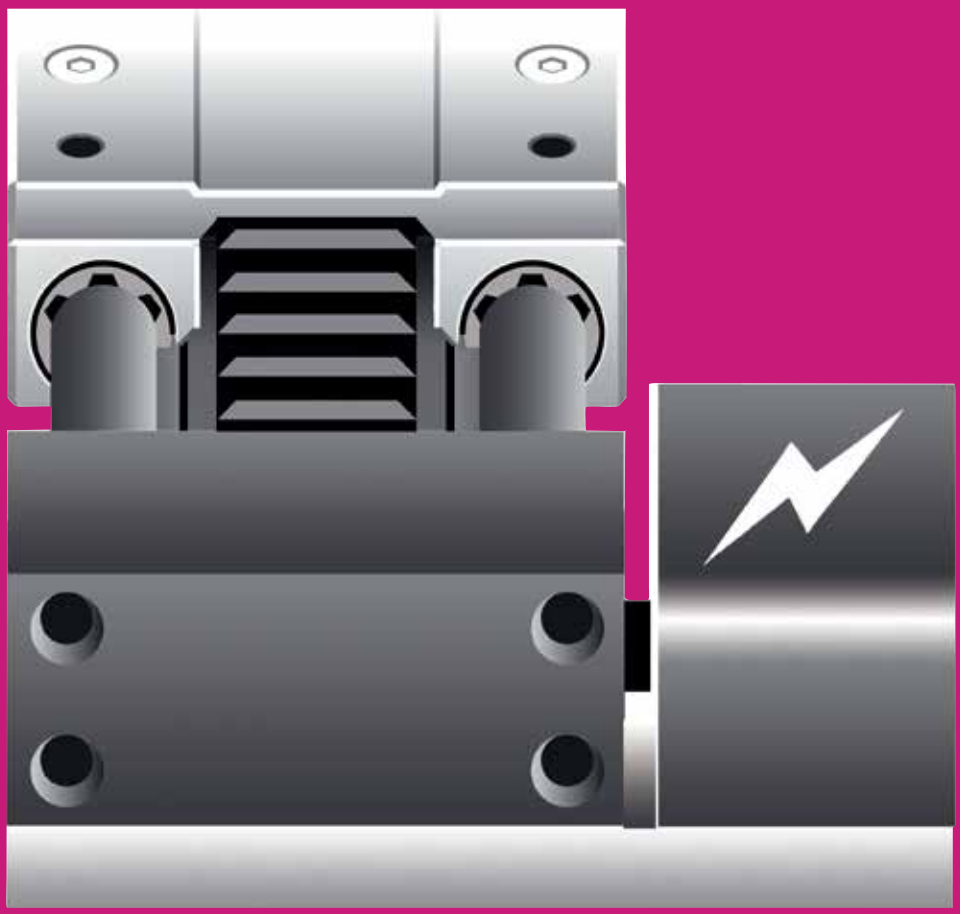


drylin® Accessories - electrical

Motor control systems

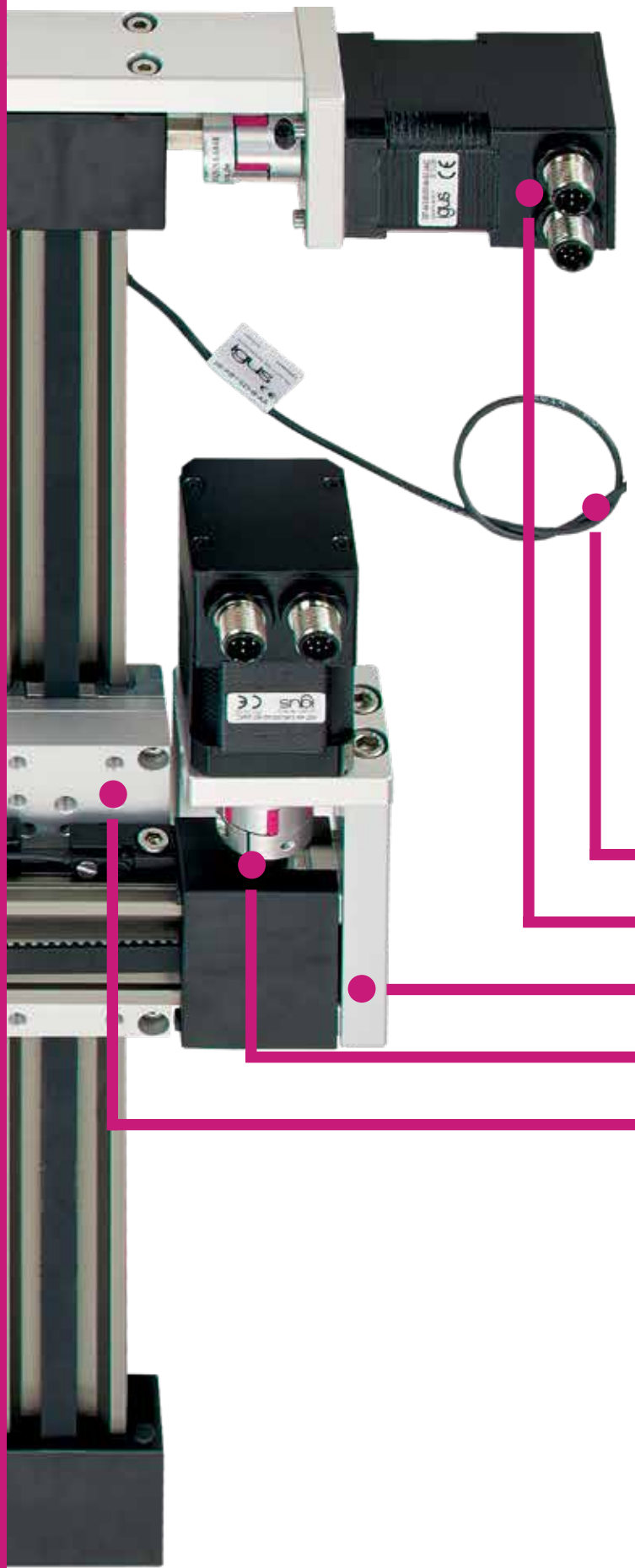
Stepper motors

DC motors

Motor flanges

Cables and proximity switches

Mounting accessories



Accessories for drylin® linear axes

Almost every drylin® linear axis can be retrofitted with a corresponding motor and accessories such as initiators (proximity switches). igus® offers a large modular system of motors, matching couplings and motor flanges plus many practical components for the combination of linear axes as well as fastening material.

- Motor flanges available for stepper, DC & EC, customs available upon request
- Linear robot structures
- Fastening options

chainflex® motor and encoder cables

drylin® stepper and DC motors

Motor flange made of aluminum

Couplings for motor and shaft connection

Adapter plates for linear robot structures

Available from stock
Detailed information about delivery time online.

Electric traversing, manual installation

Stepper motors

- Powerful in 5 installation sizes
- Motors with connector or stranded wire
- With encoder and brake
- Increased torque resistance due to machined flat motor shaft (D-cut)

▶ Page 1720

DC motors

- 3 sizes
- Torque from 0.1 – 1.8Nm
- Up to 440rpm
- Increased torque resistance due to machined flat motor shaft (D-cut)

▶ Page 1724

Motor flanges

- Motor connection for drylin® linear axes
- For stepper and DC motors
- Suitable for igus® couplings

▶ Page 1731

Cables and proximity switches

- chainflex® connection cables with straight or angled connectors
- Proximity switches: Limit and reference switches
- For drylin® linear modules and toothed belt axes

▶ Page 1732

Mounting accessories

- Adapter plates for linear robot structures
- Spacer for height adjustment of SHT/SLW linear modules
- Mounting material

▶ Page 1737

Motor driver

- For DC, EC and stepper motors
- Intuitive user interface
- Quick and easy set up
- Compatible with many industrial control systems
- For all drylin® linear axes

▶ Page 1746

Various NEMA stepper motor options

Motor with stranded wires
Motors with stranded wires are the least expensive and the most common stepper motors. The connecting wires (length 30cm) for this type exit from the housing and will be configured with a JST connector. They are usually installed in machines and equipment that have an additional housing or are used in clean environments.

Motor with connector
The connector interface provides a high IP65 protection level (IP: International Protection). The higher the IP rating, the better the motor is protected from the ingress of dirt and water.

Motor with connector and encoder
The encoder (for increased machine reliability) sends signals from the motor to the motor control. The encoder verifies that the required linear motion has occurred precisely.

Motor with connector, encoder and brake
The brake can hold the payload in position when the motor is not under power. This is used as a safety feature during power failures – recommended for vertically mounted systems.

All motors are delivered with a machined flat motor shaft (D-cut) for increased torque resistance.

Installation sizes of NEMA stepper motors

NEMA11: Tiny but with plenty of power
This motor has very compact dimensions. Even so, heavy loads can be moved with the suitable lead screw pitch. This motor is typically used on small test and analysis equipment and miniature adjustments.

NEMA17: Small, but lots of power
This little motor has impressive torque and high RPMs. Reliable operation at fast travel with low loads.

NEMA23: The best known stepper motor size
Versatile choice due to the high torque and rotational speed. This motor is the best choice for most applications with medium loads.

NEMA23XL: The power motor in the medium installation size
A development extension of the typical NEMA23 with nearly twice the torque. The assembly dimensions are identical to the NEMA23, allowing many applications.

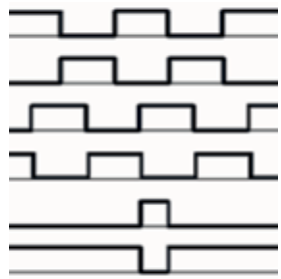
NEMA34: The power pack in the large installation size
Applications with higher loads are implemented using the largest installation size. Heavy-duty format adjustments or parallel dual axis setups are among its primary duties.

Technical data

Distance over hubs		28	42	56	60	86
Motor		**NEMA11**	**NEMA17**	**NEMA23**	**NEMA23XL**	**NEMA34**
Connection dimensions	[mm]	28 x 28	42 x 42	56 x 56	60 x 60	86 x 86
Maximum voltage	[VDC]	60	60	60	60	60
Nominal voltage	[VDC]	24-48	24-48	24-48	24-48	24-48
Nominal current	[A]	1.0	1.8	4.2	4.2	6.4
Holding torque	[Nm]	0.13	0.5	2.0	3.5	5.9
Ratchet torque	[Nm]	0.004	0.022	0.068	0.075	0.210
Step angle	[°]	1.8	1.8	1.8	1.8	1.8
Resistance/phase	[Ω]	2.30 ±10%	1.75 ±10%	0.5 ±10%	0.65 ±10%	0.33 ±10%
Inductivity/phase	[mH]	1.40 ±20%	3.30 ±20%	1.90 ±20%	3.20 ±20%	3.00 ±20%
Moment of inertia – rotor	[kgcm²]	0.02	0.08	0.48	0.84	2.70
Shaft load, axial	[N]	7	7	15	15	65
Shaft load, radial	[N]	20	20	52	63	200

Encoder		
Operating voltage	[VDC]	5
Signals/rotation		500
Zero signal/index		yes
Line driver		RS422 Protocol

Signal shape (Clockwise motor rotation) [CW]



Technical data

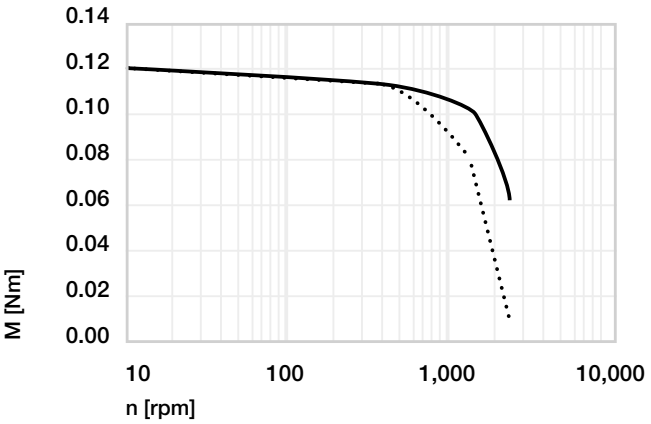
Plate size brake		28	42	56	60	86
		NEMA11	**NEMA17**	**NEMA23**	**NEMA23XL**	**NEMA34**
Operating voltage	[VDC]	–	24 ±10%	24 ±10%	24 ±10%	24 ±10%
Output rating	[W]	–	8	10	10	11
Holding torque	[Nm]	–	0.4	1.0	1.0	2.0
Mass moment of inertia	[kgcm²]	–	0.01	0.02	0.02	0.07

Mass moment of inertia		28	42	56	60	86
		NEMA11	**NEMA17**	**NEMA23**	**NEMA23XL**	**NEMA34**
Product weight	[kg]	0.25	0.32	1.12	1.56	3.20
With encoder	[kg]	0.27	0.34	1.14	1.58	3.30
With encoder and brake	[kg]	–	0.58	1.36	1.82	3.60

Operating data		
Ambient temperature	[°F]	14 to +122
Max. allowable temperature increase	[°F]	176
Insulation class		B
Air humidity (non condensing)	[%]	85
IP rating – motor housing		IP65 (shaft seal IP52, motor with stranded wires IP40)
CE conformity		EMC directive

Flange size 28 (NEMA11)

MOT-AN-S-060-001-028-…



Flange size 42 (NEMA17)

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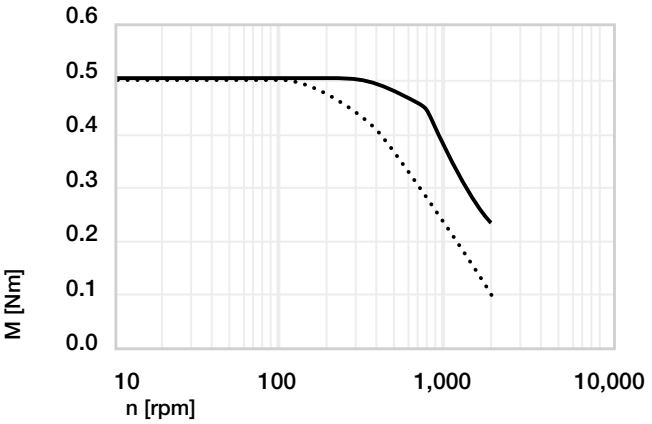

Flange size 56 (NEMA23)

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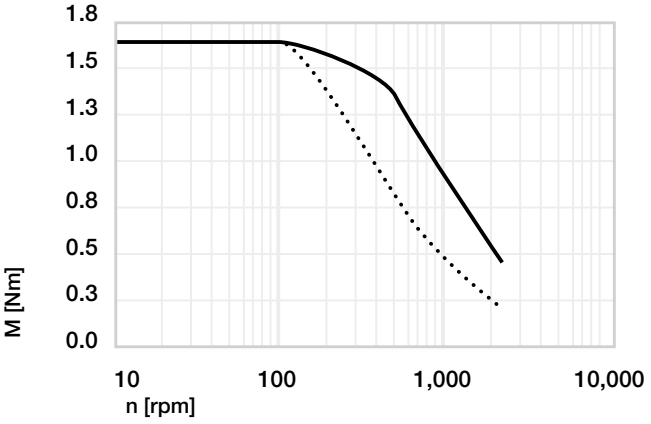

Flange size 60 (NEMA23XL)

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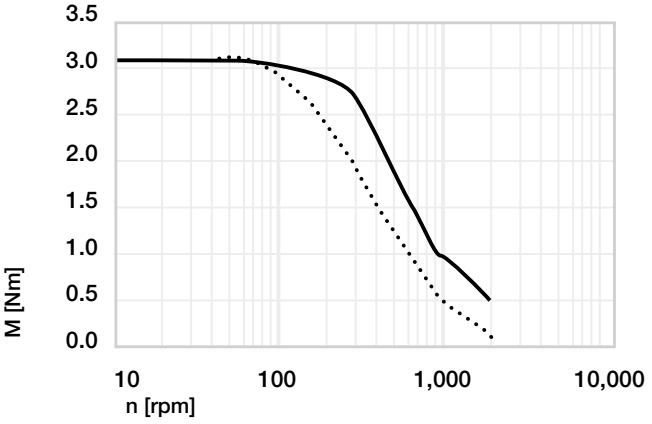
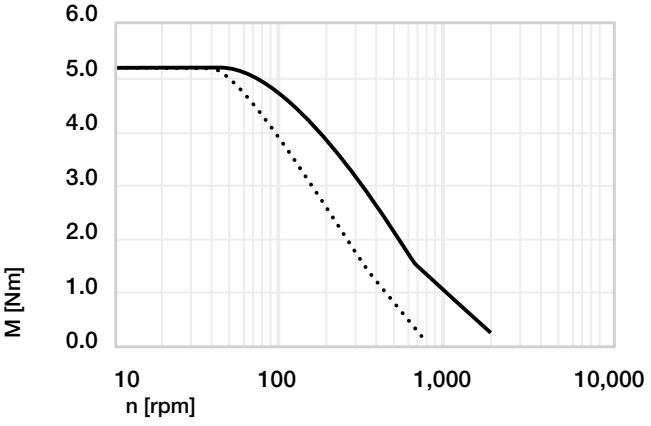


Flange size 86 (NEMA34)

MOT-AN-S-060-059-086-…



------- 24VDC ——— 48VDC

The characteristic curves are determined in quarter step mode

Order key

Order example

MOT - AN - S - 060 - 020 - 056 - M - A - AAAA

Product type	Design	Motor type	Maximum voltage	Holding torque	Distance over hubs	Motor connection	Options	Specification

Options:

Product type
MOT = Motor

Type
AN = Design

Motor type
S = Stepper motor

Maximum voltage
060 = 60V/DC

Holding torque
001 = 0.1Nm
005 = 0.5Nm
020 = 2.0Nm
035 = 3.5Nm
059 = 5.9Nm

Distance over hubs
028 = 28mm (NEMA11)
042 = 42mm (NEMA17)
056 = 56mm (NEMA23)
060 = 60mm (NEMA23XL)
086 = 86mm (NEMA34)

Motor connection
M = Metric connector
L = Stranded wires

Options
A = Without
C = Incremental encoder
D = Incremental encoder & brake

Specification
AAAA = Standard
AAAC = Encoder
AAAD = Encoder & brake

More information ▶ www.igus.com/drylinE

drylin® | Stepper motors | Product range

EC motors with Hall and encoder

The brushless DC motors have a high speed and allow quick positioning. The motor encoder enables precise positioning.

- Lubrication and maintenance-free
- More cost-effective than conventional servomotors
- Installation sizes NEMA 17, 23, 24, 34 are available
- Improved performance for drylin® E single axes, linear robots and delta robots

Technical data

Part No.	Number of phases	Number of poles	Nominal voltage [VDC]	Nominal speed [rpm]	Rated torque [Nm]	Nominal power [W]	Nominal current [A]	Peak current [A]	Maximum torque [Nm]
MOT-EC-42-C-H-A	3	8	48	3,000	0.3	90	2.61	7.8	0.9
MOT-EC-56-C-H-A	3	8	48	3,000	0.6	188	5.00	15.0	1.8
MOT-EC-60-C-H-A	3	8	48	3,000	0.8	250	7.50	22.5	2.4
MOT-EC-86-C-H-A	3	8	48	3,000	1.0	314	8.70	26.1	3.0
MOT-EC-42-C-I-A	3	8	48	3,000	0.3	90	2.61	7.8	0.9
MOT-EC-56-C-I-A	3	8	48	3,000	0.6	188	5.00	15.0	1.8
MOT-EC-60-C-I-A	3	8	48	3,000	0.8	250	7.50	22.5	2.4
MOT-EC-86-C-I-A	3	8	48	3,000	1.0	314	8.70	26.1	3.0

Part No.	Resistance [Ω]	Inductivity [mH]	Torque constant [Nm/A]	Voltage constant [V/krpm]	Weight [kg]	Distance over hubs [mm]	Encoder [Pulse/ rotation]	Encoder voltage [V]	Index [VDC]
MOT-EC-42-C-H-A	1.65	1.00	0.115	12.0	0.75	42	–	–	No
MOT-EC-56-C-H-A	0.50	0.70	0.120	12.0	1.30	56	–	–	No
MOT-EC-60-C-H-A	0.47	0.65	0.110	11.0	1.35	60	–	–	No
MOT-EC-86-C-H-A	1.08	1.27	0.115	11.5	2.30	86	–	–	No
MOT-EC-42-C-I-A	1.65	1.00	0.115	12.0	0.75	42	1,000	5	Yes
MOT-EC-56-C-I-A	0.50	0.70	0.120	12.0	1.30	56	1,000	5	Yes
MOT-EC-60-C-I-A	0.47	0.65	0.110	11.0	1.35	60	1,000	5	Yes
MOT-EC-86-C-I-A	1.08	1.27	0.115	11.5	2.30	86	1,000	5	Yes

drylin® | Gearboxes | Product range

Planetary gear for stepper motors

Suitable for stepper motors and EC/BLDC motors with flange sizes 56, 60, 86, new gearboxes with a gear reduction of 10 and 15 can be supplied. In the case of slow rotating stepper motors, torque of up to 44Nm can be generated permanently. In the case of EC/BLDC, up to 35Nm at 200rpm (short-term).

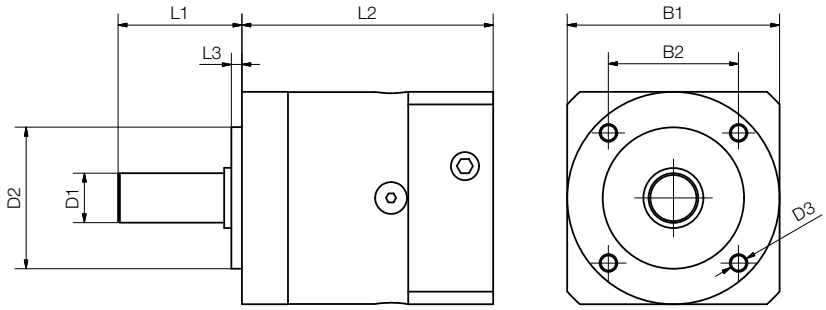
- For igus® stepper motors with flange sizes NEMA 23, 23XL, 34
- Available gear reductions: 3, 5, 10, 15
- Higher motor torque for heavy loads

Order key

Order example

GEA - 60 - 3 - 60 - ST - 063

Gearbox	Distance over hubs	Gear reduction	Width B1	Stepper motor	Shaft [mm]



Technical data and dimensions [mm]

Part No.	Motor size	B1	B2	D1 Ø h7	D2 Ø h7	D3 Ø	L1 ±1.0	L2	L3
GEA-60-3-60-ST-063	NEMA23	60.0	36.7	14.0	40.0	M5	35.0	71.0	3.0
GEA-60-3-60-ST-080	NEMA23XL	60.0	36.7	14.0	40.0	M5	35.0	71.0	3.0
GEA-60-3-90-ST-140	NEMA34	90.0	36.7	14.0	40.0	M5	35.0	86.0	3.0
GEA-60-5-60-ST-063	NEMA23	60.0	36.7	14.0	40.0	M5	35.0	71.0	3.0
GEA-60-5-60-ST-080	NEMA23XL	60.0	36.7	14.0	40.0	M5	35.0	71.0	3.0
GEA-60-5-90-ST-140	NEMA34	90.0	36.7	14.0	40.0	M5	35.0	86.0	3.0
GEA-60-10-60-ST-063	NEMA23	60.0	36.7	14.0	40.0	M5	35.0	71.0	3.0
GEA-60-10-60-ST-080	NEMA23XL	60.0	36.7	14.0	40.0	M5	35.0	71.0	3.0
GEA-60-10-90-ST-140	NEMA34	90.0	36.7	14.0	40.0	M5	35.0	86.0	3.0
GEA-60-15-60-ST-063	NEMA23	60.0	36.7	14.0	40.0	M5	35.0	71.0	3.0
GEA-60-15-60-ST-080	NEMA23XL	60.0	36.7	14.0	40.0	M5	35.0	71.0	3.0
GEA-60-15-90-ST-140	NEMA34	90.0	36.7	14.0	40.0	M5	35.0	86.0	3.0

drylin® | DC motors | Product range

DC motors with spur gear

This small DC motor can be powered directly from a power source, such as a battery. It reverses direction by changing the polarity. Typical applications are sensor/camera travel and light-duty format adjustments with drylin® lead screw or toothed belt axes.

- Torque [Nm] from 0.1Nm to 1.5Nm
- Up to 440rpm
- Can be operated at 12 & 24VDC

1. **MOT-AE-B-024-001-037-F-A-AAAA**
2. **MOT-AE-B-024-003-037-F-A-AAAA**
3. **MOT-AE-B-024-005-036-F-A-AAAA**
4. **MOT-AE-B-024-007-037-F-A-AAAA**
5. **MOT-AE-B-024-010-042-F-A-AAAA**
6. **MOT-AE-B-024-015-037-F-A-AAAA**
7. **MOT-AE-B-024-018-042-F-A-AAAA**

Technical data

Motor		1	2	3	4	5	6	7
Maximum voltage	[VDC]	24	24	24	24	24	24	24
Nominal voltage	[VDC]	24	24	24	24	24	24	24
Nominal current	[A]	0.5	0.5	0.9	0.5	2.3	0.5	2.0
Nominal torque	[Nm]	0.1	0.3	0.5	0.7	1.0	1.5	1.8
Start up torque	[Nm]	0.3	0.5	1.0	1.0	3.0	1.8	6.0
Idling speed	[1/min]	440	146	223	58	290	22	115
Rated speed	[1/min]	350	112	190	47	252	17	101
Shaft load, axial	[N]	6.8	6.8	25	6.8	30	6.8	30
Shaft load, radial	[N]	9.8	9.8	30	9.8	50	9.8	50
Reduction gearing	[N]	10	30	27	75	24	200	61
Product weight								
MOT-AE	[kg]	0.207	0.213	0.450	0.221	0.650	0.270	0.690
MOT-DC	[kg]	0.280	0.280	0.420	0.280	0.580	0.280	0.580

Operating data		MOT-AE | MOT-DC
Ambient temperature	[°F]	+14 to +140 | +14 to +122)
Max. allowable temperature increase	[°F]	60
Air humidity (non condensing)	[%]	85
IP rating – motor housing		IP30|IP41 / IP30|IP41 / IP20|IP41 / IP30|IP41 / IP20|IP41 / IP30|IP41 / IP20|IP41
Operating mode		S2 (short-term operation)

Motor connection low-profile connector								
Length	[mm]	6.5	6.5	6.0	6.5	9.0	6.5	9.0
Width	[mm]	4.0	4.0	3.8	4.0	4.8	4.0	4.8
Strength	[mm]	0.4	0.4	0.5	0.4	0.5	0.4	0.5
Can be combined with motor flange		–	–	–	–	MF-1040	–	MF-1040

drylin® | DC motors | Product range

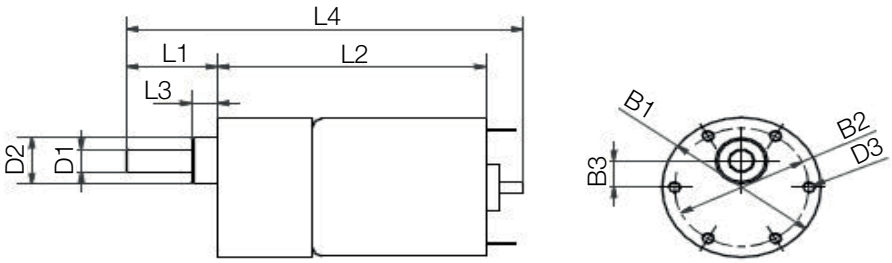
DC motors with spur gear and “protect” protection housing

Users benefit from protected DC motors in two ways. A motor housing prevents the ingress of particles of any kind. At the same time, the housing contains the appropriate motor connector for easy connection, with protection against occasional contact with water.

- Delivered ready to install with DC motor
- Increased operation reliability
- Quick connection with M12 connector
- For all drylin® linear axes

1. **MOT-DC-37-M-A-A**
2. **MOT-DC-37-M-A-B**
3. **MOT-DC-36-M-A-D**
4. **MOT-DC-37-M-A-D**
5. **MOT-DC-42-M-A-D**
6. **MOT-DC-37-M-A-H**
7. **MOT-DC-42-M-A-F**

Technical data ▶ Page 1728



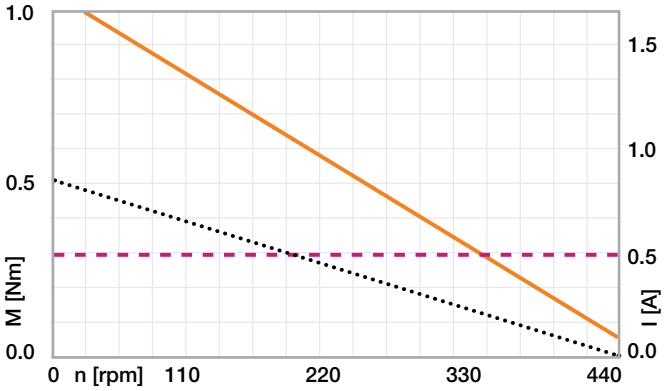
Dimensions [mm]

Part No.	B1	B2	B3	D1	D2	D3	L1	L2	L3	L4
	±0.3	±0.2	±0.1	–0.013	±0.025	Ø	±1	±1		
MOT-AE-B-024-001-037-F-A-AAAA	37.0	31.0	7.0	6.0	12.0	M3	21.0	59.5	6.0	92.5
MOT-AE-B-024-003-037-F-A-AAAA	37.0	31.0	7.0	6.0	12.0	M3	21.0	62.0	6.0	95.0
MOT-AE-B-024-005-036-F-A-AAAA	36.0	26.0	6.0	6.0	20.0	M3	19.3	85.6	3.0	104.9
MOT-AE-B-024-007-037-F-A-AAAA	37.0	31.0	7.0	6.0	12.0	M3	21.0	64.5	6.0	97.5
MOT-AE-B-024-010-042-F-A-AAAA	42.4	35.0	0	8.0	25.0	M4	22.0	105.2	2.0	127.2
MOT-AE-B-024-015-037-F-A-AAAA	37.0	31.0	7.0	6.0	12.0	M3	21.0	67.0	6.0	100.0
MOT-AE-B-024-018-042-F-A-AAAA	42.4	35.0	0	8.0	25.0	M4	22.0	111.9	2.0	142.4
MOT-DC-37-M-A-A	42.0	31.0	7.0	6.0	12.0	M3	21.0	100.0	6.0	134.0
MOT-DC-37-M-A-B	42.0	31.0	7.0	6.0	12.0	M3	21.0	100.0	6.0	134.0
MOT-DC-36-M-A-D	41.0	26.0	0	6.0	20.0	M3	19.3	126.0	3.0	158.3
MOT-DC-37-M-A-D	42.0	31.0	7.0	6.0	12.0	M3	21.0	100.0	6.0	134.0
MOT-DC-42-M-A-D	47.3	35.0	0	8.0	25.0	M4	22.0	146.0	2.0	181.0
MOT-DC-37-M-A-H	42.0	31.0	7.0	6.0	12.0	M3	21.0	100.0	6.0	134.0
MOT-DC-42-M-A-F	47.3	35.0	0	8.0	25.0	M4	22.0	146.0	2.0	181.0

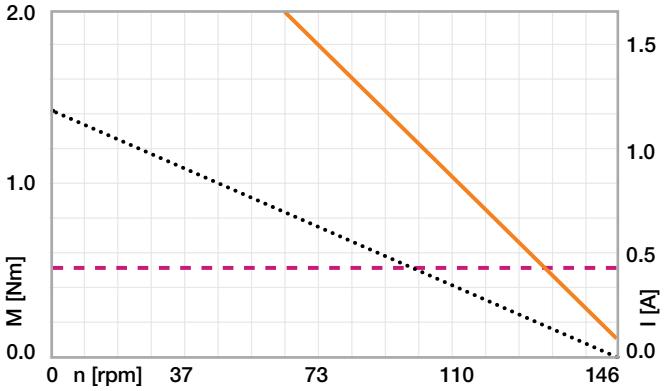
drylin® | DC motors | Characteristic curves

Characteristic curves 24VDC

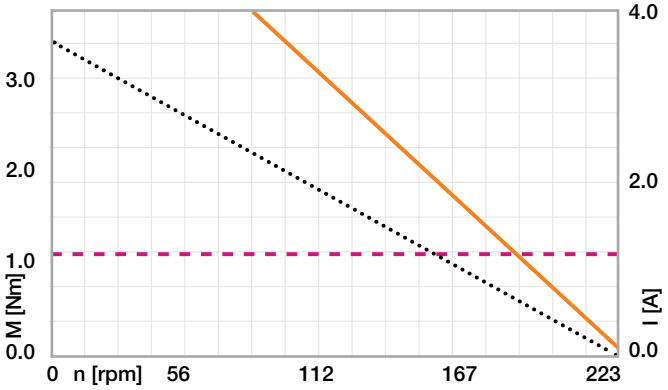
MOT-AE-B-024-001-037-F-A-AAAA / MOT-DC-37-M-A-A



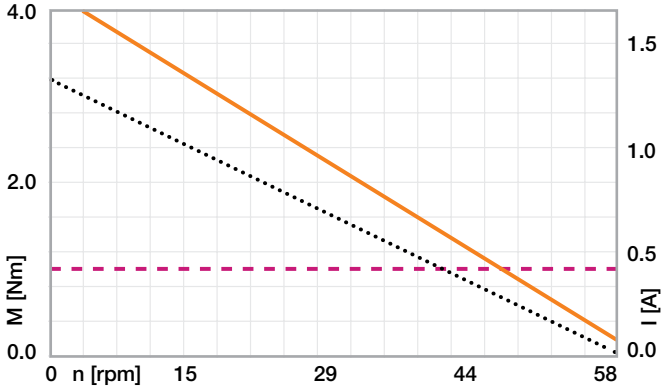
MOT-AE-B-024-003-037-F-A-AAAA / MOT-DC-37-M-A-B



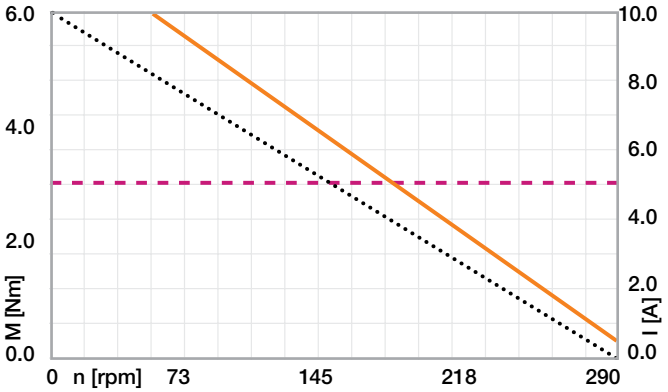
MOT-AE-B-024-005-036-F-A-AAAA / MOT-DC-36-M-A-D



MOT-AE-B-024-007-037-F-A-AAAA / MOT-DC-37-M-A-D



MOT-AE-B-024-010-042-F-A-AAAA / MOT-DC-42-M-A-D



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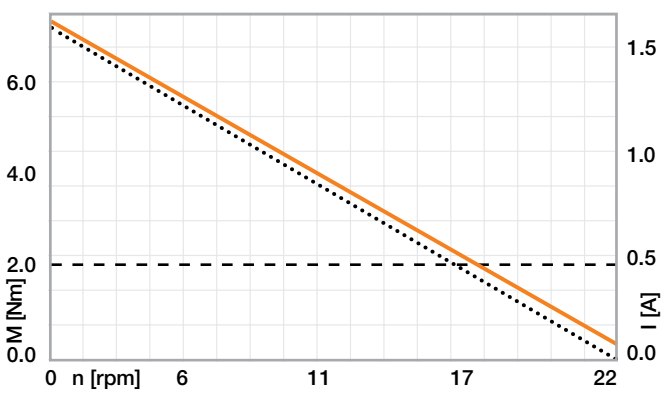

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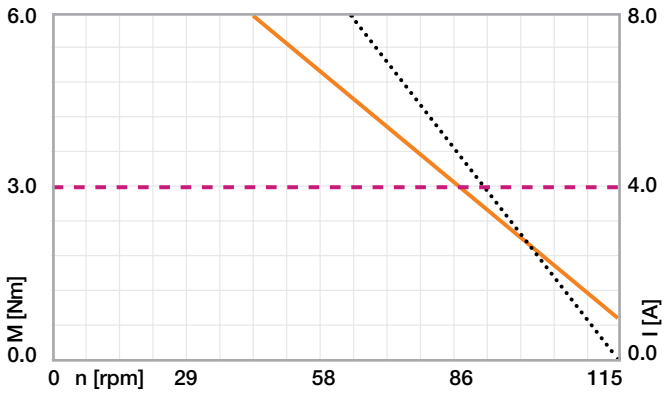


Torque — Max. continuous torque ------- Motor current

Order key

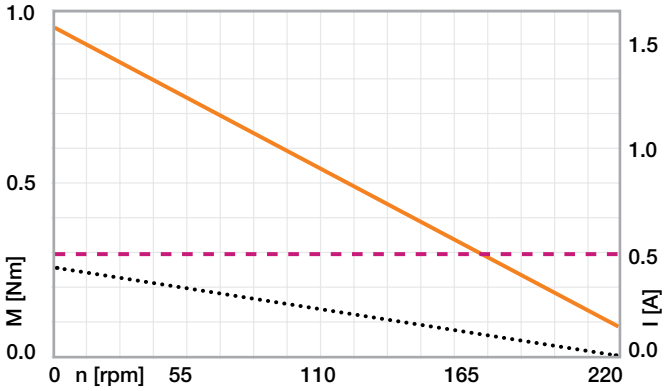
Order example

MOT - AE - B - 024 - 015 - 037 - F - A - AAAA

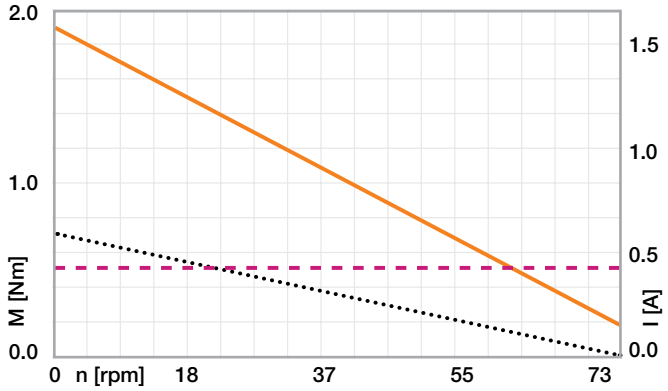
Product type: Motor	AE: Design	Motor type B: DC motor	Operating voltage: 24VDC	Nominal torque [Nm]	Outer diameter [mm]	F = Low-profile connector	Options: A: Without	AAAA: Standard

Characteristic curves 12VDC

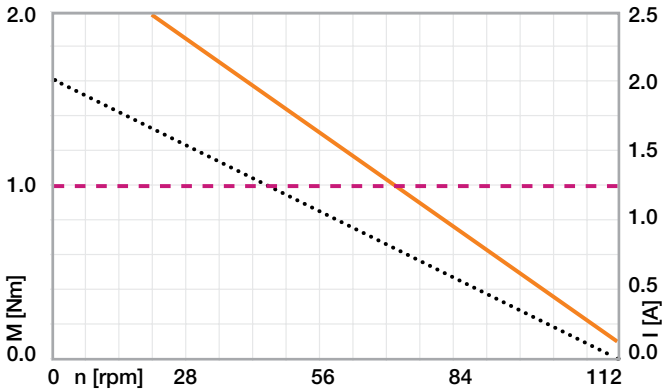
MOT-AE-B-024-001-037-F-A-AAAA / MOT-DC-37-M-A-A



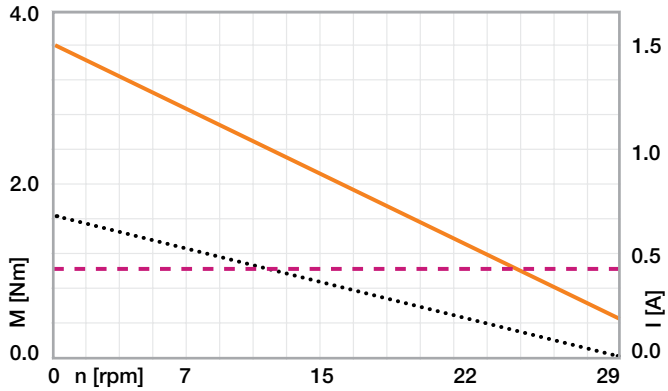
MOT-AE-B-024-003-037-F-A-AAAA / MOT-DC-37-M-A-B



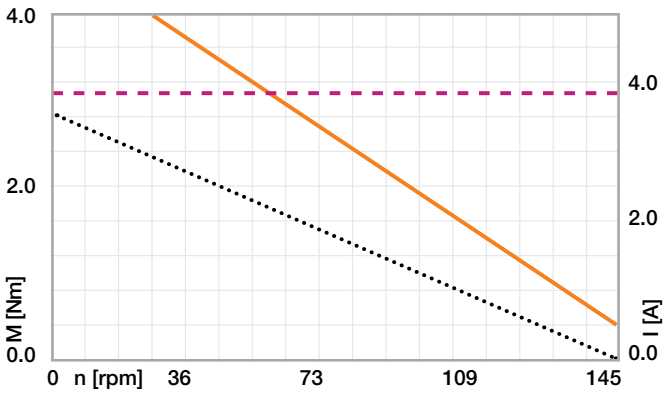
MOT-AE-B-024-005-036-F-A-AAAA / MOT-DC-36-M-A-D



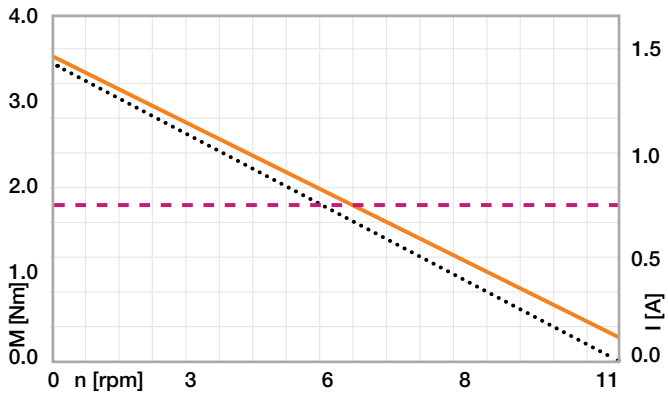
MOT-AE-B-024-007-037-F-A-AAAA / MOT-DC-37-M-A-D



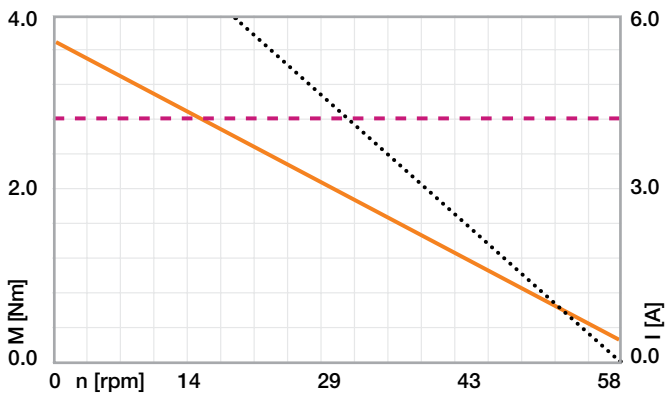
MOT-AE-B-024-010-042-F-A-AAAA / MOT-DC-42-M-A-D



MOT-AE-B-024-015-037-F-A-AAAA / MOT-DC-37-M-A-H



MOT-AE-B-024-018-042-F-A-AAAA / MOT-DC-42-M-A-F



Torque — Max. continuous torque — Motor current

Order key

Order example

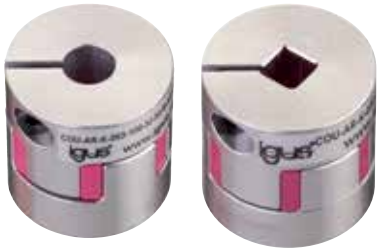
MOT - DC - 36 - M - A - D

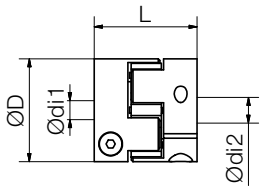
Product type: Motor	Motor type B: DC motor	Outer diameter [mm]	M: Metric connectors M12	Options: A: Without	Rated speed [rpm]

Rated speeds
A: Ø 37 = 350
B: Ø 37 = 112
D: Ø 36 = 190
Ø 37 = 47
Ø 42 = 252
F: Ø 42 = 96
H: Ø 37 = 17

drylin® | Accessories | Product range

Coupling – vibration dampening and easy fitting





The coupling connects the drive pin of the axis to the motor. An elastic polymer insert in the center of the coupling transfers the motor torque. This damping element compensates for radial and axial clearance.

- 20 versions from stock
- Vibration dampening and easy fitting

Coupling material: Aluminum. TPU elastomeric center. Shore hardness: 98 Sh A. Temperature range –22°F to +212°F.

Toothed belt axis	Motor type	Coupling	Technical data – coupling				
			D	di1	di2	L	Weight
				[mm]	[mm]	[mm]	[kg]
ZLW-0630-B	NEMA17	COU-AR-K-050-000-25-26-B-AAAB	25.00	5.00	□6.00	26.00	0.02
	NEMA23	COU-AR-K-063-000-25-26-B-AAAB	25.00	6.35	□6.00	26.00	0.02
	DC motor31	COU-AR-K-060-000-25-26-B-AAAB	25.00	6.00	□6.00	26.00	0.02
ZLW-0630-S	NEMA17	COU-AR-K-050-080-25-26-B-AAAA	25.00	5.00	8.00	26.00	0.02
	NEMA23	COU-AR-K-063-080-25-26-B-AAAA	25.00	6.35	8.00	26.00	0.02
	DC motor31	COU-AR-K-060-080-25-26-B-AAAA	25.00	6.00	8.00	26.00	0.02
ZLW-1040-B / ZAW	NEMA17	COU-AR-K-050-000-25-26-B-AAAB	25.00	5.00	□6.00	26.00	0.02
	NEMA23	COU-AR-K-063-000-25-26-B-AAAB	25.00	6.35	□6.00	26.00	0.02
	NEMA23XL	COU-AR-K-080-000-25-26-B-AAAB	25.00	8.00	□6.00	26.00	0.02
	DC motor31	COU-AR-K-060-000-25-26-B-AAAB	25.00	6.00	□6.00	26.00	0.02
ZLW-1040-S / ZAW	NEMA23	COU-AR-K-063-100-32-32-B-AAAA	32.00	6.35	10.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-100-32-32-B-AAAA	32.00	8.00	10.00	32.00	0.05
	NEMA34	COU-AR-K-140-100-32-32-B-AAAA	32.00	14.00	10.00	32.00	0.05
	DC motor31	COU-AR-K-060-100-32-32-B-AAAA	32.00	6.00	10.00	32.00	0.05
ZLW-1660-S	NEMA 34	COU-AR-K-140-140-32-32-B-AAAA	32.00	14.00	14.00	32.00	0.05

Lead screw axis	Motor type	Coupling	D	di1	di2	L	Weight
				[mm]	[mm]	[mm]	[kg]
SAW-0630 / SLW-BB-0630	NEMA17	COU-AR-K-050-080-25-26-B-AAAA	25.00	5.00	8.00	26.00	0.02
	DC motor31	COU-AR-K-060-080-25-26-B-AAAA	25.00	6.00	8.00	26.00	0.02
SAW-1040 / SLW-(BB)-1040	NEMA17	COU-AR-K-050-100-32-32-B-AAAA	32.00	5.00	10.00	32.00	0.05
	NEMA23	COU-AR-K-063-100-32-32-B-AAAA	32.00	6.35	10.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-100-32-32-B-AAAA	32.00	8.00	10.00	32.00	0.05
	DC motor31	COU-AR-K-060-100-32-32-B-AAAA	32.00	6.00	10.00	32.00	0.05
SLW-(BB)-1660	NEMA23	COU-AR-K-063-140-32-32-B-AAAA	32.00	6.35	14.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-140-32-32-B-AAAA	32.00	8.00	14.00	32.00	0.05
SLW-(BB)-2080	NEMA23	COU-AR-K-063-120-32-32-B-AAAA	32.00	6.35	12.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-120-32-32-B-AAAA	32.00	8.00	12.00	32.00	0.05
	NEMA34	COU-AR-K-140-120-32-32-B-AAAA	32.00	14.00	12.00	32.00	0.05
SHT-(BB)-12	NEMA17	COU-AR-K-050-100-32-32-B-AAAA	32.00	5.00	10.00	32.00	0.05
	NEMA23	COU-AR-K-063-100-32-32-B-AAAA	32.00	6.35	10.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-100-32-32-B-AAAA	32.00	8.00	10.00	32.00	0.05
	DC motor31	COU-AR-K-060-100-32-32-B-AAAA	32.00	6.00	10.00	32.00	0.05
SHT-(BB)-20	NEMA23	COU-AR-K-063-120-32-32-B-AAAA	32.00	6.35	12.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-120-32-32-B-AAAA	32.00	8.00	12.00	32.00	0.05
	NEMA34	COU-AR-K-140-120-32-32-B-AAAA	32.00	14.00	12.00	32.00	0.05
SHT-(BB)-30	NEMA34	COU-AR-K-140-140-32-32-B-AAAA	32.00	14.00	14.00	32.00	0.05

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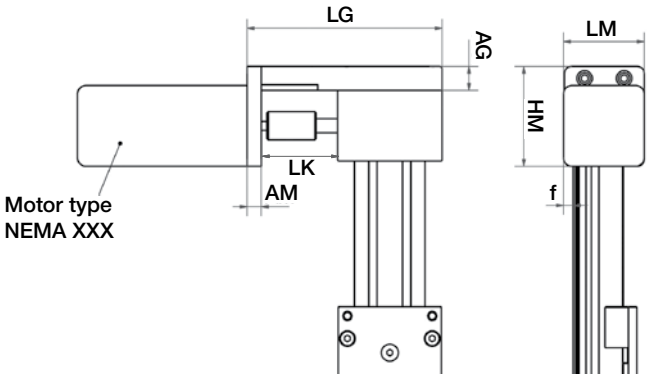
Using motor flange for stepper and DC motors



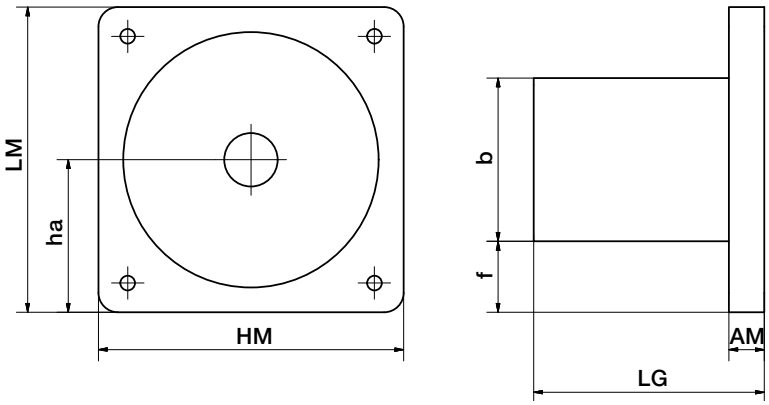
- 2 base plate lengths for each NEMA motor flange; others upon request
- Matches the drylin® coupling ▶ Page 1730

Dimensions [mm]

Part No.	Matching linear modules	Base plate			Motor flange			
		AG	LG	LK	AM	HM	LM	f
MF-0630-NEMA17-S	ZLW-0630	12	99.5	35.5	10	53	42	7
MF-0630-NEMA23-S	ZLW-0630	12	99.5	35.5	10	59	56	14
MF-1040-NEMA17-S	ZLW-1040	17	119	35	10	63	44	–
MF-1040-NEMA23-S	ZLW-1040	17	119	35	10	70.7	56.4	7
MF-1040-NEMA34-L	ZLW-1040	17	138	54	10	85	85	20.5
MF-1660-NEMA34-S	ZLW-1660	15	166	52	10	86	86	–
MF-2260-NEMA23-S	ZAW-1040	10	108	35	10	70.7	56.4	–
MF-0630-DC0310	ZLW-0630	12	99.5	35.5	10	53	42	7
MF-1040-DC0310	ZLW-1040	17	119	35	10	63	44	–
MF-1040-DC0350	ZLW-1040	17	119	35	10	63	44	–

The motor flange, sometimes called motor enclosure, encloses and protects the coupling and provides the matching mounting dimensions for your NEMA motor.

- Matches the drylin® coupling ▶ Page 1730



Dimensions [mm]

Part No.	Matching linear modules	LG	AM	HM	LM	b	f	ha
MF-1123-NEMA17	SAW/SLW-BB-0630	45	–	43	43	43	–	21.5
MF-2040-NEMA17	SAW/SLW-1040-AL, SHT-12	47	12	56	56	56	–	21.5
MF-2040-NEMA23-S	SAW/SLW-1040-AL, SHT-12/20	48	13	56	56	56	–	28
MF-3648-NEMA23	SHT-20, SHT-BB-20	56	13	56	56	56	–	28
MF-3648-NEMA34	SLW-1660/2080, SLW-BB-1660/2080	65	10	86	86	46	20	43
MF-3648-NEMA34-XL	SHT-30, SHT-BB-30	76	10	86	86	56	15	43
MF-1123-DC0310	SAW/SLW-BB-0630	45	–	43	43	43	–	21.5
MF-2040-DC0310	SAW/SLW-1040-AL, SHT12	47	12	43	43	43	–	21.5
MF-2040-DC0350	SAW/SLW-1040-AL, SHT12	47	12	43	43	43	–	21.5

drylin® | Accessories | Product range

Connecting cables for NEMA stepper motors

The ideal complement to the drylin® product range provides chainflex® connection cables.

- Suitable for energy chains
- Shielded and oil-resistant
- Straight and angled connectors

Flange size 42 (NEMA17), 56 (NEMA23), 60 (NEMA23XL)

Part No.	Jacket	Type	Cable length [m]	Connectors
Motor cable (overmolded)				
MAT9043737	TPE	CF9-CF.INI	3.0	straight
MAT9043738	TPE	CF9-CF.INI	5.0	straight
MAT9043740	TPE	CF9-CF.INI	10.0	straight
MAT9043742	TPE	CF9-CF.INI	3.0	angled
MAT9043743	TPE	CF9-CF.INI	5.0	angled
MAT9043745	TPE	CF9-CF.INI	10.0	angled
Encoder (harnessed)				
MAT90432594-3	PVC	CF240	3.0	straight
MAT90432594-5	PVC	CF240	5.0	straight
MAT90432594-10	PVC	CF240	10.0	straight
MAT90436430-3	PVC	CF240	3.0	angled
MAT90436430-5	PVC	CF240	5.0	angled
MAT90436430-10	PVC	CF240	10.0	angled

Flange size 86 (NEMA34)

Part No.	Jacket	Type	Cable length [m]	Connectors
Motor cable (harnessed)				
MAT90439520-3	PUR	CF78.UL	3.0	straight
MAT90439520-5	PUR	CF78.UL	5.0	straight
MAT90439520-10	PUR	CF78.UL	10.0	straight
Encoder (harnessed)				
MAT90439519-3	PVC	CF211	3.0	straight
MAT90439519-5	PVC	CF211	5.0	straight
MAT90439519-10	PVC	CF211	10.0	straight

Flange size 42 (NEMA17), 56 (NEMA23), 60 (NEMA23XL)

Part No.	Jacket	Type	Cable length [m]	Connectors
Brake cable				
MAT9043716	TPE	CF9-CF.INI	3.0	straight
MAT9043717	TPE	CF9-CF.INI	5.0	straight
MAT9043719	TPE	CF9-CF.INI	10.0	straight
MAT9043724	TPE	CF9-CF.INI	3.0	angled
MAT9043725	TPE	CF9-CF.INI	5.0	angled
MAT9043727	TPE	CF9-CF.INI	10.0	angled

drylin® | Accessories | Product range

Proximity switches - limit and reference switches

The compact and easy assembly of the proximity switches represent a logical extension of the kit approach for the drylin® range. The plastic housing makes the proximity switches, which can be used as limit, position or reference switches, particularly light and tough.

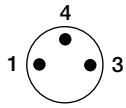
Technical data

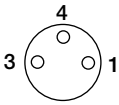
Proximity switches	Unit	
Operating voltage	[VDC]	10...30
Max. trigger current	[mA]	100
Ambient temperature	[°C]	–25...+70
Trigger distance	[SN]	2.5
Protection class		IP67
Connectors		M8

20 – 30mm of extra stroke length is required for each limit reference switch.

Pin assignment

Proximity switch	M8 3-pin	Proximity switch cable	
PIN	Signal	PIN	Color
1	+	1	brown
3	–	3	blue
4	Load	4	black





Matching cables are added by including the following attachments:

Axis	Part No. Proximity switch kit	
	N.C./normally closed	N.O./normally open
SAW-0630	IK-0001	IK-0002
SAW-1040	IK-0001	IK-0002
SAW-1660	IK-0003	IK-0004
SLW-BB-0630	–	–
SLW-BB-1040	IK-0006	IK-0017
SLW-BB-1080	IK-0007	IK-0018
SLW-BB-1660	IK-0008	IK-0019
SLW-BB-2080	IK-0009	IK-0020
SHT-BB-12	IK-0011	IK-0022
SHT-BB-20	IK-0012	IK-0023
SHT-BB-30	–	–
SLW-1040-AL	IK-0006	IK-0017
SLW-1080	IK-0007	IK-0018
SLW-1660	IK-0008	IK-0019
SLW-2080	IK-0009	IK-0020
SHT-12	IK-0011	IK-0022
SHT-20	IK-0012	IK-0023
SHT-30	–	–
ZLW-0630-B	IK-0001	IK-0002
ZLW-0630-S	IK-0001	IK-0002
ZLW-1040-B	IK-0001	IK-0002
ZLW-1040-S	IK-0001	IK-0002
ZAW-1040-B	IK-0001	IK-0002
ZAW-1040-S	IK-0001	IK-0002
ZLW-1660-S	IK-0003	IK-0004

Order key

Order example

IK - 0010 - BG - 3

Proximityswitch kit	Assignment number	Connector description	Cable length

Options:
Connector description
BG = Straight socket
Cable length
3m, 5m, 10m

A proximity switch kit for SAW & ZLW includes a proximity switch, a bracket and mounting screws

A proximity switch kit for SLW & SHT includes a proximity switch, two spacers and mounting screws.

drylin® | Accessories | Product range

Proximity switches – kit with support

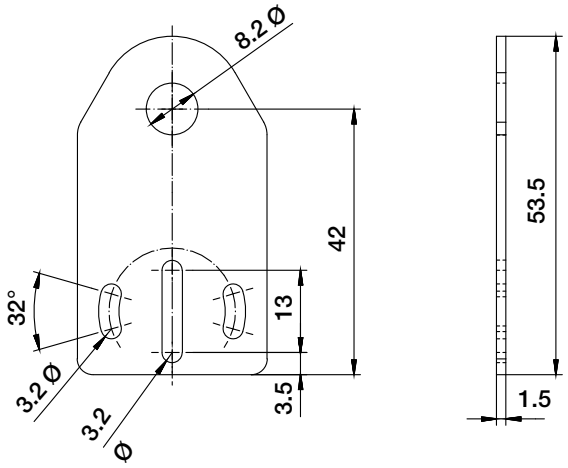
Part No.
IK-0201-2
Proximity PNP NC kit with straight support

Part No.
IK-0200-2
Proximity PNP NC kit with angled support

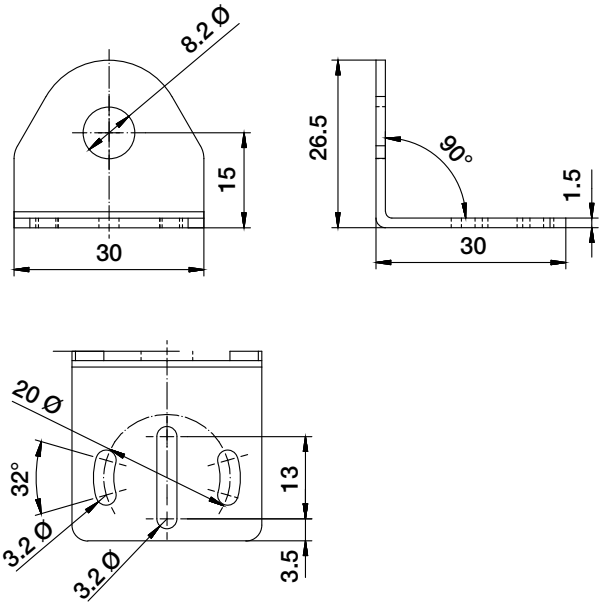
Reposition and adjustment is possible using a bracket with the proximity switch

- Cable length: 2m
- Material holder: steel

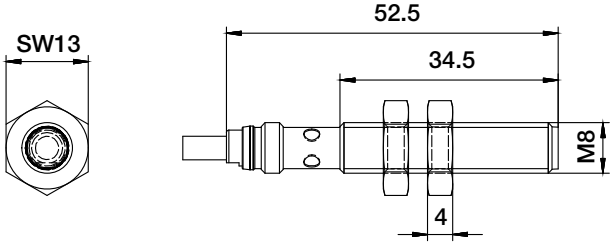
ZSY-INI-AS-B



ZSY-INI-AS-A

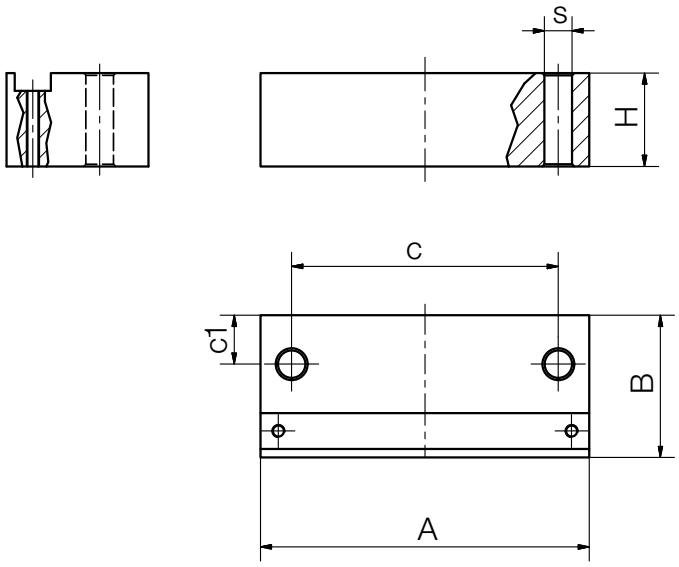


INI-AS-I-015-B-AA



drylin® drive technology | Accessories | Product range

Spacer – height compensation for SLW/SHT linear modules



The spacer is an aluminium standoff that brings the selected drylin® linear unit to a height that matches your NEMA stepper motor. An attachment feature for proximity switches is already integrated. Retro-fitting is also possible.

- Adapter kit contains 2 spacers for connection of a linear module

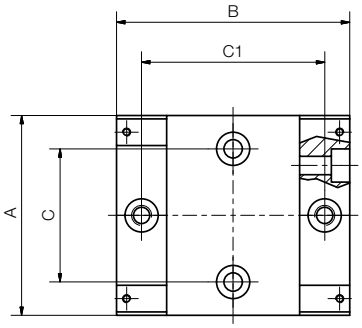
Part No.	Suitable for linear module
AK-0001	SLW-1040
AK-0002	SLW-1080
AK-0003	SLW-1660
AK-0004	SLW-2080
AK-0027	SHT-08
AK-0006	SHT-12
AK-0007	SHT-20
AK-0008	SHT-30
AK-0009	SLW-25120

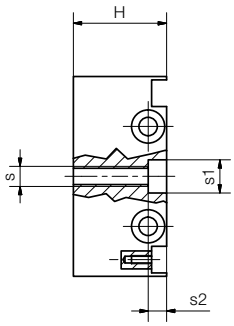
Dimensions [mm]

Part No.	A	B	H	c ±0.1	c1	Ø s +0.2
AK-0001	74	32.0	21.0	60	11.0	6.2
AK-0002	108	32.0	21.0	94	11.0	6.2
AK-0003	104 –0.2	35.0	24.5	84	12.5	8.1
AK-0004	134	38.0	20.0	116	14.0	9.0
AK-0027	65	25.5	13.0	52	7.75	5.5
AK-0006	85	40.0	17.5	70	15.0	6.2
AK-0007	130	46.0	22.0	108	18.0	10.5
AK-0008	180	60.0	10.0	150 ±0.2	25.0	13.5
AK-0009	200	45.0	16.0	173 ±0.2	17.5	13.5

drylin® drive technology | Accessories | Product range

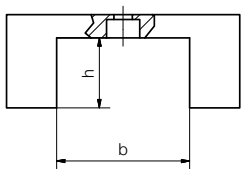
Mounting bracket for SAW linear modules and ZLW toothed belt axes





For the assembly of drylin® ZLW toothed belt axes

- Available for drylin® WSX / SAW(C) / ZLW Sizes 0630/1040/1080/1660
- Material: anodised aluminium
- Connection options: T-slots profile, linear axis/ initiators
- Freely positionable
- Quick assembly without holes
- Including roll-in slot nuts and screws for fastening



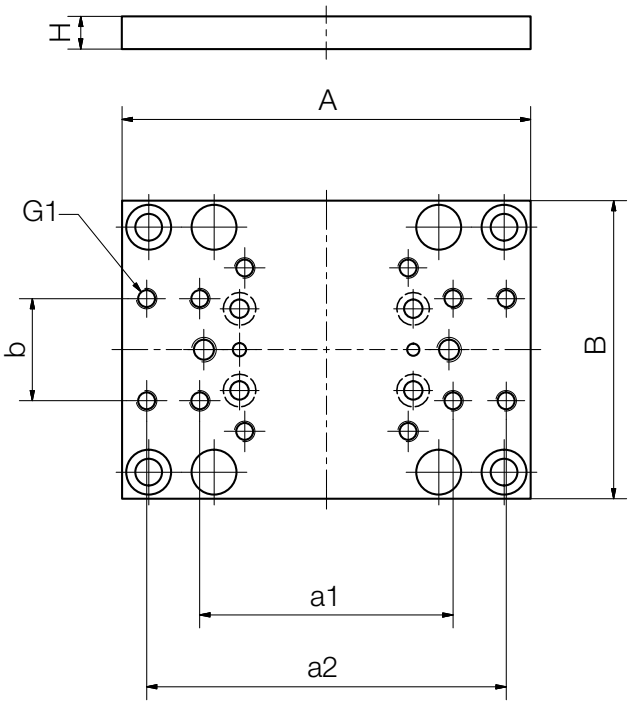
Part No.	Suitable for		
	Rail profile	Linear module	Toothed belt axis
AK-0037	WSX-06-30	SAW(C)-0630	ZLW-0630
AK-0038	WSX-10-40	SAW(C)-1040	ZLW-1040
AK-0039	WSX-10-80	SAW-1080	ZLW-1080
AK-0040	WSX-16-60	SAW-1660	ZLW-1660

Dimensions [mm]

Part No.	A	B	H	h	b	C	C1	s	s1	s2
AK-0037	60	70	20	12	30	40	50	M6	Ø 10	5.5
AK-0038	60	70	28	21	40	40	55	M6	Ø 10	5.5
AK-0039	60	104	28	21	74	40	90	M6	Ø 10	5.5
AK-0040	60	98	47	37	62	40	80	M8	Ø 11	27

drylin® drive technology | Accessories | Product range

Adapter kit for linear robot setup



- Simple and fast multi-axes linear robot setup
- For lead screw and toothed belt axes
- Energy chain assembly preparation
- Anodized aluminum
- Space and weight-saving
- Mounting of y-axis on 2 x-axes

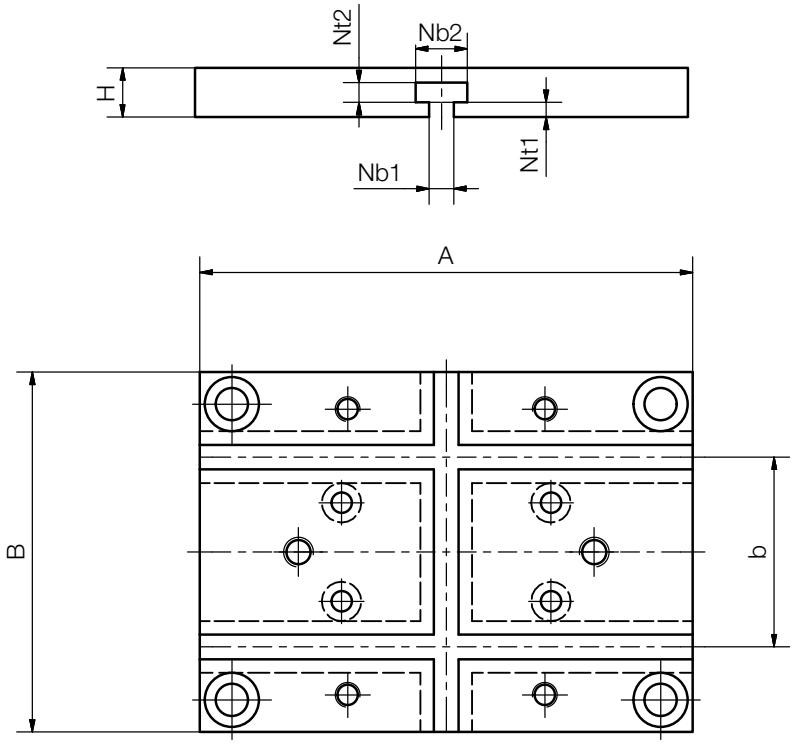
Mounting of y-axis on two x-axes

Part No.	x-axis	y-axis	Function linear robot setup
AK-0011	ZLW-0630, 100mm carriage	ZLW-0630, ZLW-1040	Assembly y-axis
AK-0012	ZLW-1040, 100mm carriage	ZLW-0630, ZLW-1040	Assembly y-axis
AK-0013	ZLW-1040, 150mm carriage	ZLW-0630, ZLW-1040, ZLW-1080	Assembly y-axis
AK-0014	ZLW-1660, 250mm carriage	ZLW-1040, ZLW-1080	Assembly y-axis
AK-0024	ZLW-1040, 200mm carriage	ZLW-0630, ZLW-1040, ZLW-1080	Assembly y-axis
AK-0025	ZLW-1080, 150mm carriage	ZLW-0630, ZLW-1040, GRW-0630	Assembly y-axis

Dimensions [mm]

Part No.	A	B	G1	H	a1	a2	b
	–0.3	–0.3				+0.2	
AK-0011	100	54	M5	13	62	88	25
AK-0012	100	73	M5	8	62	88	25
AK-0013	150	73	M5	8	112	138	25
AK-0014	250	104	M5	10	–	232	35
AK-0024	200	73	M5	8	162	188	25
AK-0025	150	107	M5	8	112	138	25

T-slot plate



- Anodized aluminum
- Various fixing options
- Can be retrofitted
- For XY linear robot structures
- Suitable igus® slot nuts available ▶ **Page 1740**

Variable T-slot mounting plates

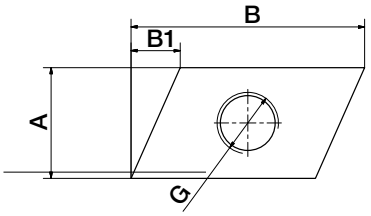
Part No.	Base axis	Axis to be mounted
AK-0021	SAW-1080, 100mm carriage	ZLW/SAW-0630, ZLW/SAW-1040, GRW-0630
AK-0022	SAW-1040, 100mm carriage	ZLW/SAW-0630, ZLW/SAW-1040, GRW-0630
AK-0023	SAW-1660, 150mm carriage	ZLW/SAW-1040, ZLW/SAW-1080, ZLW/SAW-1660

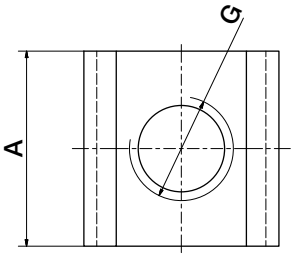
Dimensions [mm]

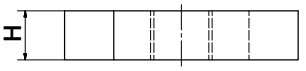
Part No.	A	B	H	b	Nb1	Nb2	Nt1	Nt2
	–0.3	–0.3			+0.2			+0.2
AK-0021	100	107	10	42.5	5	10.5	3	4
AK-0022	100	73	10	38.5	5	10.5	3	4
AK-0023	150	104	10	42.5	5	10.5	3	4

drylin® drive technology | Accessories | Product range

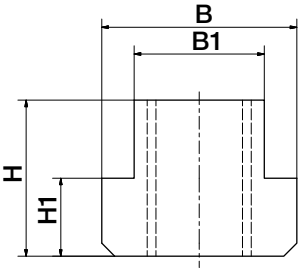
Slot nuts for mounting



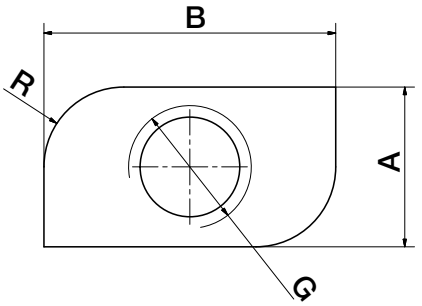


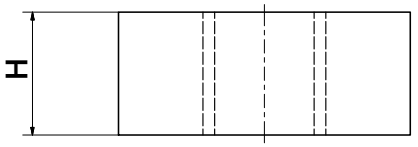


NOR-20602



NOR-20605





NOR-20613

For the drylin® W high-profile rail, slot nuts offer variable ways of fastening sensors and proximity switches, for example. The robust profile rail is the basis of SAW linear modules as well as ZLW toothed belt axes and has up to 5 T-slots for mounting slot nuts. Moreover, slot nuts are used as a fastening option in the case of drylin® Q linear carriages. Roll-in slot nuts are available for retrofitting in closed T-slots.

- Variable positionable
- Ideal for drylin® limit and reference switches
- Suitable for T-slots of the drylin® WSX high-profile rail
- Secure retention
- Can be retrofitted

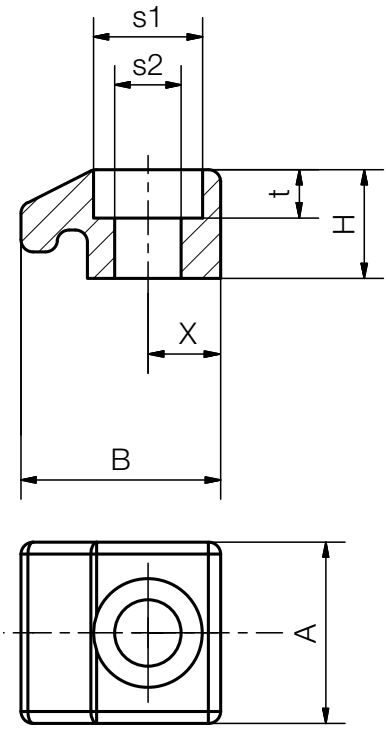
Part No.	Suitable for rail profile	Linear module
NOR-20602	WSX-06-30	SAW-0630, SAWC-0630, ZLW-0630
NOR-20602	WSX-10-40	SAW-1040, SAWC-1040, ZLW-1040
NOR-20602	WSX-10-80	SAW-1080, ZLW-1080
NOR-20602	AWMQ-12/20	QWE-01-12, QWE-01-20
NOR-20602	WSX-16-60	SAW-1660, ZLW-1660 (side slots)
NOR-20605	WSX-16-60	SAW-1660, ZLW-1660 (bottom slot)

Dimensions [mm]

Part No.	A	B	B1	H	H1	G	R
NOR-20602	9	19	4	4	–	M5	–
NOR-20605	15	15	10	12	6	M8	–
NOR-20613[132)]	5.2	9.5	–	4	–	M4	2.5

[132)] **Optionally available: roll-in slot nut for retrofitting**

Clamps for linear modules and toothed belt axes



Fixing clamps offer a safe fastening of the drylin® linear axes on aluminium profiles. Designed for the drylin® W high-profile rail, the clamps can be inserted into the slots of the rail and used to fix the axis in place.

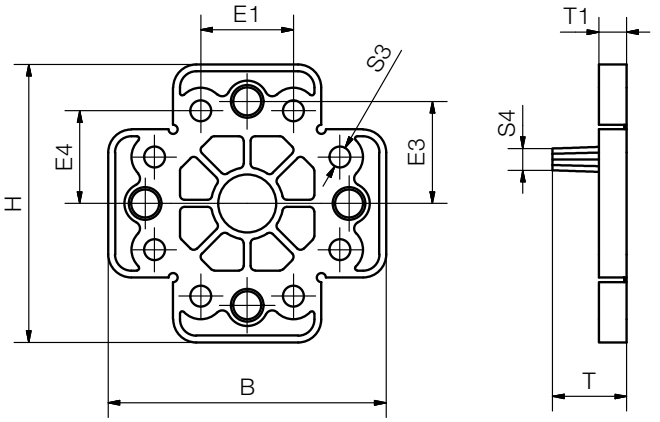
- Secure mounting
- Variable positionable
- For drylin® SAW linear modules and ZLW toothed belt axes
- For drylin® WSX high-profile rails

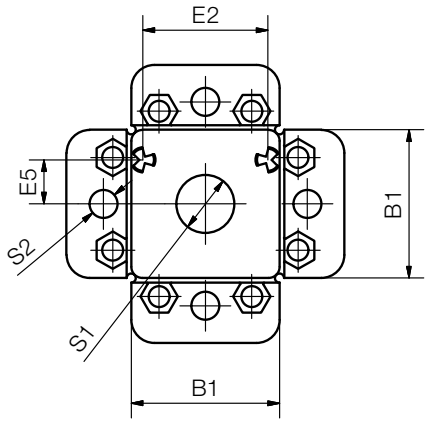
Part No.	Suitable for toothed belt axis
ZTZ-063006	ZLW-0630
75.40 ZLW	ZLW-1040
75.40 ZLW	ZLW-1080
75.50 ZLW	ZLW-1660

Dimensions [mm]

Part No.	B	A	H	X	s1	s2	t
ZTZ-063006	16.5	15	9	6	9	5.5	4
75.40 ZLW	27.65	40	8.7	8.6	–	6.4	–
75.50 ZLW	37.25	40	14.4	11	–	9	–

Adapter plate – variable arrangement of accessories





- Adapter plate for manual orientation of position indicators and manual clamps
- Suitable for drylin® linear modules of the SLW/SHT/SHTP series
- Material: Plastic

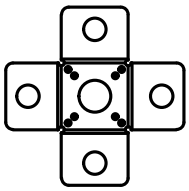
Installation note: Unused sections can be easily separated.

Part No.	Suitable for linear module
STZ-063008	SLW-0630/SHTP-06
STZ-104001	SLW-1040/SHT-12 SHT-20,SHTP-01/02-12
STZ-166001	SLW-1660
STZ-208001	SLW-2080, SLW-25120
STZ-302403	SHT-30

Dimensions [mm]

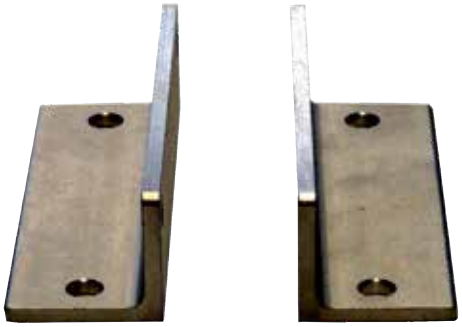
Part No.	H	B	B1	T	T1	E1	E2	E3	E4	E5	S1	S2	S3	S4
STZ-063008	48	48	18	8	5	–	14.4/11[106)]	18	–	7.2/5.5	8.5	6	–	Ø 1.5
STZ-104001	60	60	32	16	6	20	27	22	20	9.5	12.5	6	4.5	M6
STZ-166001	60	71	32	20	6	20	58	22	20	4.5	14.5	6	4.5	Ø 11
STZ-208001	60	71	32	16	6	20	58	22	20	13	14.5	6	4.5	M10
STZ-302403	60	60	32	16	6	20	27	22	20	9.5	14.5	6	4.5	M6

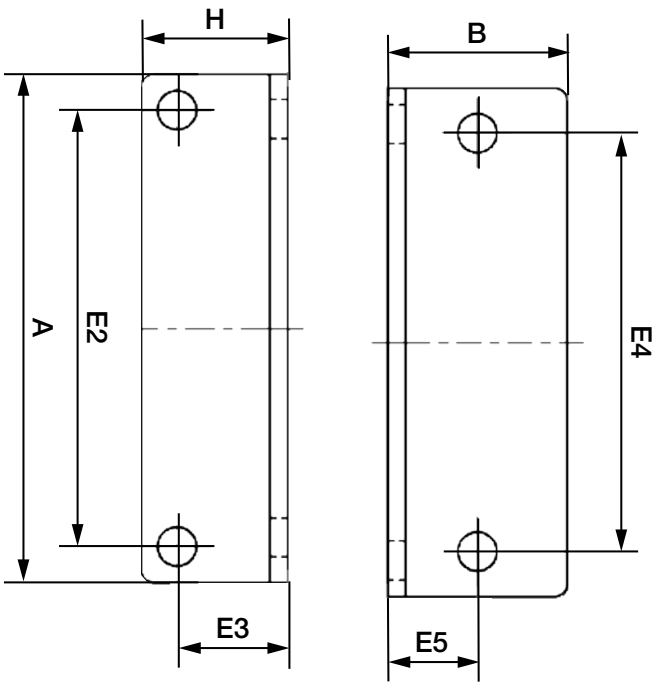
[106)] Adapter plate with 8 pins



Position indicators and lead screw clamps available ▶ Page 1710

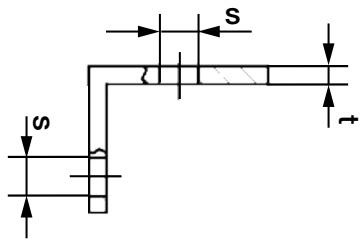
Stainless steel angle bracket kit for SHT XZ structure





drylin® SHT-WS is an angle kit for the SHT linear modules series. Stainless steel angle brackets make any XY table combination possible.

- 2 different sizes
- Can be combined with all drylin® linear modules series SHT/SHTC/SHTS with sizes 12 and 20

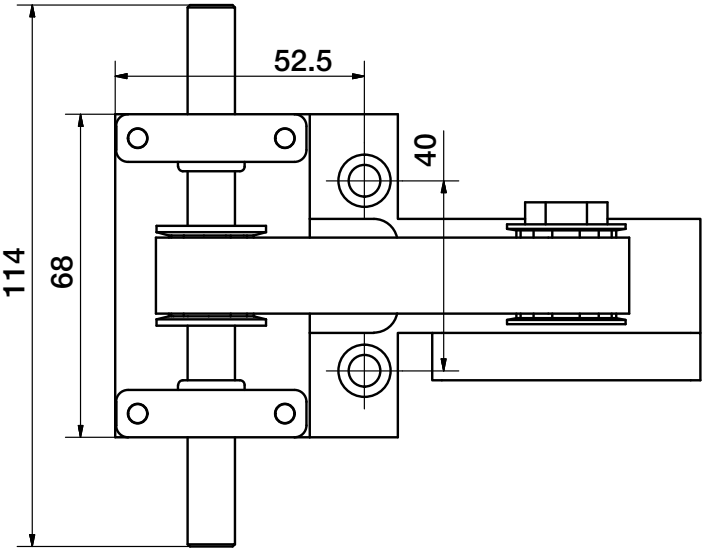


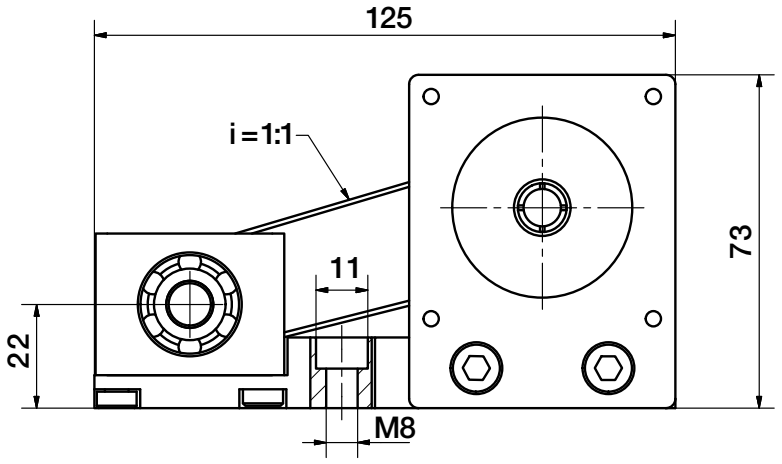
Dimensions [mm]

Part No.	A	H	B	E2	E3	E4	E5	s	t
SHT-WS-12	85	26.5	30	73	20.5	70	15	6.5	3
SHT-WS-20	130	36	35	108	18	115	35	8.5	5

Linear robot drives

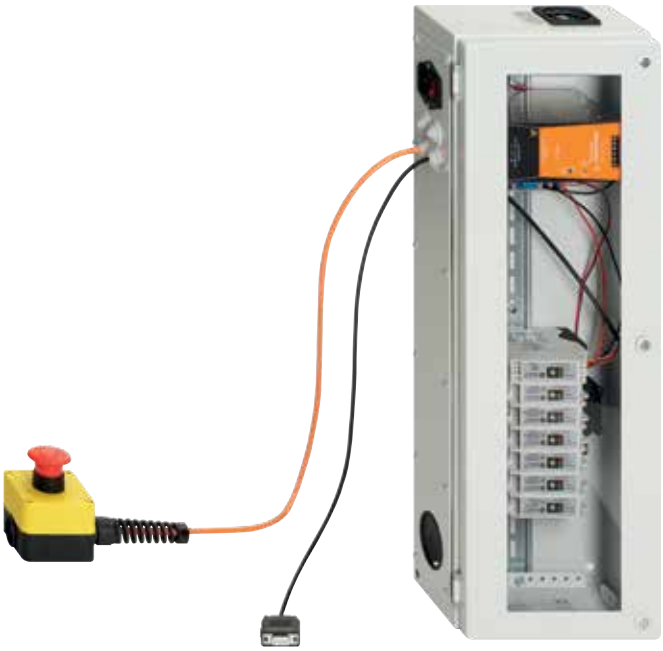
- Connection of NEMA stepper motors in linear robot structures
- Space-saving
- More safety due to encoder and brake





Dimensions [mm]

Part No.	Installation size	Motor	Design
GD-0001	1	NEMA23	Stranded wire
GD-0002	1	NEMA23	Connectors
GD-0003	1	NEMA23	Encoder
GD-0004	1	NEMA23	Encoder and brake
GD-0005	1	NEMA23XL	Stranded wire
GD-0006	1	NEMA23XL	Connectors
GD-0007	1	NEMA23XL	Encoder
GD-0008	1	NEMA23XL	Encoder and brake



First robotics control software by igus®

- Programming and integration of robots for everyone
- Available in control cabinet or on top-hat (DIN) rail assembly
- For linear robots, delta robots and robot arms
- Digital Twin feature
- Simple intuitive operation even for non-system integrators
- Save integration effort; order complete bundle including grippers and vision components via robotics platform www.rbtx.com

Part No.
Control system
RL-MAT0196
DIN rail version
RL-DRI-DP-0001
RL-DRI-DP-0002
Control cabinet version
RL-DRI-DP-003
RL-DRI-0004

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For stepper motors

Travel distances, positions, speeds, operating times – easily defined in the new web-based control system from igus®.

A simple and intuitive browser-based user interface, extensive functionality with the option of "remote control" via Ethernet (Intranet) or bus system – "dryve" is the simple motor control method from igus® for your linear guide system.

- Control via laptop, tablet or smartphone possible
- Suitable for all drylin® axes
- For DC, EC and stepper motors
- Communication by means of CANopen, Ethernet and digital inputs and outputs
- Compatible with many industrial control systems
- Cost-effective

Connections and displays	
1	Voltage supply
2	Digital inputs
3	Digital outputs
4	Analogue inputs
5	Motor & brake connection
6	Angular encoder
7	CANopen
8	Ethernet
9	Display

Available from stock
Detailed information about delivery time online.

Technical data and further options
▶ www.igus.eu/dryve

Brake resistors

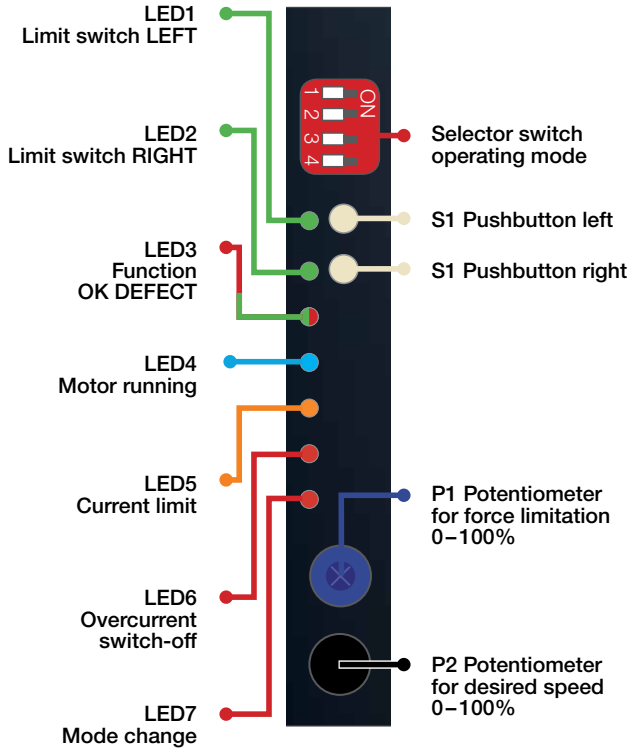
Part No.	Motor size
DLE-BR-50-18R	NEMA17 EC
DLE-BR-75-4R7	NEMA23 EC
DLE-BR-100-2R7	NEMA24 EC
DLE-BR-100-3R3	NEMA34 EC

D3 dryve motor control unit makes it possible to easily control linear systems

The D3 dryve is a cost-effective control unit for direct-current motors and is ready to use immediately. It can be connected quickly and is very easy to use – without any additional connection work. Buttons and rotary controls on the housing make it possible to control linear carriages without a PC, laptop or tablet. Different speeds as well as starting modes can be set.

- Easy to use, quick to connect
- Controls on the device make it possible to activate linear carriages, for example (anticlockwise/clockwise operation, speed, step mode or continuous operation)
- Different speeds and starting modes possible
- Can be combined with switches or joysticks
- Cost-effective, everything necessary and immediately ready for use for e.g. control on a camera slider

D3 dryve motor control system for all igus® DC motors



Available from stock
Detailed information about delivery time online.

Technical data and further options
▶ www.igus.com/D3