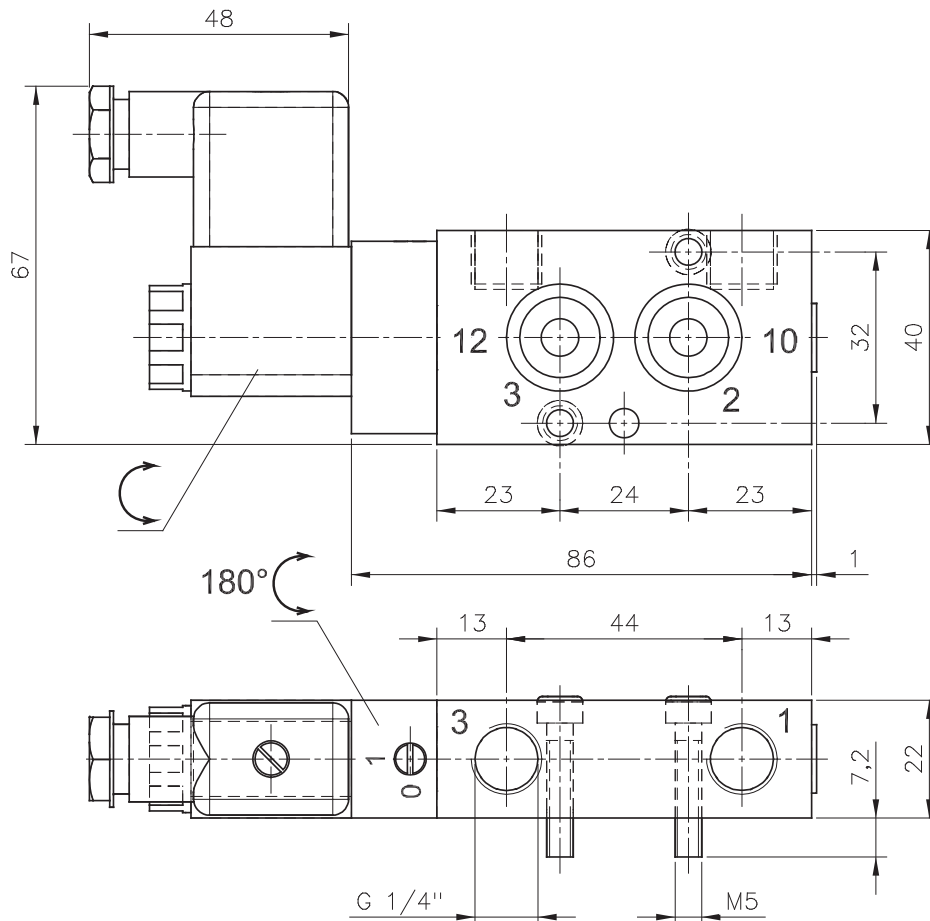
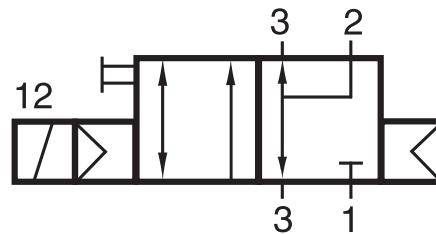
Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.

Delivery includes 1 pin, 2 screws, 2 O-rings and 1 connector.

Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/4"
air flow	1250 l/min
operating pressure	2 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.26 kg



Namur Solenoid Valve, 3/2-way, G 1/2"

MNH 310 121

3/2-way solenoid valve, actuated by permanent signal. Interface according to 1/2" Namur standard, with exhaust air recirculation („purge“).

With pneumatic spring return.

Generally with manual override.

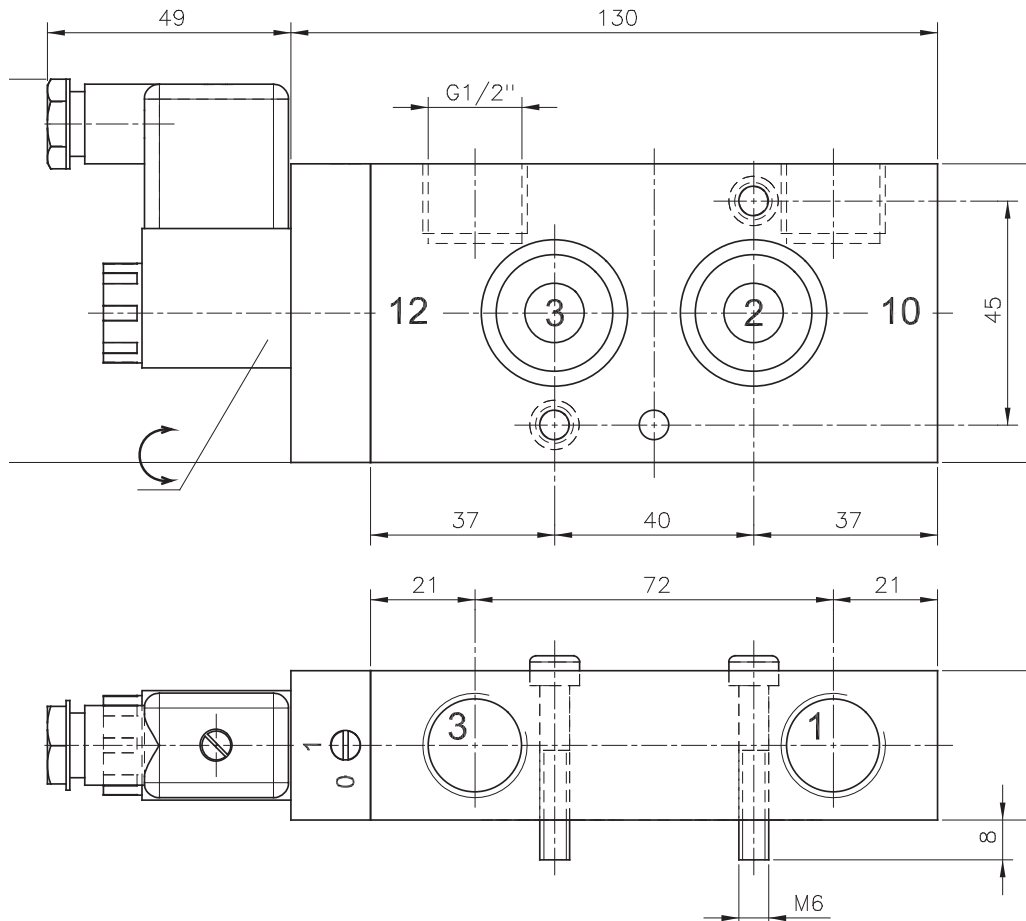
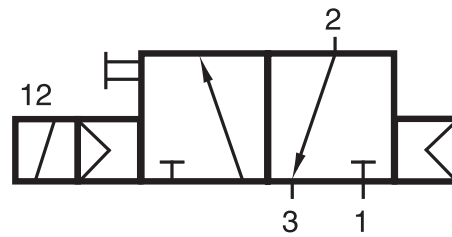
Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.

Delivery includes 1 pin, 2 screws, 2 O-rings and 1 connector.

Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).

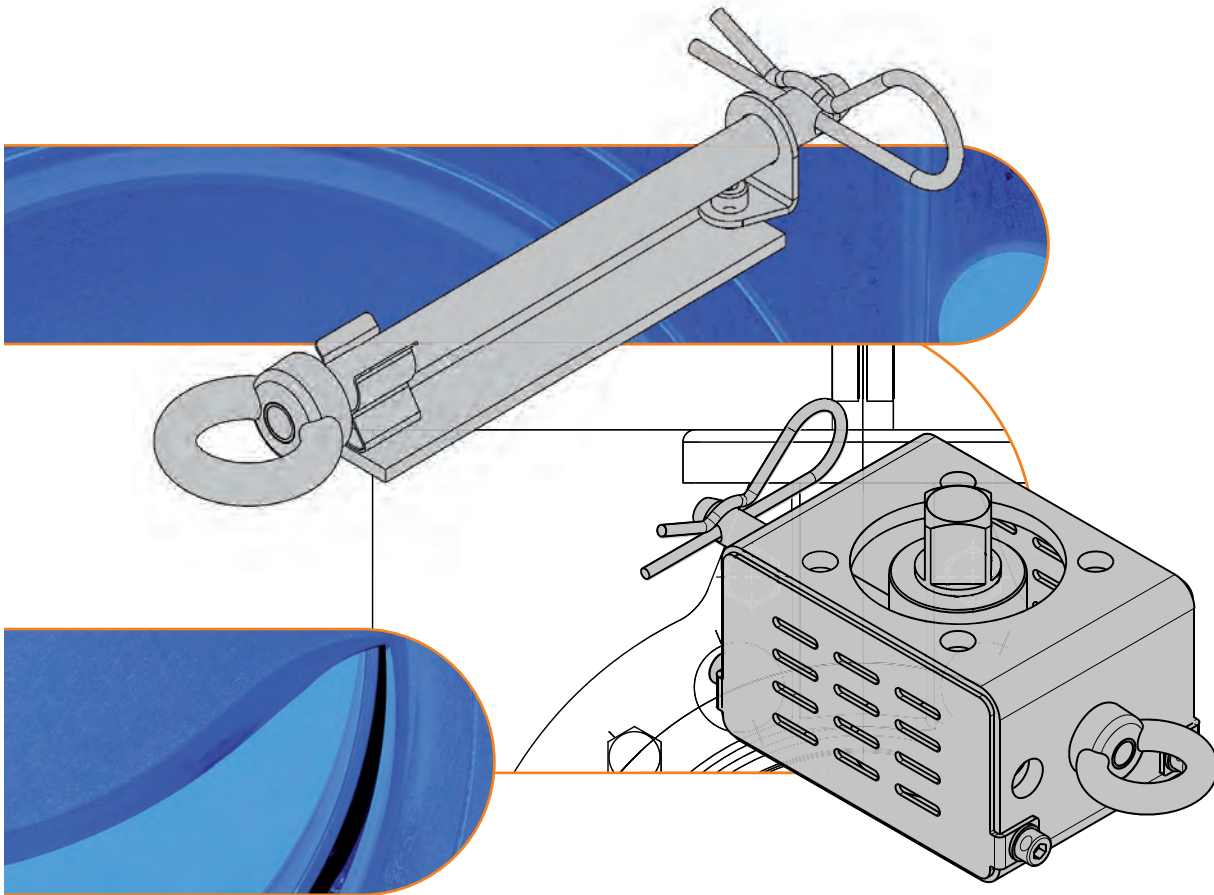


port size	G 1/2"
air flow	3000 l/min
operating pressure	1.0 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.70 kg



Locking devices

for valves and 90°-rotary valves



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Fixing valves reliably in end position

During shutdowns and maintenance work it is often necessary that valves are securely fixed in an end position. This is often particularly important for heavy or vertically running valves.

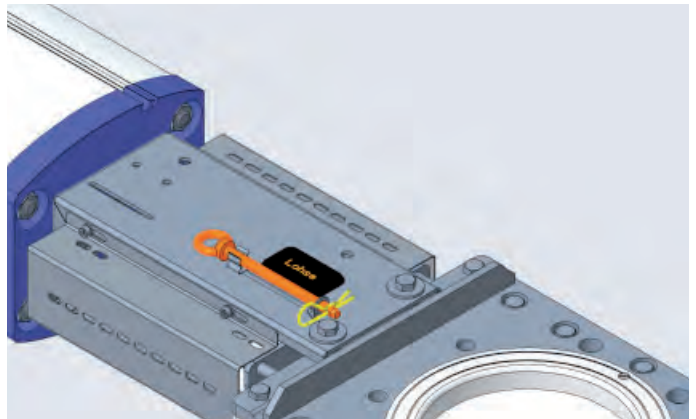
With LOHSE locking devices, a form-fit connection enables a safe positioning of the valves and ensures a reliable locking. Unwanted movements of the valve are thus prevented, unintentional or automatic movement is no longer possible in a secured state.

The valve can be locked in both the OPEN and CLOSE position. The locking pin can be secured during shutdown or maintenance work with the safety cotter pin supplied or, if required, with a padlock (not supplied). If a padlock is used, the locking pin cannot be removed without authorization.

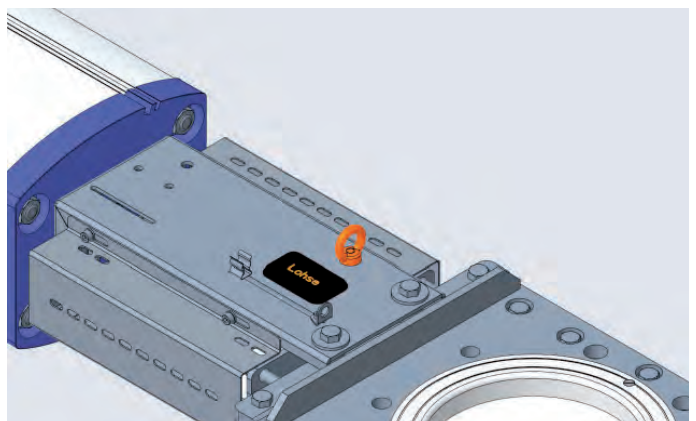
The locking pin is installed directly at the valve and is therefore always ready to hand. No special tools are required.

Locking devices for valves

locking device
in rest position



locked
valve

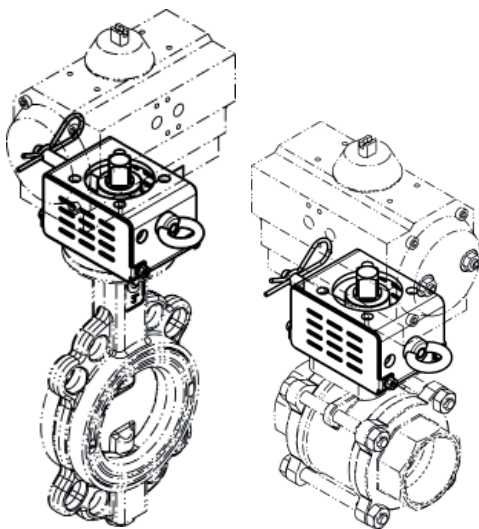


Locking device available in the following gradations:

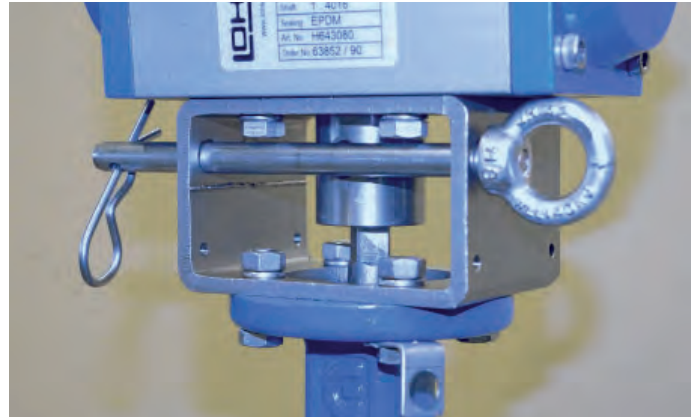
valve type	DN	
	from	to
CNA / CAW CBS / CDS RQS / NAQ AEQ	50	150
	200	300
	350	500
	600	
TA	100	125
	150	300
	350	500
	600	

Locking device for 90°-rotary valves

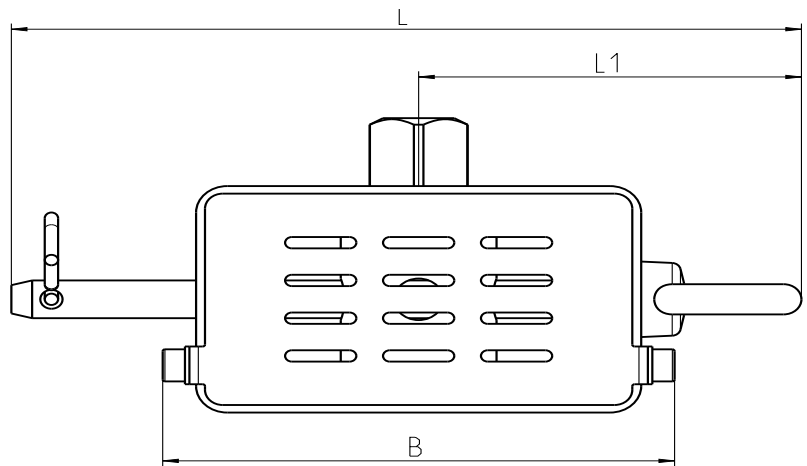
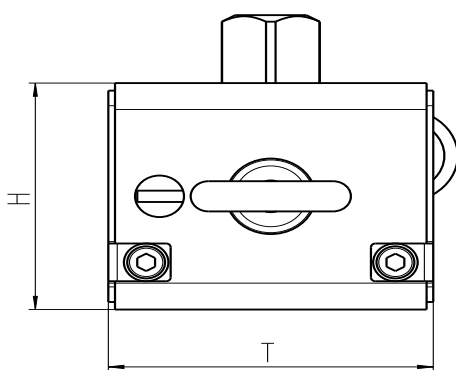
(e.g. butterfly valves, ball valves)



locking device
in rest position



locking device
locked



usage		B [mm]	H [mm]	T [mm]	L [mm]	L1 [mm]
ball valve	DN 10–20	95	50	48	~152	~76
	DN 25–40	115	60	53	~152	~86
	DN 50–65	115	60	73	~177	~86
	DN 80–100	135	80	93	~177	~96
butterfly valve	DN 40–150	115	60	73	~177	~86
	DN 200–300	135	80	93	~177	~96

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