SMW electronics

Pneumatic I Mechatronic I Tool Changer Systems I Accessories

MAIN CATALOGUE

GRIPPERS

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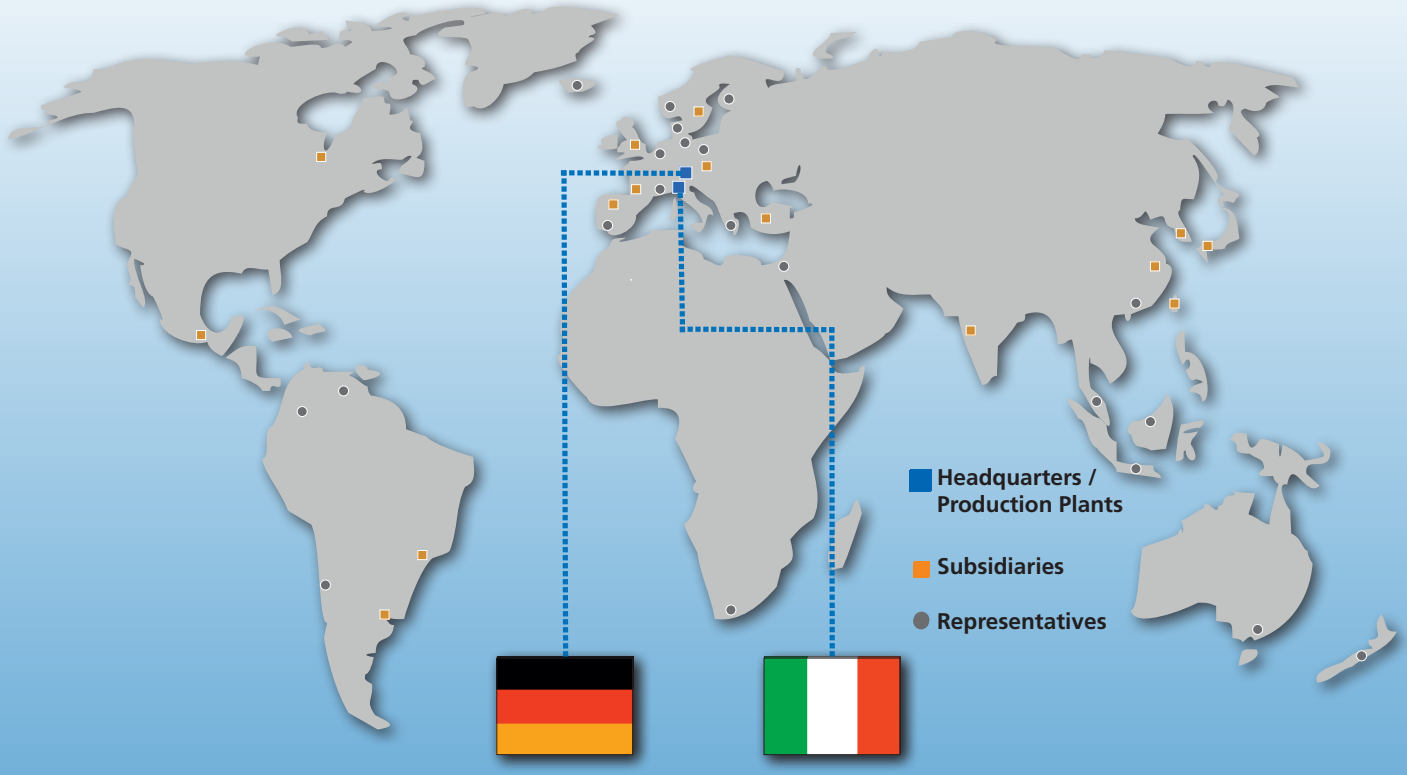

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SMW-AUTOBLOK technology and logistics center Meckenbeuren

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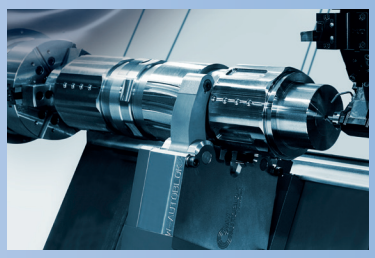
Technical documentation I 3D customer models I Accessories

Market segements

Automotive

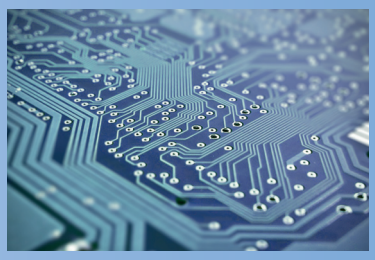


Industrial Equipment

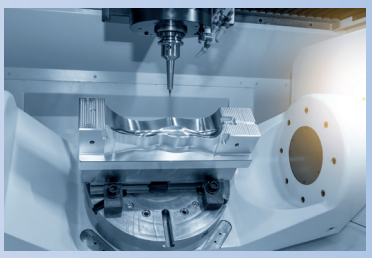
OCTG

Aerospace

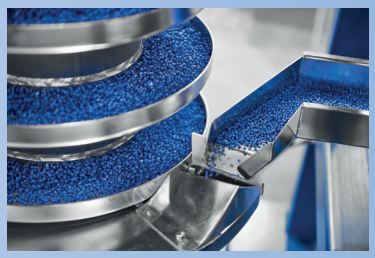
Off Highway



Electronics



Mold Industry



Plastics

Automation
and Handling

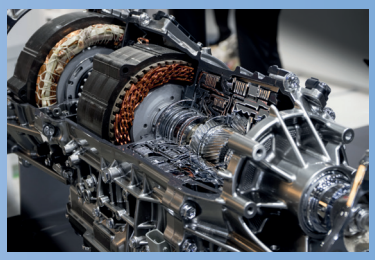
Mining Industry
Cranes

Robots / Cobots

Medical Technology

Intralogistics

Packaging Industry



Powertrain

Product range

Page 8

MX-S

Mechatronic small parts gripper

- 2 fingers parallel
- ID and OD clamping
- Gripping force independent of gripping speed and stroke
- Mechatronic drive with gripping force retention
- Position sensing and monitoring of the gripping force
- Protection class: IP40

Page 12

MX-M

Mechatronic universal gripper

- 2 fingers parallel
- ID and OD clamping
- Gripping force independent of gripping speed and stroke
- Mechatronic drive with gripping force retention
- Position sensing and monitoring of the gripping force
- Sealed / Protection class: IP64

Page 16

MX-L

Mechatronic long stroke gripper

- 2 fingers parallel
- OD clamping
- Gripping force independent of gripping speed and stroke
- Mechatronic drive with gripping force retention
- Position sensing and monitoring of the gripping force
- Sealed / Protection class: IP67

Page 20

2PXS/2PXM/2PXL

Pneumatic universal gripper

- 2 fingers parallel
- ID and OD clamping
- Aluminum housing
- Protection class: IP64 (2PXS: IP40)
- Optional: Sensor package for gripping position/ end position monitoring

Page 32

3PXS/3PXM/3PXL

Pneumatic centric gripper

- 3 fingers centric
- ID and OD clamping
- Pneumatic drive with gripping force retention
- Aluminum housing
- Sealed / Protection class: IP64

Page 44

Gripper finger blanks

Accessories

- Standard blanks for pneumatic grippers
- Made from Aluminum
- Customized gripper fingers

Page 46

PP

Pneumatic / hydraulic universal gripper

- 2 fingers parallel
- ID and OD clamping
- Air sensing
- Rigid steel housing
- Sealed / Protection class: IP64

Page 47

PL-N/L RR 320/380

Pneumatic universal gripper

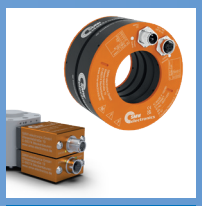
- 2 fingers parallel
- ID and OD clamping
- Gripper with automatic gripper finger change
- Air sensing
- Aluminum housing
- Sealed / Protection class: IP64

Page 48

PRS

Robot Tool Changer system

- Quick and safe gripper change
- Integrated media feed-through
- Integrated interlock status query
- Pneumatic drive



Page 50

Inductive Coupling System

Contact free transmission of energy and signals

- Operation and control of MX grippers
- F100-2IOL compatible with MX-S/ MX-M grippers
- F180-ETH compatible with MX-L grippers
- Wear free
- Protection class: IP67

Page 60

IPS 4.0

Inductive proximity sensor

- IPS 4.0 M08-PNP
- IPS 4.0 M08-0-10V e-sensing
- Suitable for pneumatic grippers for end position sensing or gripper position sensing
- Protection class: IP67

Page 62

Digitized Workholding

For automation application

- Long-stroke vise
- Zero point clamping system for quick change system

Page 63

Application examples

Robot application

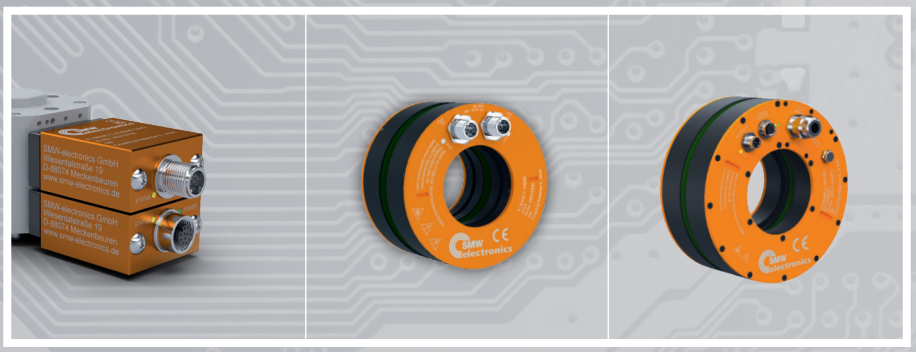
- Mechatronic grippers:
  - Inductive coupling system with hollow shaft allows for non-contact energy and signal transmission and endless 360° rotation on both sidesfor the MX-L 520 long-stroke gripper
  - Automated quick jaw change

GRIPPING TECHNOLOGY from SMW

- Innovative
- Reliable
- Flexible
- Intelligent

Network

Integration



Interface/Connectivity

Actuator

Everything from a single source.

Our specialists work in a completely customer-oriented manner to develop tailor-made solutions for actuators and interfaces. Our customized solutions can be seamlessly integrated into all processes and applications. **Everything from a single source.**

Mechatronic Grippers

Product line MOTIACT

- Gripping force independent of gripping speed and stroke
- Gripping force retention in case of power failure
- Measuring system (absolute sensor) to monitor the gripping position
- Safety features (self-locking; MX-L = additional features)
- Optional use of inductive coupling systems for 360° rotation.Contactless wear-free transmission of energy and signals
- Pre-positioning and sensitive gripping force adjustment
- IO-Link / IO-Digital / Profinet / EtherNet/IP interfaces with intelligent motion profiles
- Protection class MX-S = IP40, MX-M = IP64, MX-L = IP67
- Optional: MX-S 025-> Speed-Version

MX-S

SMALL PARTS GRIPPER

- 2 finger parallel
- IO-Link / Digital-IO

MX-M

UNIVERSAL GRIPPER

- 2 finger parallel
- IO-Link / Digital-IO

MX-L

LONG STROKE GRIPPER

- 2 finger parallel
- Profinet / EtherNet/IP

MX-S 025/050
Technical Data

- Stroke per jaw = 3 mm/8 mm
- Gripping force: close/open 40 N/200 N
- ID and OD clamping
- Protection class: IP40
- Repeatability = 0,02 mm
- Gripping force retention due to self locking and spring assembly
- IO-Link / Digital-IO Interface
- URCap optionally available

MX-M 080/125
Technical Data

- Stroke per jaw = 8 mm/13 mm
- Gripping force: close/open 1200 N/ 1800 N
- ID and OD clamping
- Protection class: IP64
- Repeatability = 0,02 mm
- Gripping force retention due to self locking and spring assembly
- IO-Link / Digital-IO Interface
- URCap optionally available

MX-L 520
Technical Data

- Stroke per jaw = 99 mm
- Gripping force: close 10.000 - 40.000 N
- OD clamping
- Protection class: IP67
- Repeatability = 0,02 mm
- Gripping force retention due to self locking and spring assembly and additional engine brake
- Profinet / EtherNet/IP Interface

GENERAL NOTES FOR ALL MECHATRONIC GRIPPERS!

Gripping force is the arithmetic sum of the individual force applied to each jaw at distance on the drawing.
Repeat accuracy is defined as a distribution of the end Position for 100 consecutive strokes.
Recommended workpiece weight is calculated for force-fit gripping with a coefficient of static friction of 0,1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.
Closing and opening times are movement times of the base jaws only, without application-specific gripper fingers. Valve switching times,hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

MX-S

Mechatronic gripper

Mechatronic small parts gripper

■ 2 finger parallel

Application/customer benefits

- Gripping force independent of gripping speed and stroke
- Mechatronic drive with gripping force retention
- Position measuring system (absolute)
- Pre-positioning and gripping force adjustment
- ID and OD clamping
- Suitable for use as small parts gripper due to lightweight and compact design
- Also suitable for cobot applications and pick & place tasks
- Speedversion available

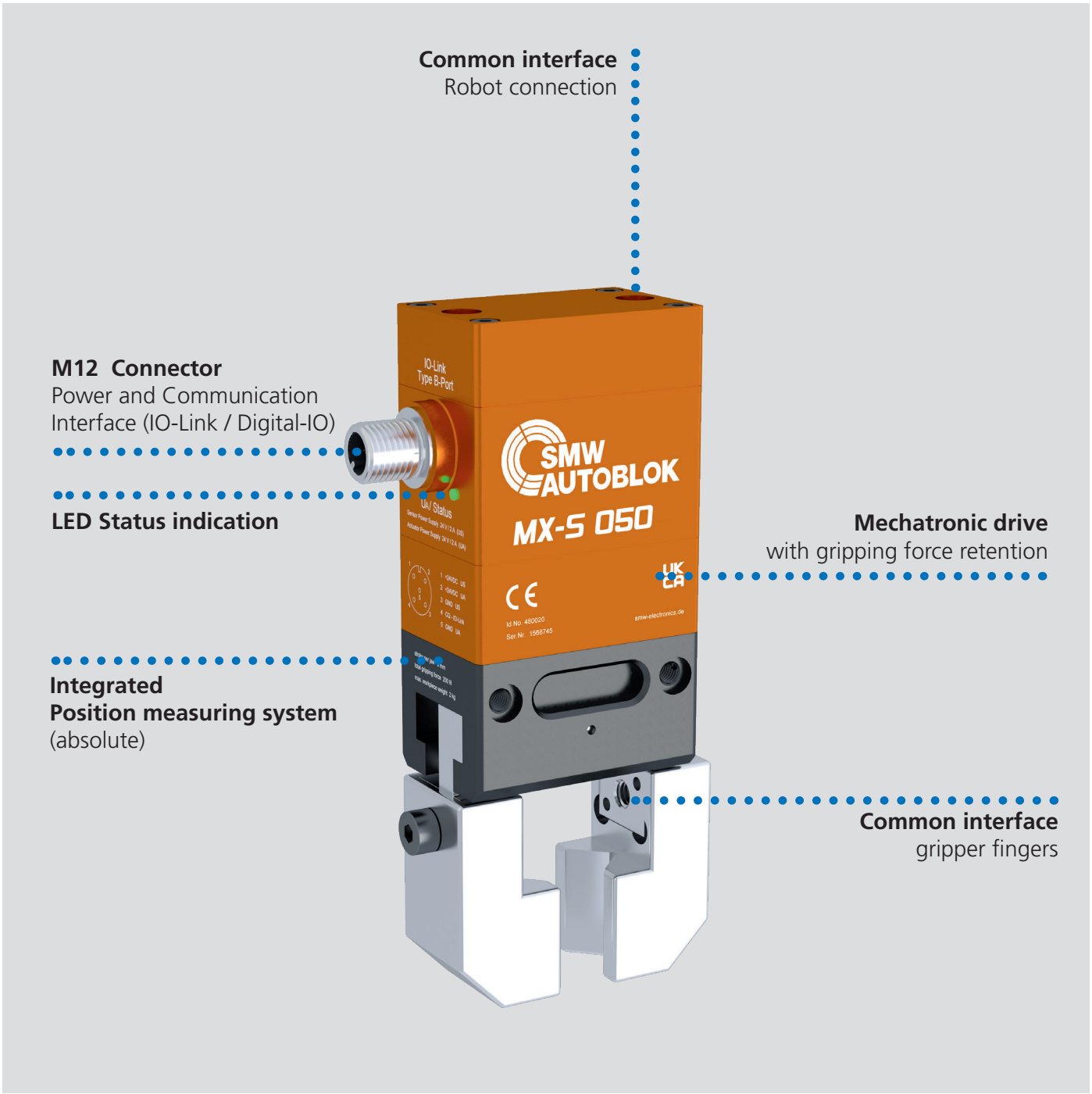
Technical features

- Aluminum housing
- Protection class: IP40
- Adjustable gripping position and force
- Repeatability 0,02 mm
- Power supply 19.2 ... 30 V / 2 A
- Communication interface IO-Link or Digital-IO
- URCap optionally available

Standard equipment

Gripper with centering sleeves (wihout gripper fingers and mounting bolts)

MX-S

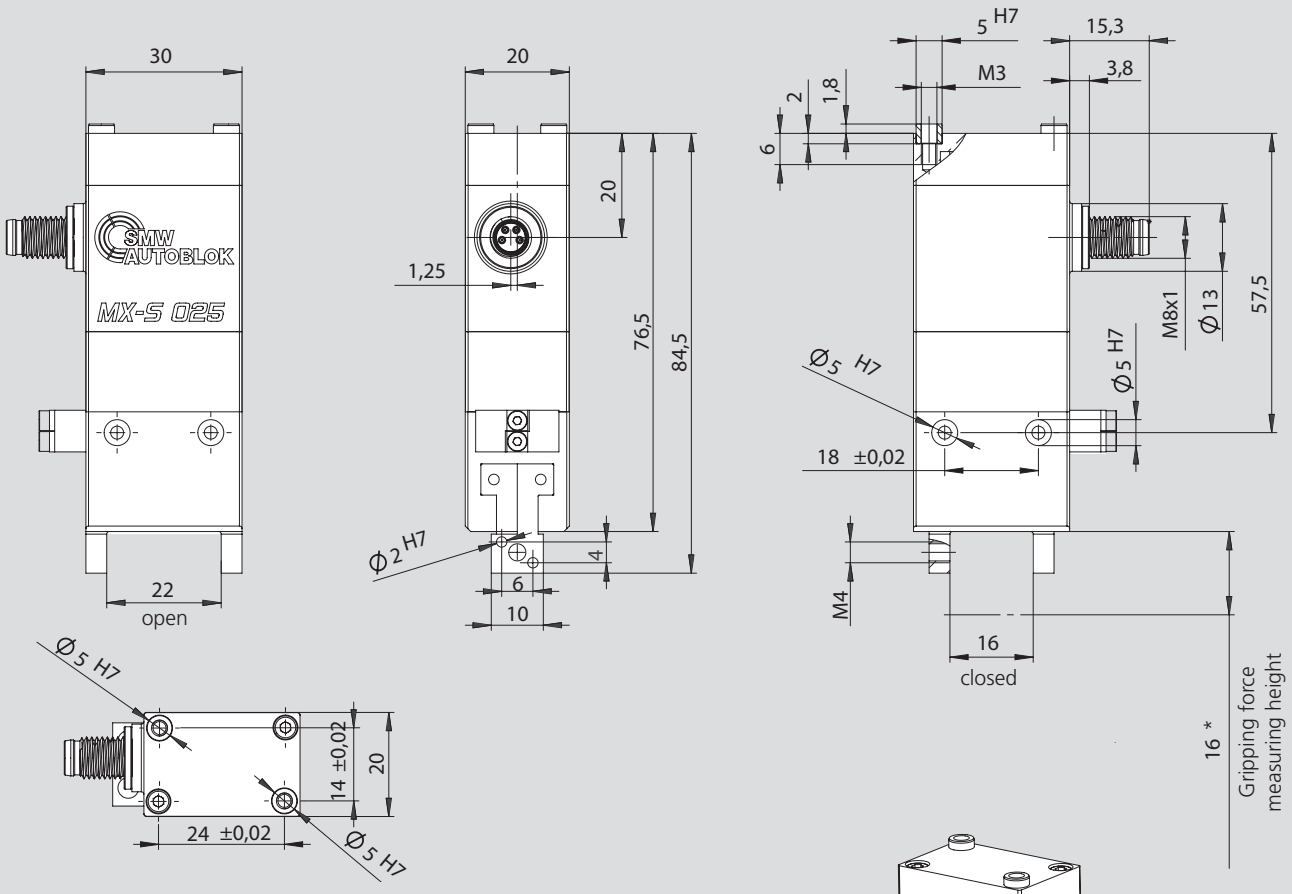


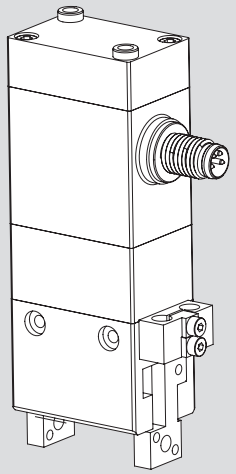
Mechatronic small parts gripper

Dimension and technical data

MX-S 025

Mechatronic gripper





Subject to technical changes.
For more detailed information please ask our customer service.

*Gripping force is the arithmetic sum of the individual forces applied on each jaw at the specified distance.

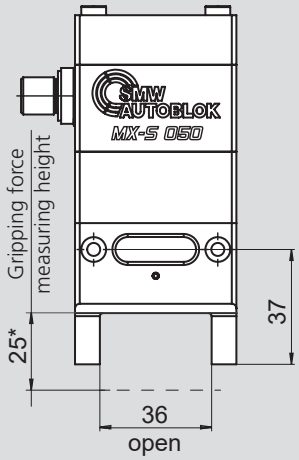
Type		MX-S 025 DIO	MX-S 025 DIO SPEED
Id. No.		**480150**	**480180**
Gripping force	N	40	
Stroke per jaw	mm	3	
Repeatability	mm	0,02	
Weight	kg	0,14	
Recommended workpiece weight	kg	0,2	
Closing time	s	0,08	0,03
Opening time	s	0,08	0,03
Voltage	V	19.2 ... 30 V	
Max. Power consumption	A	1 A	
Idle current (in non-moving state)	A	I < 100 mA	
Protection class		IP40	
Interface		Digital-IO	

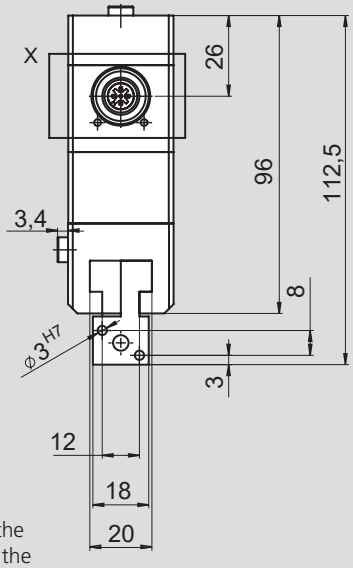
MX-S 050

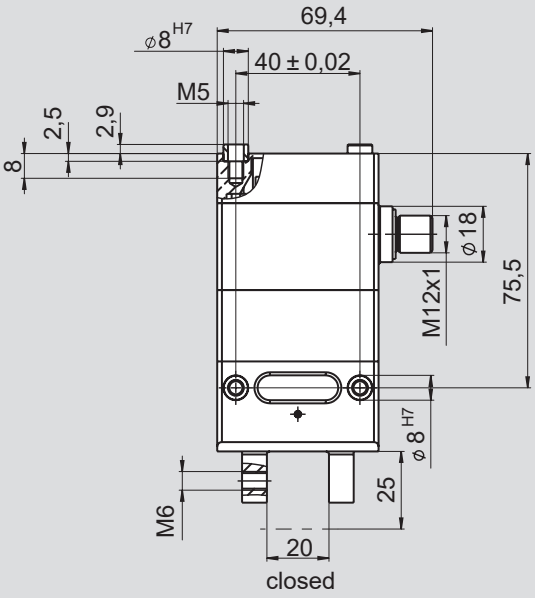
Mechatronic gripper

Mechatronic small parts gripper

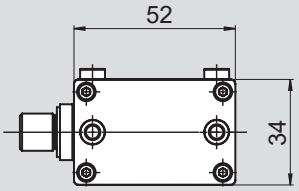
Dimension and technical data

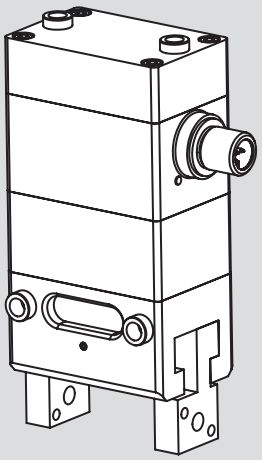






*Gripping force is the arithmetic sum of the individual forces applied on each jaw at the specified distance.





Subject to technical changes.
For more detailed information please ask our customer service.

Type		MX-S 050 IOL	MX-S 050 DIO
Id. No.		**480020**	**480120**
Gripping force	N	200	
Stroke per jaw	mm	8	
Repeatability	mm	0,02	
Weight	kg	0,58	
Recommended workpiece weight	kg	1	
Closing time	s	0,35	
Opening time	s	0,35	
Voltage	V	U_a 19.2 ... 30 V, U_s 18 ... 30 V	19.2 ... 30 V
Max. Power consumption	A	$I_S \leq 100$ mA, $I_A \leq 2$ A	2 A
Idle current (in non-moving state)	A	$I_S = I_A < 100$ mA	I < 100 mA
Protection class		IP40	
Interface		IO-LINK	Digital-IO

Notes

MX-M

Mechatronic gripper

Mechatronic universal gripper

■ **2 finger parallel**

Application/customer benefits

- Gripping force independent of gripping speed and stroke
- Mechatronic drive with gripping force retention
- Position measuring system (absolute)
- Pre-positioning and gripping force adjustment
- ID and OD clamping clamping
- Use as universal gripper

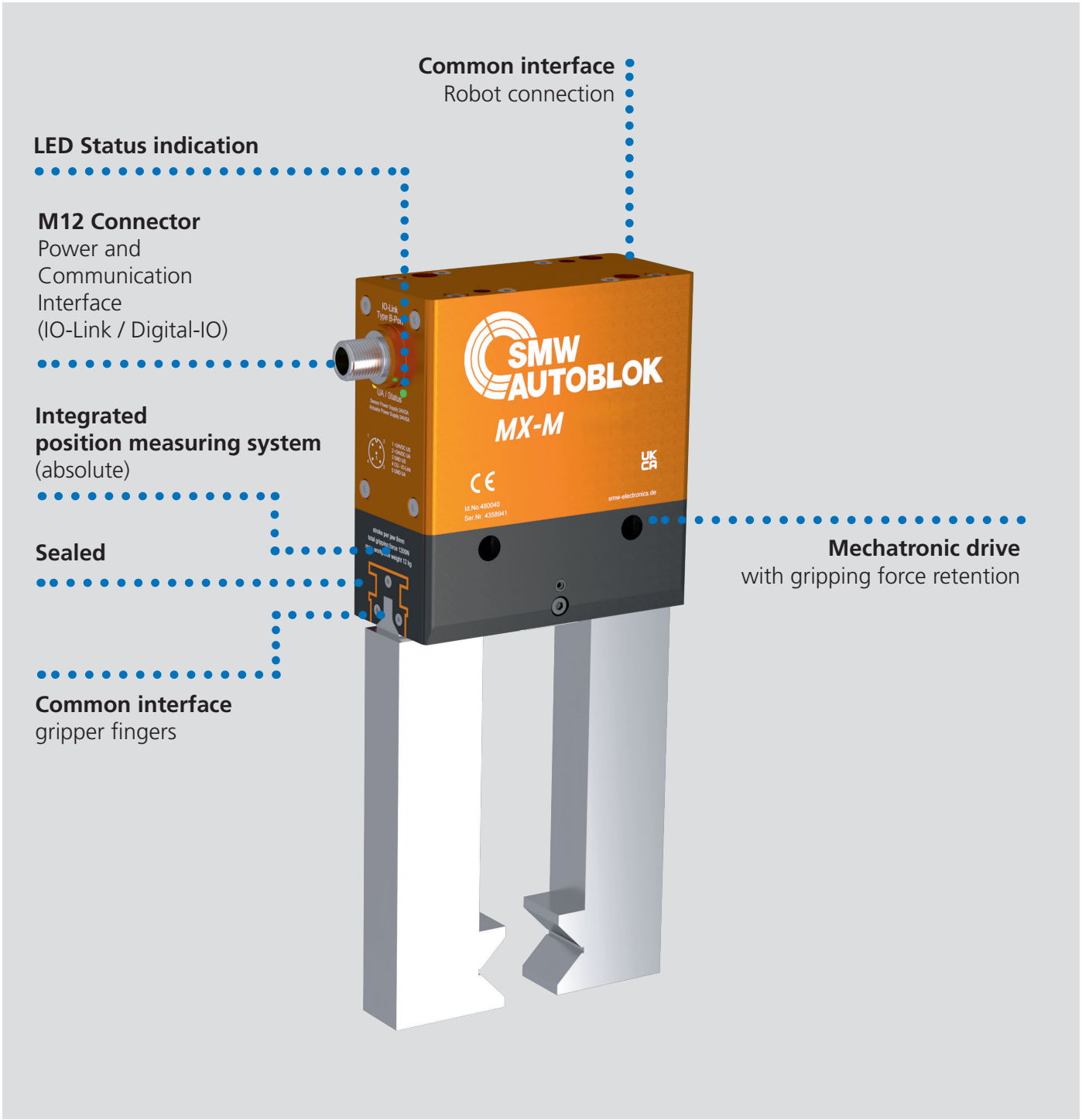
Technical features

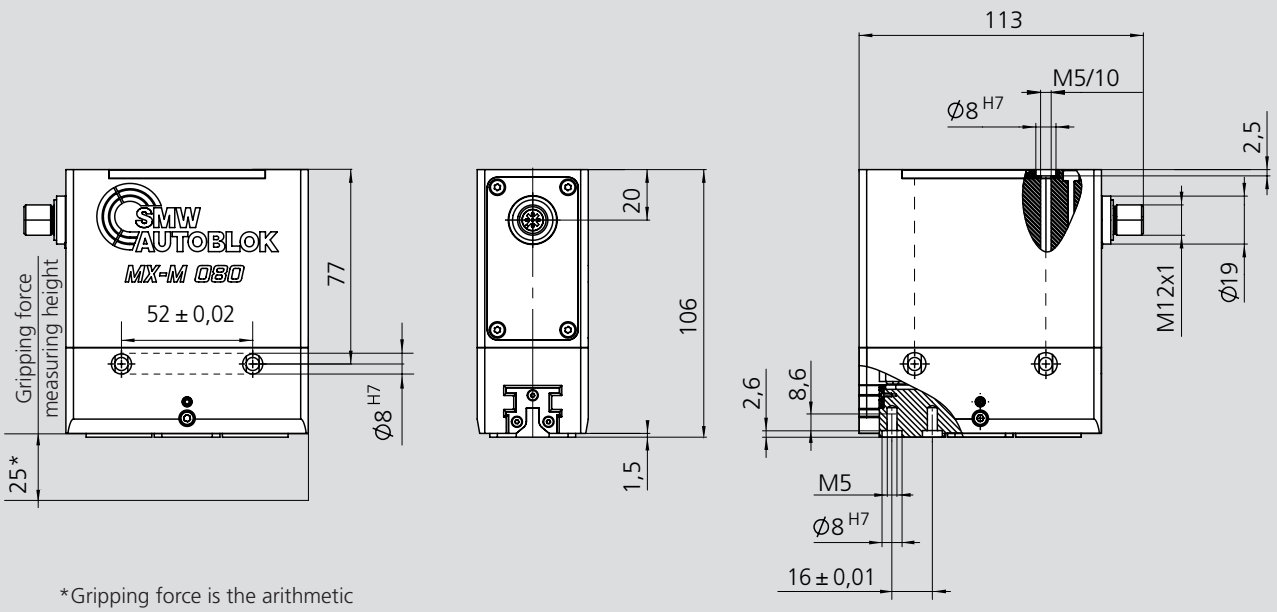
- Aluminium housing
- Sealed / Protection class: IP64
- Adjustable gripping position and force
- Repeatability 0,02 mm
- Power supply 19.2 ... 30 V / 5 A
- Communication interface IO-Link or Digital-IO
- URCap optionally available

Standard equipment

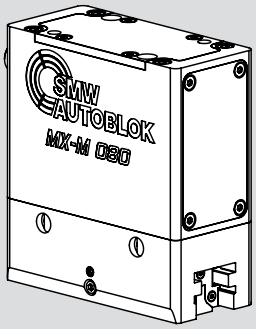
Gripper with centering sleeves (without gripper fingers and mounting bolts)

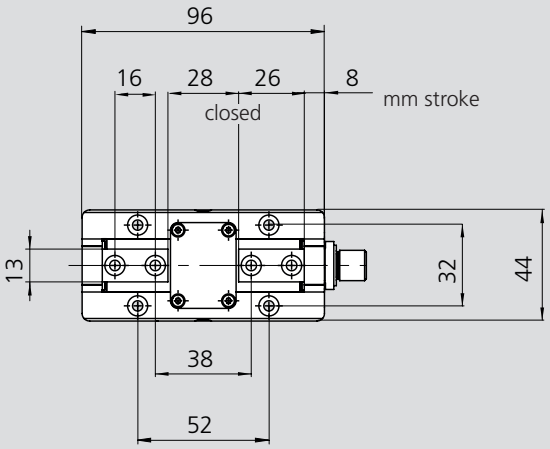
MX-M





*Gripping force is the arithmetic sum of the individual forces apllied each jaw at the specified distance.





Subject to technical changes.
For more detailed information please ask our customer service.

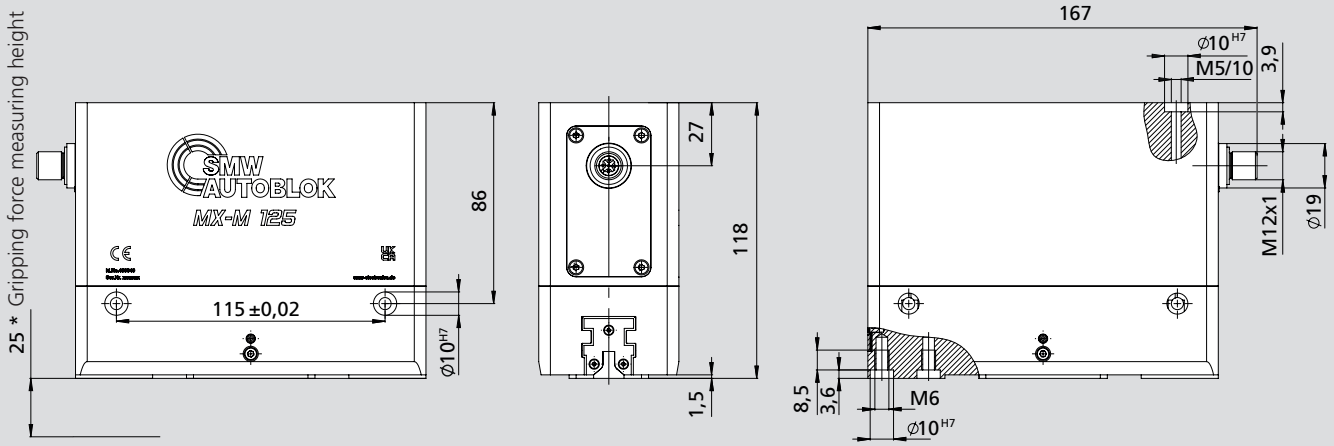
Type		MX-M 080 IOL	MX-M 080 DIO
Id. No.		480040	480140
Gripping force	N	1200	
Stroke per jaw	mm	8	
Repeatability	mm	0,02	
Weight	kg	1,35	
Recommended workpiece weight	kg	6	
Closing time	s	0,36	
Opening time	s	0,36	
Voltage	V	19.2 ... 30 V	
Max. power consumption	A	5 A	
Protection class		IP64	
Signal interface		IO-Link	Digital-IO

MX-M 125

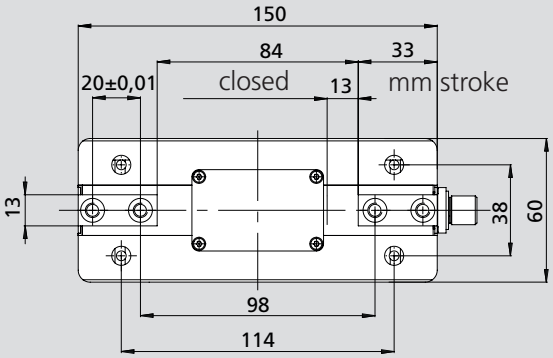
Mechatronic gripper

Mechatronic universal gripper

Dimension and technical data



*Gripping force is the arithmetic sum of the individual forces apllied each jaw at the specified distance.



Subject to technical changes.
For more detailed information please ask our customer service.

Type		MX-M 125 IOL	MX-M 125 DIO
Id. No.		**480110**	**480210**
Gripping force	N	1800	
Stroke per jaw	mm	13	
Repeatability	mm	0,02	
Weight	kg	2,7	
Recommended workpiece weight	kg	9	
Closing time	s	0,4	
Opening time	s	0,4	
Voltage	V	19.2 ... 30 V	
Max. power consumption	A	5 A	
Protection class		IP64	
Signal interface		IO-Link	Digital-IO

Notes

MX-L 520

Mechatronic gripper

Mechatronic long stroke gripper

■ 2 finger parallel

Application/customer benefits

- Gripping force independent of gripping speed and stroke
- Mechatronic drive with gripping force retention
- Gripping force up to 40000 N
- Position sensing and monitoring of the gripping force
- OD clamping
- Pre-positioning and sensitive gripping force adjustment

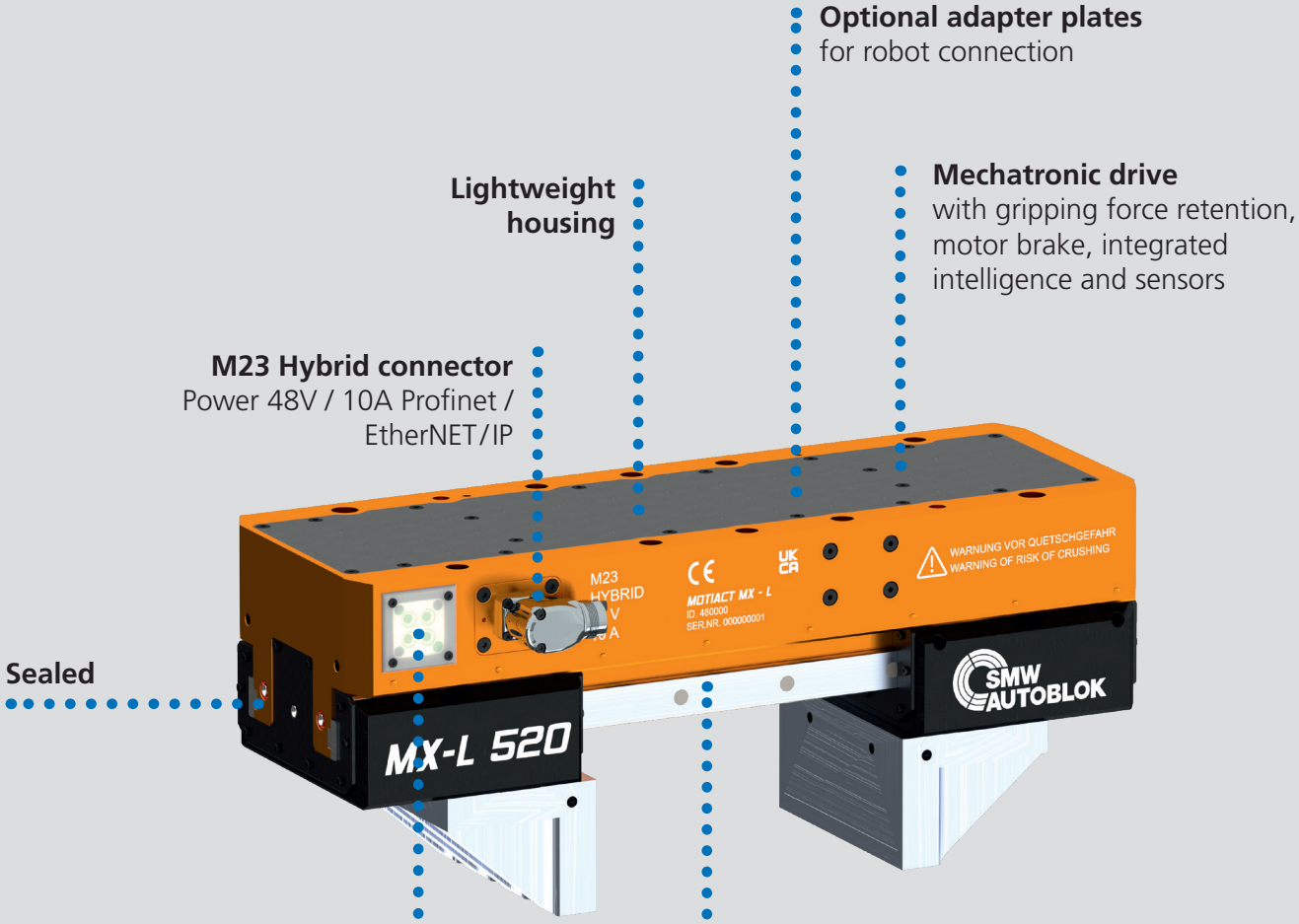
Technical features

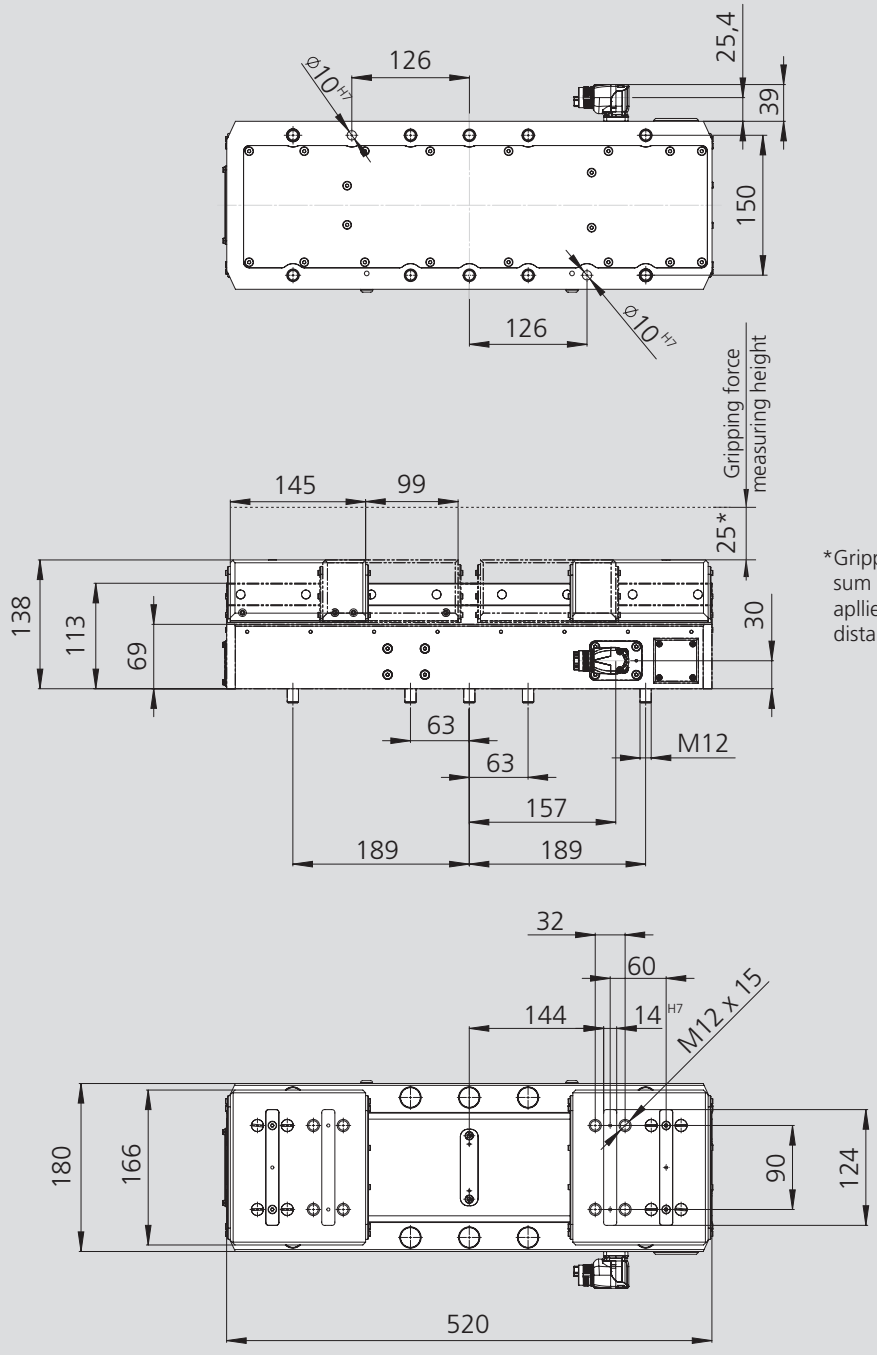
- Aluminum housing
- Sealed/Protection class: IP67
- Repeatability 0,02 mm
- Recommended workpiece weight up to 200 kg
- Power supply 48V / 10A
- Communication interface Profinet / EtherNet/IP
- 2 STO Signals

Standard equipment

Gripper (wihout gripper fingers, centering sleeves and mounting bolts)

MX-L





*Gripping force is the arithmetic sum of the individual forces apllied each jaw at the specified distance.

Subject to technical changes.
For more detailed information please ask our customer service.

Type		MX-L 520 PROFINET	MX-L 520 ETHERNET / IP
Id. No.		**480000**	**480200**
Gripping force	N	40000	
Stroke per jaw	mm	99	
Repeatability	mm	0.02	
Weight	kg	42,2	
Recommended workpiece weight	kg	200	
Travel speed	mm/s	1,2	
Voltage	V	48	
Max. power consumption	A	10	
Voltage	V	24 V ± 10%	
Max. power consumption	A	0.5 A	
Communication interface		Profinet	EtherNET/IP
STO signals (option)		2	

Pneumatic Grippers

Overview

Sensor package
(optional)

ADVANTAGES

- Protection class: IP64 (IP40=2PXS)
- 2PXS/2PXM/2PXL: Highly efficient power density thanks to optimum oval piston geometry:
  - High gripping force
  - Compact design
  - Light weight (Aluminum housing)
- Gripping force maintained via spring assembly or pressure retention (optional)
- Extended sensor package:
  - C-slot magnetic sensors for piston position monitoring
  - Inductive proximity switches for end position monitoring
  - Gripping position monitoring
- Interchangeable with most existing universal grippers
- Unversal grippers PP pneumatic or hydraulic actuated
- Gripper fingers screw-on pattern, optionally via centering sleeves or groove
- Sizes PL-L 320 and 380 with gripper finger quick-change system RR

2PXS/ 2PXM/ 2PXL

UNIVERSAL GRIPPERS

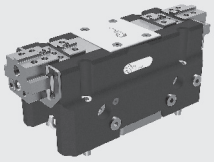
- 2 finger parallel
- Pneumatic actuated
- Aluminum housing
- Maximum power density
- Sealed
- Extensive sensor accessories package

3PXS/ 3PXM/ 3PXL

CENTRIC GRIPPERS

- 3 finger centric
- Pneumatic actuated
- Aluminum housing
- Sealed

PP



UNIVERSAL GRIPPERS

- 2 finger parallel
- Pneumatic/hydraulic actuated
- Rigid steel housing
- Sealed

PL-N/L RR 320/380

UNIVERSAL GRIPPERS

- Automated gripper finger change
- Aluminum housing

GENERAL NOTES FOR ALL PNEUMATIC GRIPPERS!

Gripping force is the arithmetic sum of the individual force applied to each jaw at distance on the drawing.
Repeat accuracy is defined as a distribution of the end Position for 100 consecutive strokes.
Recommended workpiece weight is calculated for force-fit gripping with a coefficient of static friction of 0,1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.
Closing and opening times are movement times of the base jaws only, without application-specific gripper fingers. Valve switching times,hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

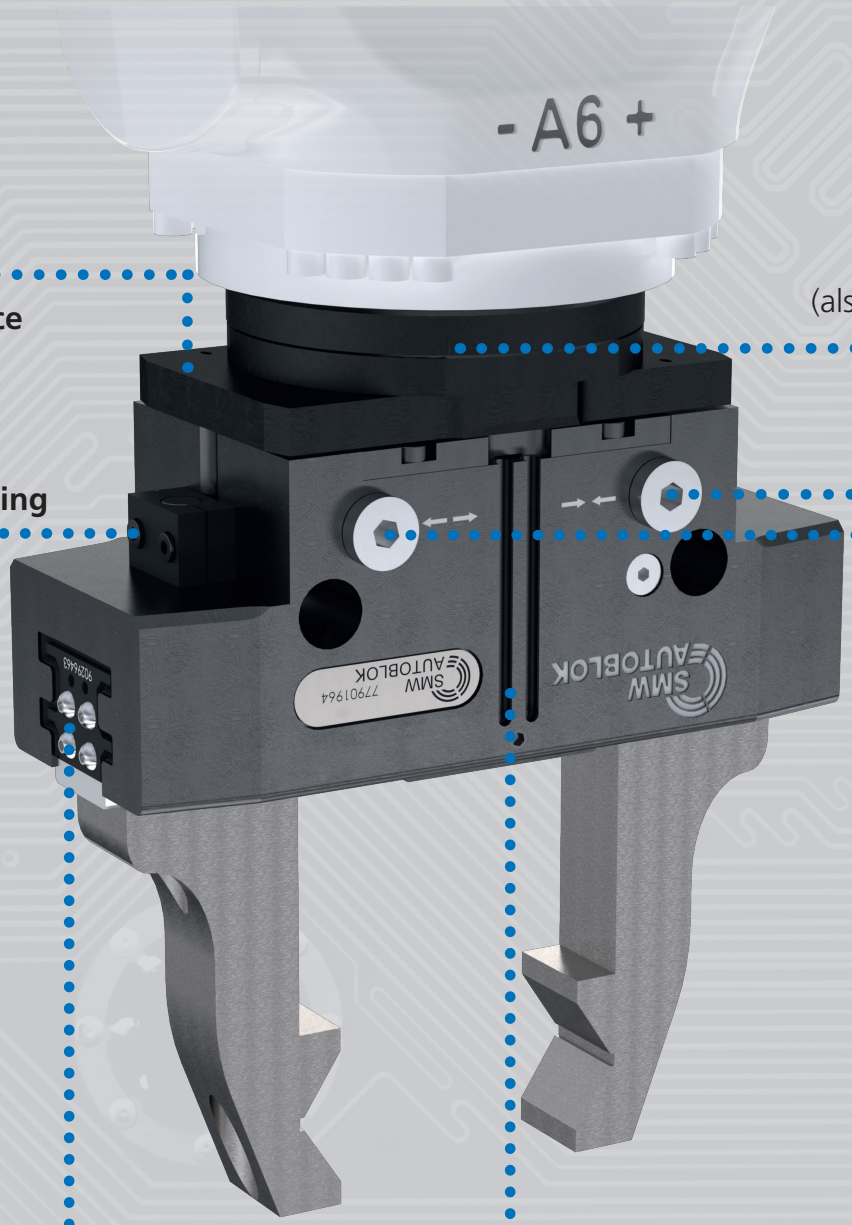
2PXM 125 in Robot application

Highly efficient power density

- **High gripping force**
- **Compact design**
- **Low weight**

Preparation end position monitoring

or position monitoring by means of inductive sensors IPS 4.0



Connections
open/close
(also at the botton)

Sealed

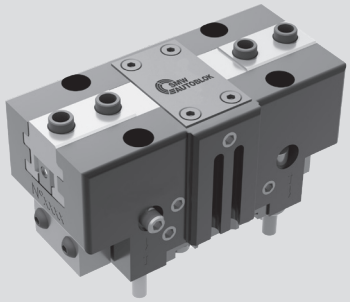
Mounting
for C-slot sensors

2PXS

Pneumatic gripper

Universal gripper

■ 2 finger parallel



Application/customer benefits

- Compact, lightweight design and high gripping force thanks to optimized oval piston geometry
- Gripping force retention (LSI/LSE, NSE/NSI)
- ID and OD clamping
- Side or rear feeding
- Compatible with commercially available grippers

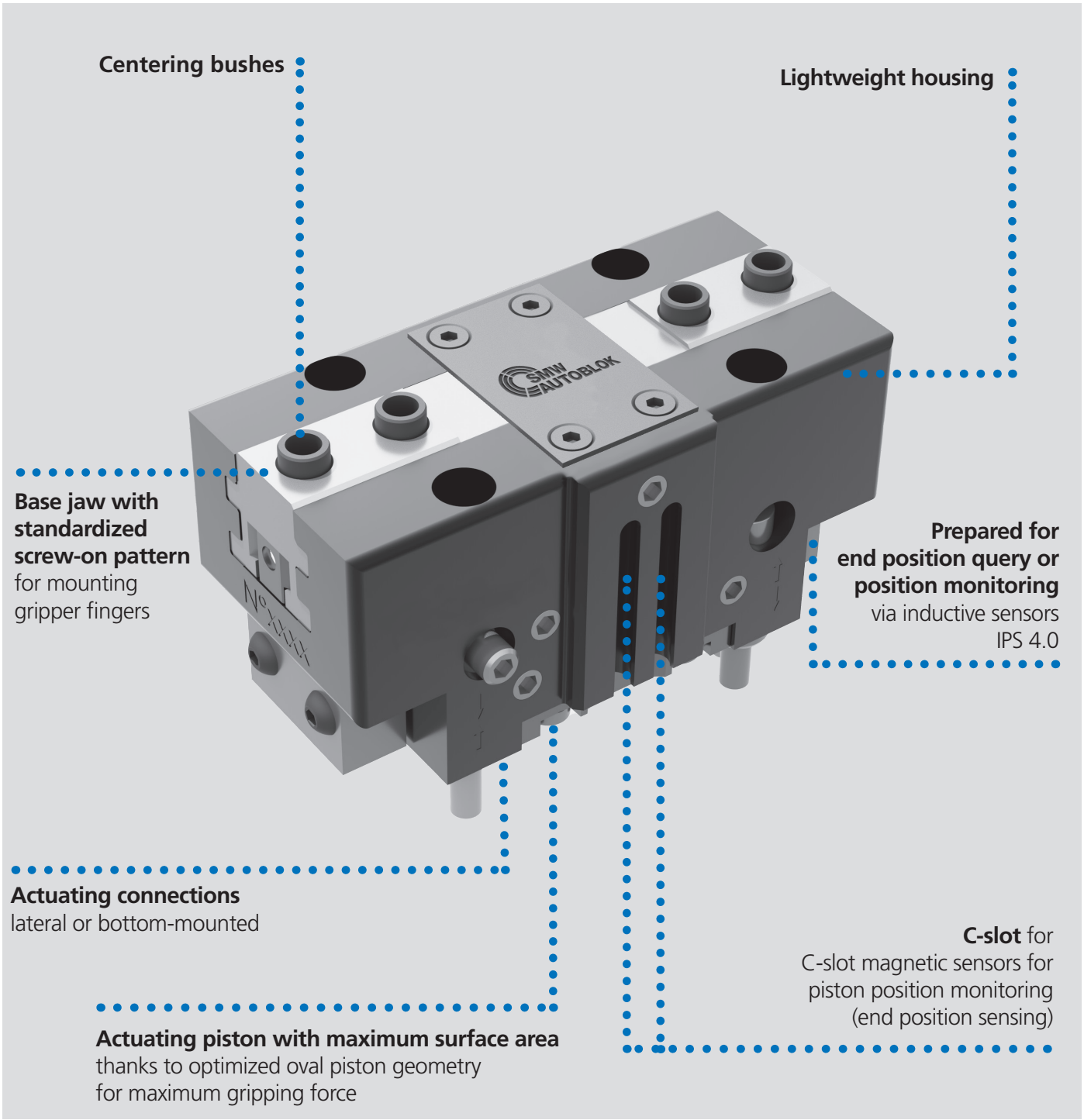
Technical features

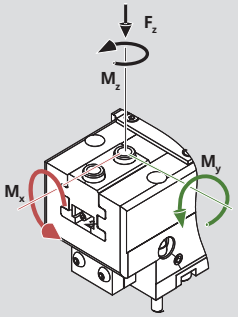
- Aluminum housing
- Protection class: IP40
- Functional parts heat-treated for high precision and long life
- Highest rigidity and Repeatability: 0,01 mm
- Prepared for Air purge
- Optional: Sensor package for gripping position / end position monitoring (IPS 4.0)

Standard equipment

Gripper with centering sleeves and mounting bolts (without gripper fingers and sensors)

2PXS

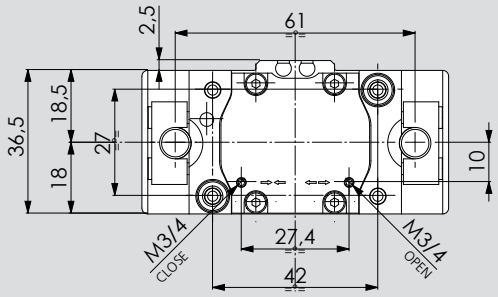


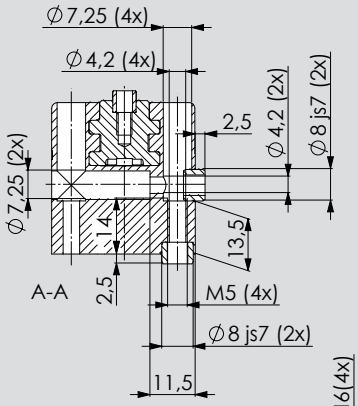


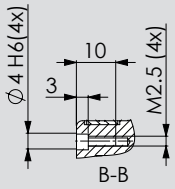
- M_x max. 45 Nm*
- M_y max. 60 Nm*
- M_z max. 40 Nm*
- F_z max. 1200 N*

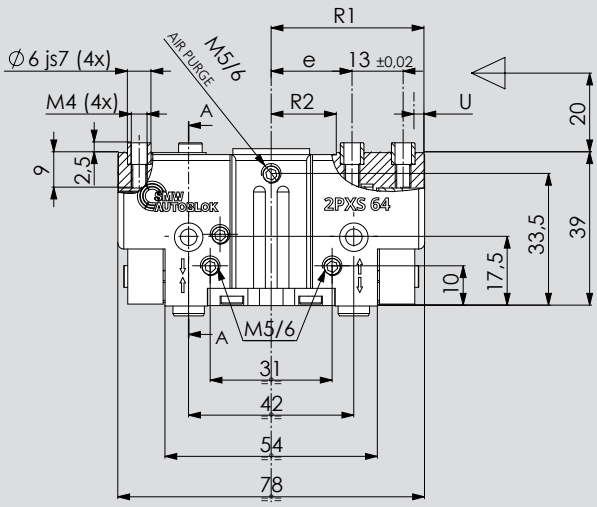
* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

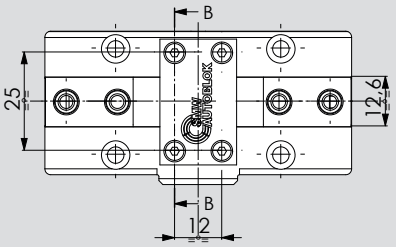
max allowed temperature using proximities is 60°C



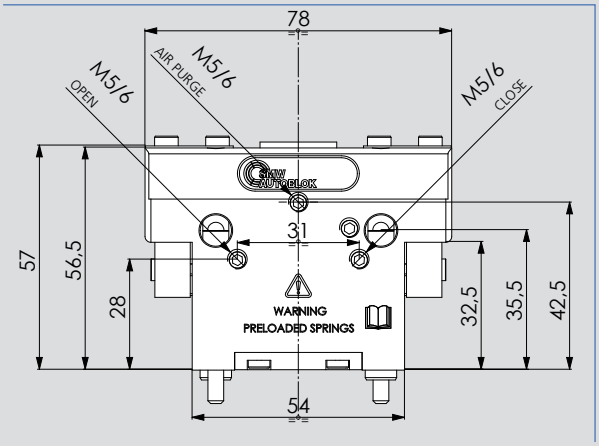


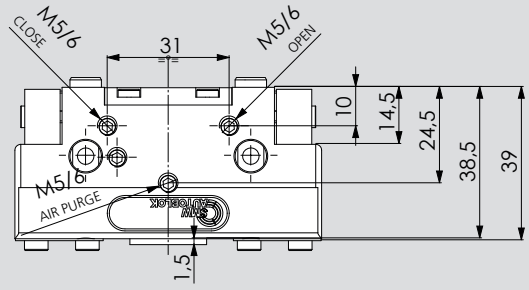






2 PXS-LSE 2PXS-LSI 2PXS-NSE 2PXS-NSI





Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
2PXS-N 64	77901856	630	-----	3	8	2/8	0,03/0,03	0,3	3,0	14,25/17,25	36/39	10/13
2PXS-NSE 64	77902056	930	300	3	17	4/6,5	0,04/0,02	0,38	3,0	14,25/17,25	36/39	10/13
2PXS-NSI 64	77901156	1010	300	3	18,5	4/6,5	0,02/0,04	0,38	3,0	14,25/17,25	36/39	10/13
2PXS-L 64	77901956	300	-----	6	8	2/8	0,03/0,03	0,3	1,5	14,25/20,25	36/39	10/16
2PXS-LSE 64	77902156	440	140	6	17	4/6,5	0,04/0,02	0,38	1,5	14,25/20,25	36/39	10/16
2PXS-LSI 64	77901256	480	140	6	18,5	4/6,5	0,02/0,04	0,38	1,5	14,25/20,25	36/39	10/16

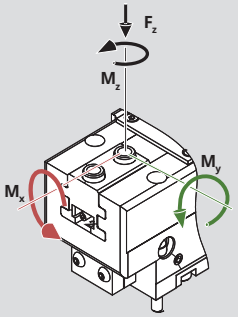
LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

2PXS 80

Pneumatic gripper

Universal gripper

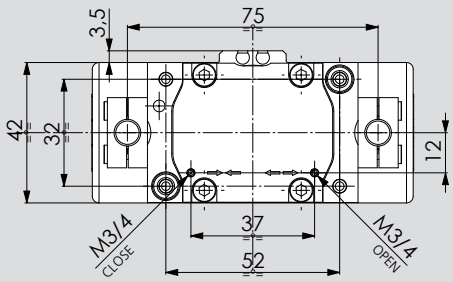
Dimension and technical data

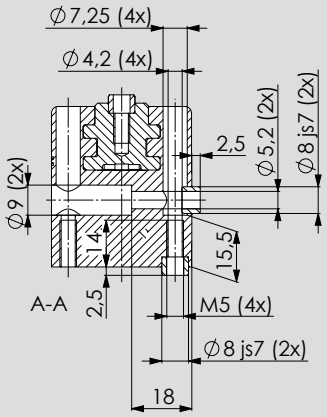


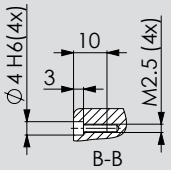
- M_x max. 60 Nm*
- M_y max. 95 Nm*
- M_z max. 55 Nm*
- F_z max. 1800 N*

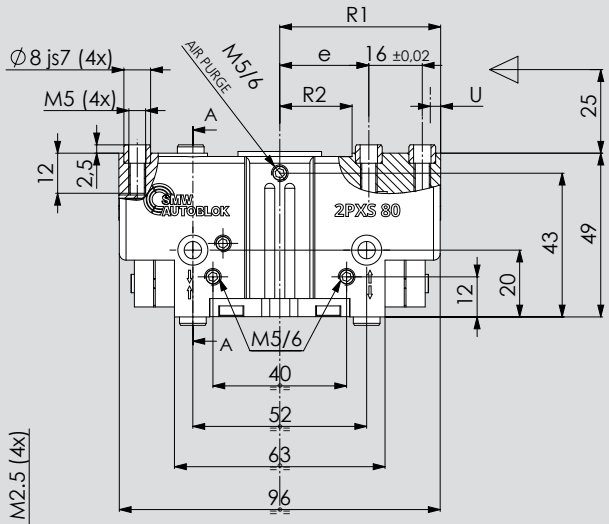
* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

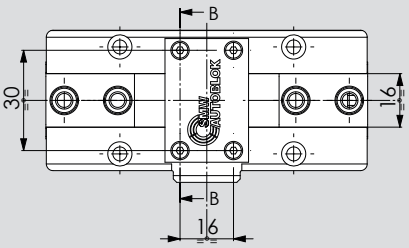
max allowed temperature using proximities is 60°C



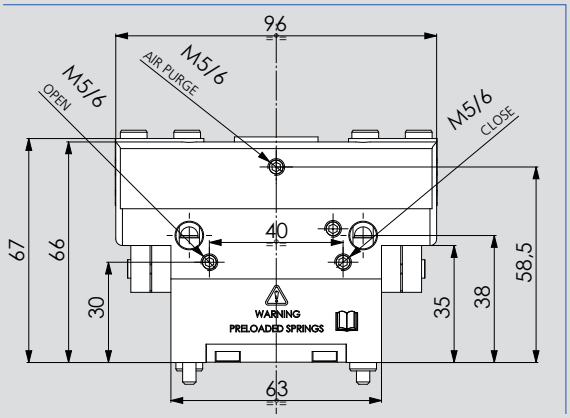


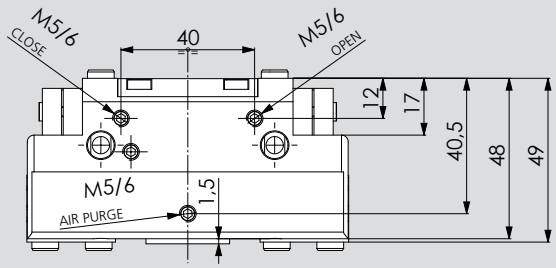






2PXS-LSE 2PXS-LSI 2PXS-NSE 2PXS-NSI

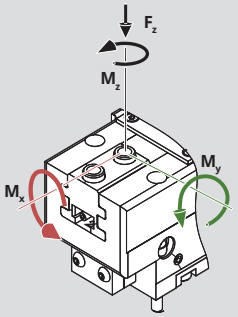




Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
2PXS-N 80	**77901858**	970	-----	4	17	2/8	0,04/0,04	0,55	5,0	18,75/22,5	44/48	13,5/17,5
2PXS-NSE 80	**77902058**	1290	320	4	31	4/6,5	0,05/0,03	0,65	5,0	18,75/22,5	44/48	13,5/17,5
2PXS-NSI 80	**77901158**	1410	320	4	33	4/6,5	0,03/0,05	0,65	5,0	18,75/22,5	44/48	13,5/17,5
2PXS-L 80	**77901958**	460	-----	8	17	2/8	0,04/0,04	0,55	2,5	18,75/26,5	40/48	13,5/21,5
2PXS-LSE 80	**77902158**	610	150	8	31	4/6,5	0,05/0,03	0,65	2,5	18,75/26,5	40/48	13,5/21,5
2PXS-LSI 80	**77901258**	670	150	8	33	4/6,5	0,03/0,05	0,65	2,5	18,75/26,5	40/48	13,5/21,5

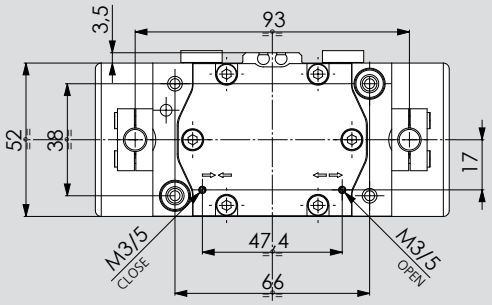
LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

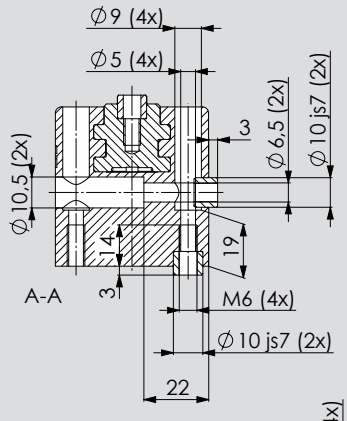


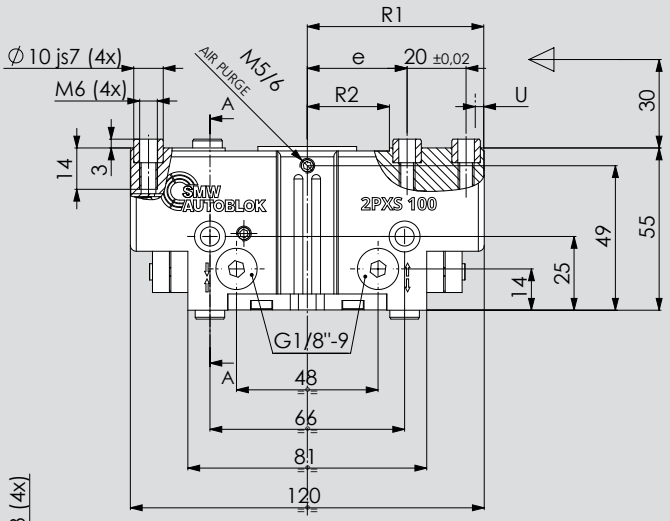
- M_x max. 90 Nm*
- M_y max. 110 Nm*
- M_z max. 75 Nm*
- F_z max. 2350 N*

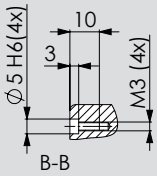
* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

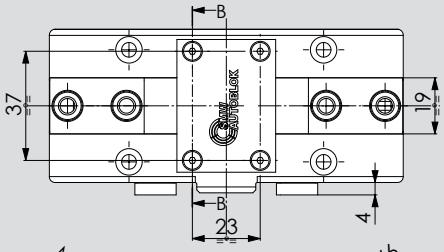
max allowed temperature using proximities is 60°C



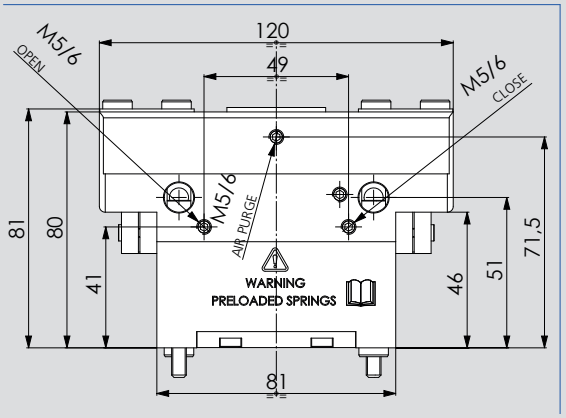


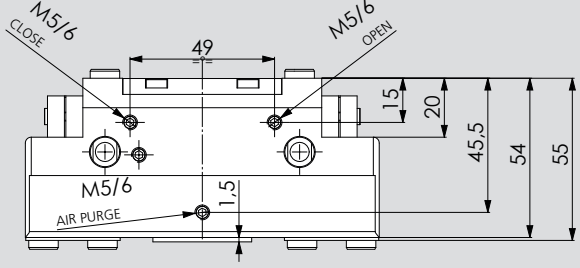






2PXS-LSE 2PXS-LSI 2PXS-NSE 2PXS-NSI





Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
2PXS-N 100	77901860	1550	-----	5	33,5	2/8	0,07/0,07	0,93	8,0	23,5/28,5	55/60	17,5/22,5
2PXS-NSE 100	77902060	2290	740	5	67	4/6,5	0,1/0,05	1,2	8,0	23,5/28,5	55/60	17,5/22,5
2PXS-NSI 100	77901160	2450	740	5	71	4/6,5	0,05/0,1	1,2	8,0	23,5/28,5	55/60	17,5/22,5
2PXS-L 100	77901960	730	-----	10	33,5	2/8	0,07/0,07	0,93	4,0	23,5/33,5	50/60	17,5/27,5
2PXS-LSE 100	77902160	1080	350	10	67	4/6,5	0,1/0,05	1,2	4,0	23,5/33,5	50/60	17,5/27,5
2PXS-LSI 100	77901260	1160	350	10	71	4/6,5	0,05/0,1	1,2	4,0	23,5/33,5	50/60	17,5/27,5

LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

2PXM

Pneumatic gripper

Universal gripper

■ 2 finger parallel

Application/customer benefits

- Compact, lightweight design and high gripping force thanks to optimized oval piston geometry
- Gripping force retention (LSI/LSE, NSE/NSI)
- ID and OD clamping
- Side or rear feeding
- Compatible with commercially available grippers

Technical features

- Aluminum housing
- Protection class: IP64
- Functional parts heat-treated for high precision and long life
- Highest rigidity and repeatability: 0,02 mm
- Prepared for Air purge
- Optional: Sensor package for gripping position / end position monitoring (IPS 4.0)

Standard equipment

Gripper with centering sleeves and mounting bolts (without gripper fingers and sensors)

2PXM

Centering sleeves

Lightweight housing

Base jaw with standardized screw-on pattern for mounting gripper fingers

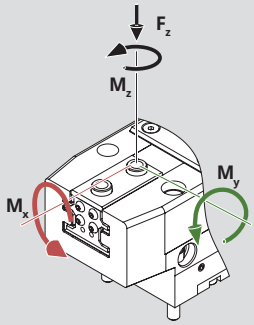
Sealed

Prepared for end position query or position monitoring via inductive sensors IPS 4.0

Actuating connections lateral or bottom-mounted

C-slot for C-slot magnetic sensors for piston position monitoring (end position sensing)

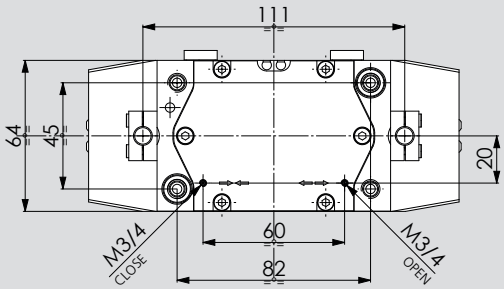
Actuating piston with maximum surface area thanks to optimized oval piston geometry for maximum gripping force

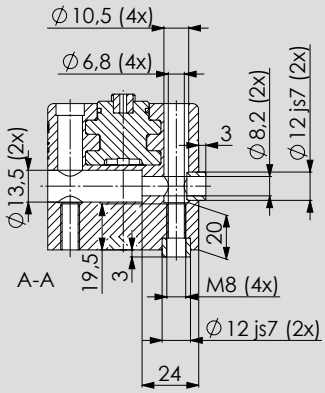


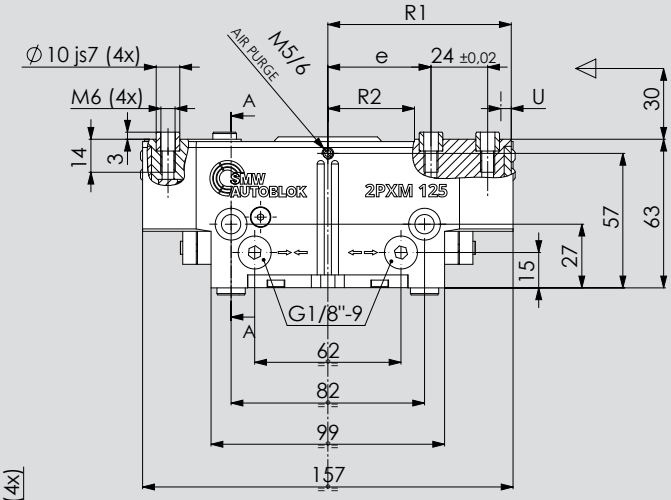
- M_x max. 125 Nm*
- M_y max. 140 Nm*
- M_z max. 110 Nm*
- F_z max. 3350 N*

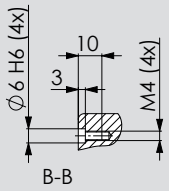
* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

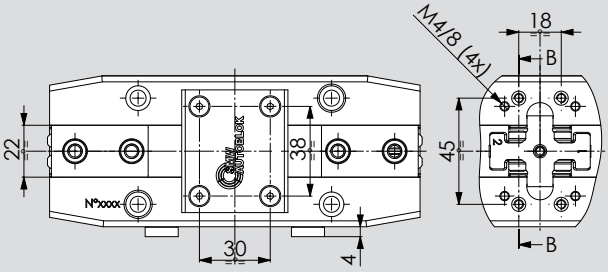
max allowed temperature using proximities is 60°C

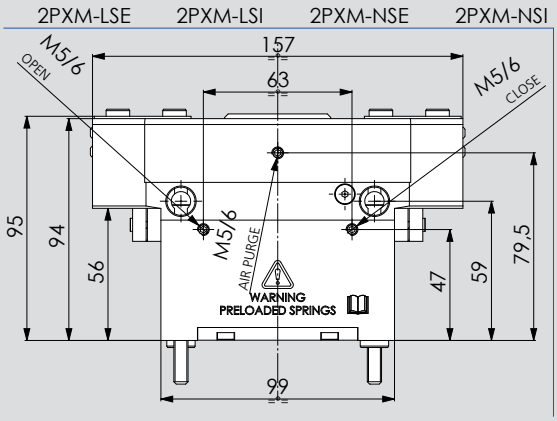


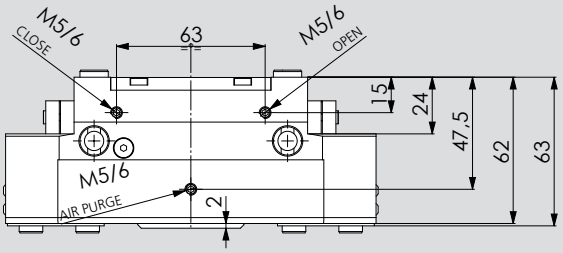












Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm^3)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
2PXM-N 125	**77901864**	2800	-----	6	79	2/8	0,1/0,1	1,6	14,0	30,5/36,5	71,5/77,5	23,5/29,5
2PXM-NSE 125	**77902064**	3900	1100	6	151	4/6,5	0,12/0,08	2	14,0	30,5/36,5	71,5/77,5	23,5/29,5
2PXM-NSI 125	**77901164**	4070	1100	6	157	4/6,5	0,08/0,12	2	14,0	30,5/36,5	71,5/77,5	23,5/29,5
2PXM-L 125	**77901964**	1320	-----	13	79	2/8	0,1/0,1	1,6	7,0	30,5/43,5	64,5/77,5	23,5/36,5
2PXM-LSE 125	**77902164**	1840	520	13	151	4/6,5	0,12/0,08	2	7,0	30,5/43,5	64,5/77,5	23,5/36,5
2PXM-LSI 125	**77901264**	1920	520	13	157	4/6,5	0,08/0,12	2	7,0	30,5/43,5	64,5/77,5	23,5/36,5

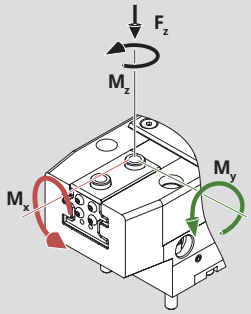
LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

2PXM 160

Pneumatic gripper

Universal gripper

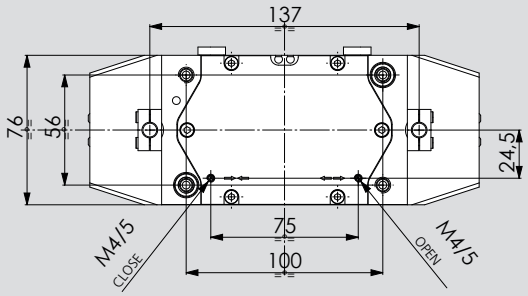
Dimension and technical data

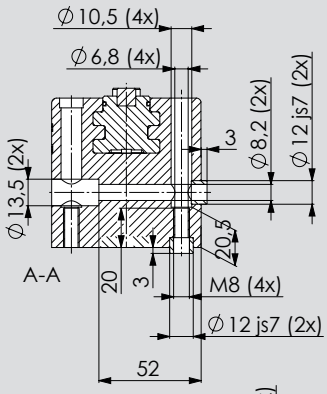


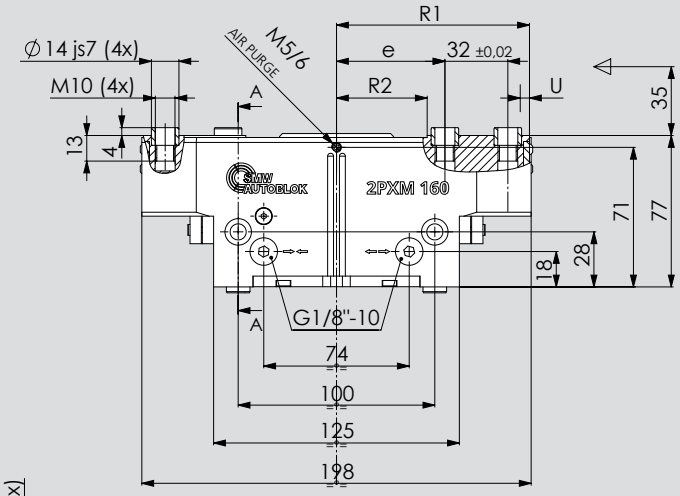
- M_x max. 175 Nm*
- M_y max. 175 Nm*
- M_z max. 150 Nm*
- F_z max. 5650 N*

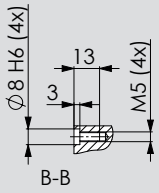
* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

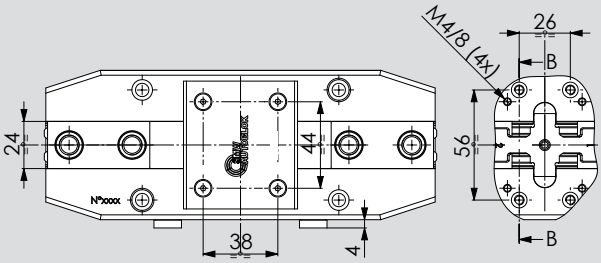
max allowed temperature using proximities is 60°C



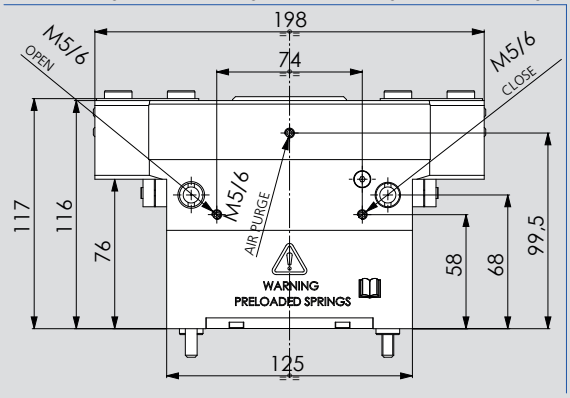


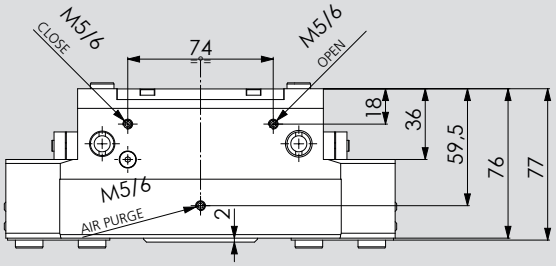






2PXM-LSE 2PXM-LSI 2PXM-NSE 2PXM-NSI

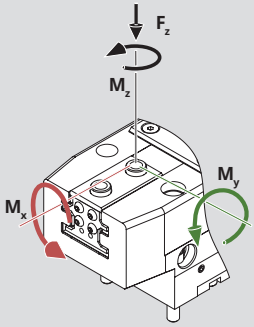




Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
2PXM-N 160	77901868	4560	-----	8	161	2/8	0,14/0,14	2,9	23,0	38,5/46,5	90/98	29,5/37,5
2PXM-NSE 160	77902068	6510	1950	8	318	4/6,5	0,22/0,11	3,7	23,0	38,5/46,5	90/98	29,5/37,5
2PXM-NSI 160	77901168	6850	1950	8	330,5	4/6,5	0,11/0,22	3,7	23,0	38,5/46,5	90/98	29,5/37,5
2PXM-L 160	77901968	2150	-----	16	161	2/8	0,14/0,14	2,9	11,0	38,5/54,5	82/98	29,5/45,5
2PXM-LSE 160	77902168	3070	920	16	318	4/6,5	0,22/0,11	3,7	11,0	38,5/54,5	82/98	29,5/45,5
2PXM-LSI 160	77901268	3240	920	16	330,5	4/6,5	0,11/0,22	3,7	11,0	38,5/54,5	82/98	29,5/45,5

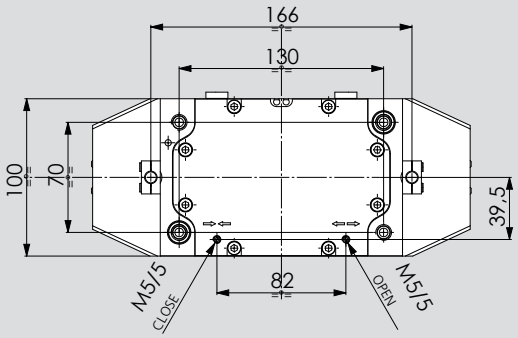
LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

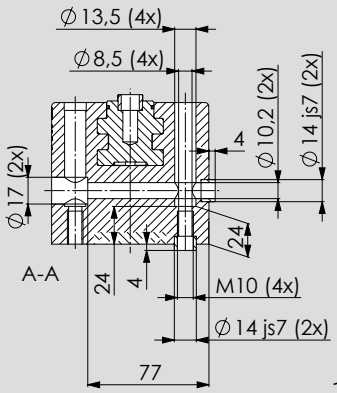


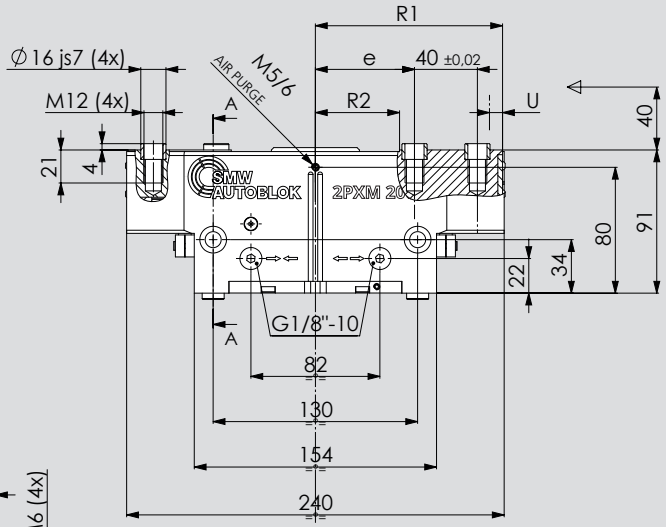
- M_x max. 205 Nm*
- M_y max. 195 Nm*
- M_z max. 180 Nm*
- F_z max. 7200 N*

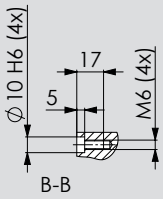
* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

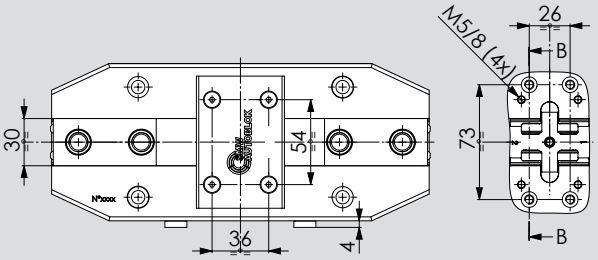
max allowed temperature using proximities is 60°C

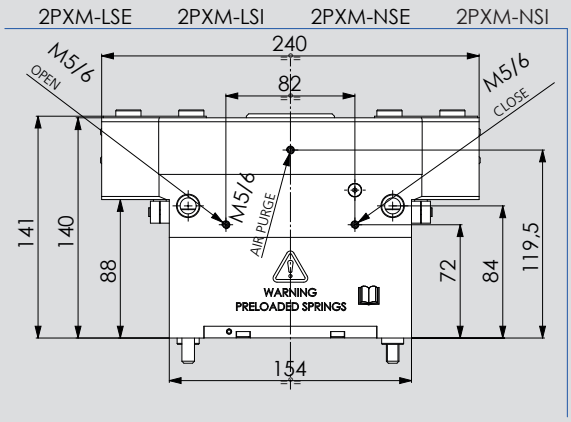


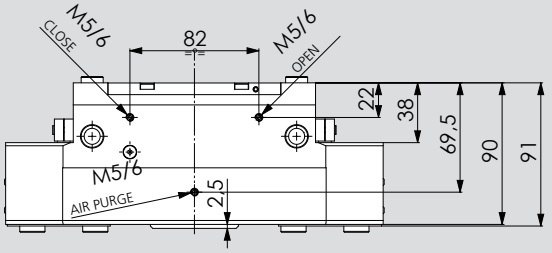












Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
2PXM-N 200	77901872	5560	-----	14	373	2/8	0,3/0,3	5,8	28,0	38/52	105/119	28,5/42,5
2PXM-NSE 200	77902072	7560	2000	14	733	4/6,5	0,5/0,3	7,3	28,0	38/52	105/119	28,5/42,5
2PXM-NSI 200	77901172	7900	2000	14	758	4/6,5	0,3/0,5	7,3	28,0	38/52	105/119	28,5/42,5
2PXM-L 200	77901972	3700	-----	25	373	2/8	0,3/0,3	5,8	18,5	38/63	94/119	28,5/53,5
2PXM-LSE 200	77902172	5020	1320	25	733	4/6,5	0,5/0,3	7,3	18,5	38/63	94/119	28,5/53,5
2PXM-LSI 200	77901272	5260	1320	25	758	4/6,5	0,3/0,5	7,3	18,5	38/63	94/119	28,5/53,5

LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

2PXL

Pneumatic gripper

Universal gripper

■ **2 finger parallel**

Application/customer benefits

- Compact, lightweight design and high gripping force thanks to optimized oval piston geometry
- Gripping force retention (LSI/LSE, NSE/NSI)
- ID and OD clamping
- Side or rear feeding
- Compatible with commercially available grippers

Technical features

- Aluminum housing
- Protection class: IP64
- Functional parts heat-treated for high precision and long life
- Highest rigidity and repeatability: 0,04 mm
- Prepared for Air purge
- Optional: Sensor package for gripping position / end position monitoring (IPS 4.0)

Standard equipment

Gripper with centering sleeves and mounting bolts (without gripper fingers and sensors)

2PXL

Centering sleeves

Lightweight housing

Base jaw with standardized screw-on pattern for mounting gripper fingers

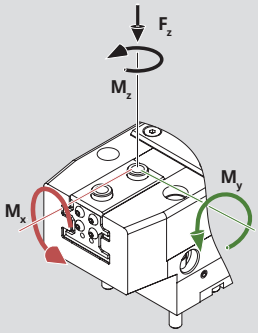
Sealed

Prepared for end position query or position monitoring via inductive sensors IPS 4.0

Actuating connections lateral or bottom-mounted

C-slot for C-slot magnetic sensors for piston position monitoring (end position sensing)

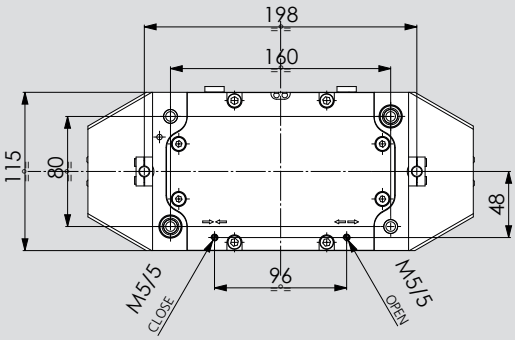
Actuating piston with maximum surface area thanks to optimized oval piston geometry for maximum gripping force

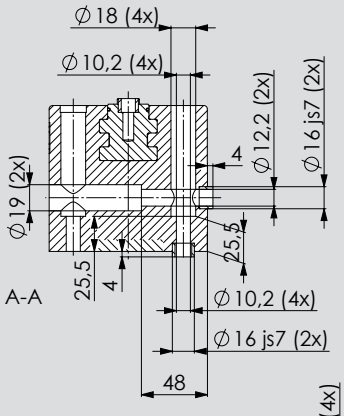


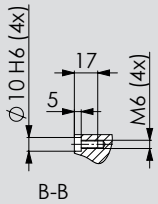
- M_x max. 270 Nm*
- M_y max. 255 Nm*
- M_z max. 220 Nm*
- F_z max. 8750 N*

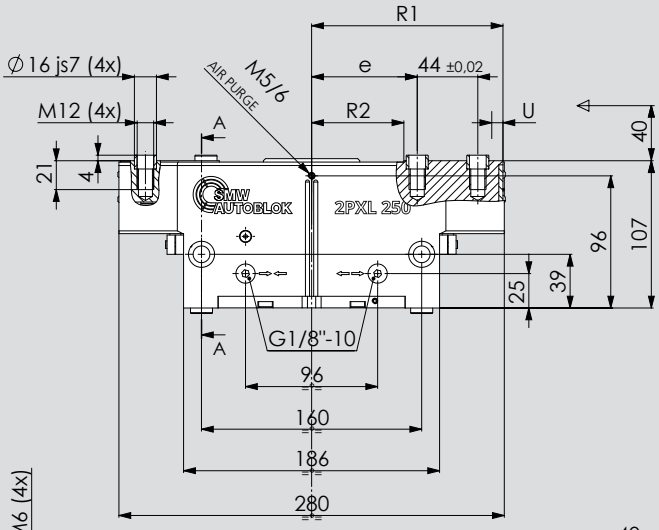
* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

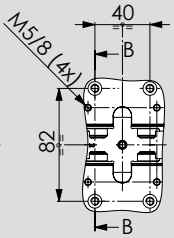
max allowed temperature using proximities is 60°C

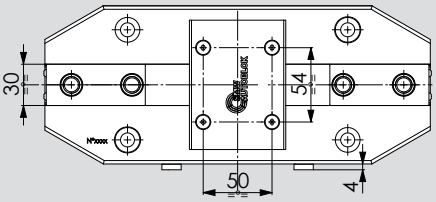


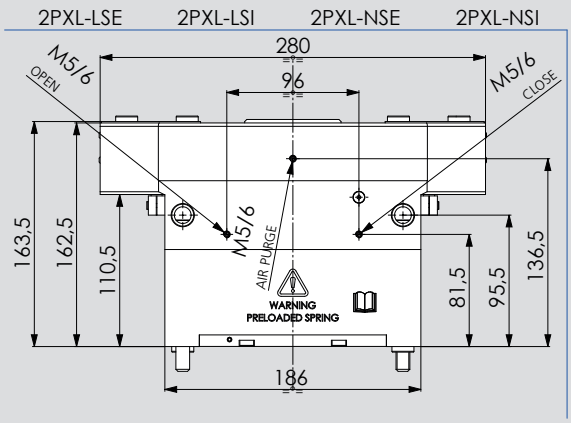


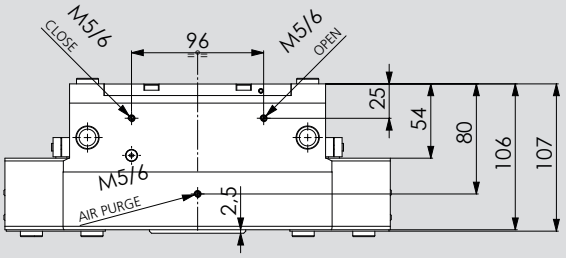












Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
2PXL-N 250	77901877	8000	-----	17	651	2/8	0,5/0,5	8,4	40,0	46,75/63,75	122/139	37/54
2PXL-NSE 250	77902077	11000	3000	17	1251	4/6,5	0,7/0,4	10,7	40,0	46,75/63,75	122/139	37/54
2PXL-NSI 250	77901177	11350	3000	17	1278	4/6,5	0,4/0,7	10,7	40,0	46,75/63,75	122/139	37/54
2PXL-L 250	77901977	5300	-----	30	651	2/8	0,5/0,5	8,2	26,5	46,75/76,75	109/139	37/67
2PXL-LSE 250	77902177	7300	2000	30	1251	4/6,5	0,7/0,4	10,5	26,5	46,75/76,75	109/139	37/67
2PXL-LSI 250	77901277	7550	2000	30	1278	4/6,5	0,4/0,7	10,5	26,5	46,75/76,75	109/139	37/67

LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

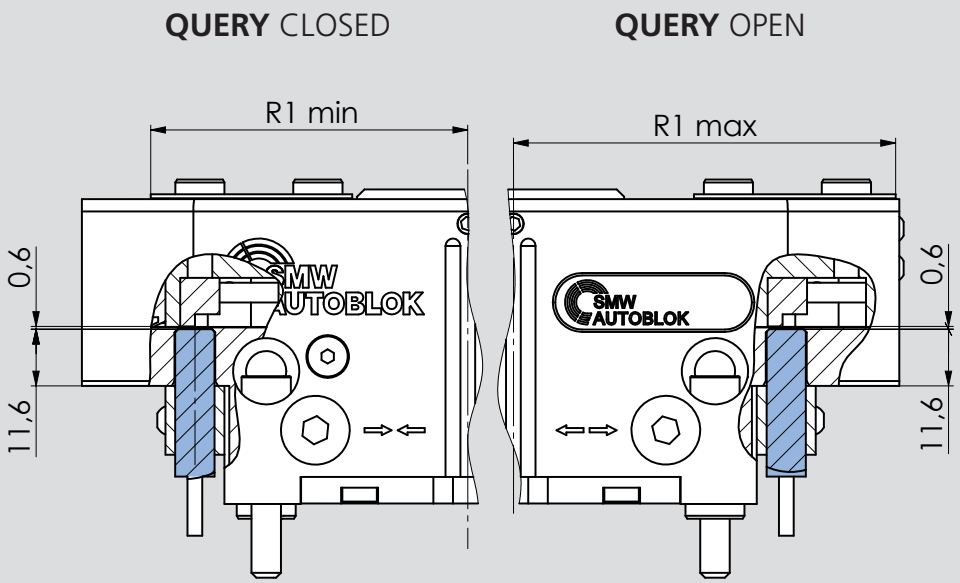
Sensor Package

Pneumatic gripper

2PXS/2PXM/2PXL

- Gripping position monitoring via inductive sensors
- End position monitoring via inductive sensors

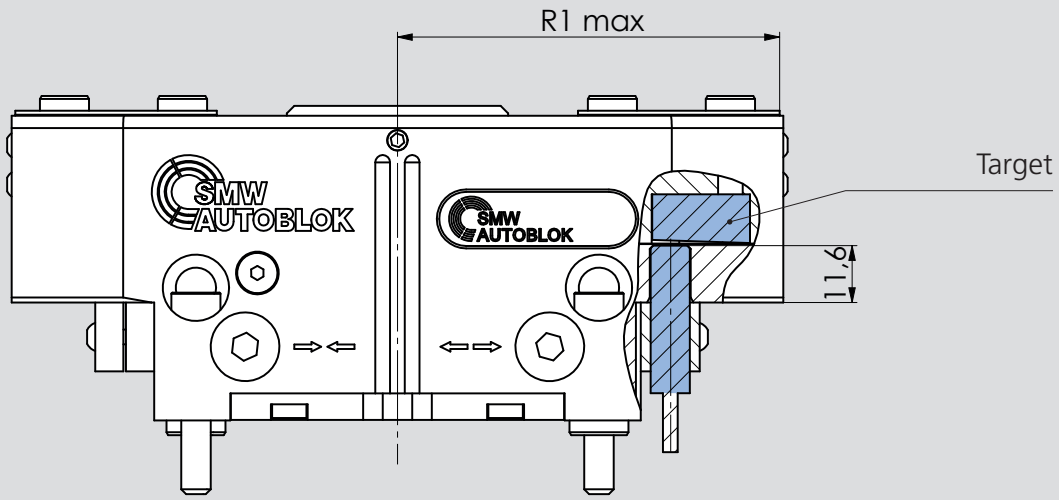
End position monitoring



Type	SENSOR Id. No.*
IPS 4.0 M08-PNP	0E012802

*You can find more information on page 60.

Gripping position monitoring



Type	SENSOR Id. No.*	TARGET Id. No.
IPS 4.0 M08x040 0-10V e-sensing	0E012810	92262163

*You can find more information on page 61.

Notes

3PXS

Pneumatic gripper

Centric gripper

■ **3 finger centric**

Application/customer benefits

- Compact and light design and high gripping force
- ID and OD clamping
- Integrated greasing system on master jaw (use SMW-Autoblok K67 grease)

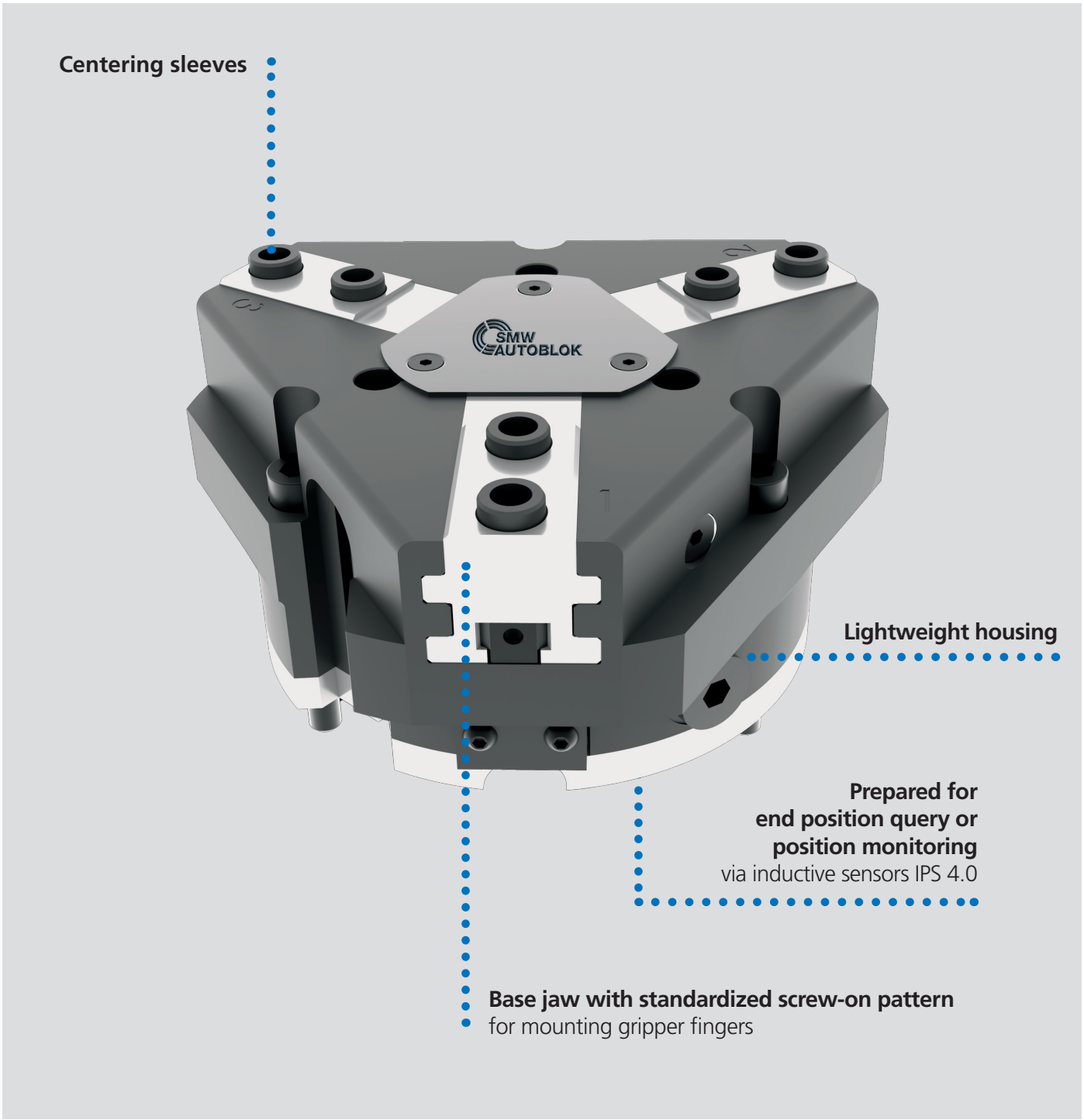
Technical features

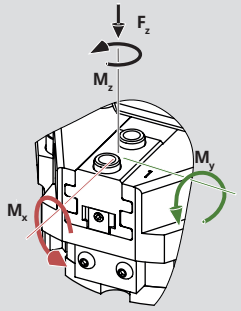
- Aluminum housing
- Protection class: IP40
- Functional parts heat-treated for high precision and long life
- Highest rigidity and repeatability: 0,01 mm
- Prepared for Air purge
- Optional: Spring workstop, Pneumatic stroke control valve, Sensor package

Standard equipment

Gripper with centering sleeves and mounting bolts (without gripper fingers and sensors)

3PXS

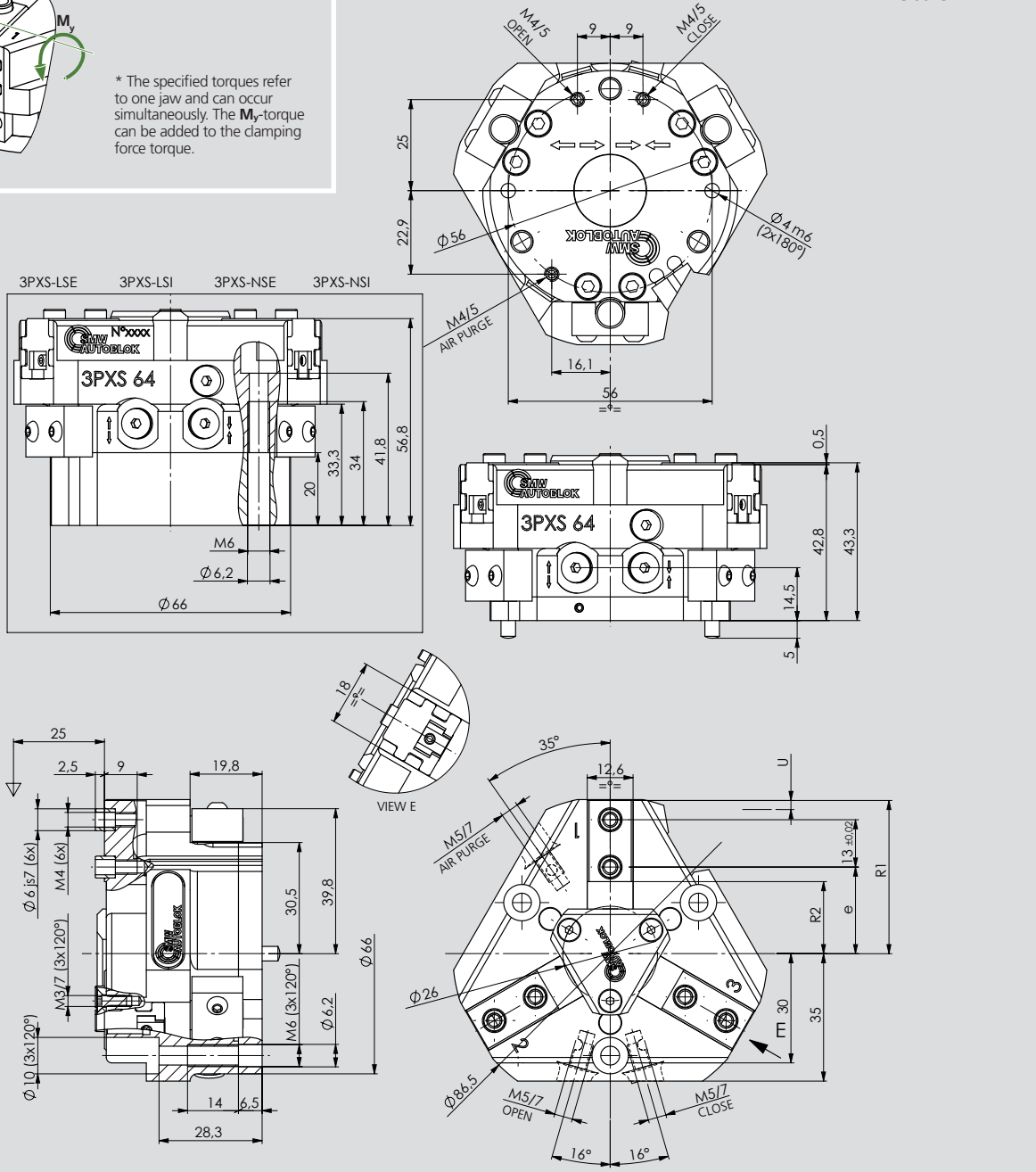




- M_x max. 45 Nm*
- M_y max. 60 Nm*
- M_z max. 40 Nm*
- F_z max. 1100 N*

* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

max allowed temperature using proximities is 60°C



Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
3PXS-N 64	77920407	1300	-----	3	19,5	2/8	0,03/0,03	0,5	6,5	17,5/20,5	39/42	13,5/16,5
3PXS-NSE 64	77920507	1600	300	3	36	4/6,5	0,05/0,03	0,6	6,5	17,5/20,5	39/42	13,5/16,5
3PXS-NSI 64	77920607	1790	300	3	38,5	4/6,5	0,03/0,05	0,6	6,5	17,5/20,5	39/42	13,5/16,5
3PXS-L 64	77920107	630	-----	6	19,5	2/8	0,03/0,03	0,5	3,0	17,5/23,5	36/42	13,5/19,5
3PXS-LSE 64	77920207	780	150	6	36	4/6,5	0,05/0,03	0,6	3,0	17,5/23,5	36/42	13,5/19,5
3PXS-LSI 64	77920307	850	150	6	38,5	4/6,5	0,03/0,05	0,6	3,0	17,5/23,5	36/42	13,5/19,5

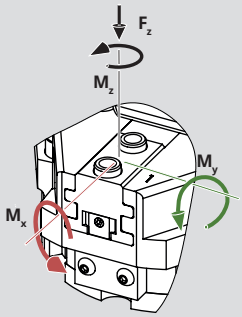
LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

3PXS 80

Pneumatic gripper

Centric gripper

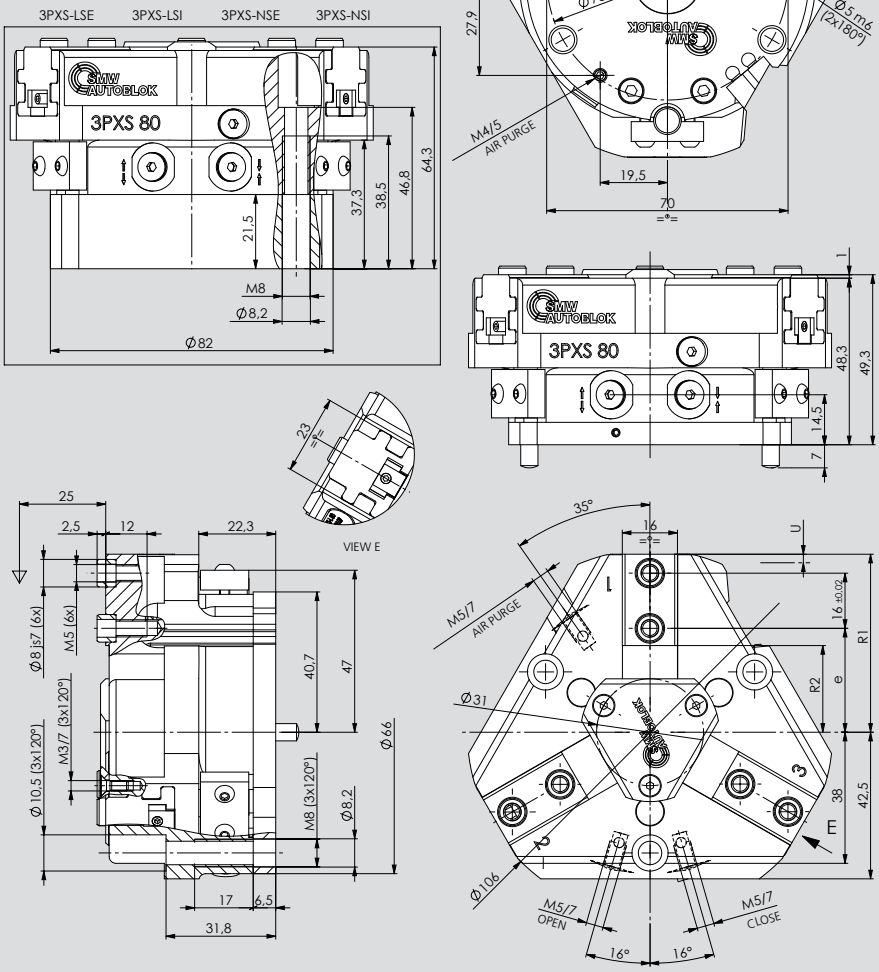
Dimension and technical data



- M_x max. 60 Nm*
- M_y max. 95 Nm*
- M_z max. 55 Nm*
- F_z max. 1550 N*

* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

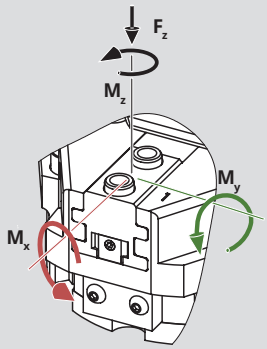
max allowed temperature using proximities is 60°C



Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
3PXS-N 80	77920309	2350	-----	4	45,5	2/8	0,05/0,05	0,8	11,5	22/26	47,5/51,5	17/21
3PXS-NSE 80	77920509	3050	700	4	78,5	4/6,5	0,06/0,04	1	11,5	22/26	47,5/51,5	17/21
3PXS-NSI 80	77920609	3270	700	4	81,5	4/6,5	0,04/0,06	1	11,5	22/26	47,5/51,5	17/21
3PXS-L 80	77920109	1100	-----	8	45,5	2/8	0,05/0,05	0,8	5,5	22/30	43,5/51,5	17/25
3PXS-LSE 80	77920209	1400	300	8	78,5	4/6,5	0,06/0,04	1	5,5	22/30	43,5/51,5	17/25
3PXS-LSI 80	77920309	1500	300	8	81,5	4/6,5	0,04/0,06	1	5,5	22/30	43,5/51,5	17/25

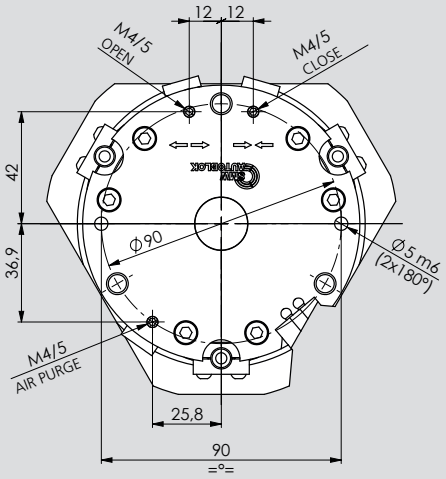
LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

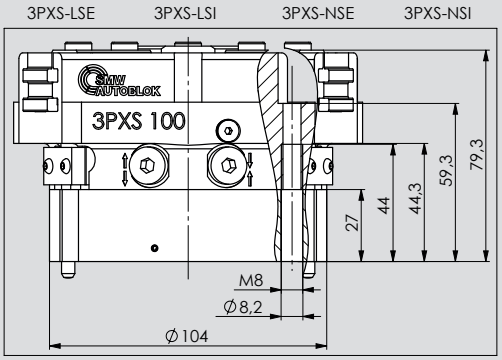


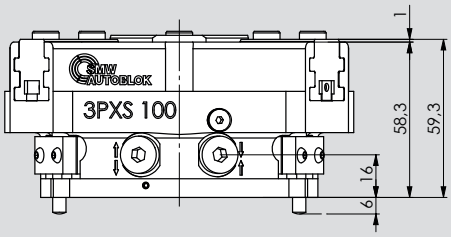
- M_x max. 85 Nm*
- M_y max. 115 Nm*
- M_z max. 70 Nm*
- F_z max. 2100 N*

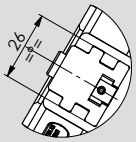
* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

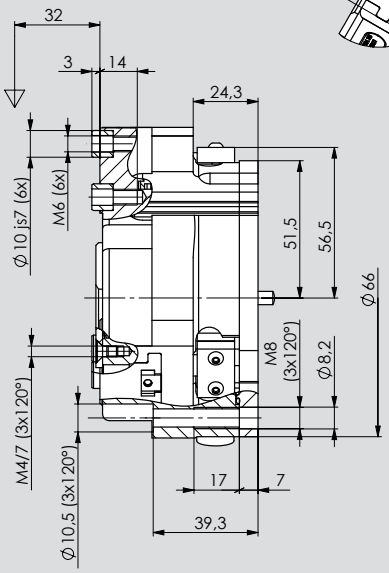
max allowed temperature using proximities is 60°C

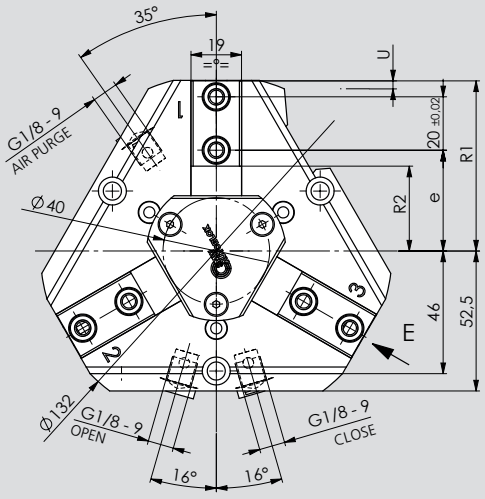












Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
3PXS-N 100	77920411	4100	-----	5	94,5	2/8	0,12/0,12	1,7	20,0	27,5/32,5	59/64	21,5/26,5
3PXS-NSE 100	77920511	5450	1350	5	171	4/6,5	0,22/0,12	2	20,0	27,5/32,5	59/64	21,5/26,5
3PXS-NSI 100	77920611	5730	1350	5	176	4/6,5	0,12/0,22	2	20,0	27,5/32,5	59/64	21,5/26,5
3PXS-L 100	77920111	1950	-----	10	94,5	2/8	0,12/0,12	1,7	9,5	27,5/37,5	54/64	21,5/31,5
3PXS-LSE 100	77920211	2600	650	10	171	4/6,5	0,22/0,12	2	9,5	27,5/37,5	54/64	21,5/31,5
3PXS-LSI 100	77920311	2730	650	10	176	4/6,5	0,12/0,22	2	9,5	27,5/37,5	54/64	21,5/31,5

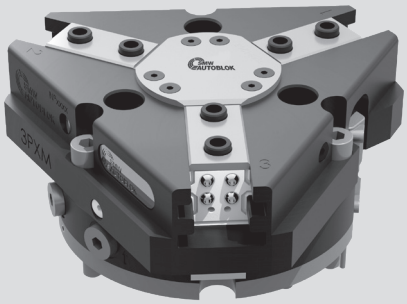
LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

3PXM

Pneumatic gripper

Centric gripper

■ **3 finger centric**



Application/customer benefits

- Compact and light design and high gripping force
- ID and OD clamping
- Integrated greasing system on master jaw (use SMW-Autoblok K67 grease)

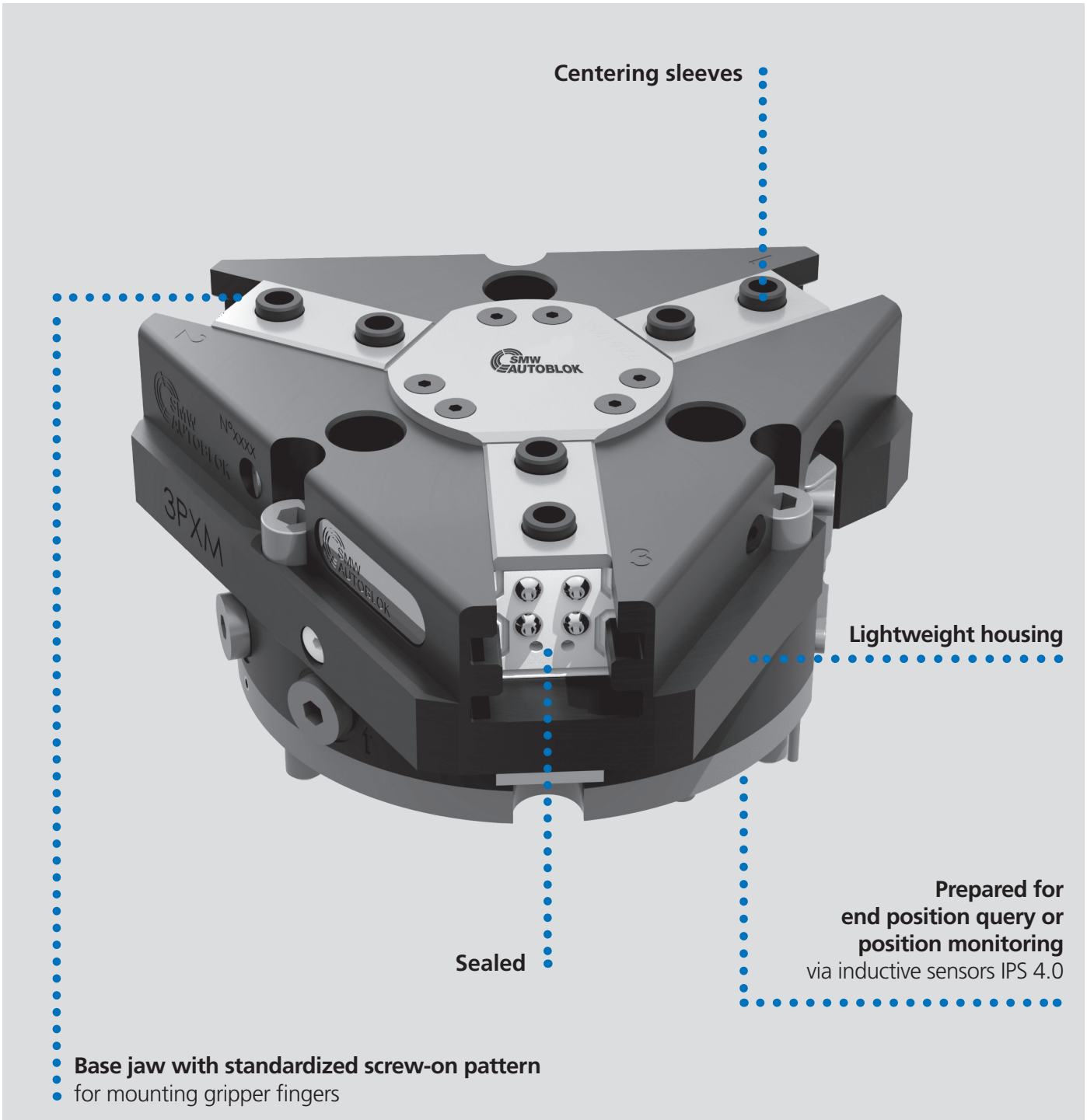
Technical features

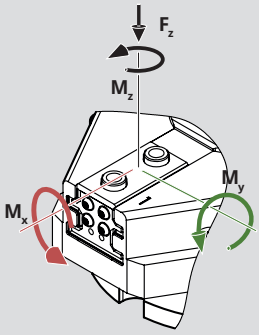
- Aluminum housing
- Sealed / Protection class: IP64
- Functional parts heat-treated for high precision and long life
- Highest rigidity and repeatability: 0,02 mm
- Prepared for Air purge
- Optional: Spring workstop, pneumatic stroke control valve, Sensor package

Standard equipment

Gripper with centering sleeves and mounting bolts (without gripper fingers and sensors)

3PXM

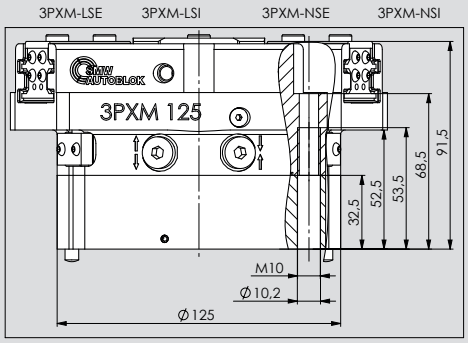


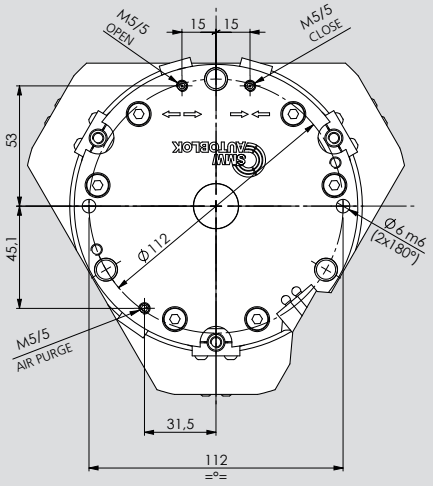


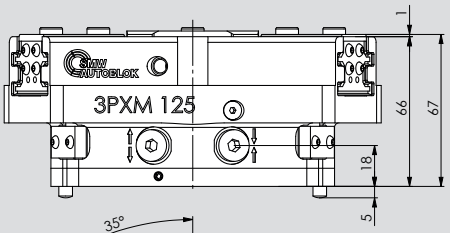
- M_x max. 120 Nm*
- M_y max. 145 Nm*
- M_z max. 100 Nm*
- F_z max. 2800 N*

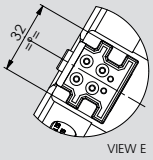
* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

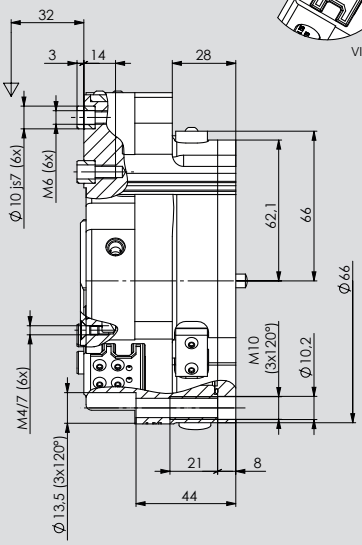
max allowed temperature using proximities is 60°C

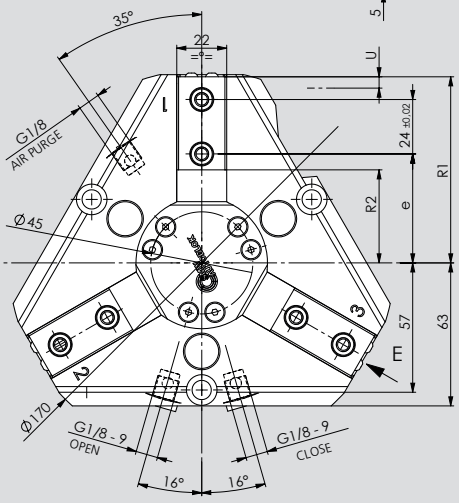












Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
3PXM-N 125	77920413	6750	-----	6	200,5	2/8	0,2/0,2	2,7	33,5	35/41	76/82	28/34
3PXM-NSE 125	77920513	9450	2700	6	357	4/6,5	0,32/0,17	3,3	33,5	35/41	76/82	28/34
3PXM-NSI 125	77920613	9900	2700	6	366,5	4/6,5	0,17/0,32	3,3	33,5	35/41	76/82	28/34
3PXM-L 125	77920113	3200	-----	13	200,5	2/8	0,2/0,2	2,7	16,0	35/48	69/82	28/41
3PXM-LSE 125	77920213	4500	1300	13	357	4/6,5	0,32/0,17	3,3	16,0	35/48	69/82	28/41
3PXM-LSI 125	77920313	4700	1300	13	366,5	4/6,5	0,17/0,32	3,3	16,0	35/48	69/82	28/41

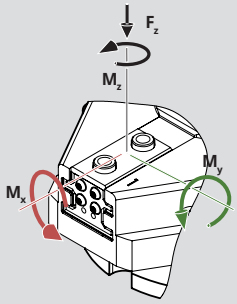
LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

3PXM 160

Pneumatic gripper

Centric gripper

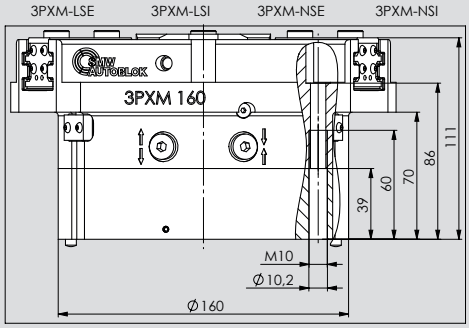
Dimension and technical data

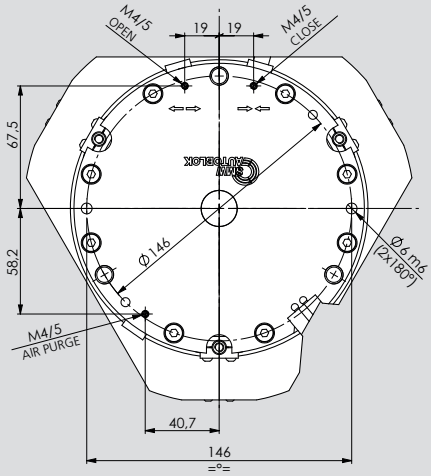


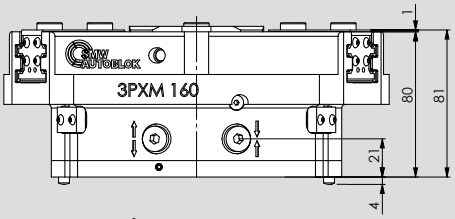
- M_x max. 170 Nm*
- M_y max. 180 Nm*
- M_z max. 140 Nm*
- F_z max. 4400 N*

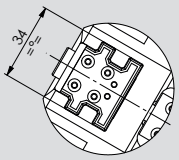
* The specified torques refer to one jaw and can occur simultaneously. The **M_y**-torque can be added to the clamping force torque.

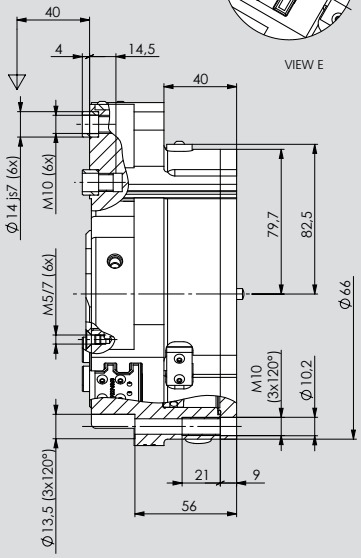
max allowed temperature using proximities is 60°C

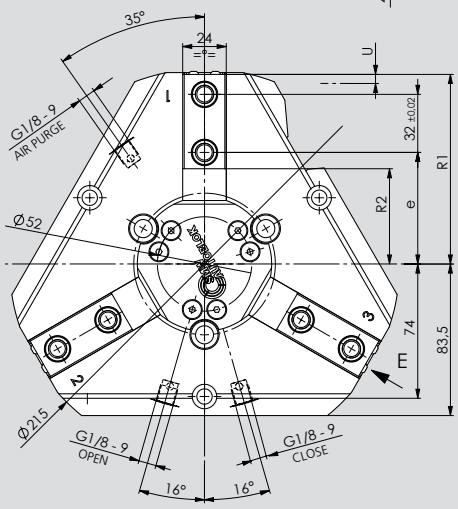








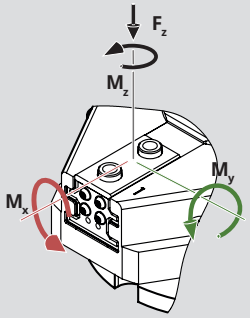




Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
3PXM-N 160	77920417	12700	-----	8	480	2/8	0,44/0,44	5,2	63,5	45/53	96,5/104,5	36/44
3PXM-NSE 160	77920517	17500	4800	8	833	4/6,5	0,66/0,36	6,5	63,5	45/53	96,5/104,5	36/44
3PXM-NSI 160	77920617	18000	4800	8	847,5	4/6,5	0,36/0,66	6,5	63,5	45/53	96,5/104,5	36/44
3PXM-L 160	77920117	6000	-----	16	480	2/8	0,44/0,44	5,2	30,0	45/61	88,5/104,5	36/52
3PXM-LSE 160	77920217	8300	2300	16	833	4/6,5	0,66/0,36	6,5	30,0	45/61	88,5/104,5	36/52
3PXM-LSI 160	77920317	8550	2300	16	847,5	4/6,5	0,36/0,66	6,5	30,0	45/61	88,5/104,5	36/52

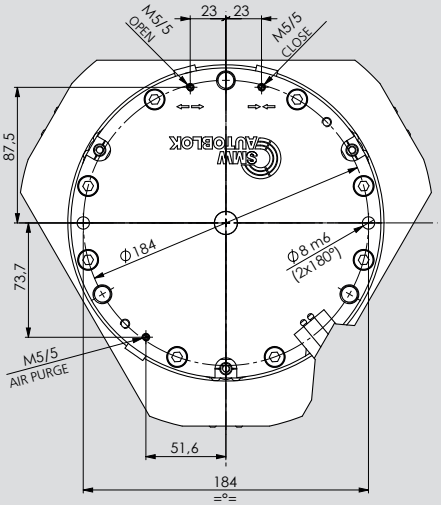
LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

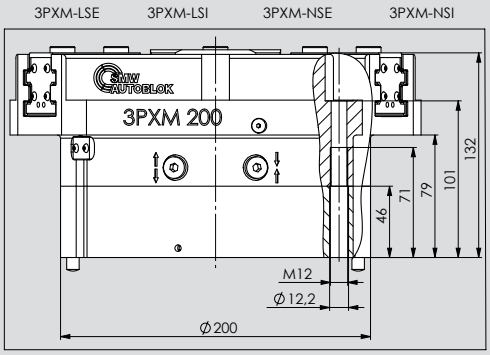


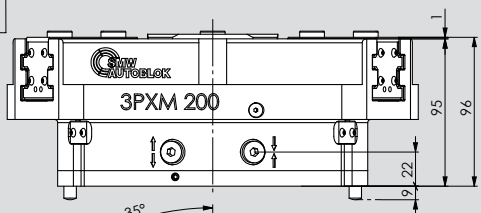
- M_x max. 180 Nm*
- M_y max. 200 Nm*
- M_z max. 155 Nm*
- F_z max. 5500 N*

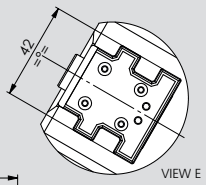
* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

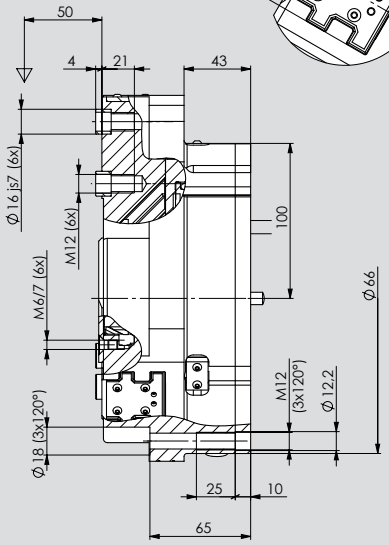
max allowed temperature using proximities is 60°C

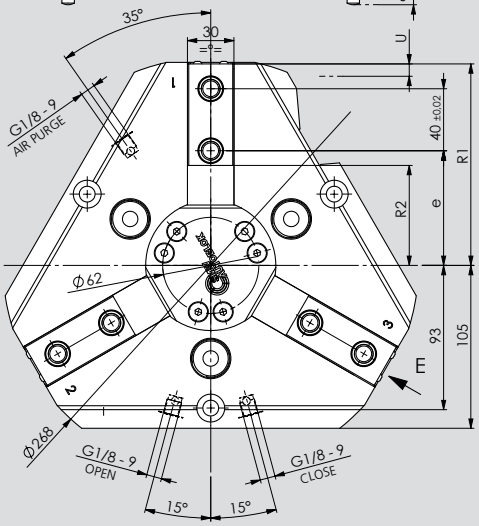












Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
3PXM-N 200	77920421	12200	-----	14	866	2/8	1,05/1,05	10,1	60,0	49/63	116/130	39,5/53,5
3PXM-NSE 200	77920521	16300	4100	14	1476,5	4/6,5	1,38/0,9	12,2	60,0	49/63	116/130	39,5/53,5
3PXM-NSI 200	77920621	16800	4100	14	1502	4/6,5	0,9/1,38	12,2	60,0	49/63	116/130	39,5/53,5
3PXM-L 200	77920121	8100	-----	25	866	2/8	1,05/1,05	10,1	40,5	49/74	105/130	39,5/64,5
3PXM-LSE 200	77920221	10850	2750	25	1476,5	4/6,5	1,38/0,9	12,2	40,5	49/74	105/130	39,5/64,5
3PXM-LSI 200	77920321	11200	2750	25	1502	4/6,5	0,9/1,38	12,2	40,5	49/74	105/130	39,5/64,5

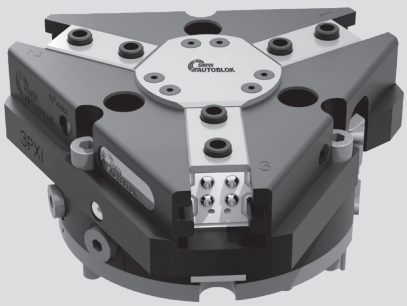
LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

3PXL

Pneumatic gripper

Centric gripper

■ **3 finger centric**



Application/customer benefits

- Compact and light design and high gripping force
- ID and OD clamping
- Integrated greasing system on master jaw (use SMW-Autoblok K67 grease)

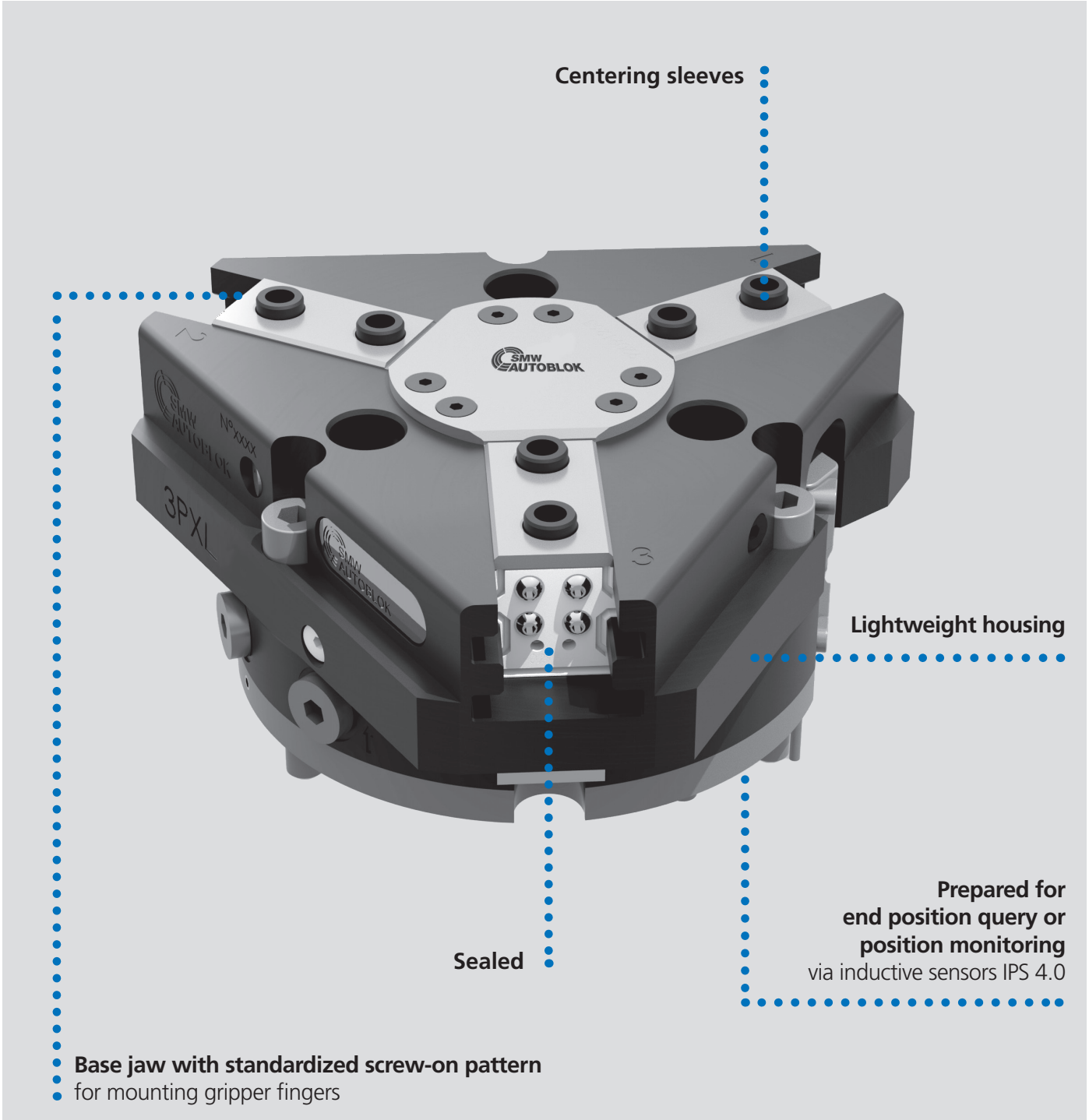
Technical features

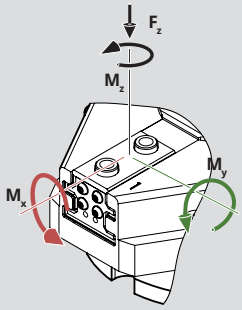
- Aluminum housing
- Sealed / Protection class: IP64
- Functional parts heat-treated for high precision and long life
- Highest rigidity and repeatability: 0,04 mm
- Air purge
- Optional: Spring workstop, Sensor package

Standard equipment

Gripper with centering sleeves and mounting bolts (without gripper fingers and sensors)

3PXL

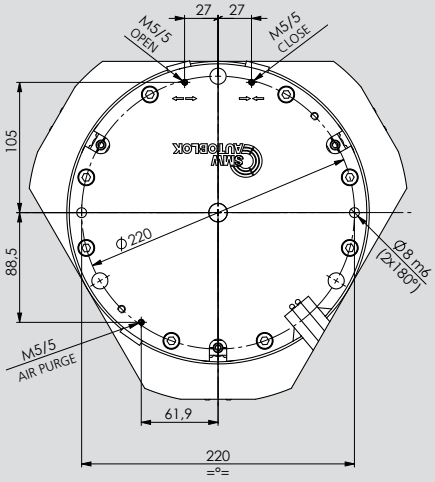


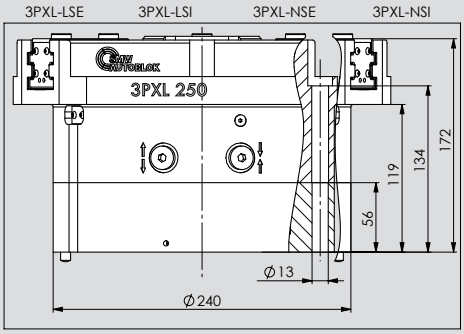


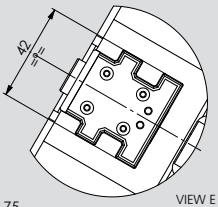
- M_x max. 265 Nm*
- M_y max. 255 Nm*
- M_z max. 190 Nm*
- F_z max. 6800 N*

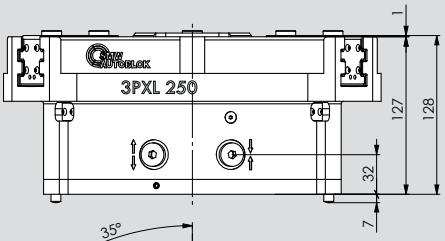
* The specified torques refer to one jaw and can occur simultaneously. The M_y-torque can be added to the clamping force torque.

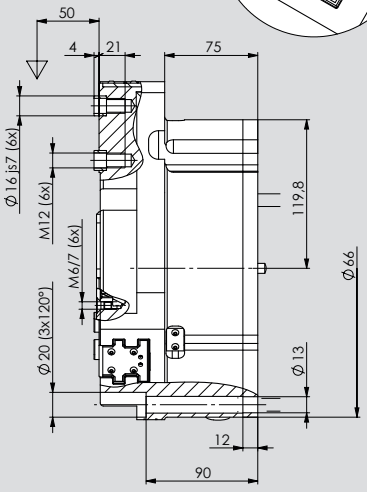
max allowed temperature using proximities is 60°C

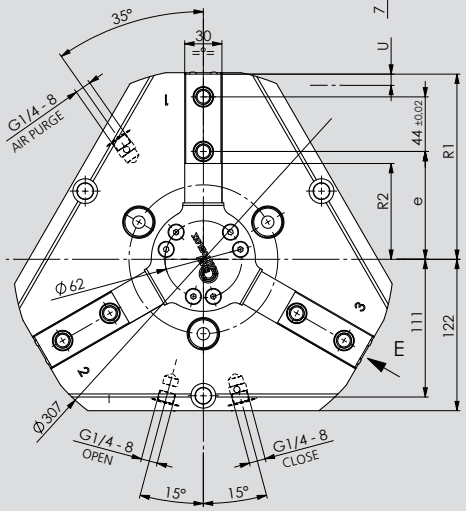












Subject to technical changes.
For more detailed information please ask our customer service.

Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm³)	Pressure (bar) min./max.	Opening / Closing time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)	e (mm) min./max.	R1 (mm) min./max.	R2 (mm) min./max.
3PXL-N 250	77920426	1755	-----	17	1496,5	2/8	1,23/1,23	17	87,5	57/74	132,5/149,5	47/64
3PXL-NSE 250	77920521	2405	650	17	2571,5	4/6,5	2,05/1,08	21	87,5	57/74	132,5/149,5	47/64
3PXL-NSI 250	77920621	2480	650	17	2616,5	4/6,5	1,08/2,05	21	87,5	57/74	132,5/149,5	47/64
3PXL-L 250	77920121	1170	-----	30	1496,5	2/8	1,23/1,23	17	58,5	57/87	119,5/149,5	47/77
3PXL-LSE 250	77920221	1605	435	30	2571,5	4/6,5	2,05/1,08	21	58,5	57/87	119,5/149,5	47/77
3PXL-LSI 250	77920321	1655	435	30	2616,5	4/6,5	1,08/2,05	21	58,5	57/87	119,5/149,5	47/77

LSI/LSE, NSE/NSI = gripping force retention (E = external clamping, I = internal clamping), L = long stroke, N = normal stroke

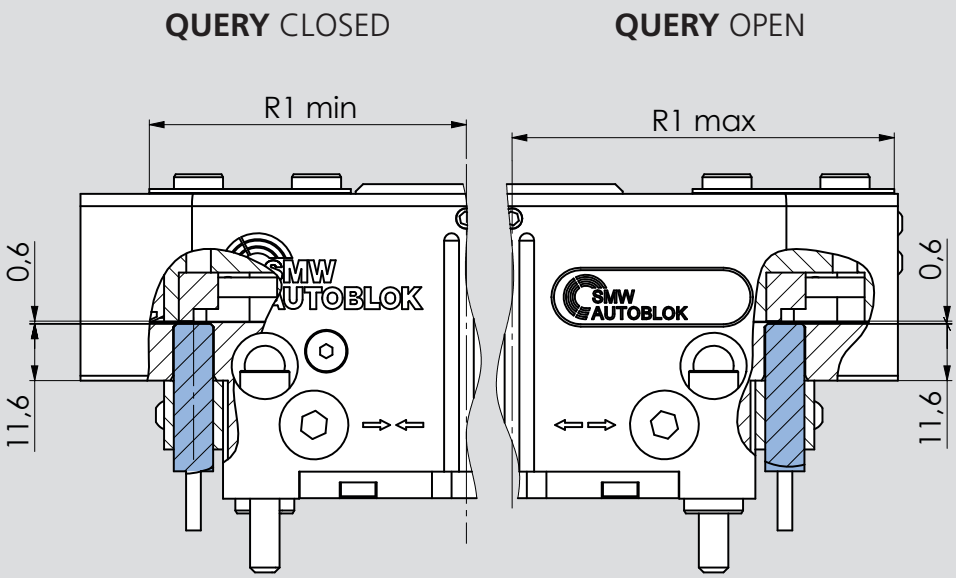
Sensor Package

Pneumatic gripper

3PXS/3PXM/3PXL

- Gripping position monitoring via inductive sensors
- End position monitoring via inductive sensors

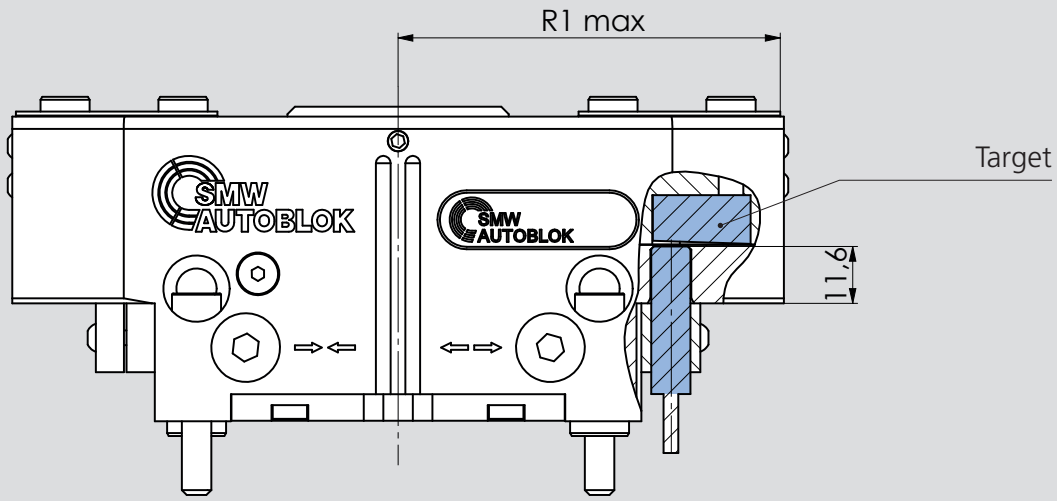
End position monitoring



Type	SENSOR Id. No.*
IPS 4.0 M08-PNP	0E012802

*You can find more information on page 60.

Gripping position monitoring



Type	SENSOR Id. No.*	TARGET Id. No.
IPS 4.0 M08x040 0-10V e-sensing	0E012810	92262163

*You can find more information on page 61.

Notes

Gripper finger blanks for pneumatic grippers

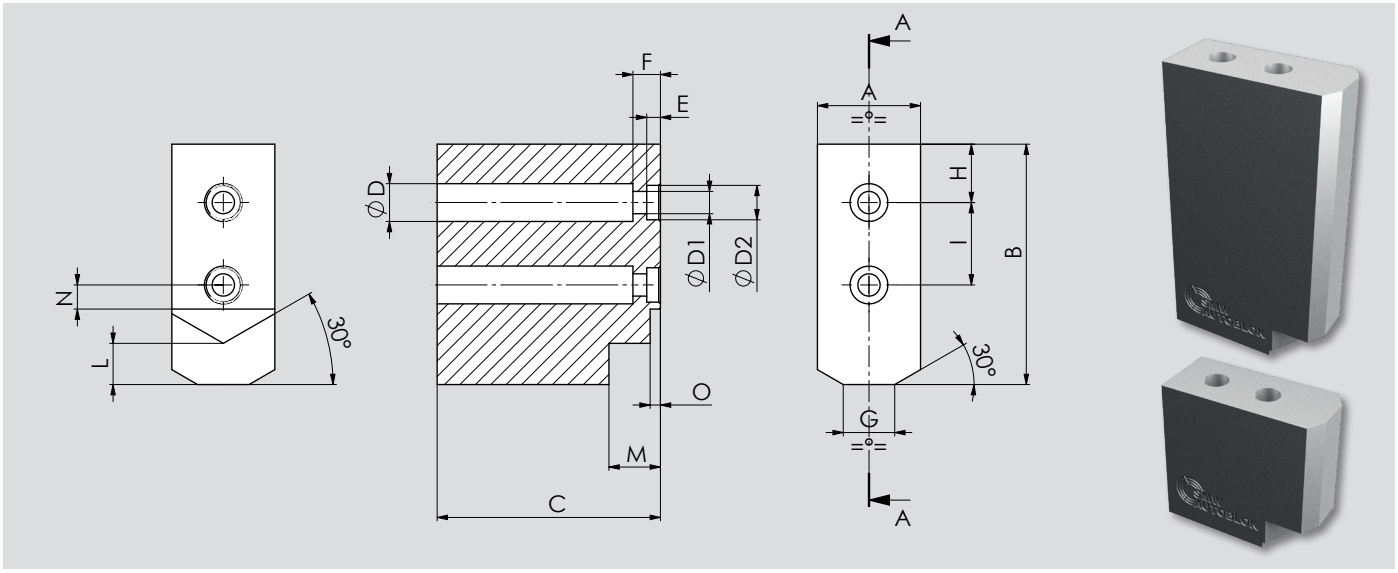
CUSTOMIZED GRIPPER fingers for pneumatic and mechatronic grippers:
Our specialists work closely with our customers to develop tailor-made solutions.

2PXS/2PXM/2PXL, 3PXS/3PXM/3PXL

- Standard blanks or pneumatic grippers
- Made from aluminum

Gripper finger blanks

Accessories



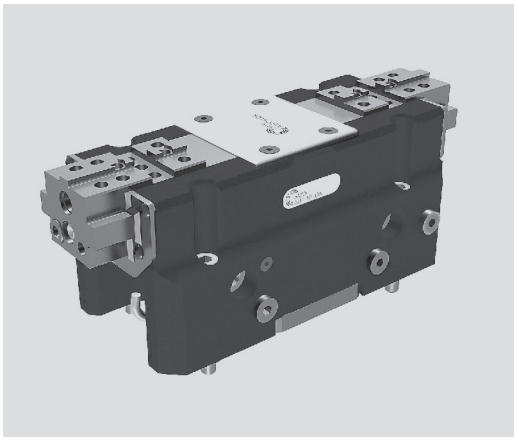
Gripper Size	Id. No.	MAT.	A	B	C	Ø D	Ø D1	Ø D2	E	F	G	H	I	L	M	N	O	Clamping Range		Weight (Kg)
																		Normal Stroke	Long Stroke	
PL 64 2PXS 64	92720663	AL	20	40	35	8	4,5	6	3,5	6	1	11	13	8	11	4	3	0 - 2,5	0 - 8,5	0,057
	92730663				64															0,108
3PXS 64	92720663				35													3 - 9	3 - 15	0,057
	92730663				64															0,108
PL 80 2PXS 80	92720863	AL	25	45	45	9	5,5	8	3,5	7	6	10	16	8	11	5	3	0 - 7	0 - 15	0,108
	92730863				80															0,2
3PXS 80	92720863				45													6 - 14	6 - 22	0,108
	92730863				80															0,2
PL 100 2PXS 100	92721063	AL	25	55	55	11	6,5	10	4	8	10	12	20	8	11	6	3	1 - 11	1 - 21,5	0,16
	92731063				100															0,3
3PXS 100	92721063				55													9 - 19	9 - 29	0,16
	92731063				100															0,3
2PXM 125	92721263	AL	30	70	65	11	6,5	10	4	8	15	17	24	12	15	7	3	3 - 15,5	3 - 29,5	0,31
	92731263				125															0,61
3PXM 125	92721263				65													12 - 24	12 - 38	0,31
	92731263				125															0,61
2PXM 160	92721663	AL	30	80	80	17	11	14	5	11	15	11	32	10	14	9	4	3 - 19	3 - 36,5	0,4
	92731663				160															0,81
3PXM 160	92721663				80													16 - 32	16 - 48	0,4
	92731663				160															0,81
2PXM 200	92722063	AL	40	100	100	20	13	16	5	13	20	20	40	15	18	9,5	4	0 - 25	0 - 46	0,87
	92732063				200															1,76
3PXM 200	92722063				100													18 - 46	18 - 68	0,87
	92732063				200															1,76
2PXL 250	92722563	AL	40	120	120	20	13	16	5	13	20	26	44	15	18	10	4	0 - 28	0 - 53,5	1,3
	92732563				220															2,4
3PXL 250	92722563				120													14 - 48	14 - 74	1,3
	92732563				220															2,4

PP

Pneumatic / hydralic gripper

Universal gripper

■ 2 finger parallel



Application/customer benefits

- Pneumatic (max. 8 bar) as well as hydraulic (max. 30 bar) use
- ID and OD clamping
- Side or rear feeding
- Integrated greasing system on master jaw (use SMW-Autoblok K67 grease)
- Possibility of element presence control (Air sensing)

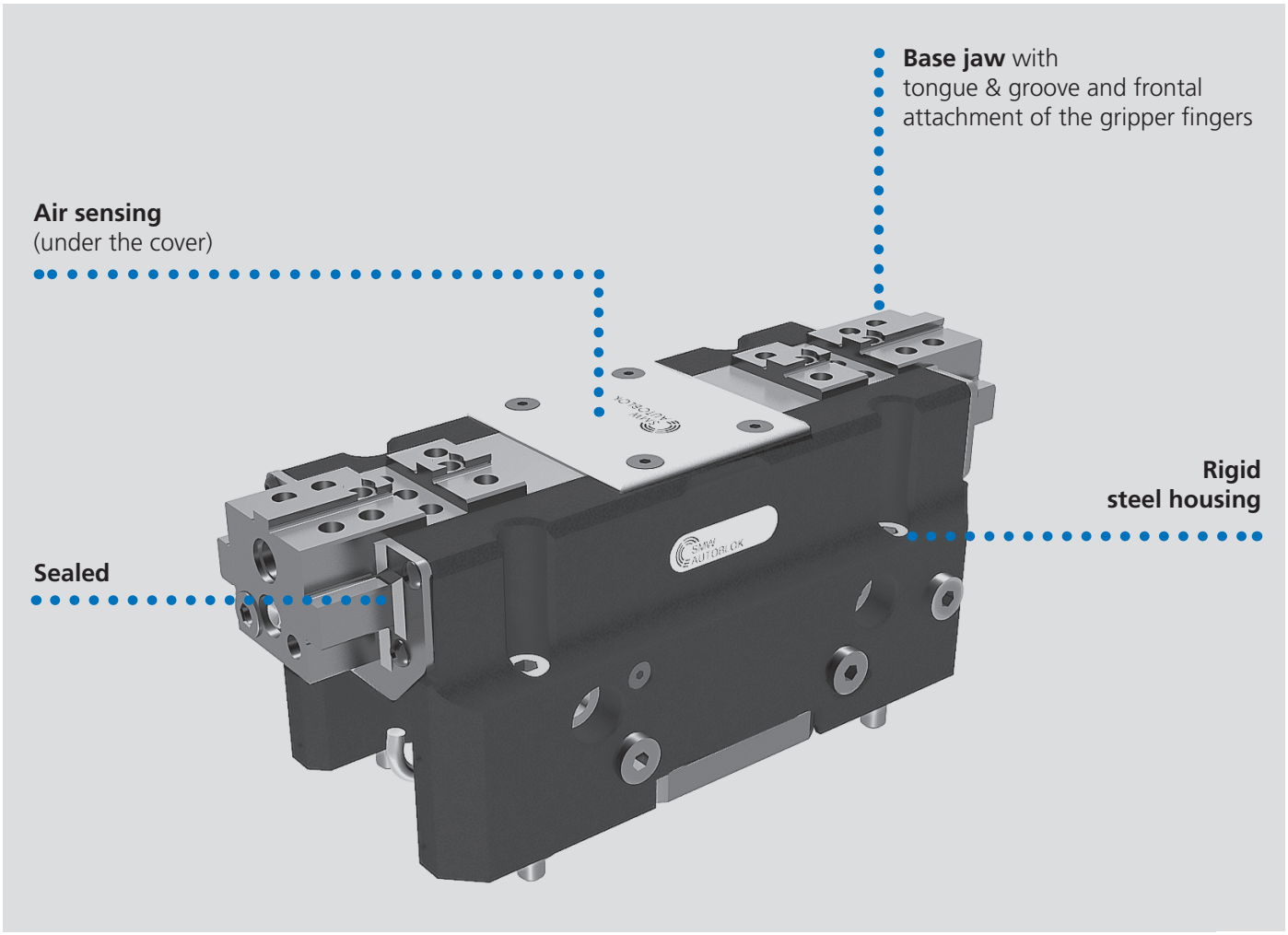
Technical features

- Rigid steel housing
- Sealed / protection class: IP64
- Body and functional parts heat-treated for high precision and long life
- Base jaws with tongue & groove
- Highest rigidity and repeatability
- Air purge
- Air sensing
- Optional: Sensor package, gripping position/end position monitoring

Standard equipment

Gripper with centering sleeves and mounting bolts (without gripper fingers and sensors)

PP



Type	Id. No.	Pneumatic I Hydraulic **Gripping force** (N) at 6 bar | at 30 bar	**U** (mm) jaw stoke	Pneumatic I Hydraulic **Pressure** (bar) min./max.	**Weight** (Kg)	Pneumatic I Hydraulic Recommended **Workpiece weight** (Kg)	**Repeatability** (mm)
PP-N 125	77901862	2900 | 14600	5,5	3/8 | 8/30	4,9	14,5 | 73	0,01
PP-L 125	77901962	1300 | 6500	13	3/8 | 8/30	4,9	6,5 | 32,5	0,01
PP-N 160	77901866	4000 | 19000	5,5	3/8 | 8/30	5,7	20 | 95	0,01
PP-L 160	77901966	1700 | 8400	13	3/8 | 8/30	5,7	8,5 | 42	0,01
PP-N 200	77901870	5800 | 28500	7	3/8 | 8/30	11	29 | 142,5	0,02
PP-L 200	77901970	2500 | 12700	16,5	3/8 | 8/30	11	12,5 | 63,5	0,02
PP-N 250	77901875	8700 | 43700	10	3/8 | 8/30	19,5	43,5 | 218,5	0,02
PP-L 250	77901975	3200 | 15800	29,8	3/8 | 8/30	19,5	16 | 79	0,02

L = long stroke, N = normal stroke

Universal gripper

■ Interface for gripper fingers quick-change system RR
■ 2 finger parallel

PL-N/L RR 320/380

Pneumatic gripper

Application/customer benefits

- Compact, lightweight design and automatic gripper finger change
- ID and OD clamping
- Tool-free actuation

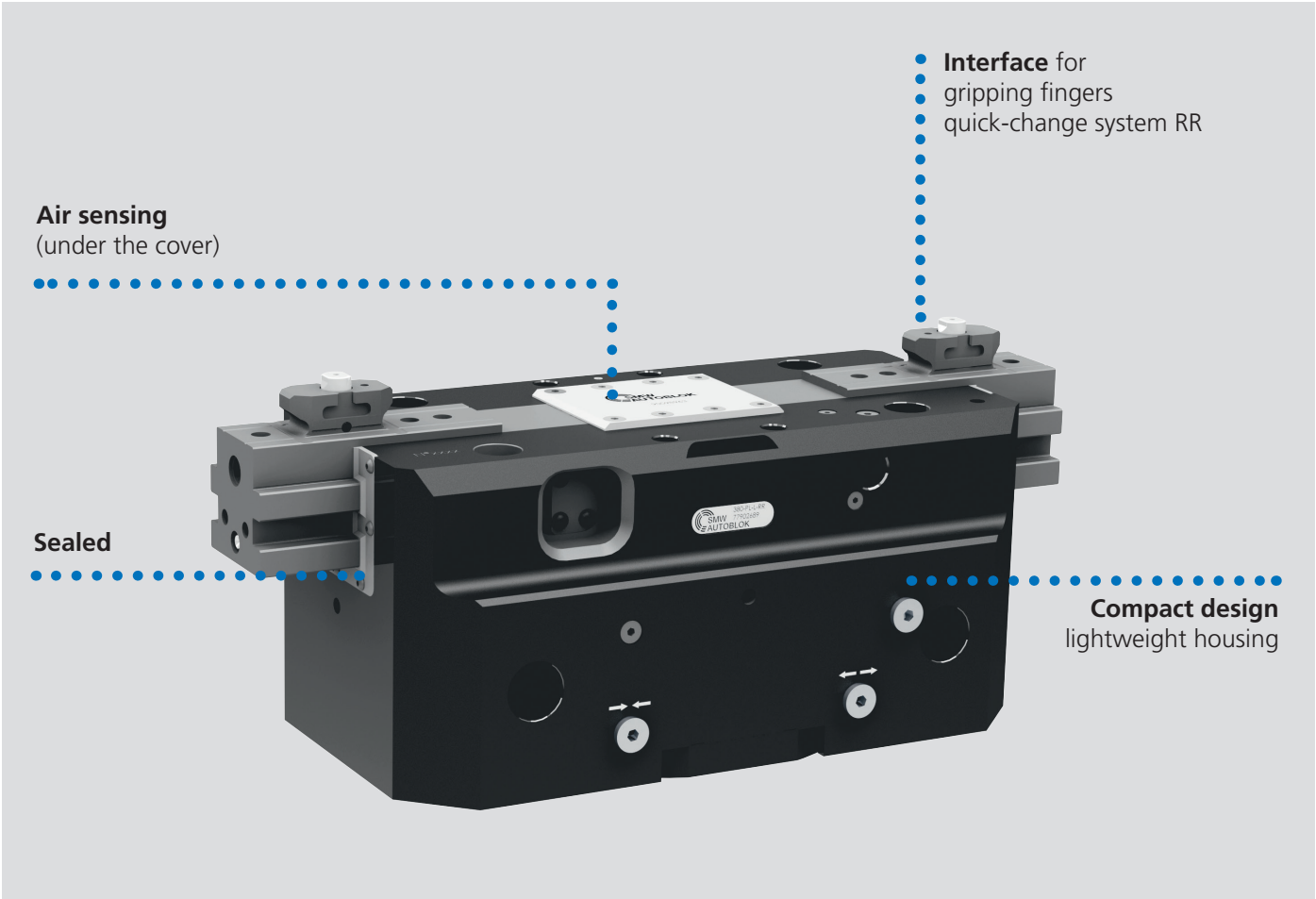
Technical features

- Aluminum body
- Sealed / Protection class: IP64
- Body and functional parts heat-treated for high precision and long life
- Highest rigidity
- Prepared for Air purge
- Air sensing
- Optional: Sensor package

Standard equipment

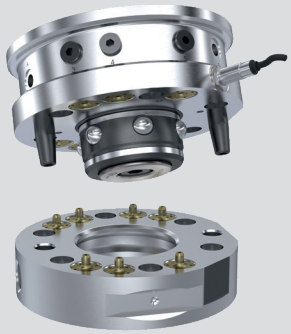
Gripper with centering sleeves and mounting bolts (without gripper fingers and sensors)

PL-N / L RR 320/380



Type	Id. No.	Gripping force (N) at 6 bar	Spring force min. (N)	U (mm) jaw stoke	Air volume (cm^3)	Pressure (bar) min./max.	Closing/Opening time (s) at 6 bar	Weight (Kg)	Recommended Workpiece weight (Kg)
PL-N 320 RR	77902583	1100	-----	23,5	1206,5	2/8	0,5/0,5	27,5	55,0
PLS-N 320 RR	77902783	1430	3300	23,5	1206,5	4/6,5	0,7/0,4	28	55,0
PL-L 320 RR	77902683	600	-----	45	1206,5	2/8	0,5/0,5	28	30,0
PLS-L 320 RR	77902883	780	1800	45	1206,5	4/6,5	0,7/0,4	28,5	30,0
PL-N 380 RR	77902589	1690	-----	26	2060	2/8	0,6/0,6	41,5	84,5
PLS-N 380 RR	77902789	2220	5300	26	2060	4/6,5	0,9/0,5	42,5	84,5
PL-L 380 RR	77902689	925	-----	50	2060	2/8	0,6/0,6	42,5	46,5
PLS-L 380 RR	77902889	1215	2900	50	2060	4/6,5	0,9/0,5	43,5	46,5

L = long stroke, N = normal stroke



Application/customer benefits

- Quick and safe gripper change
- ISO flange pattern
- Integrated media feed-through
- Integrated interlock status query
- Pneumatic drive
- Self-locking by spring tension (turbo)
- Wear-free and maintenance-free, contactless transmission system for energy and signals (optional)

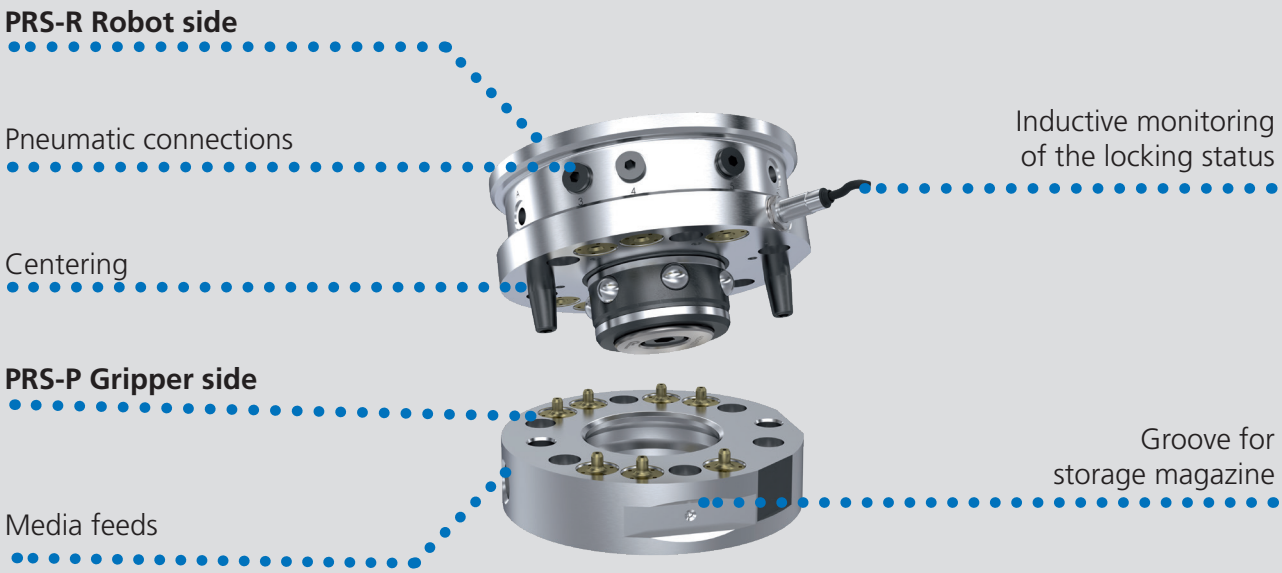
Technical features

- Repeatability 0,015 mm
- Air purge
- Pneumatic nominal pressure 6 bar

Standard equipment

PRS-R (Robot side) or PRS-P (Gripper side) without sensor

PRS



Type Robot Side	PRS-R 55	PRS-R 85	PRS-R 110	PRS-R 160	PRS-R 240
Id. No.	**46204550**	**46204600**	**46204400**	**46204320**	**46204500**
Recommended handling weight	20 kg	50 kg	75 kg	150 kg	500 kg
Pull-in force Spring	700 N	2000 N	2000 N	2500 N	12500 N
Pull-in force Turbo	3400 N	10000 N	11000 N	14000 N	76000 N
Repeatability	0,015 mm	0,015 mm	0,015 mm	0,015 mm	0,015 mm
Weight	0,5 kg	1,3 kg	3,0 kg	6,0 kg	16,0 kg

Type Gripper Side	PRS-P 55	PRS-P 85	PRS-P 110	PRS-P 160	PRS-P 240
Id. No.	**46204565**	**46204615**	**46204415**	**46204330**	**46204515**
Recommended handling weight	20 kg	50 kg	75 kg	150 kg	500 kg
Pull-in force Spring	-	-	-	-	-
Pull-in force Turbo	-	-	-	-	-
Repeatability	0,015 mm	0,015 mm	0,015 mm	0,015 mm	0,015 mm
Weight	0,3 kg	0,7 kg	1,9 kg	4,3 kg	9,5 kg

Notes

Inductive Coupling system

Overview

- Contact free transmission of energy and signal
- Operation and control of grippers

F180 ETH: Compatible with MX-L grippers

- Diameter Ø 180 mm
- Pass through Ø 85 mm
- Power supply 24 V/ 48 V
- Transmission distance 0 - 5 mm
- Energy transmission 240 W (24 V) / 400 W (48 V)
- Signal transmission Ethernet 100 Base-T
- Protection class: IP67

F100-2IOL: Compatible with MX-S/MX-M grippers

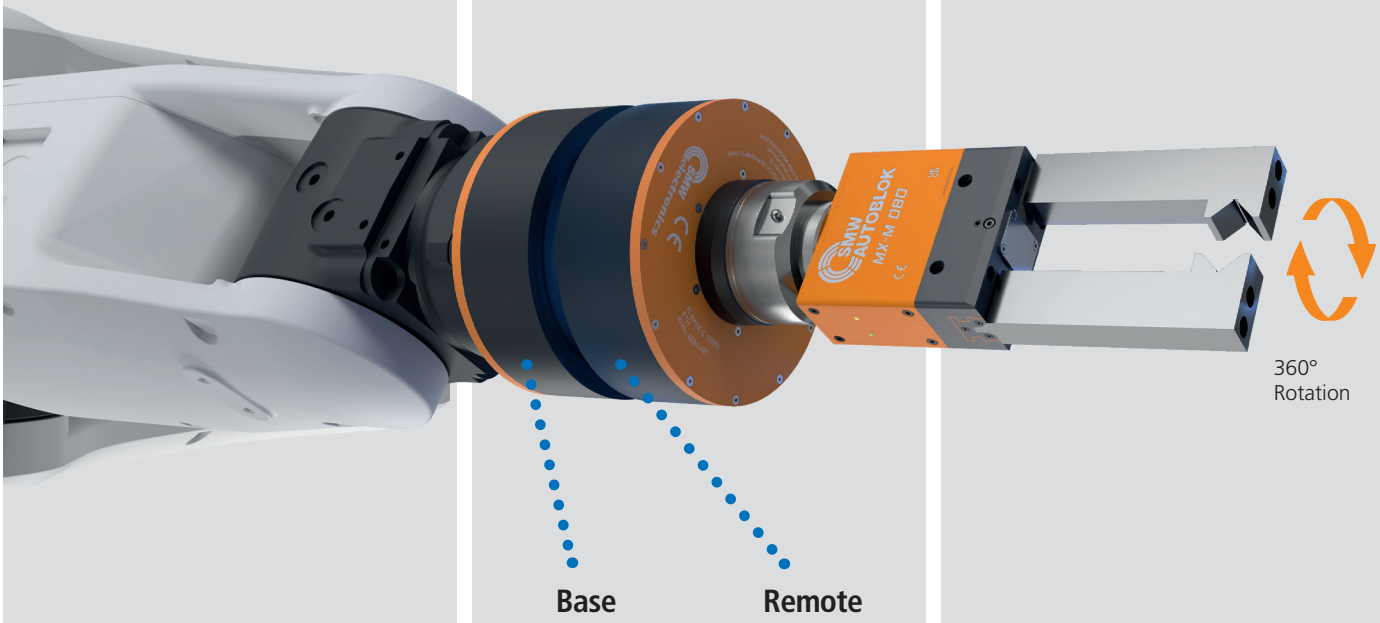
- Diameter Ø 100 mm
- Pass through Ø 50 mm
- Power supply 24 V
- Transmission distance 0 - 4 mm
- Energy transmission 75 W (24 V)
- Signal transmission Ethernet 100 Base-T/ 2x IO-Link (COM 1, COM 2, COM 3)
- Protection class: IP67

Application Example: 360° rotation of the MX-M 080 gripper

Robot

Inductive Coupling System

MX-M 080 Gripper



F100

F100 2x IO-Link-Link Transmission

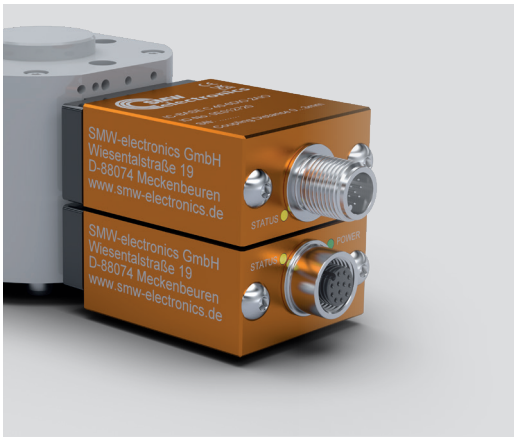
- OD = 100 mm
- ID = 50 mm
- Height = 25 mm
- Energy transmission ~ 75 W / 24 V

3 Product Lines

- MX-S Small
- MX-M Medium
- MX-L Large

Inductive coupling system

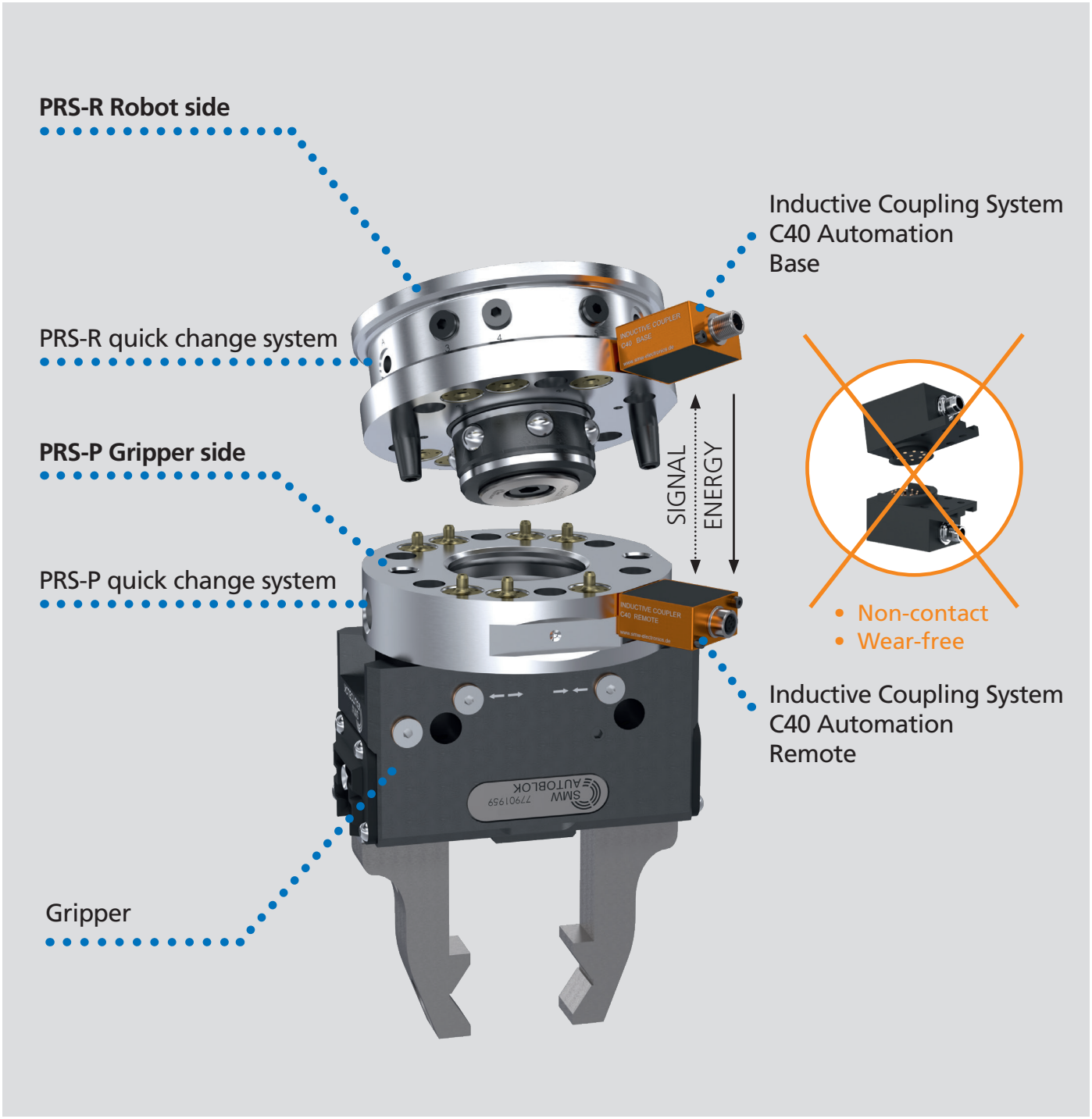
Overview



C40-IOL / C40-2x 0-10V / 6PNP

- Cubical coupling system (40x45x22 mm)
- Ideal suited for EOAT applications, no plug connection necessary
- Power supply 24 V
- Transmission distance 0 - 3 mm
- Energy transmission 15 W (24 V)
- Signal transmission:
  IO-Link (COM 1, COM 2, COM 3) / 6 PNP Signals + 2 Analog signals 0-10 V
- Hyprid Dynamic Pairing: Base IO-Link can be used with remote IO-Link or 2x 0-10 V/6 PNP
- IP67 Protection class
- Simple retrofit solutions thanks to standardized mounting kits for different replacement systems.

Application Example: Replacement of feed-through modules (power/signals) with contact pins

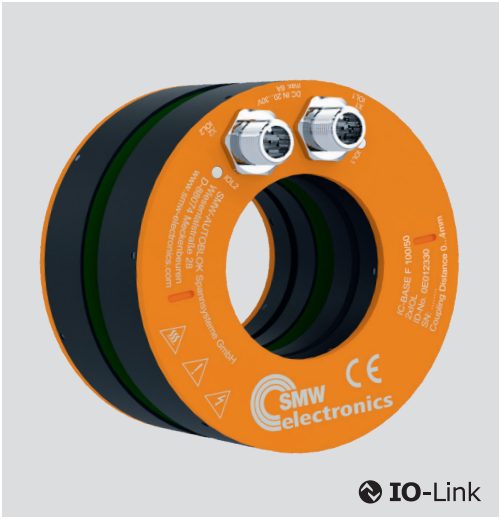


F100-2IOL

Axial coupler

Inductive Coupling System

■ **Contact free transmission of energy and signals**



Application/customer benefits

- Contact free transmission of energy and signals between moving / rotating and stationary components
- Application examples: Robotic (End of Arm Tooling), Automation, Mechanical engineering
- Substitution of slip ring / connector
- Dynamic Pairing
- Wear and maintenance free
- Protective functions: temperature monitoring, foreign object detection, reverse polarity protection
- Status LED with good visibility

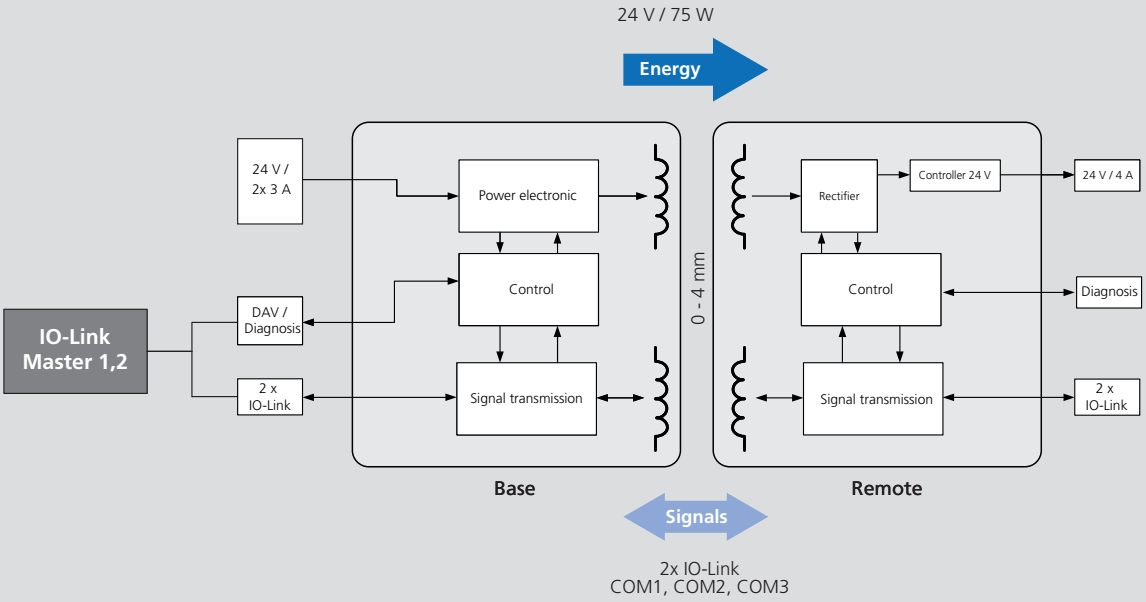
Technical features

- Diameter 100 mm / Through hole 50 mm
- Operating voltage 24 V / max. 6 A
- Transmission distance 0 - 4 mm
- Transmission of energy 24 V / 75 W
- Transmission of signals: 2 x IO-Link (COM 1, COM 2, COM 3)
- Connections: Base: 2x M12 x 1 male 5-pin, Remote: 2x M12 x 1 female 5-pin
- Protection class: IP67

Standard equipment

Inductive coupler base or remote

Block diagram



Subject to technical changes.
For more detailed information please ask our customer service.

IO-Link

Inductive coupling system F100-2IOL		
Type	**Base**	**Remote**
Id. No.	**0E012330**	**0E012331**
Operating temperature (housing surface)	-20 °C ... +60 °C	
Storage temperature	-20 °C ... +60 °C	
Transmission distance	0 mm ... 4 mm	
Operating voltage	24 V	-
Output voltage	-	24 V (75 W)
Signal transmission	2x IO-Link (COM2, COM 2, COM 3)	
LED	2 LEDs 2-color	
Current consumption (Base)	6 A (24 V)	-
Overload protection / short circuit protection	✓	✓
Residual ripple	-	< 50 mV
Reverse polarity protection	✓	-
Data-Valid output	max. 100 mA	
Ready delay	< 1 s	

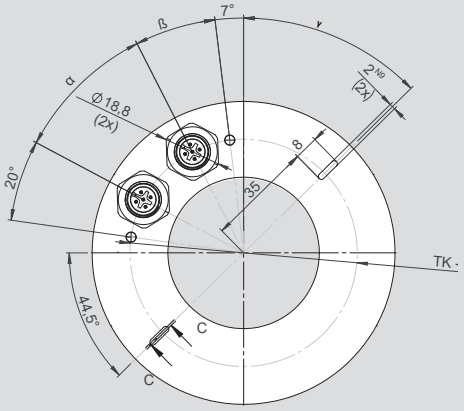
Inductive Coupling System

■ Stationary unit - Base
■ Mobile unit - Remote

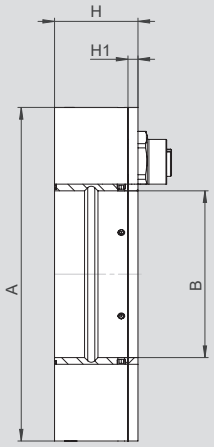
F100-2IOL

Axial coupler

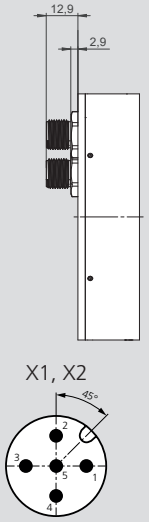
Base / Remote:



Base / Remote:



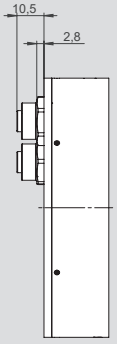
Base:



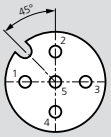
X1, X2

2x Male connector 5-pin
M12 x 1

Remote:



X1, X2



2x Female connector 5-pin
M12 x 1

Subject to technical changes.
For more detailed information please ask our customer service.

Inductive coupling system F100-2IOL			
Type		**Base**	**Remote**
Id. No.		**0E012330**	**0E012331**
A	mm	100	
B	mm	50	
C	mm	1	
H	mm	25	
H1	mm	3	
α	degree	35	
ß	degree	20	
γ	degree	45.5	
Housing material		Al, GFK	
Protection class		IP67	

Function LED IO-Link Base (X1, X2)	
LED Power	
Color	Yellow / red
Function	Yellow » SIO mode active and SIO signal is high
	Flash yellow (1000 ms on, 100 ms off), » IO-Link communication active, power is on, Remote was detected
	Flashing 2 Hz yellow » no IO-Link device detected, power on, no Remote detected
	Flashing 2 Hz red » Short circuit on IO-Link PIN
	Flashing 5 Hz red » Overload voltage output Remote

Function LED IO-Link Remote (X1, X2)	
LED Power	
Color	Yellow / red
Function	Yellow » SIO mode active and SIO signal is high
	Flash yellow (1000 ms on, 100 ms off),» IO-Link communication active, power is on, Base has been detected
	Flashing 2 Hz yellow » No IO-Link communication, power on, no Base detected
	Flashing 2 Hz red » Short circuit on IO-Link PIN
	Flashing 5 Hz red » Overload voltage output Base

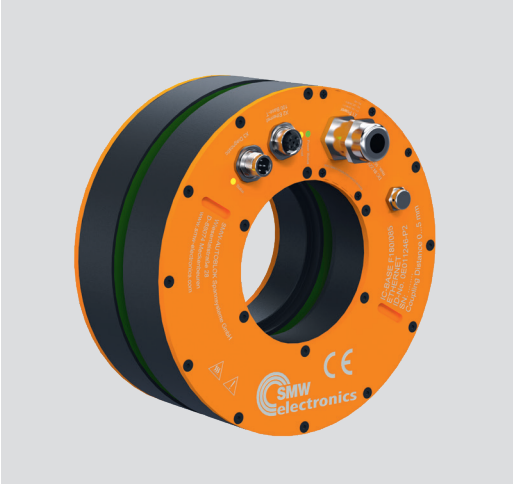
PIN assignment	PIN	X1 Base	X2 Base	X1 Remote	X2 Remote
Supply voltage	1	24 V IN	24 V IN	24 V OUT	24 V OUT
Data-Valid	2	DAV 24 V	-	-	-
Ground	3	GND	GND	GND	GND
IO-Link Signal	4	IO-Link CQ	IO-Link CQ	IO-Link CQ	IO-Link CQ
-	5	-	-	-	-

F180 Ethernet

Axial coupler

Inductive Coupling System

■ **Contact free transmission of energy and signals**



Application/customer benefits

- Contact free transmission of energy and signals between moving / rotating and stationary components
- Application examples: Packaging machines, special machines, automation, machine tools, printing machines, robot applications (EOAT)
- Substitution of slip ring / connector
- Dynamic Pairing
- Wear and maintenance free
- Protective functions: Temperature monitoring, foreign object detection
- Status LED with good visibility

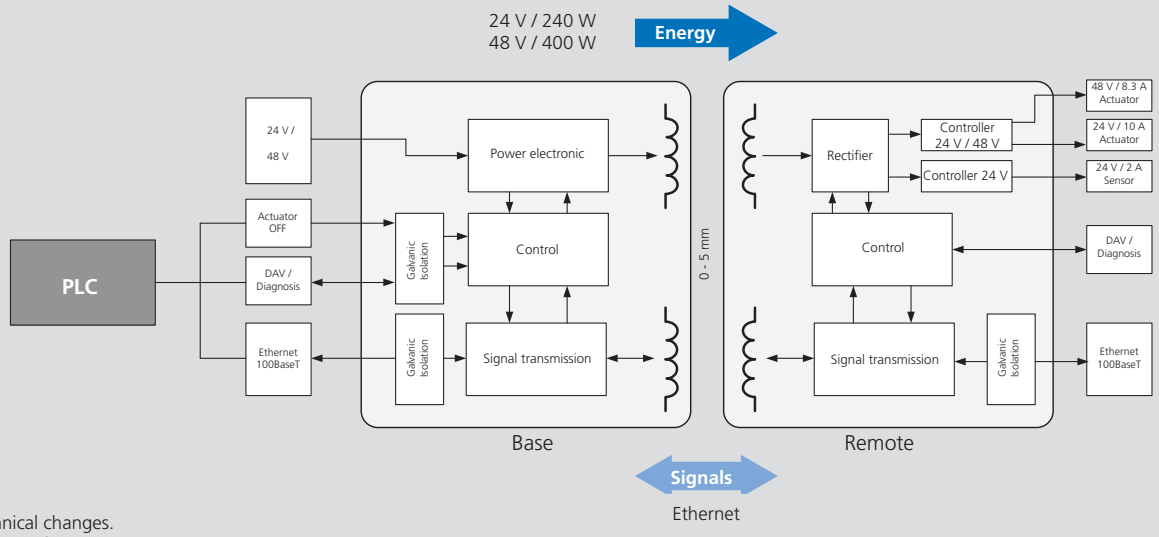
Technical features

- Diameter: 180 mm / Through hole: 85 mm
- Operating voltage: 24 V or 48 V
- Transmission distance: 0 - 5 mm at 24 V or 0 - 3 mm at 48 V
- Energy transmission: 24 V / 240 W or 48 V / 400 W (adjustable)
- Signal transmission: Ethernet 100 Base-T
- Transmission bandwidth < 5 MBit/s
- Connections: M12 Ethernet (D-coded), M12 Diagnosis (A-coded), terminal block (Energy)
- Protection class: IP 67

Standard equipment

Inductive coupler base oder remote

Block diagram



Subject to technical changes.
For more detailed information please ask our customer service.

Inductive coupling system F180 Ethernet		
Type	**Base**	**Remote**
Id. No.	**0E011246**	**0E011247**
Operating temperature (body surface)	-20° C ... +60° C	
Stocking temperature	-20° C ... +60° C	
Transmission distance	0 mm ... 5 mm (24 V) 0 mm ... 3 mm (48 V)	
Operating voltage	24 V / 48 V	-
Output voltage (Actuator supply)*	-	24 V DC / 10 A 48 V DC / 8.3 A
Output voltage (Sensor supply)*	-	24 V DC / 4 A
Signal transmission	Ethernet 100 Base-T	
LED function display	3 LEDs 2-color	
Current consumption (base)	15 A (24 V) 12 A (48 V)	-
Overload protection / short-circuit protection	✓	✓
Reverse polarity protection	-	< 50 mV
Data valid output	max. 100 mA	-
Ready delay	< 5 s	

*max 400 W total

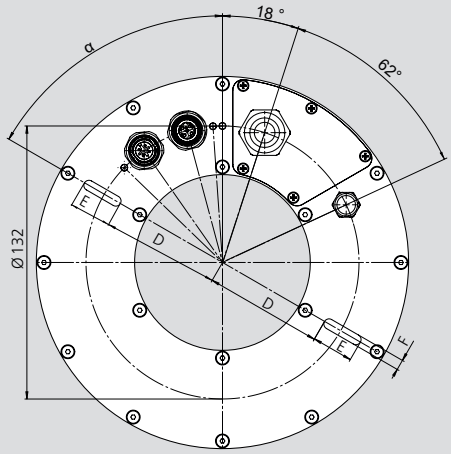
Inductive Coupling System

■ Stationary Unit - Base
■ Mobile Unit - Remote

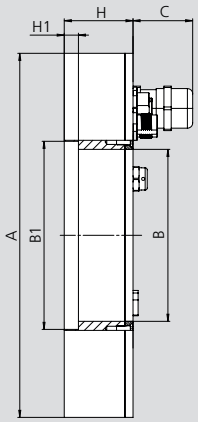
F180 Ethernet

Axial coupler

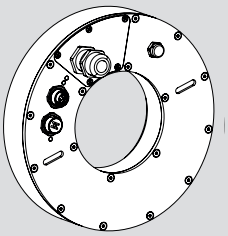
Base / Remote:



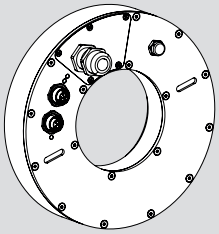
Base / Remote:



Base:



Remote:



Subject to technical changes.
For more detailed information please ask our customer service.

Inductive coupling system F180 Ethernet			
Type		**Base**	**Remote**
Id. No.		**0E011246**	**0E011247**
A	mm	180	
B	mm	85	
B1	mm	93	
C	mm	29.5	
D	mm	57	
E	mm	20	
F	mm	5	
H	mm	34	
H1	mm	7	
α	degree	60	
Housing material		Al, GFK	
Protection class		IP67	

Function Base	
LED Power	
Color	Green/red
Function	Off » Unit not supplied with voltage (or undervoltage)
	On (green) » Voltage ok and mobile unit has been detected
	2 Hz green 50/ 50% » Operating temperature in critical range
	1 Hz green 25/75% » Voltage ok but no mobile unit detected
	1 Hz red/green » Incompatible mobile unit detected
	2 Hz red » Foreign element detected
	5 Hz red » Internal error
LED Signal transmission Ethernet	
Color	Yellow/red
Function	Off » No mobile unit detected
	On/yellow » Signal transmission ready
	1 Hz yellow » Data packets are being transmitted
	3 Hz yellow » 50% of the transmission bandwidth used (10 s)
	8 Hz red » Data packets were discarded (in the last 10 s)
	On/red » Error in data transmission (internal error)
LED Energy transmission	
Color	Yellow/red
Function	Off » No mobile unit detected
	On (yellow) » Unit coupled, voltage output ok
	1 Hz red/yellow » Short circuit at voltage output sensor
	3 Hz red/yellow » Short circuit at voltage output actuator
	3 Hz red » Short circuit at both voltage outputs
	5 Hz red » Internal error

Function Remote	
LED Actuator	
Color	Green/red
Function	Off » Unit not paired
	On (green) » Unit paired, voltage output actuator ok
	Flashes 2 Hz red » Unit paired but short circuit on actuator
	Flashes 5 Hz red » Internal error
LED Sensor supply	
Color	Green/red
Function	Off » Unit not paired
	On (green) » Unit paired, voltage output sensor (24 V) ok
	Flashes 2 Hz red » Unit paired but short circuit on sensor (24 V)
	Flashes 5 Hz red » Internal error
LED Signal transmission	
Color	Yellow/red
Function	Off » No mobile unit detected
	On/yellow » Signal transmission ready
	Flashes 1 Hz yellow » Data packets are being transmitted
	Flashes 3 Hz yellow » 50% of the transmission bandwidth used (10 s)
	Flashes 8 Hz red » Data packets were discarded (in the last 10 s)
	On/red » Error in data transmission (internal error)

C40-IOL

Axial coupler

Inductive Coupling System

- **Contact free transmission of energy and signals**
- **Ideal for gripper changing systems and pallet change applications**

Application/customer benefits

- Contact free transmission of energy and signals between moving and stationary components
- Application examples: Operation of sensors in gripper changing systems (EOAT) and pallet change applications
- Easy retrofit solutions due to mounting kit
- Dynamic Pairing
- Wear and maintenance free
- Protective functions: Temperature monitoring, foreign object detection, reverse polarity protection

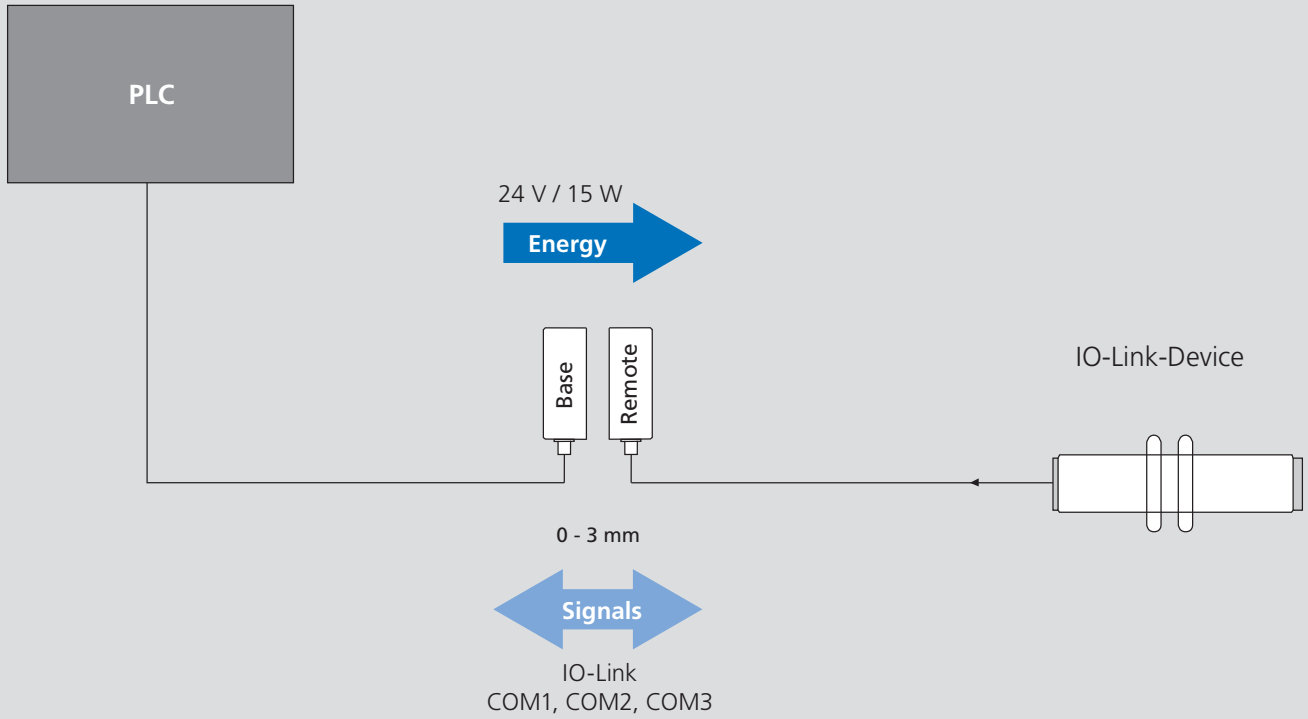
Technical features

- Mounting via 2 x M4 mounting screws (stainless steel)
- Operating voltage 24 V (18 ... 30 V)
- Transmission distance 0 - 3 mm
- Transmission of energy 24 V / 15 W
- Transmission of signals: 1 x IO-Link (COM 1, COM 2, COM 3)
- Connections: Base: M12 x 1 male 5-pin,
  Remote: M12 x 1 female 5-pin
- Protection class: IP67

Standard equipment

Inductiv coupler base or remote with each 2 mounting bolts

Block diagramm



Subject to technical changes.
For more detailed information please ask our customer service.

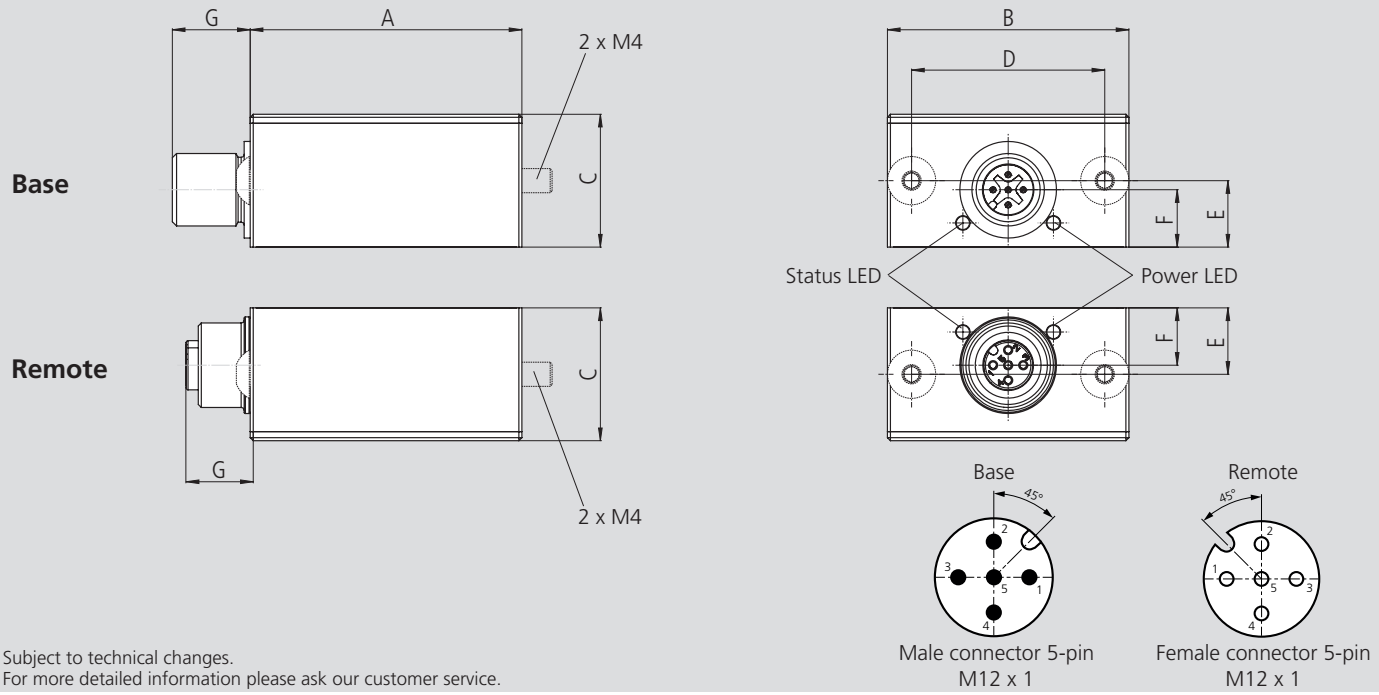
IO-Link

Inductive Coupling System

■ Contact free transmission of energy and signals
■ Ideal for gripper changing systems and pallet change applications

C40-IOL

Axial coupler



Subject to technical changes.
For more detailed information please ask our customer service.

Inductive coupling system C40-IOL			
Type		**Base**	**Remote**
Id. No.		**0E012615**	**0E012616**
A	mm	45	
B	mm	40	
C	mm	22	
D	mm	32	
E	mm	11	
F	mm	9.5	
G	mm	13	10.6
H	mm	M12 x 1 / Male	M12 x 1 / Female
Housing material		AL, V2A, FR4	
Protection class		IP67	
Operating temperature		-20° C ... +50° C	
Storage temperature		-20° C ... +80° C	
Transmission distance		0 - 3 mm	
Weight	kg	0.09	0.09
Operating voltage		24 V (18 ... 30 V)	-
Output voltage		-	24 V ± 10% DC
Power consumption (Base)		2000 mA	-
Power output (Remote)		-	625 mA
Overload protection / short circuit protection		✓	✓
Residual ripple		-	< 200 mV
Reverse polarity protection		✓	-
Temperature monitoring		✓	✓
Data-Valid Output		150 mA	-
Ready delay		< 600 ms	

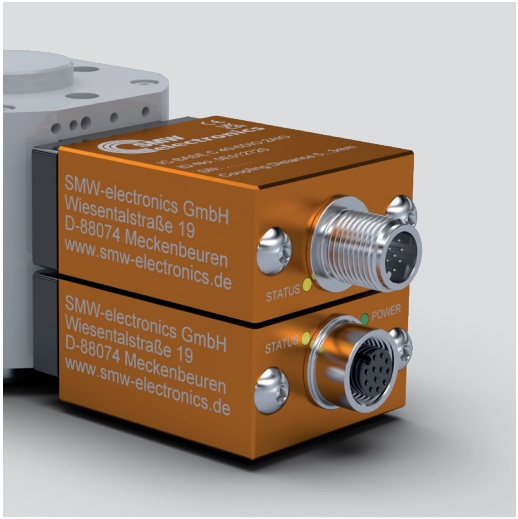
PIN assignment		Signal Base	Signal Remote
Supply voltage	1	24 V IN	24 V OUT
Digitalsignal	2	-	-
Ground	3	GND	GND
IO-Link Signal	4	IO-Link CQ	IO-Link CQ
Data-Valid	5	DAV 24 V	-

C40-2x 0-10V / 6PNP

Axial coupler

Inductive Coupling System

- **Contact free transmission of energy and signals**
- **Ideal for gripper changing systems and pallet change applications**



Application/customer benefits

- Contact free transmission of energy and signals between moving and stationary components
- Application examples: Operation of sensors in gripper changing systems (EOAT) and pallet change applications
- Easy retrofit solutions due to mounting kit
- Dynamic Pairing
- Wear and maintenance free
- Protective functions: Temperature monitoring, foreign object detection, reverse polarity protection

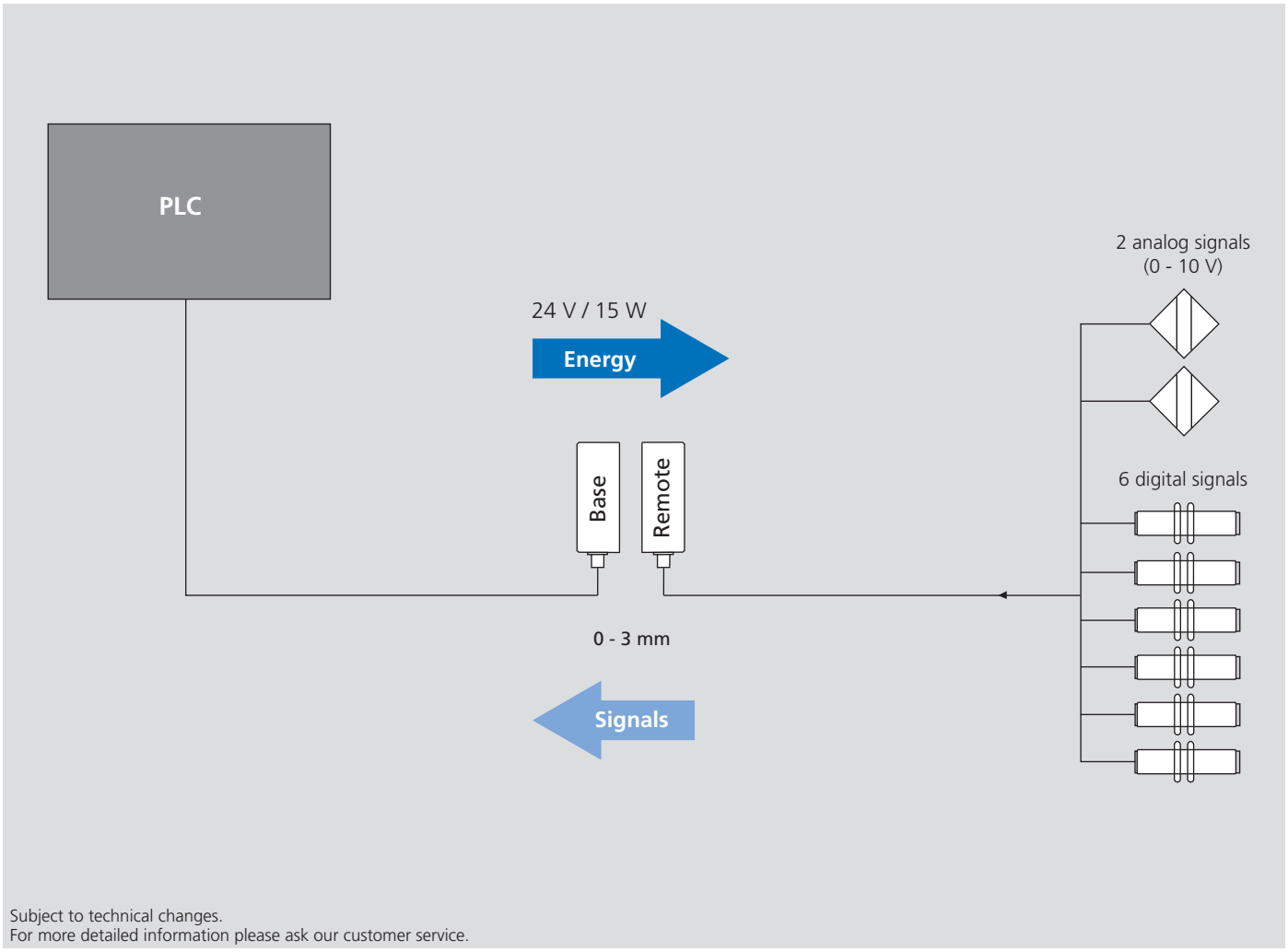
Technical features

- Mounting via 2 x M4 mounting screws (stainless steel)
- Operating voltage 24 V (18 ... 30 V)
- Transmission distance 0 - 3 mm
- Transmission of energy 24 V / 15 W
- Transmission of signals: 6 x PNP, 2 x Analog 0 - 10 V
- Connections: Base: M12 x 1 male 12-pin,
  Remote: M12 x 1 female 12-pin
- Protection class: IP 67

Standard equipment

Inductiv coupler base or remote with each 2 mounting bolts

Block diagram



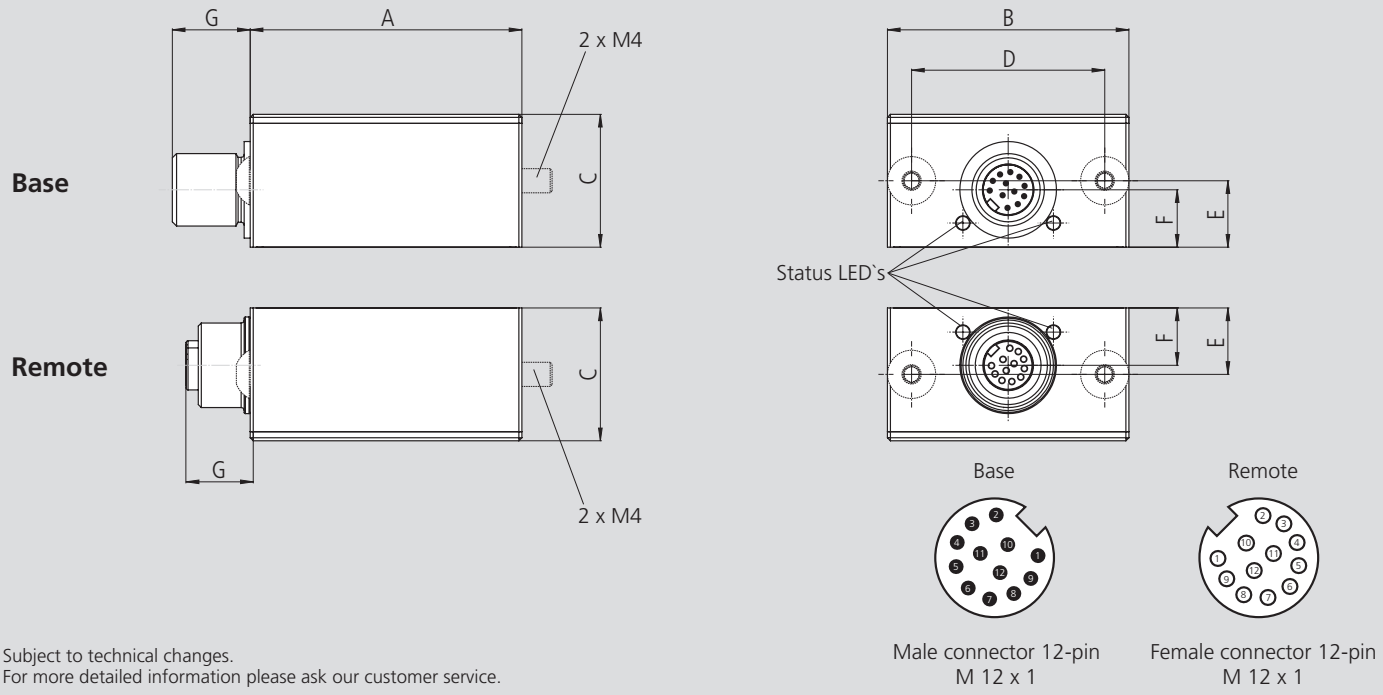
Subject to technical changes.
For more detailed information please ask our customer service.

Inductive Coupling System

- Contact free transmission of energy and signals
- Ideal for gripper changing systems and pallet change applications

C40-2x 0-10V / 6PNP

Axial coupler



Male connector 12-pin
M 12 x 1

Female connector 12-pin
M 12 x 1

Subject to technical changes.
For more detailed information please ask our customer service.

Inductive coupling system C40-2x 0-10V / 6PNP			
Type		**Base**	**Remote**
Id. No.		**0E012720**	**0E012721**
A	mm	45	
B	mm	40	
C	mm	22	
D	mm	32	
E	mm	11	
F	mm	9.5	
G	mm	13	10.6
H	mm	M12 x 1 / Male	M12 x 1 / Female
Housing material		AL	
Protection class		IP67	
Operating temperature		-20° C ... +50° C	
Storage temperature		-20° C ... +80° C	
Transmission distance		0 - 3 mm	
Weight	kg	0.09	0.09
Operating voltage		24 V (18 ... 30 V)	-
Output voltage		-	24 V ± 10% DC
Power consumption (Base)		2000 mA	-
Power output (Remote)		-	625 mA
Overload protection / short circuit protection		✓	✓
Residual ripple		-	< 200 mV
Reverse polarity protection		✓	-
Temperature monitoring		✓	✓
Data-Valid Output		150 mA	-
Ready delay		< 600 ms	
PIN assignment		**Signal Base**	**Signal Remote**
Supply voltage	1	24 V IN	24 V OUT
Ground	2	GND	GND
Digital signal 1	3	0/24 V OUT	0/24 V IN
Digital signal 2	4	0/24 V OUT	0/24 V IN
Digital signal 3	5	0/24 V OUT	0/24 V IN
Digital signal 4	6	0/24 V OUT	0/24 V IN
Digital signal 5	7	0/24 V OUT	0/24 V IN
Digital signal 6	8	0/24 V OUT	0/24 V IN
Analog signal 1	9	0 ... 10 V OUT	0 ... 10 V IN
Analog signal 2	10	0 ... 10 V OUT	0 ... 10 V IN
	11	-	-
Data-Valid	12	DAV 24 V	-

IPS 4.0 M08-PNP

Inductive proximity sensor

Application/customer benefits

- Inductive proximity sensor
- Flexible use with versatile mounting options
- Compact and rigid design

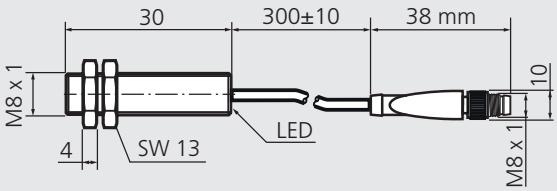
Technical features

- 2 mm flush
- Temperature range -40 ... +85 °C
- Operating voltage 24 V
- M8 x 1 Mounting
- Digital singnal output PNP normally open (NO)
- Protection class: IP67

Standard equipment

IPS 4.0 M08-PNP
2 self locking nuts M8

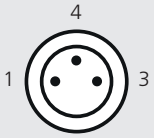
0E012802



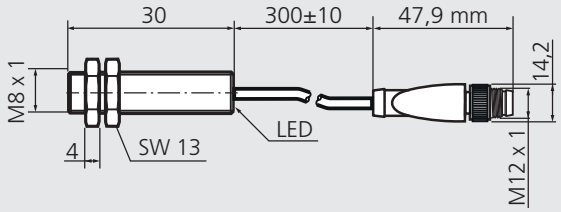
Pin Assignment

Pin	Description
1	24 V DC (brown)
3	GND (blue)
4	Normally open (NO) (black)

Male connector M8 x 1



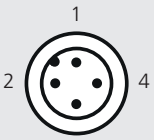
0E012803



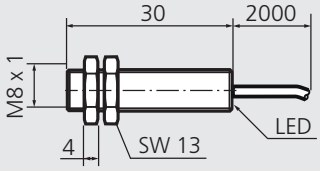
Pin Assignment

Pin	Description
1	24 V DC (brown)
2	NC
3	GND (blue)
4	Normally open (NO) (black)

Male connector M12 x 1



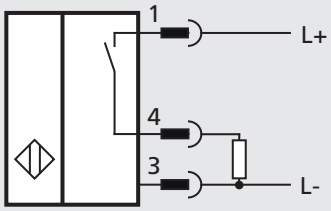
0E012804



Wire Assignment

Description
24 V DC (brown) (1)
GND (blue) (3)
Normally open (NO) (black) (4)

Connection



Technical data

Type	IPS 4.0 M08-PNP	IPS 4.0 M08-PNP	IPS 4.0 M08-PNP
Id. No.	0E012802	0E012803	0E012804
Switching function	Normally open (NO)		
Output type	PNP		
Rated operating distance	2 mm		
Installation	Flush		
Assured operating distance	0 ... 1.62 mm		
Operating voltage U_B	5 ... 30 V		
Switching frequency	0 ... 6000 Hz		
Reverse polarity protection	Reverse polarity protected		
Operating current	0 ... 100 mA		
No-load supply current	≤ 10 mA		
Switching state indicator	LED yellow		
$MTTF_d$	960 a		
Mission time (T_M)	20 a		
Diagnostic Coverage (DC)	0 %		
Ambient temperature	-40 ... +85 °C		
Connection type	Cable connector M8 x 1, PUR, 300 mm	Cable connector M12 x 1, PUR, 300 mm	Cable PUR, 2000 mm
Core cross section	0.14 mm²		
Housing material	Brass, nickel plated		
Protection class	IP67		
Threading	M8		

IPS 4.0 M08-0-10V e-sensing

Application/customer benefits

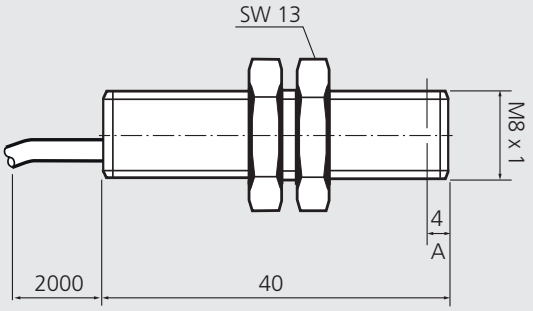
- Inductive positioning sensor
- Flexible use with versatile mounting options
- High accuate distance measuring
- Compact and rigid design

Technical features

- 2 mm Flush
- Temperature range -10 ... +70 °C
- Operating voltage 12 ... 36 V DC
- M8 x 1 Mounting
- Protection class: IP67

Standard equipment

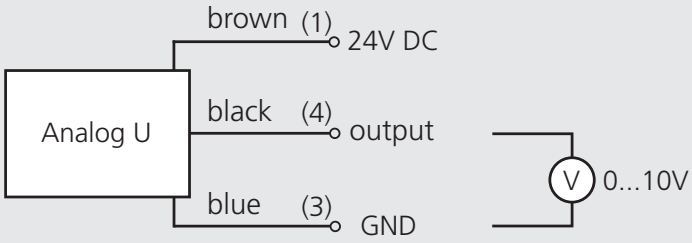
IPS 4.0 M08-0-10V
2 self locking nuts M8



Wire Assignment

Wire	Description
1	24 V DC (brown)
3	GND (blue)
4	0-10V output (black)

Connection



Technical data

Type	IPS 4.0 M08-0-10V
Id. No.	0E012810
Installation	flush
Measuring distance	0 ... 2 mm
Repeat accuracy	< 0.02 mm
Linearity error	± 60 µm (S = 0,5 ... 1,5 mm), ± 140 µm (S = 0 ... 2 mm)
Temperature drift	± 3 % (Full Scale: 0 ... +60 °C), ± 5 % (Full Scale: -10 ... +70 °C)
Response time	< 0.5 ms
Operating voltage	12 ... 36 V DC
No-load supply current max.	10 mA
Output circuit	Voltage output
Output signal	0 ... 10 V DC
Reverse polarity protection	Yes
Housing material	Stainless steel
Dimension	8 mm
Housing length	40 mm
Connection type	Cable, 2000 mm
Tightening torque max.	10 Nm
Ambient temperature	-10 ... +70 °C
Protection class	IP 67

Digitized Workholding

Long-stroke vises for automation application

SLX digit (Digitized hydraulic long-stroke vise)

More Information

you find here!

SLX e-motion (Mechatronic long-stroke vise)

More Information

you find here!

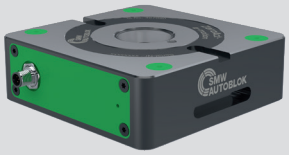
Zero-Point Clamping Systems for quick-change in automation

APS (Pneumatic drive)

More Information

you find here!

ZeroAct e-motion (Mechatronic drive)



More Information

you find here!

Further products for automation
can be found in our catalog Digit on the
www.smw-autoblok.com website.

Application examples

Inductive coupling system with hollow shaft allows for non-contact energy and signal transmission and endless 360° rotation on both sidesfor the MX-L 520 long-stroke gripper.

Sealed

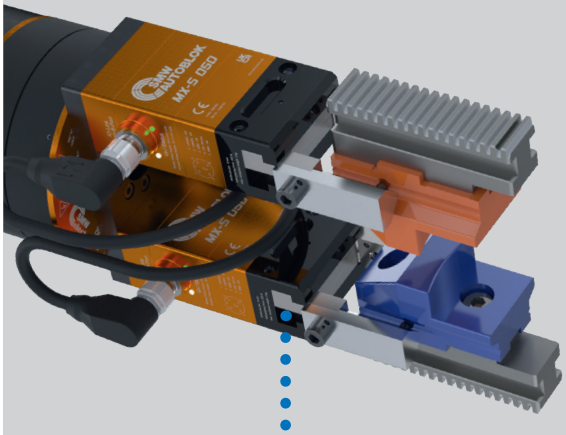
F180 ETH
Inductive coupling system

Self-locking drive
additional gripping force retention by motor brake and spring assembly

Very high gripping force
up to 40.000 N

360° Rotation

Automated quick jaw change



360° Rotation

KNCS-matic chuck for automated quick jaw change by robot

2 x MX-S 050
Gripper unit

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SMW electronics
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