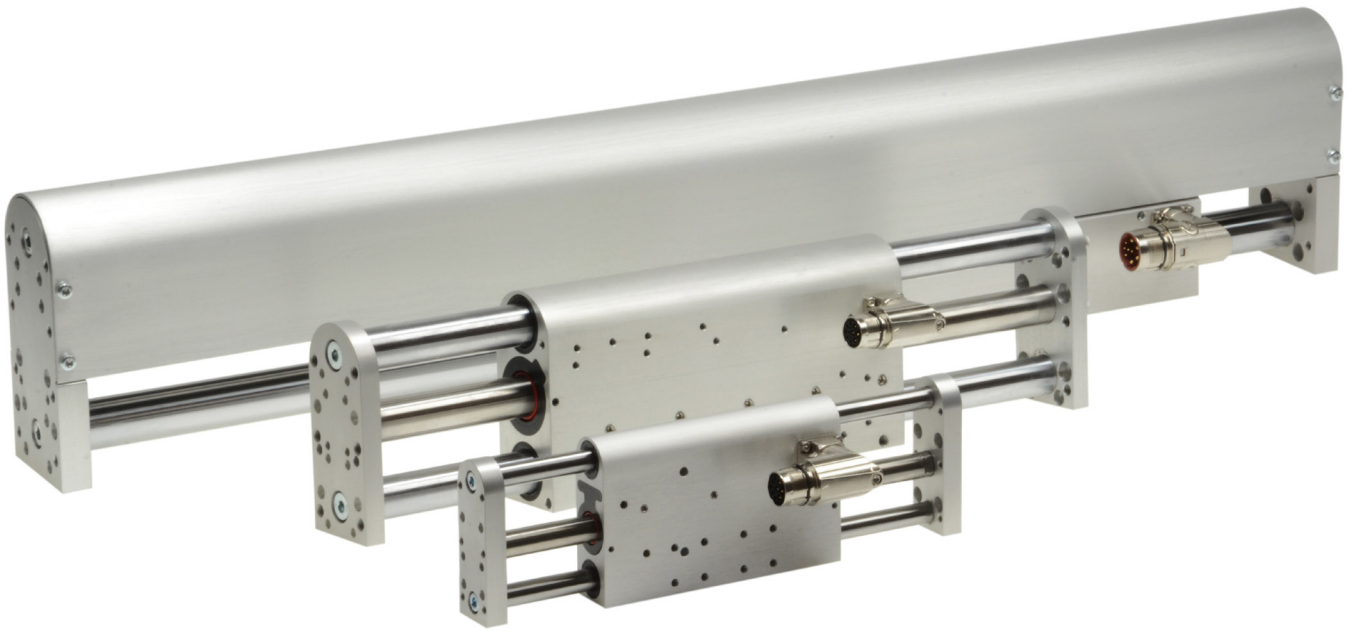


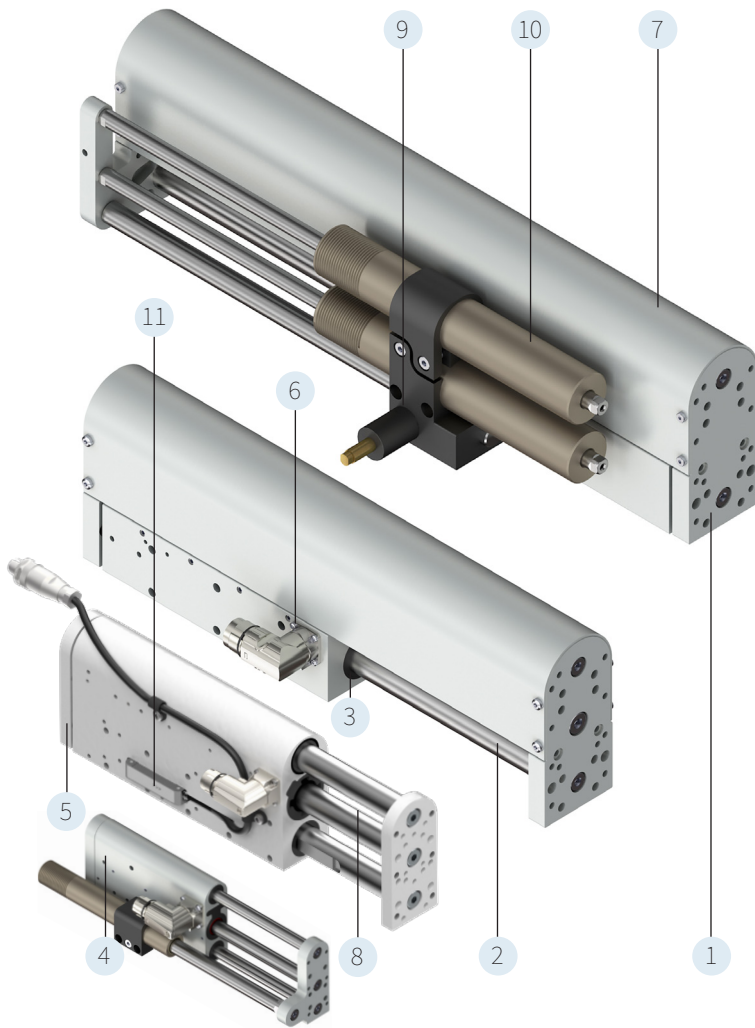
LINEAR MODULES DM01



- ✓ 3 sizes in stroke range up to 575 mm and forces up to 572 N
- ✓ Direct mounting of the load with absorption of transverse forces
- ✓ Anodised aluminium housing for easy cleaning
- ✓ Corrosion-resistant, hard chrome-plated guide rods
- ✓ Linear ball bearings with food grade lubricant (NSF H1)
- ✓ Equipped with "Plug and Play" technology
- ✓ Simple load simulation by LinMot Designer Software
- ✓ MagSpring® option available for vertical load compensation
- ✓ Can be combined to form two-axis systems

LINEAR MODULES DM01

| | |
|--|----|
| Description..... | 3 |
| DM01-23x80..... | 6 |
| DM01-23x160..... | 12 |
| DM01-37x120..... | 18 |
| DM01-48x150..... | 30 |
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| DM01 Linear Modules as combined YZ Motion Units..... | 45 |
| Mounting DM01 Linear Modules on F01 and E01 Linear Guides..... | 46 |
| Accessories..... | 47 |



1. Front plate with counterbore holes for precise load mounting
2. Hardened, chrome-plated shafts with high corrosion resistance
3. Linear ball bearings with food grade lubricant (NSF H1)
4. Guide block with counterbores holes for un-complicated and precise mounting of the linear module
5. Front plate (back) with counterbore holes for precise load mounting
6. Linear motor stator with integrated temperature and position sensors and electronic type plate
7. Aluminium casing protects the slider from contact and increases stability. (Only for DM01-48)
8. Magnetic slider of the linear motor (Magnets are protected in a chrome steel tube)
9. Pneumatic holding brake with max. holding force 1000 N (Optional for DM01-48)
10. Magnetic spring MagSpring® for vertical load compensation (Optional)
11. Position sensor with high repeat accuracy and absolute resolution as well as function and status LED (Optional)

Linear Modules DM01

The DM01 linear modules are a complete drive solution consisting of a linear guide with a permanently integrated LinMot stator. These modules come optionally equipped with a constant-force magnetic spring called a "MagSpring" for counterbalancing vertical loads. Carefully engineered shafts guided by linear ball bearings ensure precise linear motion. The rounded surfaces of the housing facilitate maintenance and cleaning of the linear guides. Improvements in material and design allow the drive unit to achieve a higher bending stiffness while maintaining a light moving mass. The core technology of these drive units consist of PS01-23, PS01-37, and PS01-48 LinMot linear motors. These

options allow the user to produce forces of up to 572 N and stroke lengths of up to 575 mm. The motor capabilities, with accelerations of up to 50 m/s² and a maximum velocity of 5 m/s, will be able to successfully exceed the demands of virtually any application. Each DM01 linear guide is delivered to the customer pre-assembled, and only one article number is required for ordering. The simulation software «LinMot Designer», which is available online at any time, ensures the correct selection and design of the linear modules. The «Plug and Play» technology available within these guided motors makes drive commissioning quick and simple. The motor configuration parameters are automatically read into the servo drive.

DM01 Linear Modules with vertical Load Compensation «MagSpring®»

In vertical mounting position, linear modules and other direct drives must permanently apply a constant force to counteract the weight force. A magnetic spring, MagSpring®, installed parallel to the linear motor can be used to passively compensate for the weight force. The drive is only used for the actual positioning operation or for applying the dynamic forces and can be dimensioned accordingly smaller. Since MagSprings are purely passive elements, a defined function or position of a device can be ensured in the de-energized state. Examples are the lifting of a gripper or print head in vertical arrangements.

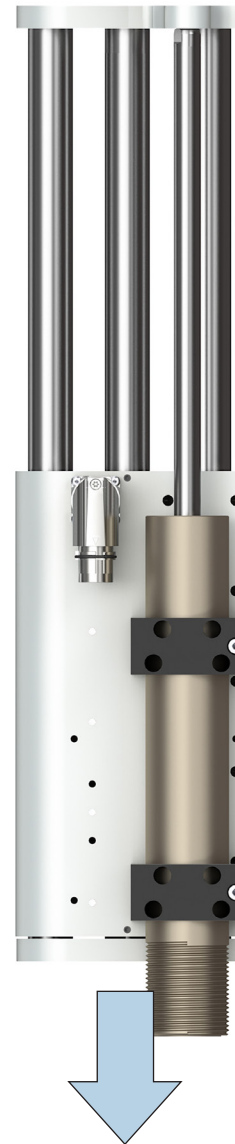
The mode of operation is based on the attractive force of permanent magnets. Accordingly, no energy source (electricity, compressed air, etc.) is needed. The special design of the flow-guiding components and the magnets translates the strongly non-linear relationship between force and displacement in magnet-iron arrangements into a constant force

curve. Depending on the strength class of the MagSpring, the permanent magnets are either in the stator, in the slider, or in both components. The slider is guided by an integrated plain bearing, so that MagSprings can be used comparably to gas pressure springs in a design. The effective force is in the range of +/- 10% of the nominal force, due to material and manufacturing tolerances.

The DM01 linear modules are optionally available with permanently installed MagSpring (MSxx option). These include various strength classes from 10 N to 60 N constant force. In addition to the commonly used pulling arrangement of the load axis, it is also possible to realise a pushing arrangement. For this purpose, the module is simply rotated, resulting in a slight MagSpring overhang depending on the type.



Pulling Arrangement



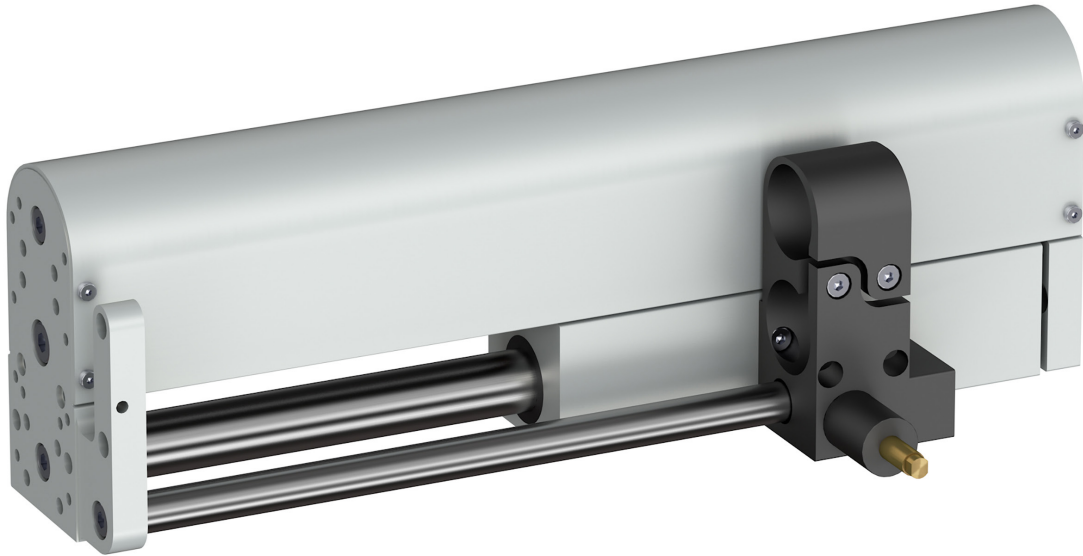
Pushing Arrangement

13

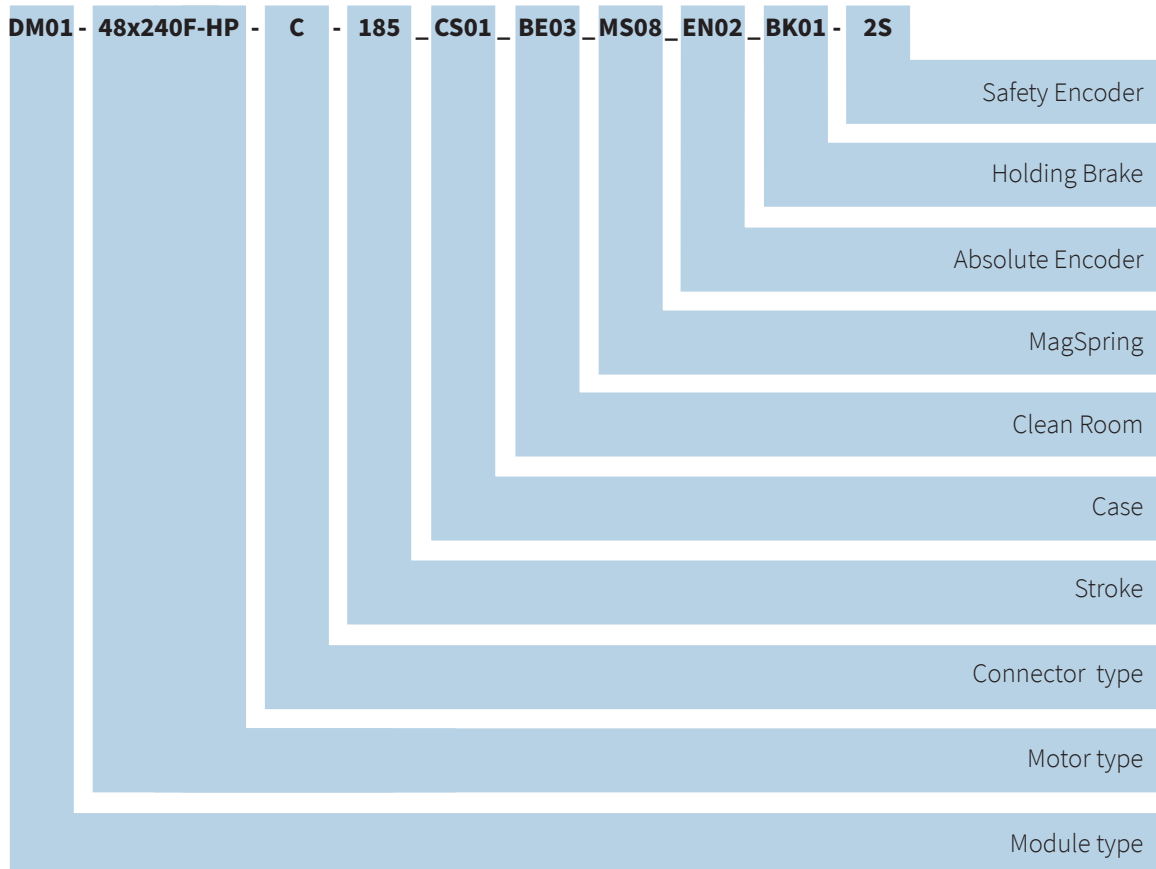
DM01 Linear Modules with Pneumatic Holding Brake

As an option, the DM01-48 linear modules can be ordered with a holding brake. The order code is indicated with the abbreviation BK01. The brake is controlled via the LinMot servo drive or directly via the PLC. For opening and closing, an additional electrical solenoid valve is required. The brake

acts on a brake shaft arranged parallel to the slider and is released using compressed air. The compressed air connection is made by a G 1/8" connecting thread. With an activated brake, the linear module achieves a holding force of up to 1000 N.

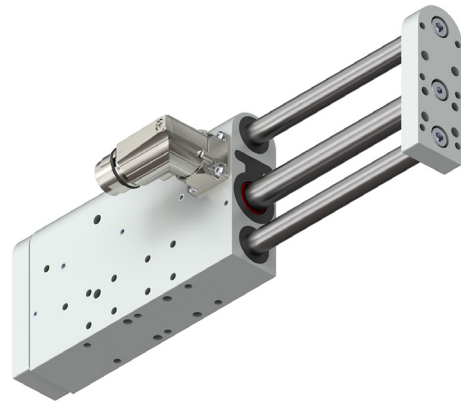
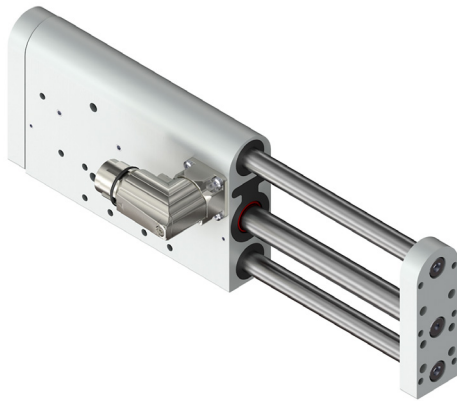
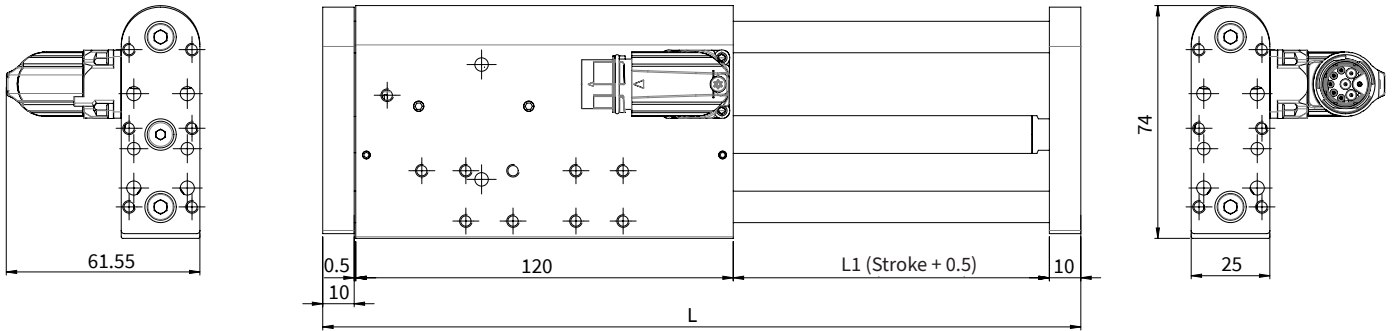


Designation Code Linear Modules DM01



The DM01 linear module product family currently offers more than 200 product variants. Each variant has its own article number and is delivered pre-assembled. The large variety of sizes, strokes, forces and features opens up a very comprehensive range of applications for the user.

LINEAR MODULE DM01-23x80



Dimensions in mm

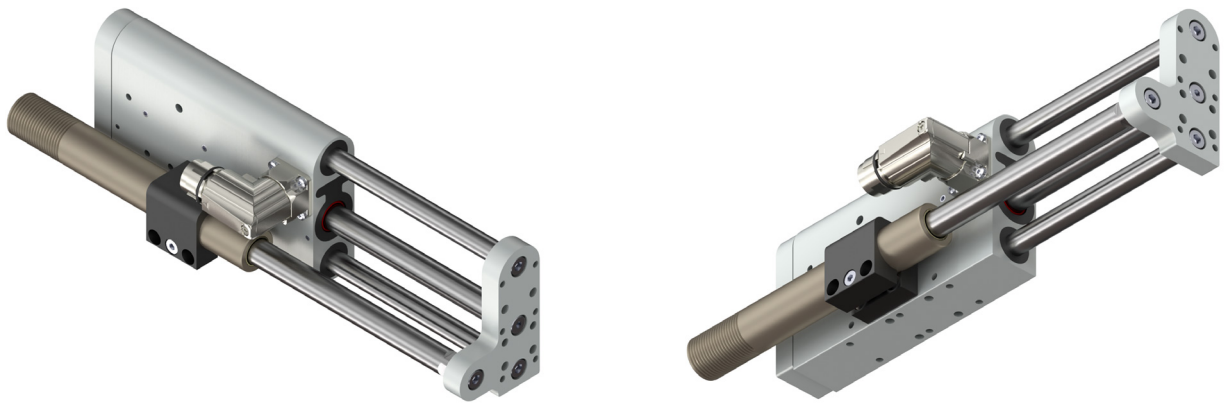
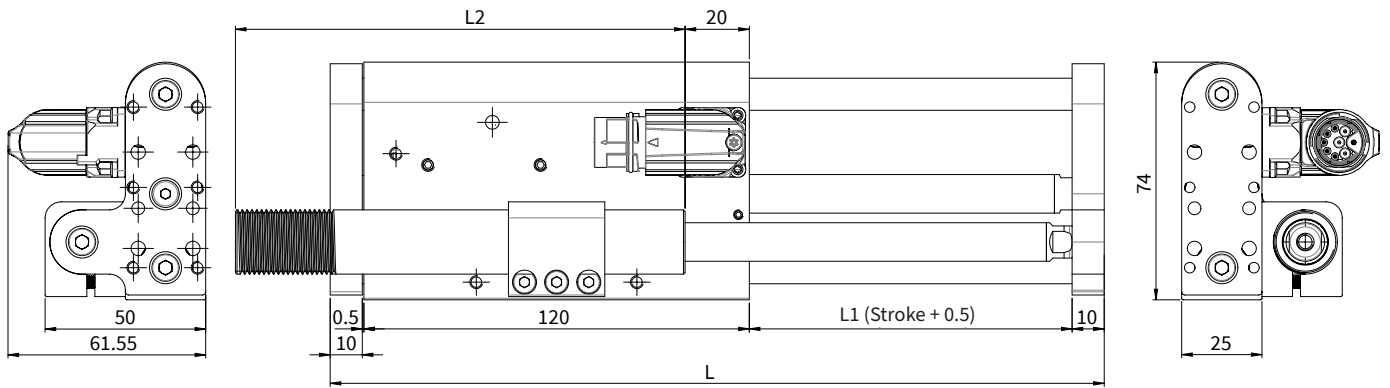
| Linear Module | Stroke H [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|-----------------------------|-------------------------|----------------------------------|---------------------------------------|--------------------------|
| DM01-23x80F-HP-R-60 | 60 (2.36) | 201 (7.91) | 460 (1.01) | 1039 (2.29) |
| DM01-23x80F-HP-R-100 | 100 (3.93) | 241 (9.49) | 542 (1.19) | 1121 (2.47) |
| DM01-23x80F-HP-R-160 | 160 (6.30) | 301 (11.85) | 666 (1.47) | 1245 (2.74) |
| DM01-23x80F-HP-R-220 | 220 (8.66) | 361 (14.21) | 774 (1.71) | 1353 (2.98) |
| DM01-23x80F-HP-R-290 | 290 (11.42) | 431 (16.97) | 915 (2.02) | 1494 (3.29) |
| DM01-23x80F-HP-R-350 | 350 (13.78) | 491 (19.33) | 1037 (2.29) | 1616 (3.56) |

¹⁾ Mass: Slider, Shafts, Front plate, Front plate back

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 10 mm | Linear ball bearing | H-ECOPUR |

LINEAR MODULE DM01-23x80_MSxx WITH VERTICAL LOAD COMPENSATION MAGSPRING®



Dimensions in mm

| Linear module with MagSpring | Stroke H [mm (inch)] | MS Stator length L2 [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|---|----------------------|---------------------------------|-------------------------------|------------------------------------|-----------------------|
| DM01-23x80F-HP-R-60_MSxx ²⁾ | 60 (2.36) | 82 (3.23) | 201 (7.91) | 580 (1.28) | 1293 (2.85) |
| DM01-23x80F-HP-R-100_MSxx ²⁾ | 100 (3.93) | 140 (5.51) | 241 (9.49) | 728 (1.60) | 1441 (3.18) |
| DM01-23x80F-HP-R-160_MSxx ²⁾ | 160 (6.30) | 220 (8.66) | 301 (11.85) | 926 (2.04) | 1639 (3.61) |
| DM01-23x80F-HP-R-220_MSxx ²⁾ | 220 (8.66) | 300 (11.81) | 361 (14.21) | 1034 (2.28) | 1747 (3.85) |
| DM01-23x80F-HP-R-290_MSxx ²⁾ | 290 (11.42) | 300 (11.81) | 431 (16.97) | 1275 (2.81) | 1988 (4.38) |

¹⁾ Masse: Mass: Slider, Shafts, Front plate, Front plate back, MagSpring slider

²⁾ MagSpring variants with different constant forces

MS11: Constant force 11N

MS12: Constant force 17N

MS13: Constant force 22N

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 10 mm | Linear ball bearing | H-ECOPUR |

PERFORMANCE DATA DM01-23x80

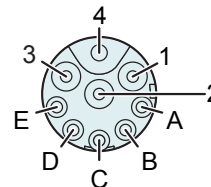


| Performance Data Linear Module DM01-23x80 | | | |
|---|--|--|-------------------------------|
| Stroke | | | |
| Max. Stroke | mm (in) | | 350 (13.78) |
| Force | | | |
| Max. Force @ 48VDC | N (lbf) | | 67.1 (15.1) |
| Max. Force @ 72VDC | N (lbf) | | 67.1 (15.1) |
| Max. Cont. Force [Passive cooling/ Fan / Fluid] | N (lbf) | | 18.5 / 25 / - (4.2 / 5.7 / -) |
| Force Constant | N/A _{pk} (lbf/A _{pk}) | | 8.95 (2.01) |
| Position Detection | | | |
| Position Resolution | mm (in) | | 0.002 (0.0001) |
| Repeatability | mm (in) | | ±0.05 (±0.002) |
| Position Resolution with ES | mm (in) | | - (-) |
| Repeatability with ES | mm (in) | | - (-) |
| Electrical Data | | | |
| Max. Current @ 48VDC | A _{pk} | | 7.4 |
| Max. Current @ 72VDC | A _{pk} | | 7.4 |
| Max. Cont. Current [Passive cooling/ Fan / Fluid] | A _{pk} | | 2.0 / 2.8 / - |
| Terminal Resistance 25 °C / 120 °C | Ohm | | 4.2 / 6.2 |
| Terminal Inductivity | mH | | 0.6 |
| Magnetic Period | mm (in) | | 20 (0.78) |
| Thermal Data | | | |
| Max. Winding Temperature (Sensor) | °C | | 120 |
| Thermal Resistance [Passive cooling / Fan / Fluid] | K/W | | 3.17 / 1.69 / - |
| Thermal Time Constant [Passive cooling / Fan / Fluid] | s | | 300 / 200 / - |
| Mechanical Data | | | |
| Stator Diameter | mm (in) | | 23 (0.91) |
| Slider Diameter | mm (in) | | 12 (0.47) |
| IP Code | | | IP 64 S |
| Certification | | | |
| cURus | File-No. | | E354430 |

CONNECTOR

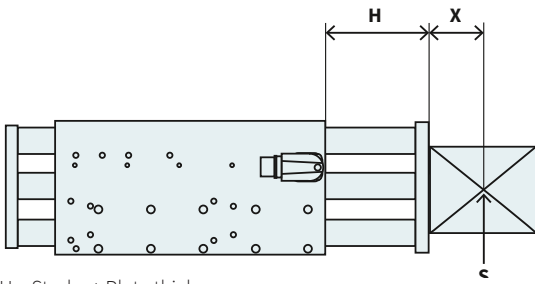
| Motor Connector Wiring | R-Connector | Wire Color Motor Cable |
|------------------------|-------------|------------------------|
| Ph 1+ | 1 | red |
| Ph 1- | 2 | pink |
| Ph 2+ | 3 | blue |
| Ph 2- | 4 | grey |
| +5VDC | A | white |
| GND | B | inner Shield |
| Sinus | C | yellow |
| Cosinus | D | green |
| Temp. | E | black |
| Shield | Case | outer Shield |

R-Connector



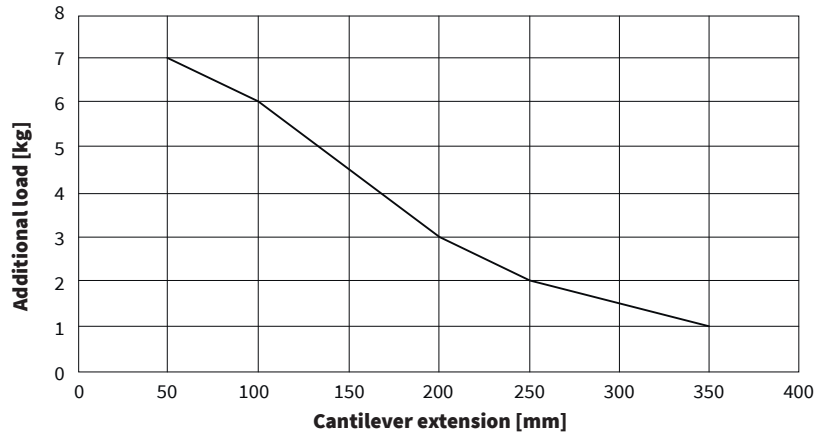
View: Motor connector, plug side
 Material: nickel plated
 IP Code: IP 67

MAXIMUM LOAD

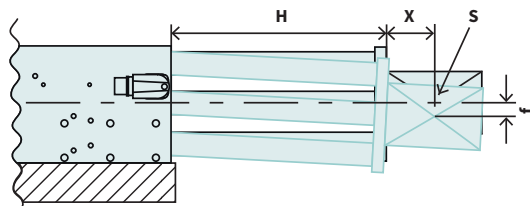


H = Stroke + Plate thickness
 X = Distance to center of gravity
 S = Center of gravity
 Cantilever extension = H + X

The maximum load depends on the cantilever extension (distance H plus distance between the center of gravity of the working load and the mounting surface).

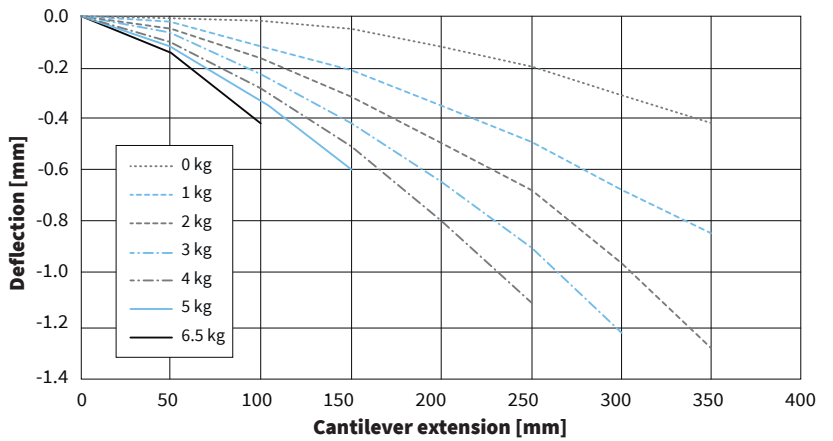


VERTICAL DEFLECTION



H = Stroke + Plate thickness
 S = Center of gravity
 X = Distance to center of gravity
 f = Deflection of theoretical axis

Total deflection =
 Static deflection + deflection under load
 (Deflection measured at standstill)



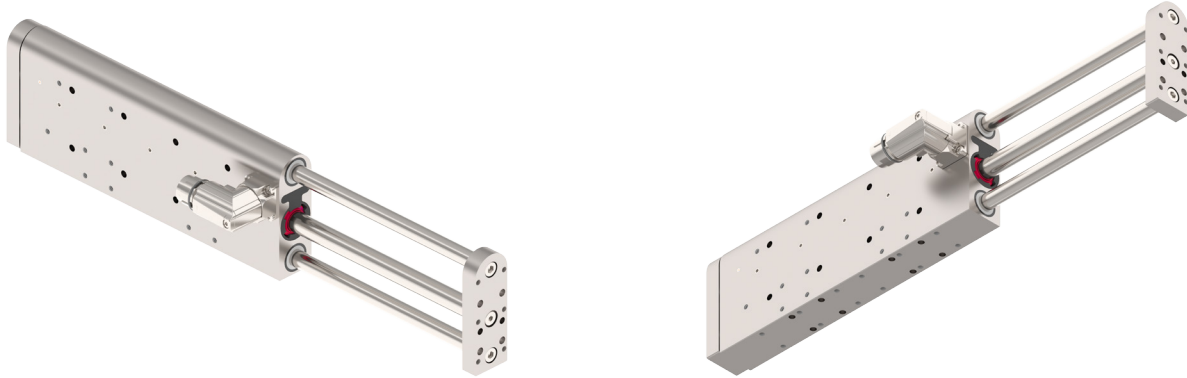
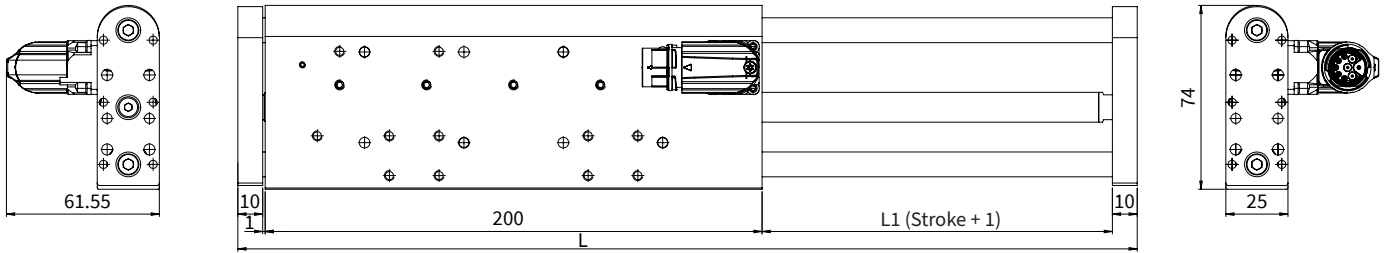
ORDERING INFORMATION

| Item | Description | Item-No. |
|----------------------------------|--|---------------------------|
| DM01-23x80F-HP-R-60 | Linear Module, Stroke max 60mm | 0150-4046 |
| DM01-23x80F-HP-R-60_MS11 | Linear Module with MagSpring 11N, Stroke max 60mm | 0150-4060 |
| DM01-23x80F-HP-R-60_MS12 | Linear Module with MagSpring 17N, Stroke max 60mm | 0150-4061 |
| DM01-23x80F-HP-R-60_MS13 | Linear Module with MagSpring 22N, Stroke max 60mm | 0150-4062 |
| DM01-23x80F-HP-R-100 | Linear Module, Stroke max 100mm | 0150-4047 |
| DM01-23x80F-HP-R-100_MS11 | Linear Module with MagSpring 11N, Stroke max 100mm | 0150-4063 |
| DM01-23x80F-HP-R-100_MS12 | Linear Module with MagSpring 17N, Stroke max 100mm | 0150-4064 |
| DM01-23x80F-HP-R-100_MS13 | Linear Module with MagSpring 22N, Stroke max 100mm | 0150-4065 |
| DM01-23x80F-HP-R-160 | Linear Module, Stroke max 160mm | 0150-4052 |
| DM01-23x80F-HP-R-160_MS11 | Linear Module with MagSpring 11N, Stroke max 160mm | 0150-4066 |
| DM01-23x80F-HP-R-160_MS12 | Linear Module with MagSpring 17N, Stroke max 160mm | 0150-4067 |
| DM01-23x80F-HP-R-160_MS13 | Linear Module with MagSpring 22N, Stroke max 160mm | 0150-4068 |
| DM01-23x80F-HP-R-220 | Linear Module, Stroke max 220mm | 0150-4053 |
| DM01-23x80F-HP-R-220_MS11 | Linear Module with MagSpring 11N, Stroke max 220mm | 0150-4069 |
| DM01-23x80F-HP-R-220_MS12 | Linear Module with MagSpring 17N, Stroke max 220mm | 0150-4070 |
| DM01-23x80F-HP-R-220_MS13 | Linear Module with MagSpring 22N, Stroke max 220mm | 0150-4071 |
| DM01-23x80F-HP-R-290 | Linear Module, Stroke max 290mm | 0150-4087 |
| DM01-23x80F-HP-R-290_MS11 | Linear Module with MagSpring 11N, Stroke max 290mm | 0150-4088 |
| DM01-23x80F-HP-R-290_MS12 | Linear Module with MagSpring 17N, Stroke max 290mm | 0150-4089 |
| DM01-23x80F-HP-R-290_MS13 | Linear Module with MagSpring 22N, Stroke max 290mm | 0150-4091 |
| DM01-23x80F-HP-R-350 | Linear Module, Stroke max 350mm | 0150-4092 |

| Item | Description | Item-No. |
|----------------------------------|--|---------------------------|
| DM01-23x80F-HP-R-60_BE03 | Linear Module, Stroke max 60mm - Clean Room | 0150-4624 |
| DM01-23x80F-HP-R-100_BE03 | Linear Module, Stroke max 100mm - Clean Room | 0150-4426 |
| DM01-23x80F-HP-R-160_BE03 | Linear Module, Stroke max 160mm - Clean Room | 0150-4427 |
| DM01-23x80F-HP-R-220_BE03 | Linear Module, Stroke max 220mm - Clean Room | 0150-4625 |
| DM01-23x80F-HP-R-290_BE03 | Linear Module, Stroke max 290mm - Clean Room | 0150-4428 |
| DM01-23x80F-HP-R-350_BE03 | Linear Module, Stroke max 350mm - Clean Room | 0150-4626 |

Area with horizontal dotted lines for notes.

LINEAR MODULE DM01-23x160



Dimensions in mm

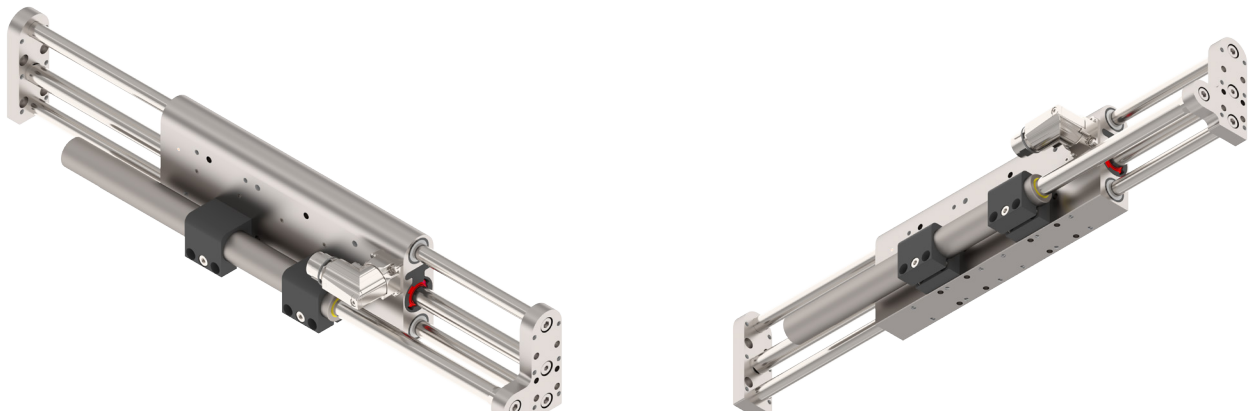
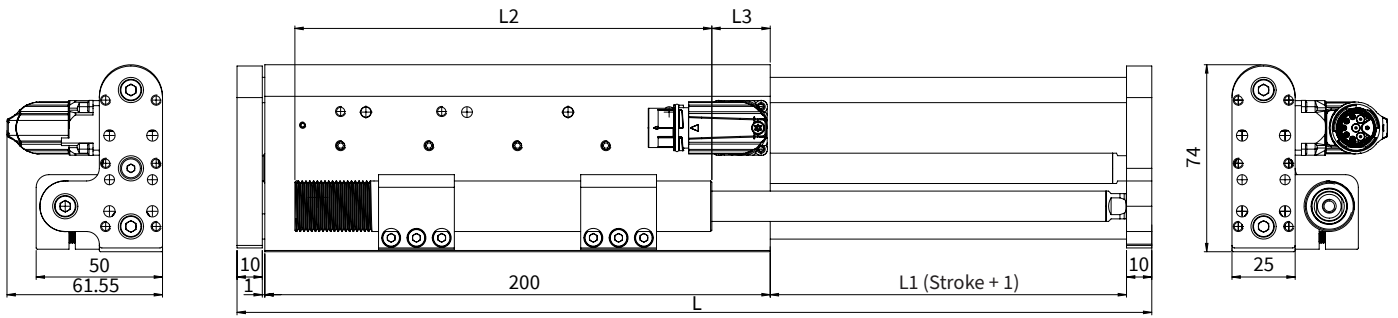
| Linear Module | Stroke H [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|------------------------------|-------------------------|----------------------------------|---------------------------------------|--------------------------|
| DM01-23x160H-XP-R-80 | 80 (3.15) | 302 (11.89) | 670 (1.48) | 1640 (3.62) |
| DM01-23x160H-XP-R-140 | 140 (5.51) | 362 (14.25) | 800 (1.76) | 1770 (3.90) |
| DM01-23x160H-XP-R-210 | 210 (8.27) | 432 (17.00) | 940 (2.07) | 1910 (4.21) |
| DM01-23x160H-XP-R-270 | 270 (10.63) | 492 (19.37) | 1060 (2.34) | 2030 (4.48) |

¹⁾ Mass: Slider, Shafts, Front plate, Front plate back

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 10 mm | Linear ball bearing | H-ECOPUR |

LINEAR MODULE DM01-23x160_MSxx WITH VERTICAL LOAD COMPENSATION MAGSPRING®



Dimensions in mm

| Linear module with MagSpring | Stroke H [mm (inch)] | Length L3 [mm (inch)] | MS Stator length L2 [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|--|----------------------|-----------------------|---------------------------------|-------------------------------|------------------------------------|-----------------------|
| DM01-23x160H-XP-R-80_MSxx ²⁾ | 80 (3.15) | 23 (0.91) | 110 (4.33) | 301 (11.85) | 790 (1.74) | 1940 (4.28) |
| DM01-23x160H-XP-R-140_MSxx ²⁾ | 140 (5.51) | 23 (0.91) | 165 (5.51) | 361 (14.21) | 960 (2.12) | 2170 (4.78) |
| DM01-23x160H-XP-R-210_MSxx ²⁾ | 210 (8.27) | 39 (1.54) | 220 (8.66) | 431 (16.97) | 1170 (2.58) | 2490 (5.49) |
| DM01-23x160H-XP-R-270_MSxx ²⁾ | 270 (10.63) | 40 (1.57) | 300 (11.81) | 491 (19.33) | 1360 (3.00) | 2780 (6.13) |

¹⁾ Masse: Mass: Slider, Shafts, Front plate, Front plate back, MagSpring slider

²⁾ MagSpring variants with different constant forces

MS11: Constant force 11N (Eff. load compensation depending on moving mass)

MS12: Constant force 17N (Eff. load compensation depending on moving mass)

MS13: Constant force 22N (Eff. load compensation depending on moving mass)

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 10 mm | Linear ball bearing | H-ECOPUR |

PERFORMANCE DATA DM01-23x160

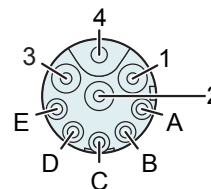


| Performance Data Linear Module DM01-23x160 | | | |
|---|--|--|----------------------------------|
| Stroke | | | |
| Max. Stroke | mm (in) | | 270 (10.63) |
| Force | | | |
| Max. Force @ 48VDC | N (lbf) | | 137.3 (30.9) |
| Max. Force @ 72VDC | N (lbf) | | 137.3 (30.9) |
| Max. Cont. Force [Passive cooling/ Fan / Fluid] | N (lbf) | | 32.7 / 50.1 / - (7.4 / 11.3 / -) |
| Force Constant | N/A _{pk} (lbf/A _{pk}) | | 13.6 (3.07) |
| Position Detection | | | |
| Position Resolution | mm (in) | | 0.002 (0.0001) |
| Repeatability | mm (in) | | ±0.05 (±0.002) |
| Position Resolution with ES | mm (in) | | - (-) |
| Repeatability with ES | mm (in) | | - (-) |
| Electrical Data | | | |
| Max. Current @ 48VDC | A _{pk} | | 7.4 |
| Max. Current @ 72VDC | A _{pk} | | 7.4 |
| Max. Cont. Current [Passive cooling/ Fan / Fluid] | A _{pk} | | 2.0 / 2.8 / - |
| Terminal Resistance 25 °C / 120 °C | Ohm | | 4.2 / 6.2 |
| Terminal Inductivity | mH | | 0.6 |
| Magnetic Period | mm (in) | | 20 (0.78) |
| Thermal Data | | | |
| Max. Winding Temperature (Sensor) | °C | | 120 |
| Thermal Resistance [Passive cooling / Fan / Fluid] | K/W | | 3.17 / 1.69 / - |
| Thermal Time Constant [Passive cooling / Fan / Fluid] | s | | 300 / 200 / - |
| Mechanical Data | | | |
| Stator Diameter | mm (in) | | 23 (0.91) |
| Slider Diameter | mm (in) | | 12 (0.47) |
| IP Code | | | IP 64 S |
| Certification | | | |
| cURus | File-No. | | E354430 |

CONNECTOR

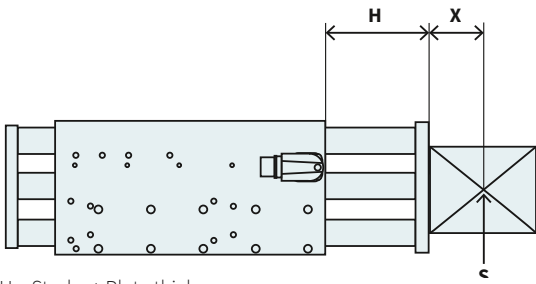
| Motor Connector Wiring | R-Connector | Wire Color Motor Cable |
|------------------------|-------------|------------------------|
| Ph 1+ | 1 | red |
| Ph 1- | 2 | pink |
| Ph 2+ | 3 | blue |
| Ph 2- | 4 | grey |
| +5VDC | A | white |
| GND | B | inner Shield |
| Sinus | C | yellow |
| Cosinus | D | green |
| Temp. | E | black |
| Shield | Case | outer Shield |

R-Connector



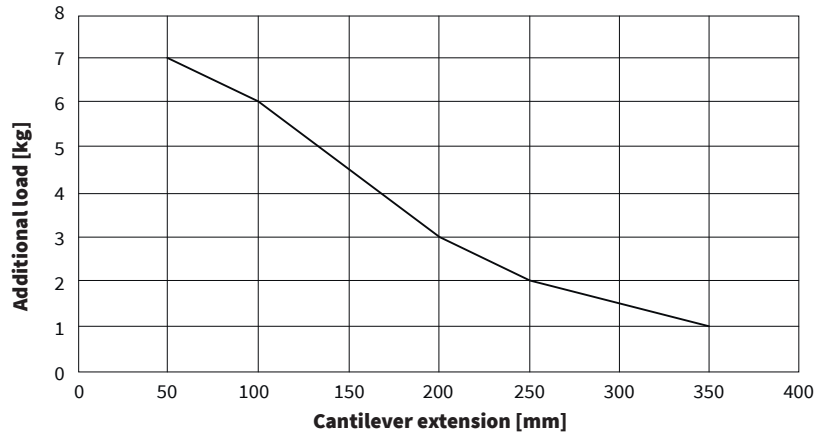
View: Motor connector, plug side
 Material: nickel plated
 IP Code: IP 67

MAXIMUM LOAD

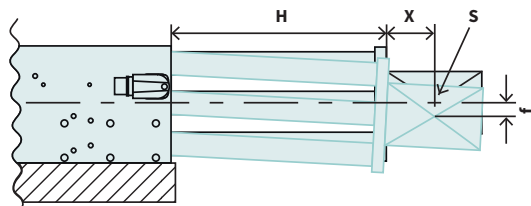


H = Stroke + Plate thickness
 X = Distance to center of gravity
 S = Center of gravity
 Cantilever extension = H + X

The maximum load depends on the cantilever extension (distance H plus distance between the center of gravity of the working load and the mounting surface).

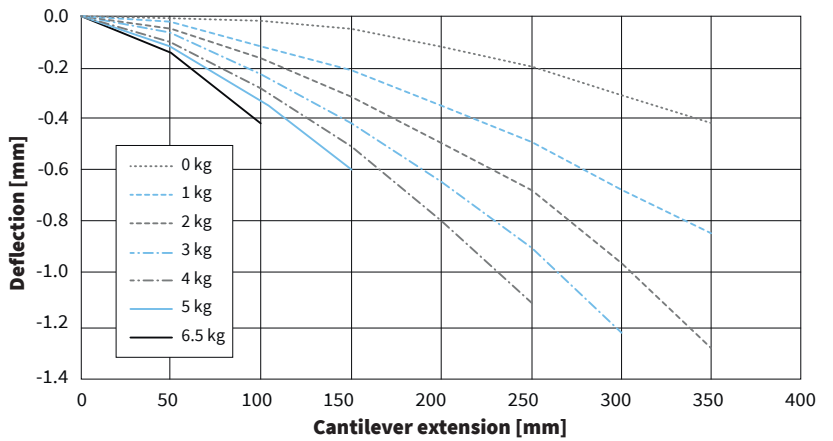


VERTICAL DEFLECTION



H = Stroke + Plate thickness
 S = Center of gravity
 X = Distance to center of gravity
 f = Deflection of theoretical axis

Total deflection =
 Static deflection + deflection under load
 (Deflection measured at standstill)



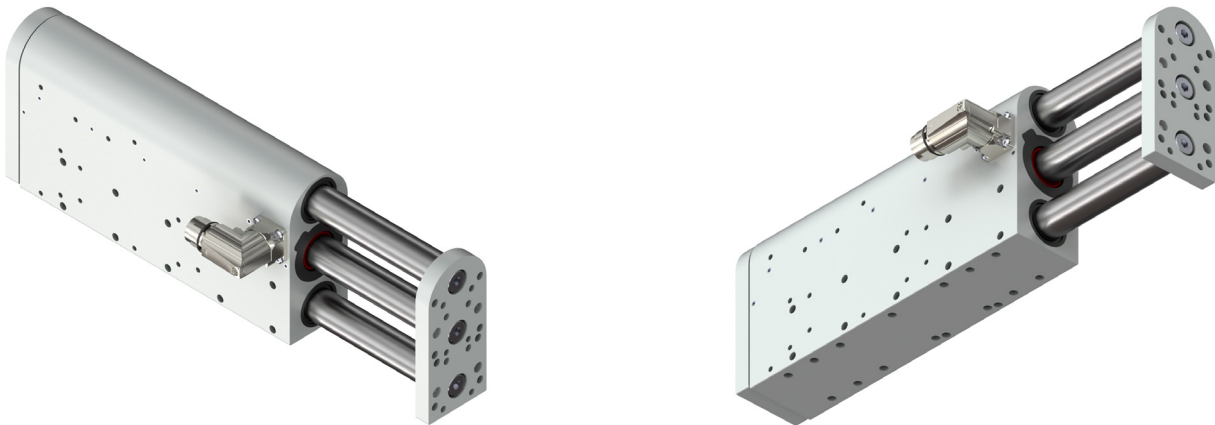
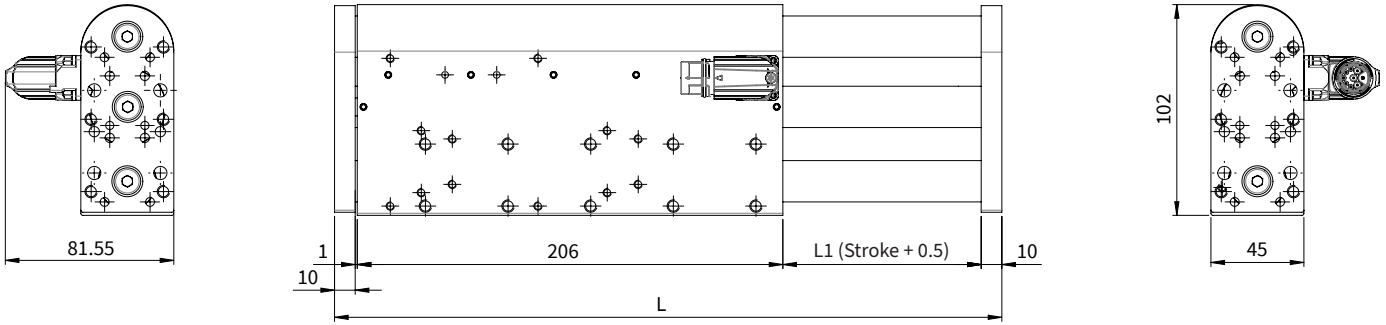
ORDERING INFORMATION

| Item | Description | Item-No. |
|-----------------------------------|---|---------------------------|
| DM01-23x160H-XP-R-80 | Linear Module, Stroke max. 80mm | 0150-6112 |
| DM01-23x160H-XP-R-80_MS11 | Linear Module with MagSpring 11N, Stroke max. 80mm | 0150-6110 |
| DM01-23x160H-XP-R-80_MS12 | Linear Module with MagSpring 17N, Stroke max. 80mm | 0150-6216 |
| DM01-23x160H-XP-R-80_MS13 | Linear Module with MagSpring 22N, Stroke max. 80mm | 0150-6217 |
| DM01-23x160H-XP-R-140 | Linear Module, Hub max. 140mm | 0150-6231 |
| DM01-23x160H-XP-R-140_MS11 | Linear Module with MagSpring 11N, Stroke max. 140mm | 0150-6218 |
| DM01-23x160H-XP-R-140_MS12 | Linear Module with MagSpring 17N, Stroke max. 140mm | 0150-6223 |
| DM01-23x160H-XP-R-140_MS13 | Linear Module with MagSpring 22N, Stroke max. 140mm | 0150-6224 |
| DM01-23x160H-XP-R-210 | Linear Module, Hub max. 210mm | 0150-6233 |
| DM01-23x160H-XP-R-210_MS11 | Linear Module with MagSpring 11N, Stroke max. 210mm | 0150-6225 |
| DM01-23x160H-XP-R-210_MS12 | Linear Module with MagSpring 17N, Stroke max. 210mm | 0150-6226 |
| DM01-23x160H-XP-R-210_MS13 | Linear Module with MagSpring 22N, Stroke max. 210mm | 0150-6227 |
| DM01-23x160H-XP-R-270 | Linear Module, Hub max. 270mm | 0150-6235 |
| DM01-23x160H-XP-R-270_MS11 | Linear Module with MagSpring 11N, Stroke max. 270mm | 0150-6228 |
| DM01-23x160H-XP-R-270_MS12 | Linear Module with MagSpring 17N, Stroke max. 270mm | 0150-6229 |
| DM01-23x160H-XP-R-270_MS13 | Linear Module with MagSpring 22N, Stroke max. 270mm | 0150-6230 |

| Item | Description | Item-No. |
|-----------------------------------|---|---------------------------|
| DM01-23x160H-XP-R-80_BE03 | Linear Module, Stroke max. 80mm - Clean room | 0150-6107 |
| DM01-23x160H-XP-R-140_BE03 | Linear Module, Stroke max. 140mm - Clean room | 0150-6232 |
| DM01-23x160H-XP-R-210_BE03 | Linear Module, Stroke max. 210mm - Clean room | 0150-6234 |
| DM01-23x160H-XP-R-270_BE03 | Linear Module, Stroke max. 270mm - Clean room | 0150-6236 |

Area with horizontal dotted lines for notes.

LINEAR MODULE DM01-37x120



Abmessungen mm

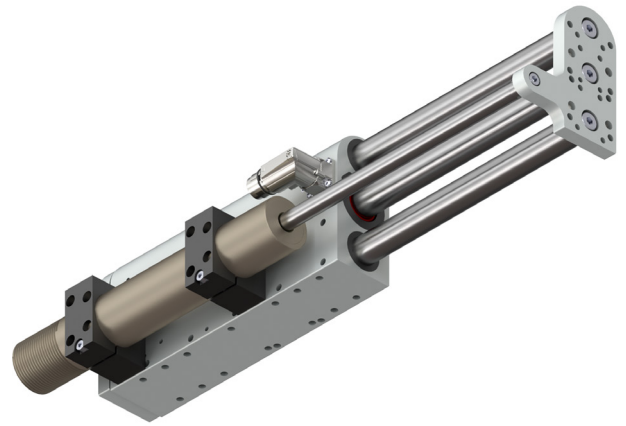
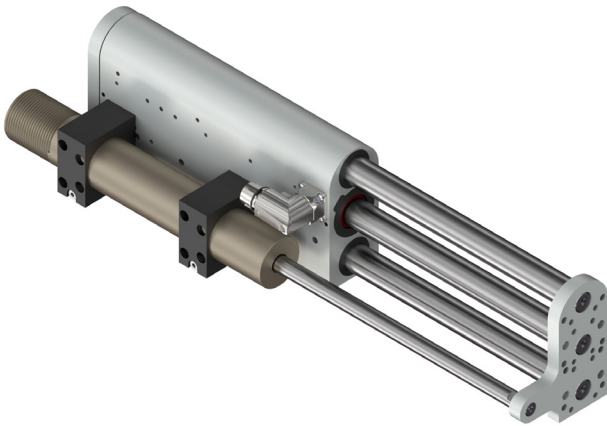
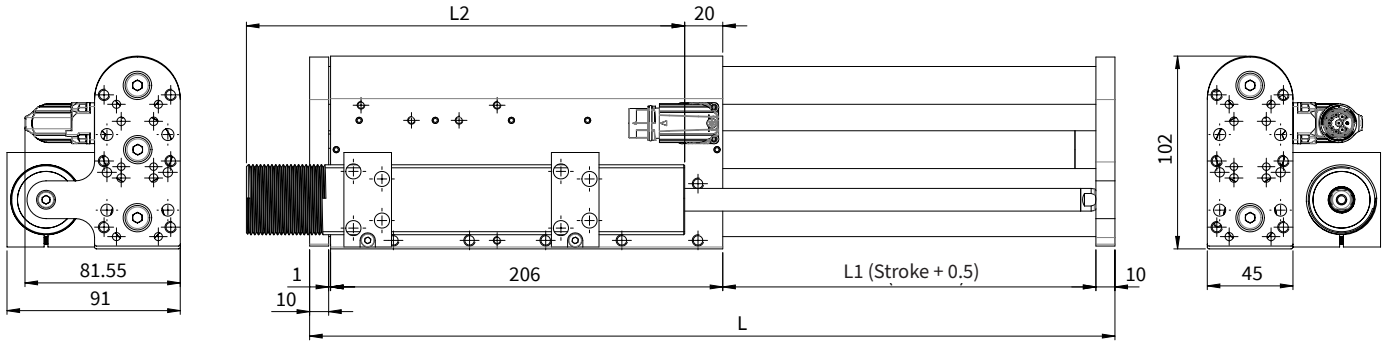
| Linear Module | Stroke H [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|------------------------------|-------------------------|----------------------------------|---------------------------------------|--------------------------|
| DM01-37x120F-HP-R-95 | 95 (3.74) | 323 (12.72) | 1740 (3.83) | 3700 (8.16) |
| DM01-37x120F-HP-R-195 | 195 (7.68) | 423 (16.65) | 2192 (4.83) | 4172 (9.20) |
| DM01-37x120F-HP-R-295 | 295 (11.62) | 523 (20.59) | 2678 (5.90) | 4658 (10.27) |
| DM01-37x120F-HP-R-395 | 395 (15.55) | 623 (24.53) | 3163 (6.97) | 5144 (11.34) |
| DM01-37x120F-HP-R-495 | 495 (19.49) | 723 (28.46) | 3649 (8.04) | 5630 (12.41) |

¹⁾ Mass: Slider, Shafts, Front plate, Front plate back

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 20 mm | Linear ball bearing | H-ECOPUR |

LINEAR MODULE DM01-37x120_MSxx WITH VERTICAL LOAD COMPENSATION MAGSPRING®



Dimensions in mm

| Linear module with MagSpring | Stroke H [mm (inch)] | MS Stator length L2 [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|---|-------------------------|------------------------------------|----------------------------------|---------------------------------------|--------------------------|
| DM01-37x120F-HP-R-95_MSxx ²⁾ | 95 (3.74) | 155 (6.10) | 323 (12.72) | 1857 (4.09) | 4858 (10.71) |
| DM01-37x120F-HP-R-195_MSxx ²⁾ | 195 (7.68) | 230 (9.05) | 423 (16.65) | 2469 (5.44) | 6009 (13.24) |
| DM01-37x120F-HP-R-295_MSxx ²⁾ | 295 (11.62) | 305 (12.01) | 523 (20.59) | 3055 (6.73) | 7037 (15.51) |

¹⁾ Mass: Slider, Shafts, Front plate, Front plate back, MagSpring slider

²⁾ MagSpring variants with different constant forces

MS02: Constant force 40N

MS03: Constant force 50N

MS04: Constant force 60N

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 20 mm | Linear ball bearing | H-ECOPUR |

PERFORMANCE DATA DM01-37x120

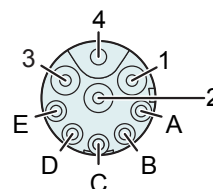


| Performance Data Linear Module DM01-37x120 | | | |
|---|--|--|-----------------------------|
| Stroke | | | |
| Max. Stroke | mm (in) | | 495 (19.49) |
| Force | | | |
| Max. Force @ 48VDC | N (lbf) | | 255 (57.3) |
| Max. Force @ 72VDC | N (lbf) | | 255 (57.3) |
| Max. Cont. Force [Passive cooling / Fan / Fluid] | N (lbf) | | 62 / 87 / - (14.2 / 20 / -) |
| Force Constant | N/A _{pk} (lbf/A _{pk}) | | 17 (3.82) |
| Position Detection | | | |
| Position Resolution | mm (in) | | 0.005 (0.0002) |
| Repeatability | mm (in) | | ±0.05 (±0.002) |
| Position Resolution with ES | mm (in) | | - (-) |
| Repeatability with ES | mm (in) | | - (-) |
| Electrical Data | | | |
| Max. Current @ 48VDC | A _{pk} | | 14.9 |
| Max. Current @ 72VDC | A _{pk} | | 14.9 |
| Max. Cont. Current [Passive cooling / Fan / Fluid] | A _{pk} | | 3.6 / 5.1 / - |
| Terminal Resistance 25 °C / 120 °C | Ohm | | 2.4 / 3.5 |
| Terminal Inductivity | mH | | 1.6 |
| Magnetic Period | mm (in) | | 40 (1.57) |
| Thermal Data | | | |
| Max. Winding Temperature (Sensor) | °C | | 120 |
| Thermal Resistance [Passive cooling / Fan / Fluid] | K/W | | 1.7 / 0.87 / - |
| Thermal Time Constant [Passive cooling / Fan / Fluid] | s | | 600 / 200 / - |
| Mechanical Data | | | |
| Stator Diameter | mm (in) | | 37 (1.5) |
| Slider Diameter | mm (in) | | 20 (0.79) |
| IP Code | | | IP 64 S |
| Certification | | | |
| cURus | File-No. | | E354430 |

CONNECTOR

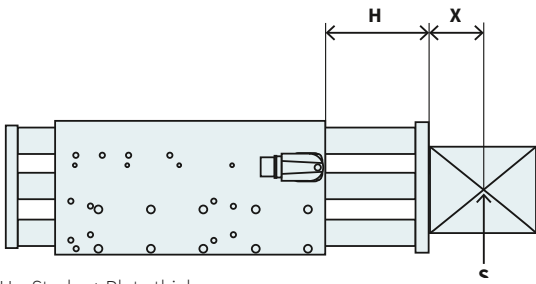
| Motor Connector Wiring | R-Stecker | Wire Color Motor Cable |
|------------------------|-----------|------------------------|
| Ph 1+ | 1 | red |
| Ph 1- | 2 | pink |
| Ph 2+ | 3 | blue |
| Ph 2- | 4 | grey |
| +5VDC | A | white |
| GND | B | inner Shield |
| Sinus | C | yellow |
| Cosinus | D | green |
| Temp. | E | black |
| Schirm | Geh. | outer Shield |

R-Connector



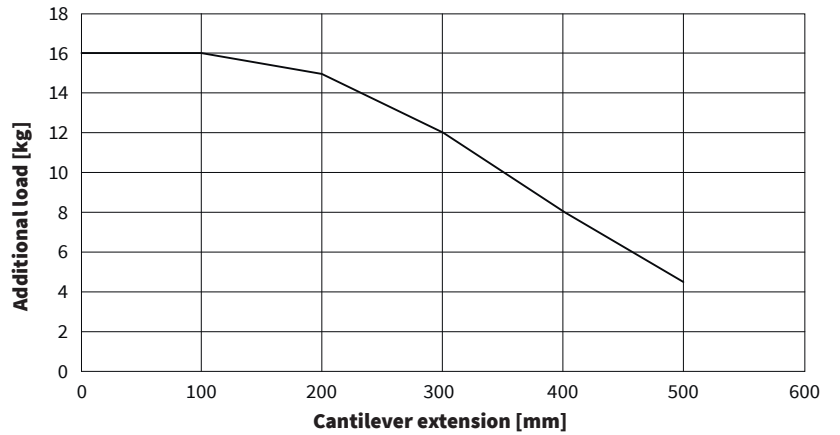
View: Motor connector, plug side
 Material: nickel plated
 IP Code: IP 67

MAXIMUM LOAD

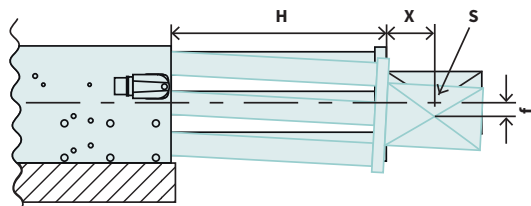


H = Stroke + Plate thickness
 X = Distance to center of gravity
 S = Center of gravity
 Cantilever extension = H + X

The maximum load depends on the cantilever extension (distance H plus distance between the center of gravity of the working load and the mounting surface).

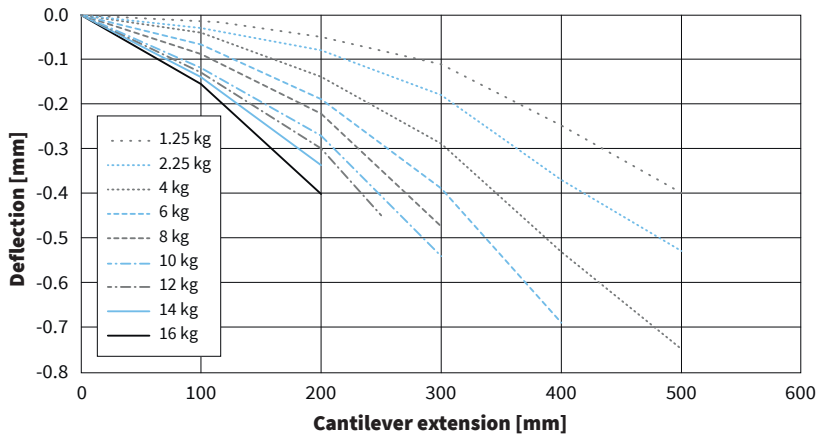


VERTICAL DEFLECTION



H = Stroke + Plate thickness
 S = Center of gravity
 X = Distance to center of gravity
 f = Deflection of theoretical axis

Total deflection =
 Static deflection + deflection under load
 (Deflection measured at standstill)



ORDERING INFORMATION

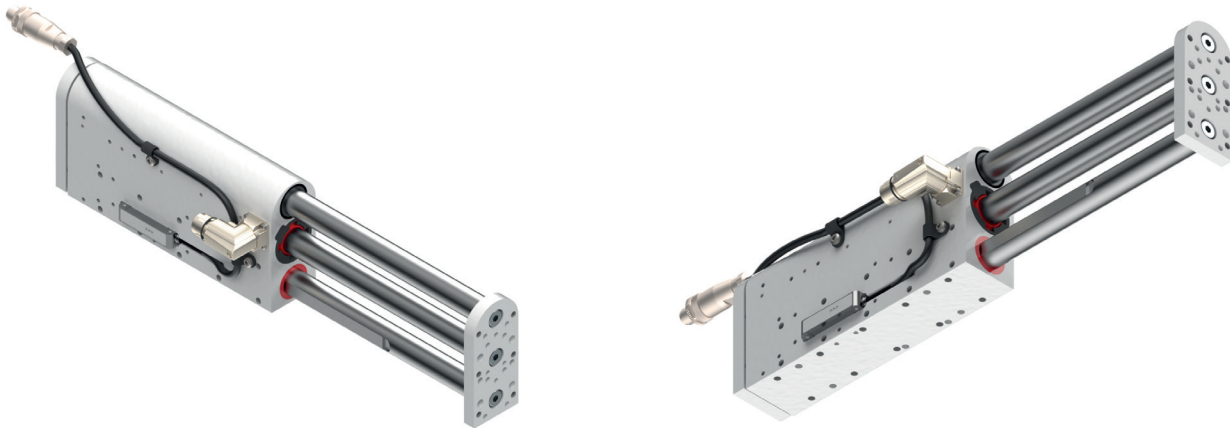
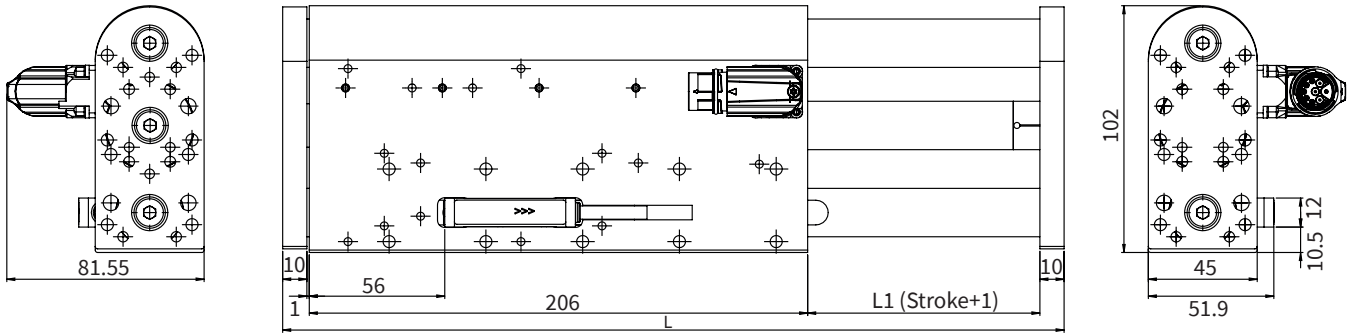
| Item | Description | Item-No. |
|-----------------------------------|--|---------------------------|
| DM01-37x120F-HP-R-95 | Linear Module, Stroke max 95mm | 0150-4013 |
| DM01-37x120F-HP-R-95_MS02 | Linear Module with MagSpring 40N, Stroke max 95mm | 0150-4074 |
| DM01-37x120F-HP-R-95_MS03 | Linear Module with MagSpring 50N, Stroke max 95mm | 0150-4075 |
| DM01-37x120F-HP-R-95_MS04 | Linear Module with MagSpring 60N, Stroke max 95mm | 0150-4076 |
| DM01-37x120F-HP-R-195 | Linear Module, Stroke max 195mm | 0150-4014 |
| DM01-37x120F-HP-R-195_MS02 | Linear Module with MagSpring 40N, Stroke max 195mm | 0150-4027 |
| DM01-37x120F-HP-R-195_MS03 | Linear Module with MagSpring 50N, Stroke max 195mm | 0150-4028 |
| DM01-37x120F-HP-R-195_MS04 | Linear Module with MagSpring 60N, Stroke max 195mm | 0150-4029 |
| DM01-37x120F-HP-R-295 | Linear Module, Stroke max 295mm | 0150-4015 |
| DM01-37x120F-HP-R-295_MS02 | Linear Module with MagSpring 40N, Stroke max 295mm | 0150-4030 |
| DM01-37x120F-HP-R-295_MS03 | Linear Module with MagSpring 50N, Stroke max 295mm | 0150-4031 |
| DM01-37x120F-HP-R-295_MS04 | Linear Module with MagSpring 60N, Stroke max 295mm | 0150-4032 |
| DM01-37x120F-HP-R-395 | Linear Module, Stroke max 395mm | 0150-4016 |
| DM01-37x120F-HP-R-495 | Linear Module, Stroke max 495mm | 0150-4017 |

| Item | Description | Item-No. |
|--------------------------------------|---|----------------------------|
| DM01-37x120F-HP-R-95-2S | Linear Module, Stroke max 95mm - Safety Encoder | 0150-24013 |
| DM01-37x120F-HP-R-95_MS02-2S | Linear Module with MagSpring 40N, Stroke max 95mm - Safety Encoder | 0150-24074 |
| DM01-37x120F-HP-R-95_MS03-2S | Linear Module with MagSpring 50N, Stroke max 95mm - Safety Encoder | 0150-24075 |
| DM01-37x120F-HP-R-95_MS04-2S | Linear Module with MagSpring 60N, Stroke max 95mm - Safety Encoder | 0150-24076 |
| DM01-37x120F-HP-R-195-2S | Linear Module, Stroke max 195mm - Safety Encoder | 0150-24014 |
| DM01-37x120F-HP-R-195_MS02-2S | Linear Module with MagSpring 40N, Stroke max 195mm - Safety Encoder | 0150-24027 |
| DM01-37x120F-HP-R-195_MS03-2S | Linear Module with MagSpring 50N, Stroke max 195mm - Safety Encoder | 0150-24028 |
| DM01-37x120F-HP-R-195_MS04-2S | Linear Module with MagSpring 60N, Stroke max 195mm - Safety Encoder | 0150-24029 |
| DM01-37x120F-HP-R-295-2S | Linear Module, Stroke max 295mm - Safety Encoder | 0150-24015 |
| DM01-37x120F-HP-R-295_MS02-2S | Linear Module with MagSpring 40N, Stroke max 295mm - Safety Encoder | 0150-24030 |
| DM01-37x120F-HP-R-295_MS03-2S | Linear Module with MagSpring 50N, Stroke max 295mm - Safety Encoder | 0150-24031 |
| DM01-37x120F-HP-R-295_MS04-2S | Linear Module with MagSpring 60N, Stroke max 295mm - Safety Encoder | 0150-24032 |
| DM01-37x120F-HP-R-395-2S | Linear Module, Stroke max 395mm - Safety Encoder | 0150-24016 |
| DM01-37x120F-HP-R-495-2S | Linear Module, Stroke max 495mm - Safety Encoder | 0150-24017 |

| Item | Description | Item-No. |
|--------------------------------------|---|----------------------------|
| DM01-37x120F-HP-R-95_BE03 | Linear Module, Stroke max 95mm - Clean Room | 0150-4627 |
| DM01-37x120F-HP-R-195_BE03 | Linear Module, Stroke max 195mm - Clean Room | 0150-4429 |
| DM01-37x120F-HP-R-295_BE03 | Linear Module, Stroke max 295mm - Clean Room | 0150-4375 |
| DM01-37x120F-HP-R-395_BE03 | Linear Module, Stroke max 395mm - Clean Room | 0150-4430 |
| DM01-37x120F-HP-R-495_BE03 | Linear Module, Stroke max 495mm - Clean Room | 0150-4628 |
| DM01-37x120F-HP-R-95_BE03-2S | Linear Module, Stroke max 95mm - Clean Room & Safety Encoder | 0150-24627 |
| DM01-37x120F-HP-R-195_BE03-2S | Linear Module, Stroke max 195mm - Clean Room & Safety Encoder | 0150-24429 |
| DM01-37x120F-HP-R-295_BE03-2S | Linear Module, Stroke max 295mm - Clean Room & Safety Encoder | 0150-24375 |
| DM01-37x120F-HP-R-395_BE03-2S | Linear Module, Stroke max 395mm - Clean Room & Safety Encoder | 0150-24430 |
| DM01-37x120F-HP-R-495_BE03-2S | Linear Module, Stroke max 495mm - Clean Room & Safety Encoder | 0150-24628 |

Area with horizontal dotted lines for notes.

LINEAR MODULE DM01-37x120_EN02 WITH ABSOLUTE ENCODER



Dimensions in mm

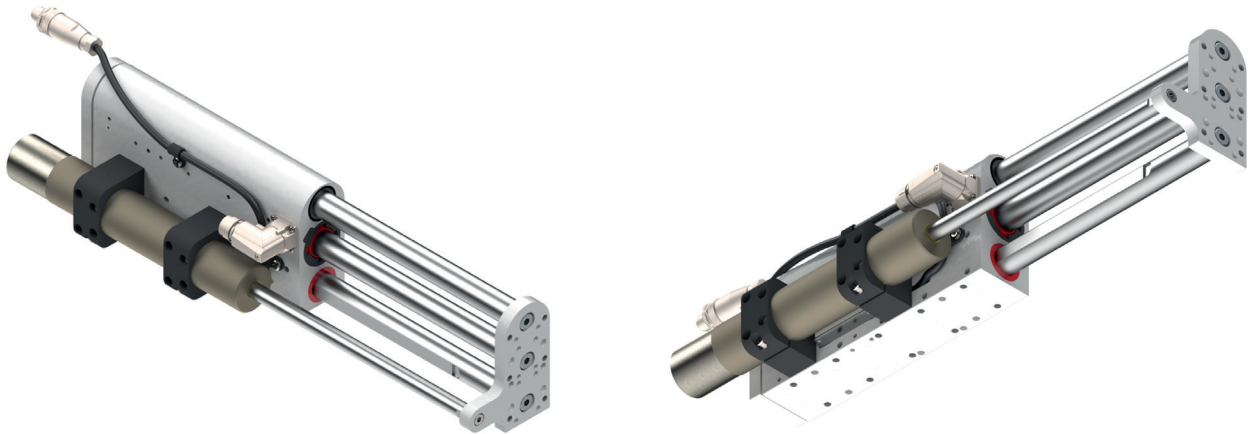
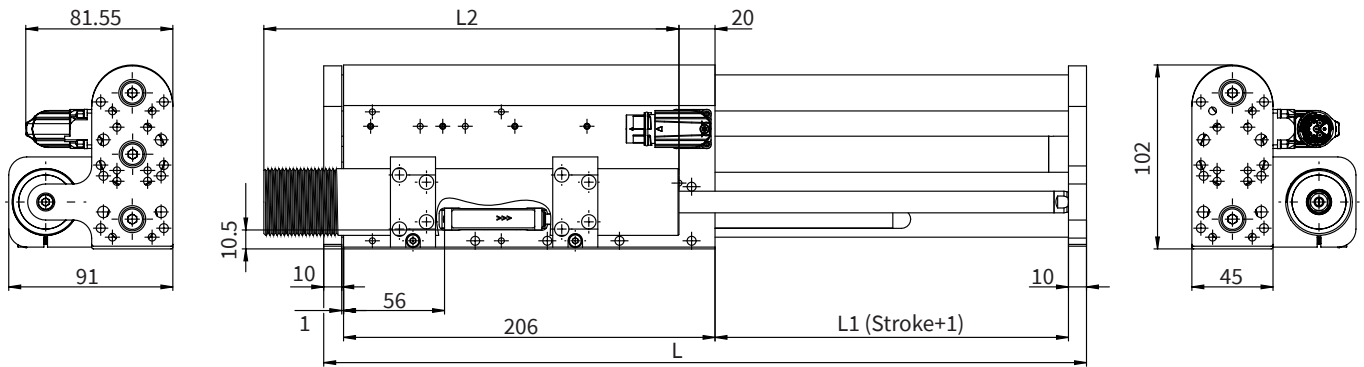
| Linear Module with Absolute Encoder | Stroke H [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|-------------------------------------|----------------------|-------------------------------|------------------------------------|-----------------------|
| DM01-37x120F-HP-R-95_EN02 | 95 (3.74) | 323 (12.72) | 2065 (4.55) | 4025 (8.87) |
| DM01-37x120F-HP-R-195_EN02 | 195 (7.68) | 423 (16.65) | 2576 (5.68) | 4556 (10.04) |
| DM01-37x120F-HP-R-295_EN02 | 295 (11.62) | 523 (20.59) | 3148 (6.94) | 5128 (11.31) |
| DM01-37x120F-HP-R-395_EN02 | 395 (15.55) | 623 (24.53) | 3770 (8.31) | 5751 (12.68) |
| DM01-37x120F-HP-R-495_EN02 | 495 (19.49) | 723 (28.46) | 4350 (9.59) | 6331 (13.96) |

¹⁾ Mass: Slider, Shafts, Front plate, Front plate back

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 20 mm | Linear ball bearing | H-ECOPUR |

LINEAR MODULE DM01-37X120_MSxx_EN02 WITH VERTICAL LOAD COMPENSATION AND ABSOLUTE ENCODER



Dimensions in mm

| Linear Module with MagSpring & Absolute Encoder | Stroke H [mm (inch)] | MS Stator length L2 [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|--|----------------------|---------------------------------|-------------------------------|------------------------------------|-----------------------|
| DM01-37x120F-HP-R-95_MSxx_EN02 ²⁾ | 95 (3.74) | 155 (6.10) | 323 (12.72) | 2182 (4.81) | 5183 (11.43) |
| DM01-37x120F-HP-R-195_MSxx_EN02 ²⁾ | 195 (7.68) | 230 (9.05) | 423 (16.65) | 2852 (6.29) | 6393 (14.09) |
| DM01-37x120F-HP-R-295_MSxx_EN02 ²⁾ | 295 (11.62) | 305 (12.01) | 523 (20.59) | 3525 (7.77) | 7507 (16.55) |

¹⁾ Mass: Slider, Shafts, Front plate, Front plate back, MagSpring slider
²⁾ MagSpring variants with different constant forces
 MS02: Constant force 40N (Eff. load compensation depending on moving mass)
 MS03: Constant force 50N (Eff. load compensation depending on moving mass)
 MS04: Constant force 60N (Eff. load compensation depending on moving mass)

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 20 mm | Linear ball bearing | H-ECOPUR |

PERFORMANCE DATA DM01-37x120_EN02 WITH ABSOLUTE ENCODER

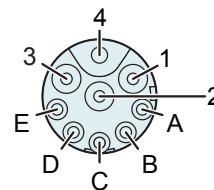


| Performance Data Linear Module DM01-37x120_EN02 with absolute encoder | | | |
|---|--|--|-----------------------------|
| Stroke | | | |
| Max. Stroke | mm (in) | | 495 (19.49) |
| Force | | | |
| Max. Force @ 48VDC | N (lbf) | | 255 (57.3) |
| Max. Force @ 72VDC | N (lbf) | | 255 (57.3) |
| Max. Cont. Force [Passive cooling / Fan / Fluid] | N (lbf) | | 62 / 87 / - (14.2 / 20 / -) |
| Force Constant | N/A _{pk} (lbf/A _{pk}) | | 17 (3.82) |
| Position Detection | | | |
| Position Resolution with ES | mm (in) | | 0.001 (0.00004) |
| Repeatability with ES | mm (in) | | 0.001 (0.00004) |
| Electrical Data | | | |
| Max. Current @ 48VDC | A _{pk} | | 14.9 |
| Max. Current @ 72VDC | A _{pk} | | 14.9 |
| Max. Cont. Current [Passive cooling / Fan / Fluid] | A _{pk} | | 3.6 / 5.1 / - |
| Terminal Resistance 25 °C / 120 °C | Ohm | | 2.4 / 3.5 |
| Terminal Inductivity | mH | | 1.6 |
| Magnetic Period | mm (in) | | 40 (1.57) |
| Thermal Data | | | |
| Max. Winding Temperature (Sensor) | °C | | 120 |
| Thermal Resistance [Passive cooling / Fan / Fluid] | K/W | | 1.7 / 0.87 / - |
| Thermal Time Constant [Passive cooling / Fan / Fluid] | s | | 600 / 200 / - |
| Mechanical Data | | | |
| Stator Diameter | mm (in) | | 37 (1.5) |
| Slider Diameter | mm (in) | | 20 (0.79) |
| IP Code | | | IP 64 S |
| Certification | | | |
| cURus | File-No. | | E354430 |

CONNECTOR

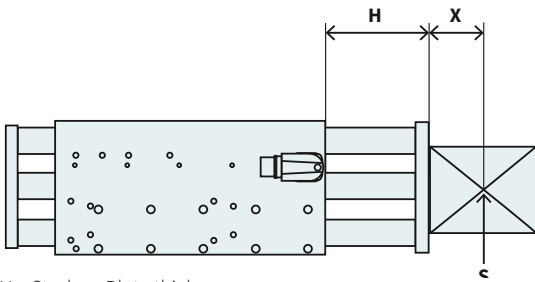
| Motor Connector Wiring | R-Stecker | Wire Color Motor Cable |
|------------------------|-----------|------------------------|
| Ph 1+ | 1 | red |
| Ph 1- | 2 | pink |
| Ph 2+ | 3 | blue |
| Ph 2- | 4 | grey |
| +5VDC | A | white |
| GND | B | inner Shield |
| Sinus | C | yellow |
| Cosinus | D | green |
| Temp. | E | black |
| Shield | Geh. | outer Shield |

R-Connector



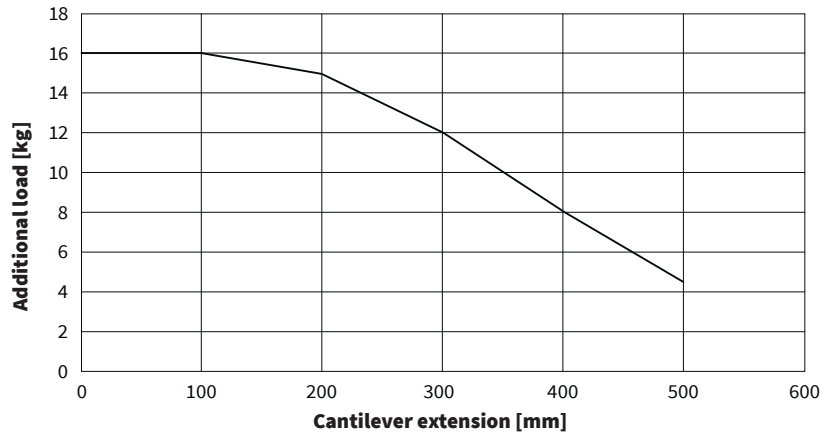
View: Motor connector, plug side
 Material: nickel plated
 IP Code: IP 67

MAXIMUM LOAD

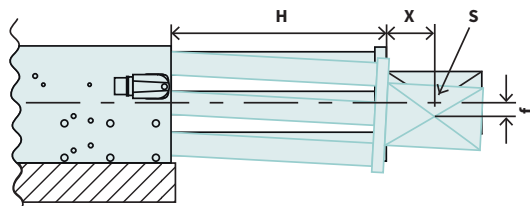


H = Stroke + Plate thickness
 X = Distance to center of gravity
 S = Center of gravity
 Cantilever extension = H + X

The maximum load depends on the cantilever extension (distance H plus distance between the center of gravity of the working load and the mounting surface).

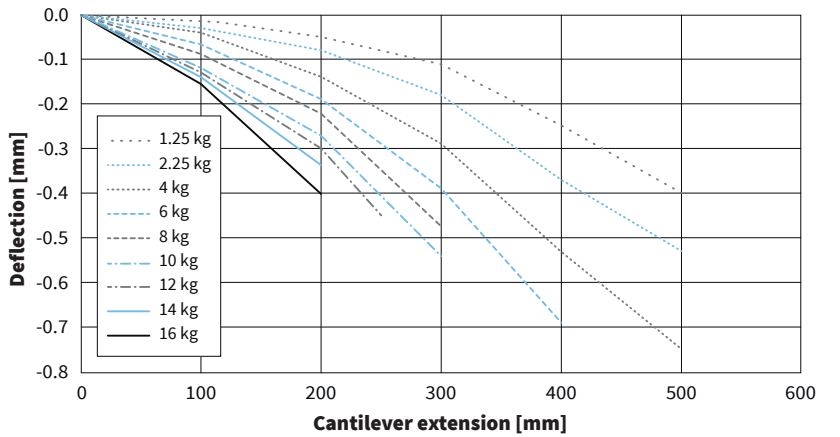


VERTICAL DEFLECTION



H = Stroke + Plate thickness
 S = Center of gravity
 X = Distance to center of gravity
 f = Deflection of theoretical axis

Total deflection =
 Static deflection + deflection under load
 (Deflection measured at standstill)



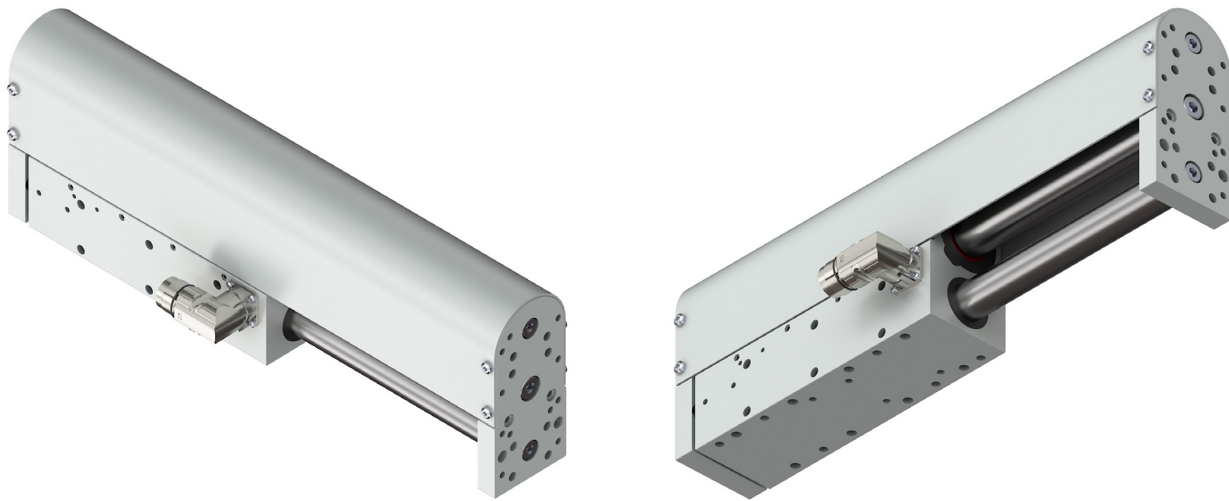
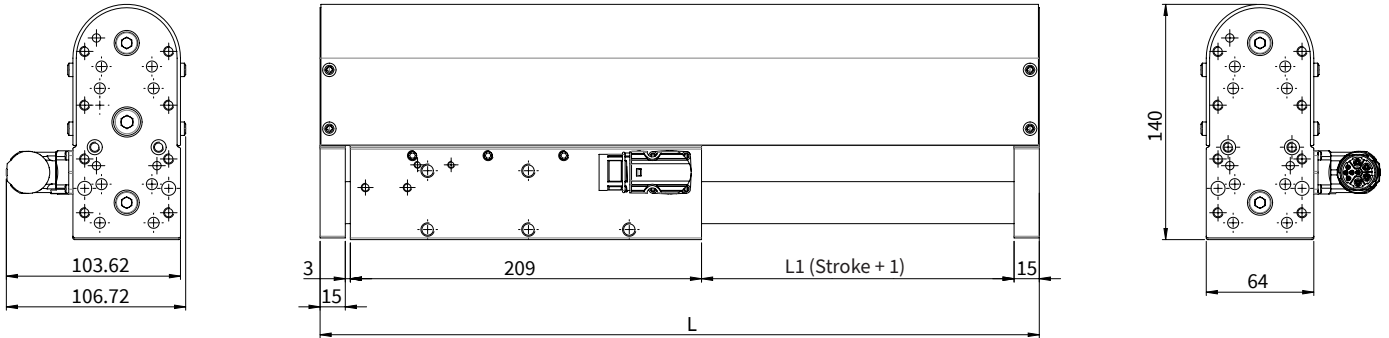
ORDERING INFORMATION

| Item | Description | Item-No. |
|--|---|---------------------------|
| DM01-37x120F-HP-R-95_EN02 | Linear Module with Absolute Encoder, Stroke max 95mm | 0150-5813 |
| DM01-37x120F-HP-R-95_MS02_EN02 | Linear Module with MagSpring 40N and Absolute Encoder, Stroke max 95mm | 0150-5891 |
| DM01-37x120F-HP-R-95_MS03_EN02 | Linear Module with MagSpring 50N and Absolute Encoder, Stroke max 95mm | 0150-5892 |
| DM01-37x120F-HP-R-95_MS04_EN02 | Linear Module with MagSpring 60N and Absolute Encoder, Stroke max 95mm | 0150-5893 |
| DM01-37x120F-HP-R-195_EN02 | Linear Module with Absolute Encoder, Stroke max 195mm | 0150-5851 |
| DM01-37x120F-HP-R-195_MS02_EN02 | Linear Module with MagSpring 40N and Absolute Encoder, Stroke max 195mm | 0150-5894 |
| DM01-37x120F-HP-R-195_MS03_EN02 | Linear Module with MagSpring 50N and Absolute Encoder, Stroke max 195mm | 0150-5895 |
| DM01-37x120F-HP-R-195_MS04_EN02 | Linear Module with MagSpring 60N and Absolute Encoder, Stroke max 195mm | 0150-5695 |
| DM01-37x120F-HP-R-295_EN02 | Linear Module with Absolute Encoder, Stroke max 295mm | 0150-5856 |
| DM01-37x120F-HP-R-295_MS02_EN02 | Linear Module with MagSpring 40N and Absolute Encoder, Stroke max 295mm | 0150-5896 |
| DM01-37x120F-HP-R-295_MS03_EN02 | Linear Module with MagSpring 50N and Absolute Encoder, Stroke max 295mm | 0150-5897 |
| DM01-37x120F-HP-R-295_MS04_EN02 | Linear Module with MagSpring 60N and Absolute Encoder, Stroke max 295mm | 0150-5898 |
| DM01-37x120F-HP-R-395_EN02 | Linear Module with Absolute Encoder, Stroke max 395mm | 0150-5857 |
| DM01-37x120F-HP-R-495_EN02 | Linear Module with Absolute Encoder, Stroke max 495mm | 0150-5858 |

| Item | Description | Item-No. |
|---|---|----------------------------|
| DM01-37x120F-HP-R-95_EN02-2S | Linear Module with Absolute Encoder and Safety Encoder, Stroke max 95mm | 0150-25813 |
| DM01-37x120F-HP-R-95_MS02_EN02-2S | Linear Module with MagSpring 40N, Absolute Encoder and Safety Encoder, Stroke max 95mm | 0150-25891 |
| DM01-37x120F-HP-R-95_MS03_EN02-2S | Linear Module with MagSpring 50N, Absolute Encoder and Safety Encoder, Stroke max 95mm | 0150-25892 |
| DM01-37x120F-HP-R-95_MS04_EN02-2S | Linear Module with MagSpring 60N, Absolute Encoder and Safety Encoder, Stroke max 95mm | 0150-25893 |
| DM01-37x120F-HP-R-195_EN02-2S | Linear Module with Absolute Encoder and Safety Encoder, Stroke max 195mm | 0150-25851 |
| DM01-37x120F-HP-R-195_MS02_EN02-2S | Linear Module with MagSpring 40N, Absolute Encoder and Safety Encoder, Stroke max 195mm | 0150-25894 |
| DM01-37x120F-HP-R-195_MS03_EN02-2S | Linear Module with MagSpring 50N, Absolute Encoder and Safety Encoder, Stroke max 195mm | 0150-25895 |
| DM01-37x120F-HP-R-195_MS04_EN02-2S | Linear Module with MagSpring 60N, Absolute Encoder and Safety Encoder, Stroke max 195mm | 0150-25695 |
| DM01-37x120F-HP-R-295_EN02-2S | Linear Module with Absolute Encoder and Safety Encoder, Stroke max 295mm | 0150-25856 |
| DM01-37x120F-HP-R-295_MS02_EN02-2S | Linear Module with MagSpring 40N, Absolute Encoder and Safety Encoder, Stroke max 295mm | 0150-25896 |
| DM01-37x120F-HP-R-295_MS03_EN02-2S | Linear Module with MagSpring 50N, Absolute Encoder and Safety Encoder, Stroke max 295mm | 0150-25897 |
| DM01-37x120F-HP-R-295_MS04_EN02-2S | Linear Module with MagSpring 60N, Absolute Encoder and Safety Encoder, Stroke max 295mm | 0150-25898 |
| DM01-37x120F-HP-R-395_EN02-2S | Linear Module with Absolute Encoder and Safety Encoder, Stroke max 395mm | 0150-25857 |
| DM01-37x120F-HP-R-495_EN02-2S | Linear Module with Absolute Encoder and Safety Encoder, Stroke max 495mm | 0150-25858 |

Area with horizontal dotted lines for notes.

LINEAR MODULE DM01-48x150_CS01



Dimensions in mm

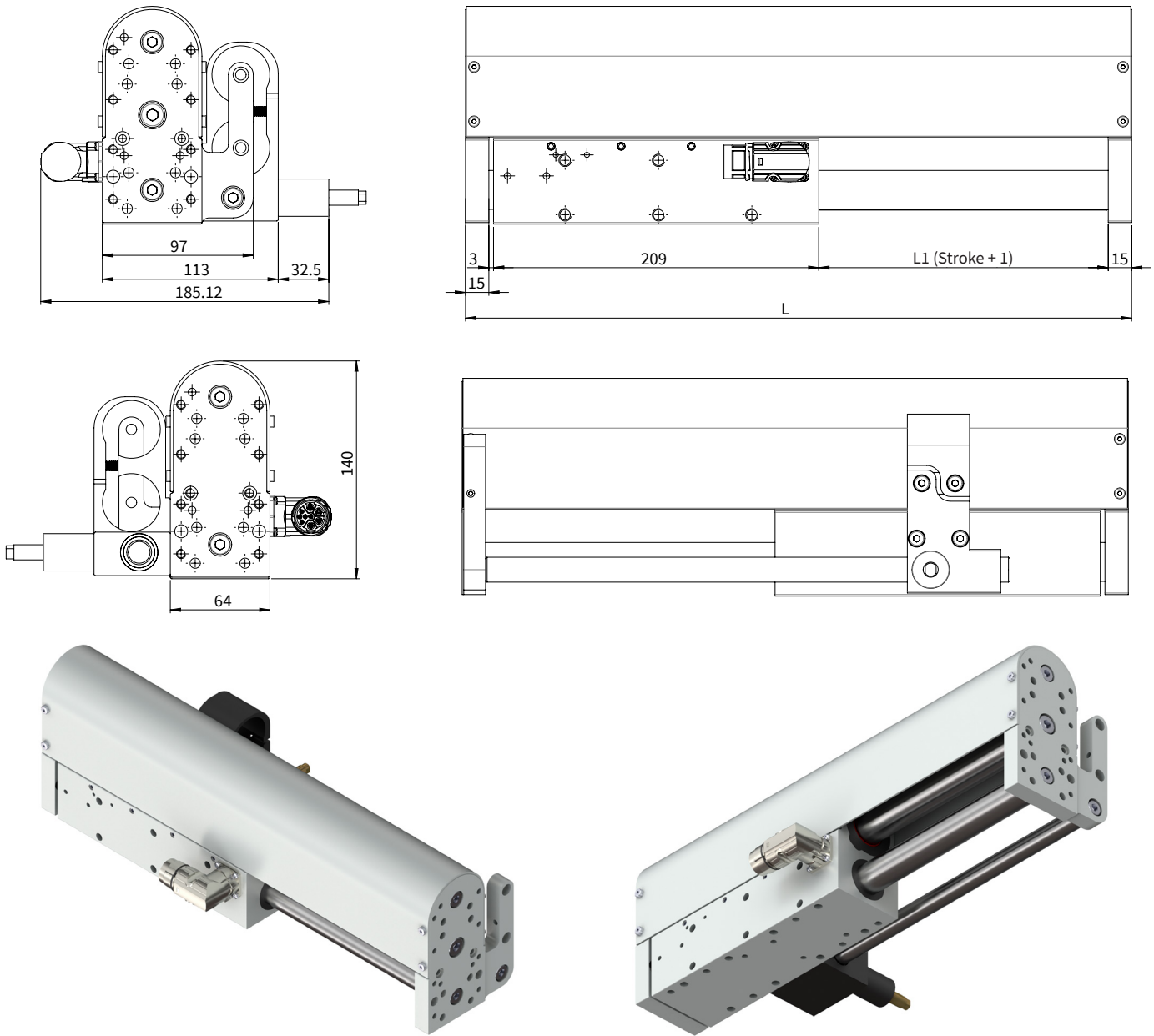
| Linear module | Stroke H [mm (inch)] | | Carriage length L [mm (inch)] | | Moving mass ¹⁾ [g (lb)] | | Total weight [g (lb)] | |
|-----------------------------------|-------------------------|---------|----------------------------------|---------|---------------------------------------|---------|--------------------------|---------|
| DM01-48x150G-HP-C-125_CS01 | 125 | (4.92) | 368 | (14.49) | 4158 | (9.16) | 8033 | (17.71) |
| DM01-48x150G-HP-C-185_CS01 | 185 | (7.28) | 428 | (16.85) | 4668 | (10.29) | 8542 | (18.83) |
| DM01-48x150G-HP-C-275_CS01 | 275 | (10.83) | 518 | (20.39) | 5577 | (12.29) | 9451 | (20.83) |
| DM01-48x150G-HP-C-395_CS01 | 395 | (15.55) | 638 | (25.12) | 6790 | (14.97) | 10664 | (23.51) |
| DM01-48x150G-HP-C-485_CS01 | 485 | (19.09) | 728 | (28.66) | 7702 | (19.98) | 11576 | (25.52) |
| DM01-48x150G-HP-C-575_CS01 | 575 | (22.64) | 818 | (32.20) | 8608 | (18.97) | 12483 | (27.52) |

¹⁾ Mass: Slider, Shafts, Front plate, Front plate back

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 25 mm | Linear ball bearing | H-ECOPUR |

LINEAR MODULE DM01-48x150_CS01_BK01 WITH HOLDING BRAKE



Dimensions in mm

| Linear module with holding brake | Stroke H [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|--|-------------------------|----------------------------------|---------------------------------------|--------------------------|
| DM01-48x150G-HP-C-125_CS01_BK01 ²⁾ | 125 (4.92) | 368 (14.49) | 4688 (10.33) | 8957 (19.74) |
| DM01-48x150G-HP-C-185_CS01_BK01 ²⁾ | 185 (7.28) | 428 (16.85) | 5307 (11.69) | 9576 (21.11) |
| DM01-48x150G-HP-C-275_CS01_BK01 ²⁾ | 275 (10.83) | 518 (20.39) | 6407 (14.12) | 10676 (23.53) |

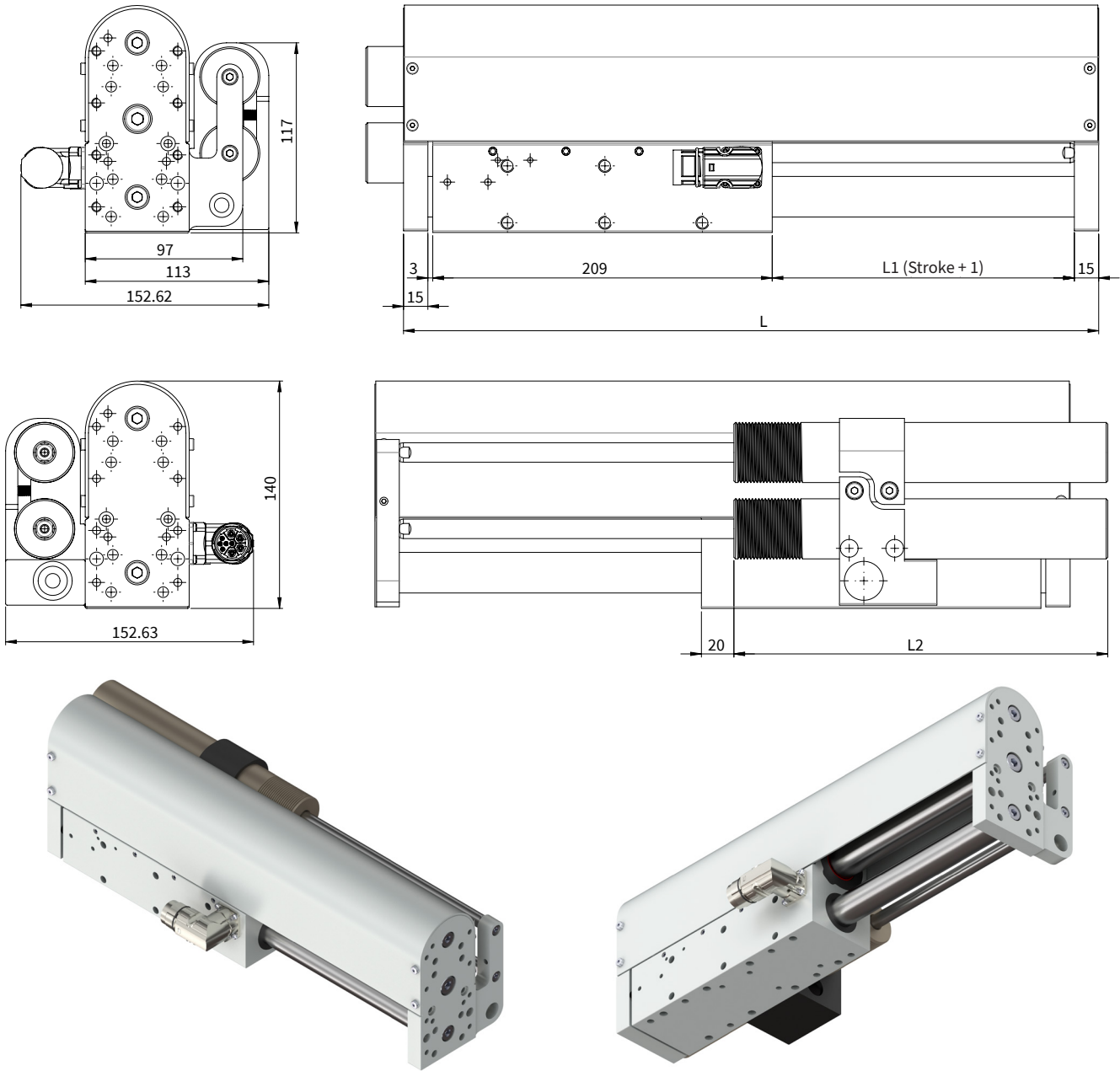
¹⁾ Mass: Slider, Shafts, Front plate, Front plate back, Brake shaft

²⁾ Pneumatic holding brake with max. holding force 1000 N

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 25 mm | Linear ball bearing | H-ECOPUR |

LINEAR MODULE DM01-48x150_CS01_MS08 WITH VERTICAL LOAD COMPENSATION MAGSPRING®



Dimensions in mm

| Linear module with MagSpring | Stroke H [mm (inch)] | MS Stator length L2 [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|---|-------------------------|------------------------------------|----------------------------------|---------------------------------------|--------------------------|
| DM01-48x150G-HP-C-125_CS01_MS08 ²⁾ | 125 (4.92) | 155 (6.10) | 368 (14.49) | 4690 (10.34) | 10699 (23.59) |
| DM01-48x150G-HP-C-185_CS01_MS08 ²⁾ | 185 (7.28) | 230 (9.06) | 428 (16.85) | 5407 (11.92) | 12276 (27.06) |
| DM01-48x150G-HP-C-275_CS01_MS08 ²⁾ | 275 (10.83) | 305 (12.0) | 518 (20.39) | 6517 (14.37) | 14266 (31.45) |

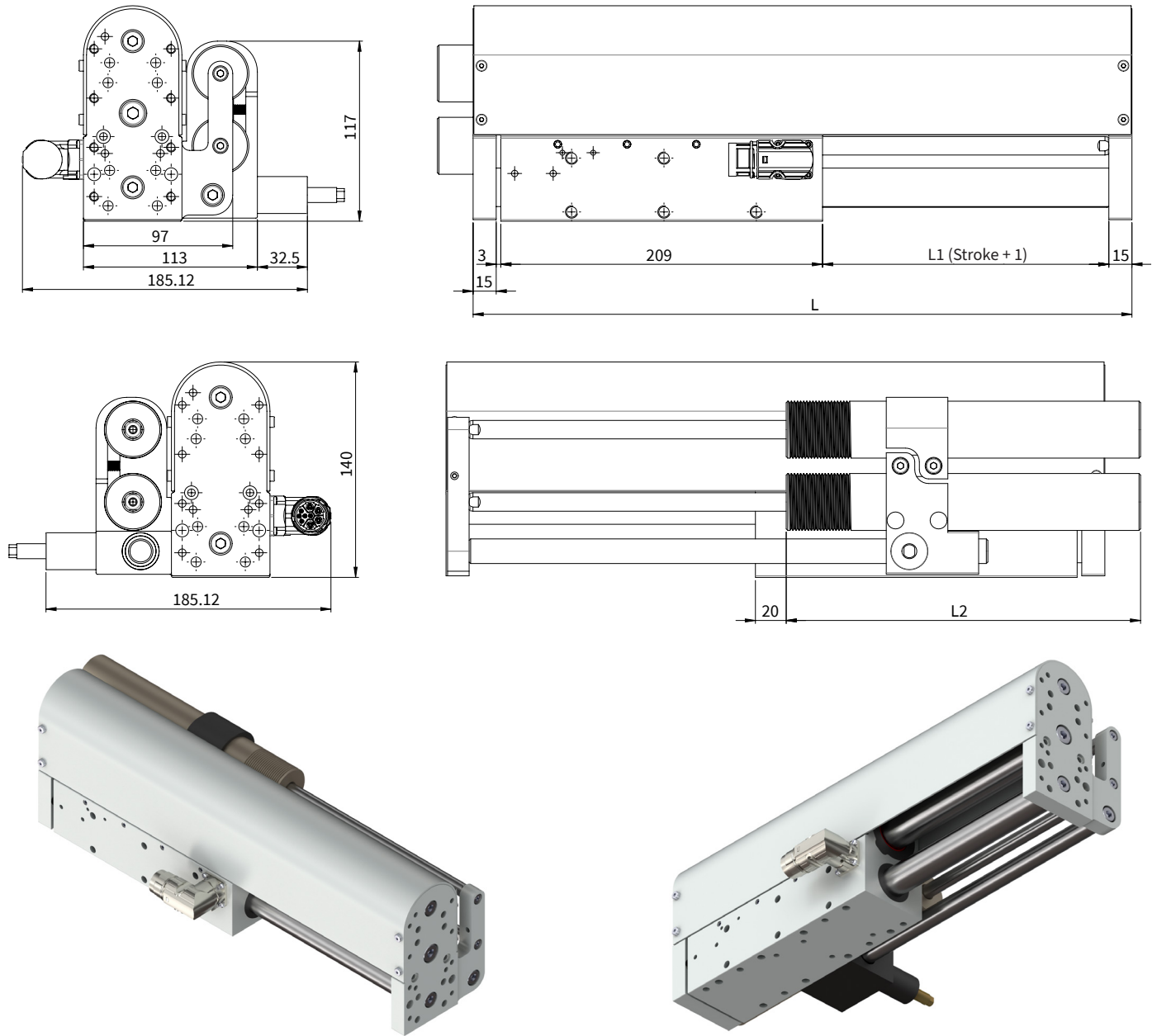
¹⁾ Mass: Slider, Shafts, Front plate, Front plate back, MagSpring slider

²⁾ MagSpring with constant force 120 N

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 25 mm | Linear ball bearing | H-ECOPUR |

LINEAR MODULE DM01-48x150_CS01_MS08_BK01 WITH VERTICAL LOAD COMPENSATION AND HOLDING BRAKE



Dimensions in mm

| Linear module with MagSpring + Holding brake | Stroke H [mm (inch)] | MS Stator length L2 [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|---|----------------------|---------------------------------|-------------------------------|------------------------------------|-----------------------|
| DM01-48x150G-HP-C-125_CS01_MS08_BK01 ²⁾ | 125 (4.92) | 155 (6.10) | 368 (14.49) | 5120 (11.29) | 11229 (24.75) |
| DM01-48x150G-HP-C-185_CS01_MS08_BK01 ²⁾ | 185 (7.28) | 230 (9.06) | 428 (16.85) | 5947 (13.11) | 12936 (28.52) |
| DM01-48x150G-HP-C-275_CS01_MS08_BK01 ²⁾ | 275 (10.83) | 305 (12.0) | 518 (20.39) | 7247 (15.97) | 15116 (33.32) |

¹⁾ Mass: Slider, Shafts, Front plate, Front plate back, Brake shaft, MagSpring slider
²⁾ MagSpring with constant force 120 N, Pneumatic holding brake with max. holding force 1000 N

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 25 mm | Linear ball bearing | H-ECOPUR |

PERFORMANCE DATA DM01-48x150



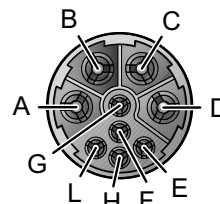
| Performance Data Linear Module DM01-48x150 | | | |
|---|--|--|---------------------------------|
| Stroke | | | |
| Max. Stroke | mm (in) | | 575 (22.64) |
| Force | | | |
| Max. Force @ 48VDC | N (lbf) | | 360 (80.9) |
| Max. Force @ 72VDC | N (lbf) | | 360 (80.9) |
| Max. Cont. Force [Passive cooling / Fan / Fluid] | N (lbf) | | 112 / 150 / - (25.6 / 34.3 / -) |
| Force Constant | N/A _{pk} (lbf/A _{pk}) | | 15.65 (3.51) |
| Position Detection | | | |
| Position Resolution | mm (in) | | 0.007 (0.0003) |
| Repeatability | mm (in) | | ±0.05 (±0.002) |
| Position Resolution with ES | mm (in) | | - (-) |
| Repeatability with ES | mm (in) | | - (-) |
| Electrical Data | | | |
| Max. Current @ 48VDC | A _{pk} | | 23.0 |
| Max. Current @ 72VDC | A _{pk} | | 23.0 |
| Max. Cont. Current [Passive cooling / Fan / Fluid] | A _{pk} | | 7.2 / 9.6 / - |
| Terminal Resistance 25 °C / 120 °C | Ohm | | 0.81 / 1.2 |
| Terminal Inductivity | mH | | 0.7 |
| Magnetic Period | mm (in) | | 60 (2.35) |
| Thermal Data | | | |
| Max. Winding Temperature (Sensor) | °C | | 120 |
| Thermal Resistance [Passive cooling / Fan / Fluid] | K/W | | 1.3 / 0.73 / - |
| Thermal Time Constant [Passive cooling / Fan / Fluid] | s | | 850 / 300 / - |
| Mechanical Data | | | |
| Stator Diameter | mm (in) | | 48 (1.9) |
| Slider Diameter | mm (in) | | 28 (1.1) |
| IP Code | | | IP 64 S |
| Certification | | | |
| cURus | File-No. | | E354430 |

CONNECTOR

13

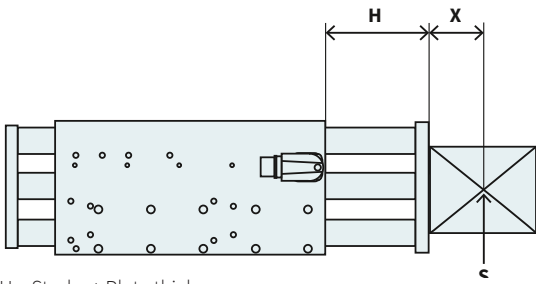
| Motor Connector Wiring | C-Stecker | Wire Color Motor Cable |
|------------------------|-----------|------------------------|
| Ph 1+ | A | red |
| Ph 1- | B | pink |
| Ph 2+ | C | blue |
| Ph 2- | D | grey |
| +5VDC | E | white |
| GND | F | inner Shield |
| Sinus | G | yellow |
| Cosinus | H | green |
| Temp. | L | black |
| Shield | Case | outer Shield |

C-Connector



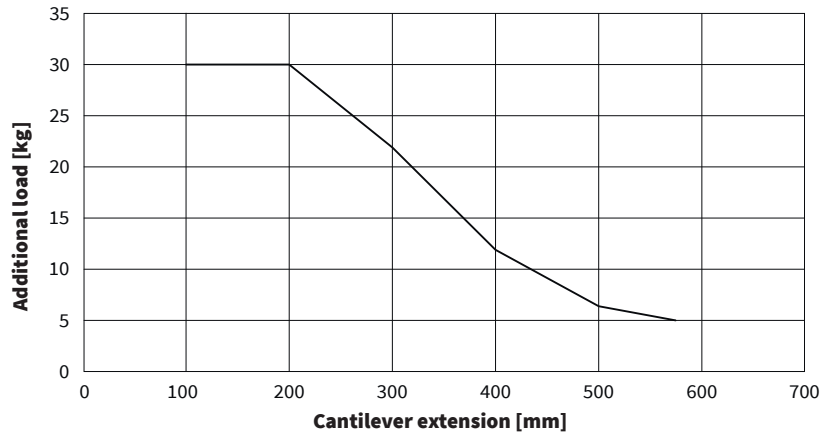
View: Motor connector, plug side
 Material: nickel plated
 IP Code: IP 67

MAXIMUM LOAD

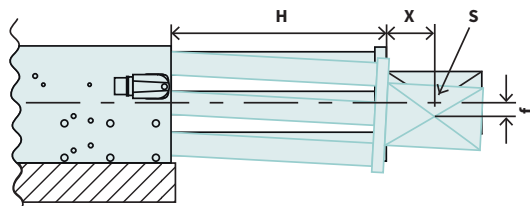


H = Stroke + Plate thickness
 X = Distance to center of gravity
 S = Center of gravity
 Cantilever extension = H + X

The maximum load depends on the cantilever extension (distance H plus distance between the center of gravity of the working load and the mounting surface).

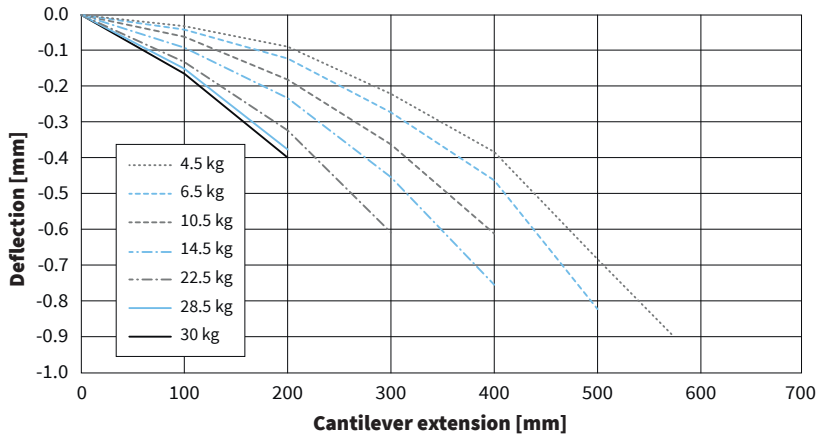


VERTICAL DEFLECTION



H = Stroke + Plate thickness
 S = Center of gravity
 X = Distance to center of gravity
 f = Deflection of theoretical axis

Total deflection =
 Static deflection + deflection under load
 (Deflection measured at standstill)



ORDERING INFORMATION

| Item | Description | Item-No. |
|---|---|---------------------------|
| DM01-48x150G-HP-C-125_CS01 | Linear Module, Stroke max 125mm | 0150-4173 |
| DM01-48x150G-HP-C-125_CS01_BK01 | Linear Module with pneumatic holding brake, Stroke max 125mm | 0150-4202 |
| DM01-48x150G-HP-C-125_CS01_MS08 | Linear Module with MagSpring 120N, Stroke max 125mm | 0150-4200 |
| DM01-48x150G-HP-C-125_CS01_MS08_BK01 | Linear Module with MagSpring 120N and pneumatic holding brake, Stroke max 125mm | 0150-4201 |
| DM01-48x150G-HP-C-185_CS01 | Linear Module, Stroke max 185mm | 0150-4174 |
| DM01-48x150G-HP-C-185_CS01_BK01 | Linear Module with pneumatic holding brake, Stroke max 185mm | 0150-4205 |
| DM01-48x150G-HP-C-185_CS01_MS08 | Linear Module with MagSpring 120N, Stroke max 185mm | 0150-4203 |
| DM01-48x150G-HP-C-185_CS01_MS08_BK01 | Linear Module with MagSpring 120N and pneumatic holding brake, Stroke max 185mm | 0150-4204 |
| DM01-48x150G-HP-C-275_CS01 | Linear Module, Stroke max 275mm | 0150-4175 |
| DM01-48x150G-HP-C-275_CS01_BK01 | Linear Module with pneumatic holding brake, Stroke max 275mm | 0150-4206 |
| DM01-48x150G-HP-C-275_CS01_MS08 | Linear Module with MagSpring 120N, Stroke max 275mm | 0150-4208 |
| DM01-48x150G-HP-C-275_CS01_MS08_BK01 | Linear Module with MagSpring 120N and pneumatic holding brake, Stroke max 275mm | 0150-4207 |
| DM01-48x150G-HP-C-395_CS01 | Linear Module, Stroke max 395mm | 0150-4176 |
| DM01-48x150G-HP-C-485_CS01 | Linear Module, Stroke max 485mm | 0150-4177 |
| DM01-48x150G-HP-C-575_CS01 | Linear Module, Stroke max 575mm | 0150-4178 |

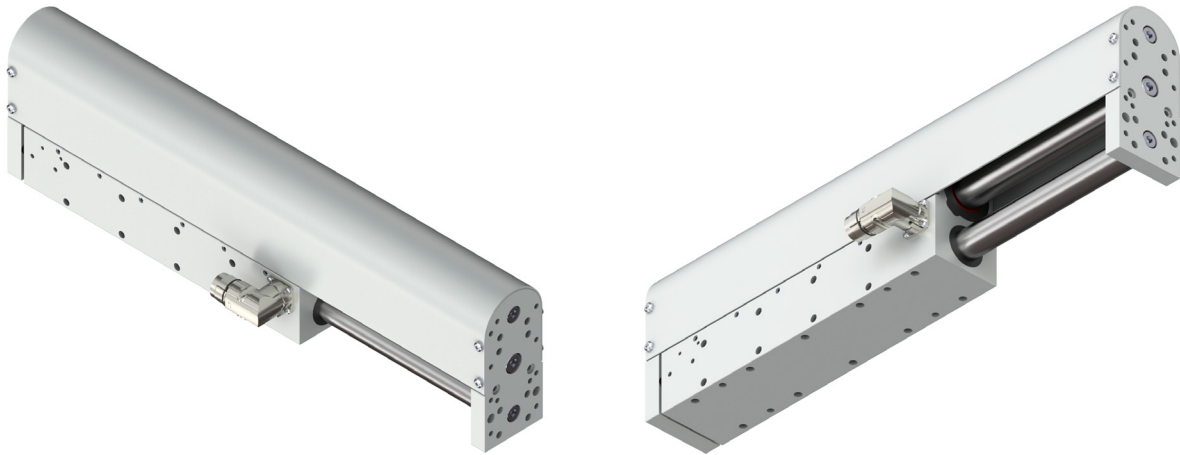
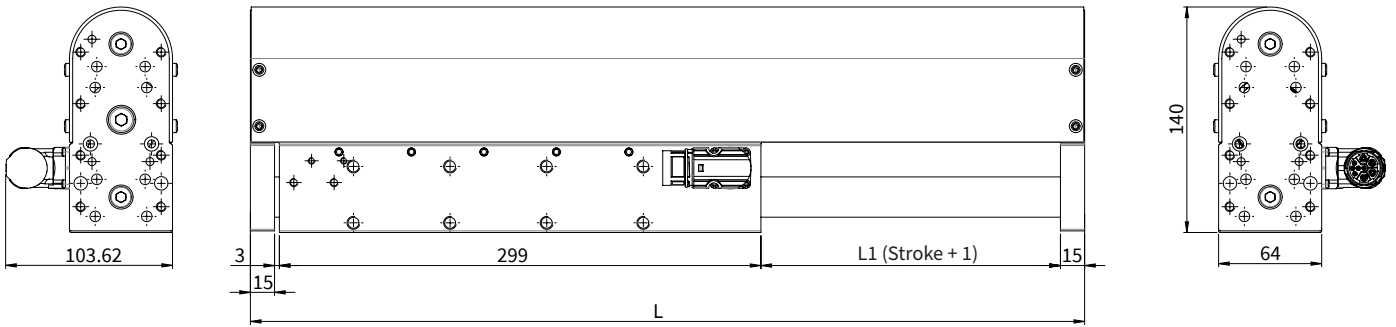
| Item | Description | Item-No. |
|--|--|----------------------------|
| DM01-48x150G-HP-C-125_CS01-2S | Linear Module, Stroke max 125mm - Safety Encoder | 0150-24173 |
| DM01-48x150G-HP-C-125_CS01_BK01-2S | Linear Module with pneumatic holding brake, Stroke max 125mm - Safety Encoder | 0150-24202 |
| DM01-48x150G-HP-C-125_CS01_MS08-2S | Linear Module with MagSpring 120N, Stroke max 125mm - Safety Encoder | 0150-24200 |
| DM01-48x150G-HP-C-125_CS01_MS08_BK01-2S | Linear Module with MagSpring 120N and pneumatic holding brake, Stroke max 125mm - Safety Encoder | 0150-24201 |
| DM01-48x150G-HP-C-185_CS01-2S | Linear Module, Stroke max 185mm - Safety Encoder | 0150-24174 |
| DM01-48x150G-HP-C-185_CS01_BK01-2S | Linear Module with pneumatic holding brake, Stroke max 185mm - Safety Encoder | 0150-24205 |
| DM01-48x150G-HP-C-185_CS01_MS08-2S | Linear Module with MagSpring 120N, Stroke max 185mm - Safety Encoder | 0150-24203 |
| DM01-48x150G-HP-C-185_CS01_MS08_BK01-2S | Linear Module with MagSpring 120N and pneumatic holding brake, Stroke max 185mm - Safety Encoder | 0150-24204 |
| DM01-48x150G-HP-C-275_CS01-2S | Linear Module, Stroke max 275mm - Safety Encoder | 0150-24175 |
| DM01-48x150G-HP-C-275_CS01_BK01-2S | Linear Module with pneumatic holding brake, Stroke max 275mm - Safety Encoder | 0150-24206 |
| DM01-48x150G-HP-C-275_CS01_MS08-2S | Linear Module with MagSpring 120N, Stroke max 275mm - Safety Encoder | 0150-24208 |
| DM01-48x150G-HP-C-275_CS01_MS08_BK01-2S | Linear Module with MagSpring 120N and pneumatic holding brake, Stroke max 275mm - Safety Encoder | 0150-24207 |
| DM01-48x150G-HP-C-395_CS01-2S | Linear Module, Stroke max 395mm - Safety Encoder | 0150-24176 |
| DM01-48x150G-HP-C-485_CS01-2S | Linear Module, Stroke max 485mm - Safety Encoder | 0150-24177 |
| DM01-48x150G-HP-C-575_CS01-2S | Linear Module, Stroke max 575mm - Safety Encoder | 0150-24178 |

| Item | Description | Item-No. |
|--|--|---------------------------|
| DM01-48x150G-HP-C-125_CS01_BE03 | Linear Module, Stroke max 125mm - Clean Room | 0150-4629 |
| DM01-48x150G-HP-C-185_CS01_BE03 | Linear Module, Stroke max 185mm - Clean Room | 0150-4749 |
| DM01-48x150G-HP-C-275_CS01_BE03 | Linear Module, Stroke max 275mm - Clean Room | 0150-4750 |
| DM01-48x150G-HP-C-395_CS01_BE03 | Linear Module, Stroke max 395mm - Clean Room | 0150-4751 |
| DM01-48x150G-HP-C-485_CS01_BE03 | Linear Module, Stroke max 485mm - Clean Room | 0150-4752 |
| DM01-48x150G-HP-C-575_CS01_BE03 | Linear Module, Stroke max 575mm - Clean Room | 0150-4630 |

ORDERING INFORMATION

| Item | Description | Item-No. |
|---|---|----------------------------|
| DM01-48x150G-HP-C-125_CS01_BE03-2S | Linear Module, Stroke max 125mm - Clean Room and Safety Encoder | 0150-24629 |
| DM01-48x150G-HP-C-185_CS01_BE03-2S | Linear Module, Stroke max 185mm - Clean Room and Safety Encoder | 0150-24749 |
| DM01-48x150G-HP-C-275_CS01_BE03-2S | Linear Module, Stroke max 275mm - Clean Room and Safety Encoder | 0150-24750 |
| DM01-48x150G-HP-C-395_CS01_BE03-2S | Linear Module, Stroke max 395mm - Clean Room and Safety Encoder | 0150-24751 |
| DM01-48x150G-HP-C-485_CS01_BE03-2S | Linear Module, Stroke max 485mm - Clean Room and Safety Encoder | 0150-24752 |
| DM01-48x150G-HP-C-575_CS01_BE03-2S | Linear Module, Stroke max 575mm - Clean Room and Safety Encoder | 0150-24630 |

LINEAR MODULE DM01-48x240_CS01



Dimensions in mm

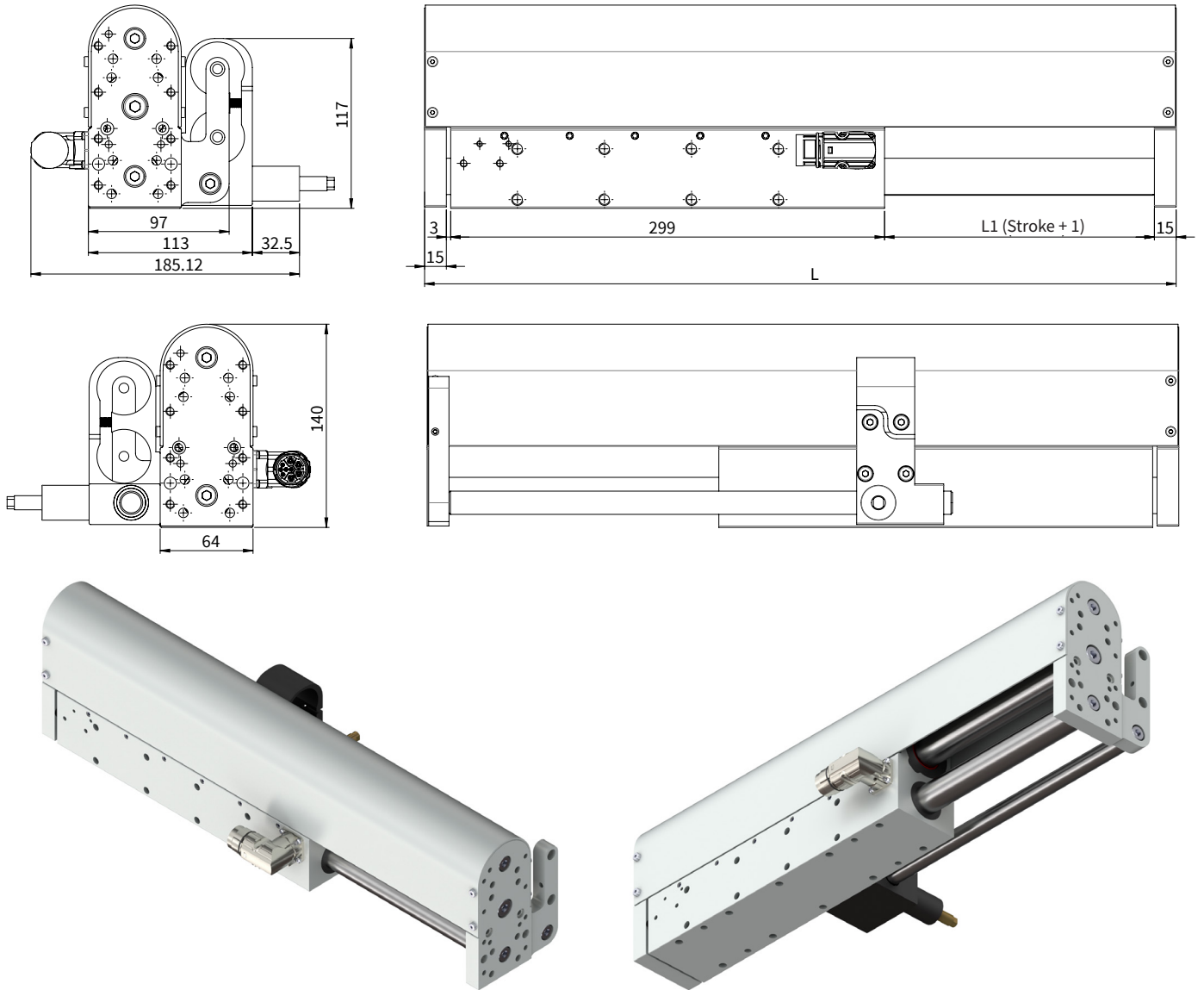
| Linear module | Stroke H [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|-----------------------------------|-------------------------|----------------------------------|---------------------------------------|--------------------------|
| DM01-48x240F-HP-C-95_CS01 | 95 (3.74) | 428 (16.85) | 4668 (10.29) | 9978 (21.99) |
| DM01-48x240F-HP-C-185_CS01 | 185 (7.28) | 518 (20.39) | 5577 (12.29) | 11874 (26.18) |
| DM01-48x240F-HP-C-305_CS01 | 305 (12.0) | 638 (25.12) | 6790 (14.96) | 12100 (26.67) |
| DM01-48x240F-HP-C-395_CS01 | 395 (15.55) | 728 (28.66) | 7702 (16.98) | 13013 (28.69) |
| DM01-48x240F-HP-C-485_CS01 | 485 (19.09) | 818 (32.20) | 8608 (18.98) | 13914 (30.68) |

¹⁾ Mass: Slider, Shafts, Front plate, Front plate back

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 25 mm | Linear ball bearing | H-ECOPUR |

LINEAR MODULE DM01-48x240_CS01_BK01 WITH HOLDING BRAKE



Dimensions in mm

| Linear module with holding brake | Stroke H [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|--|----------------------|-------------------------------|------------------------------------|-----------------------|
| DM01-48x240F-HP-C-95_CS01_BK01 ²⁾ | 95 (3.74) | 428 (16.85) | 4983 (10.98) | 10689 (23.56) |
| DM01-48x240F-HP-C-185_CS01_BK01 ²⁾ | 185 (7.28) | 518 (20.39) | 5997 (13.22) | 11702 (25.79) |
| DM01-48x240F-HP-C-305_CS01_BK01 ²⁾ | 305 (12.0) | 638 (25.12) | 7614 (16.79) | 13325 (29.38) |

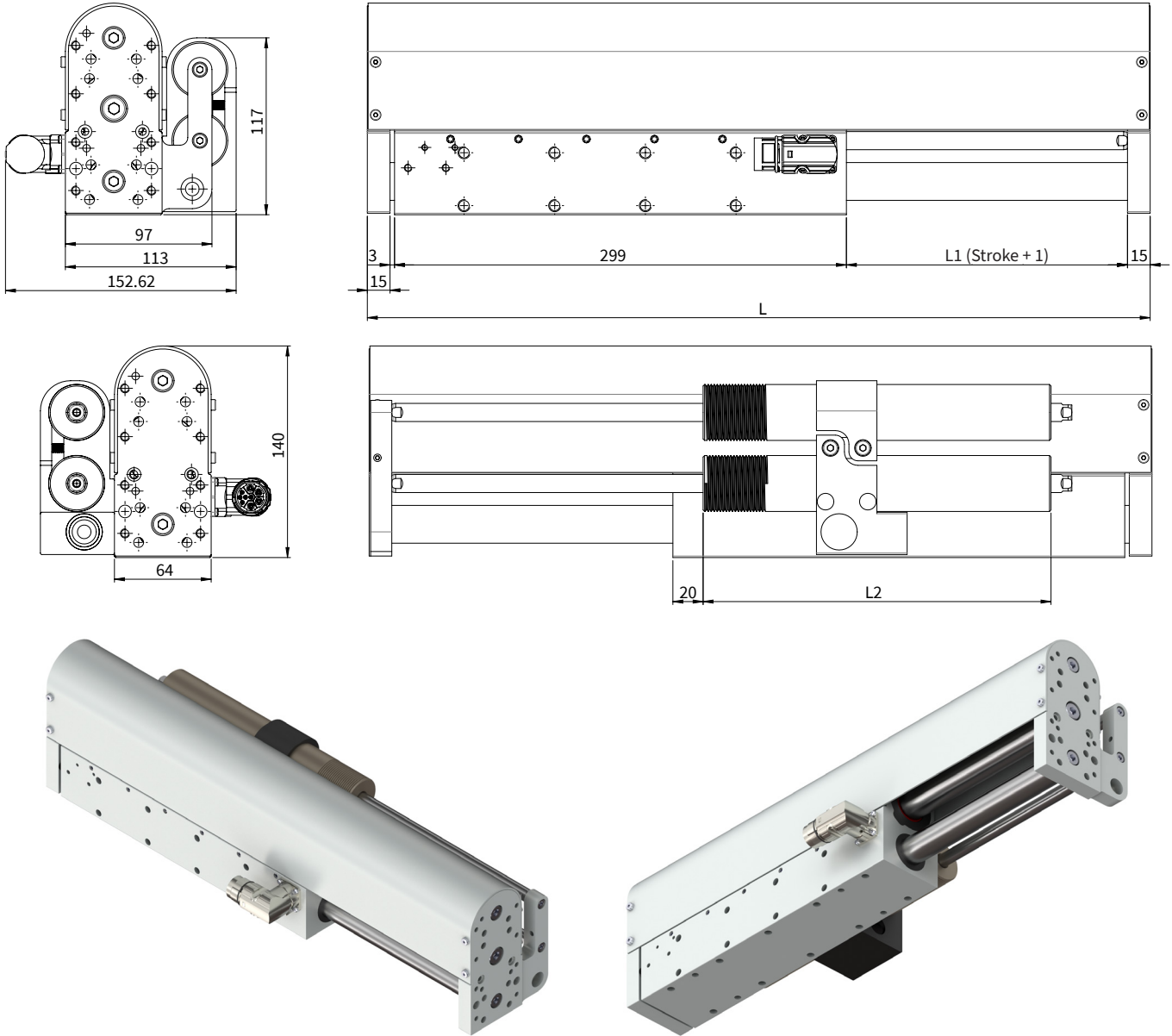
¹⁾ Mass: Slider, Shafts, Front plate, Front plate back, Brake shaft

²⁾ Pneumatic holding brake with max. holding force 1000 N

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 25 mm | Linear ball bearing | H-ECOPUR |

LINEAR MODULE DM01-48x240_CS01_MS08 WITH VERTICAL LOAD COMPENSATION MAGSPRING®



Dimensions in mm

| Linear module with MagSpring | Stroke H [mm (inch)] | MS Stator length L2 [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|---|-------------------------|------------------------------------|----------------------------------|---------------------------------------|--------------------------|
| DM01-48x240F-HP-C-95_CS01_MS08 ²⁾ | 95 (3.74) | 155 (6.10) | 428 (16.85) | 5199 (11.46) | 12625 (27.83) |
| DM01-48x240F-HP-C-185_CS01_MS08 ²⁾ | 185 (7.28) | 230 (9.06) | 518 (20.39) | 6317 (13.93) | 14623 (32.23) |
| DM01-48x240F-HP-C-305_CS01_MS08 ²⁾ | 305 (12.0) | 380 (14.96) | 638 (25.12) | 7729 (17.04) | 16915 (37.29) |

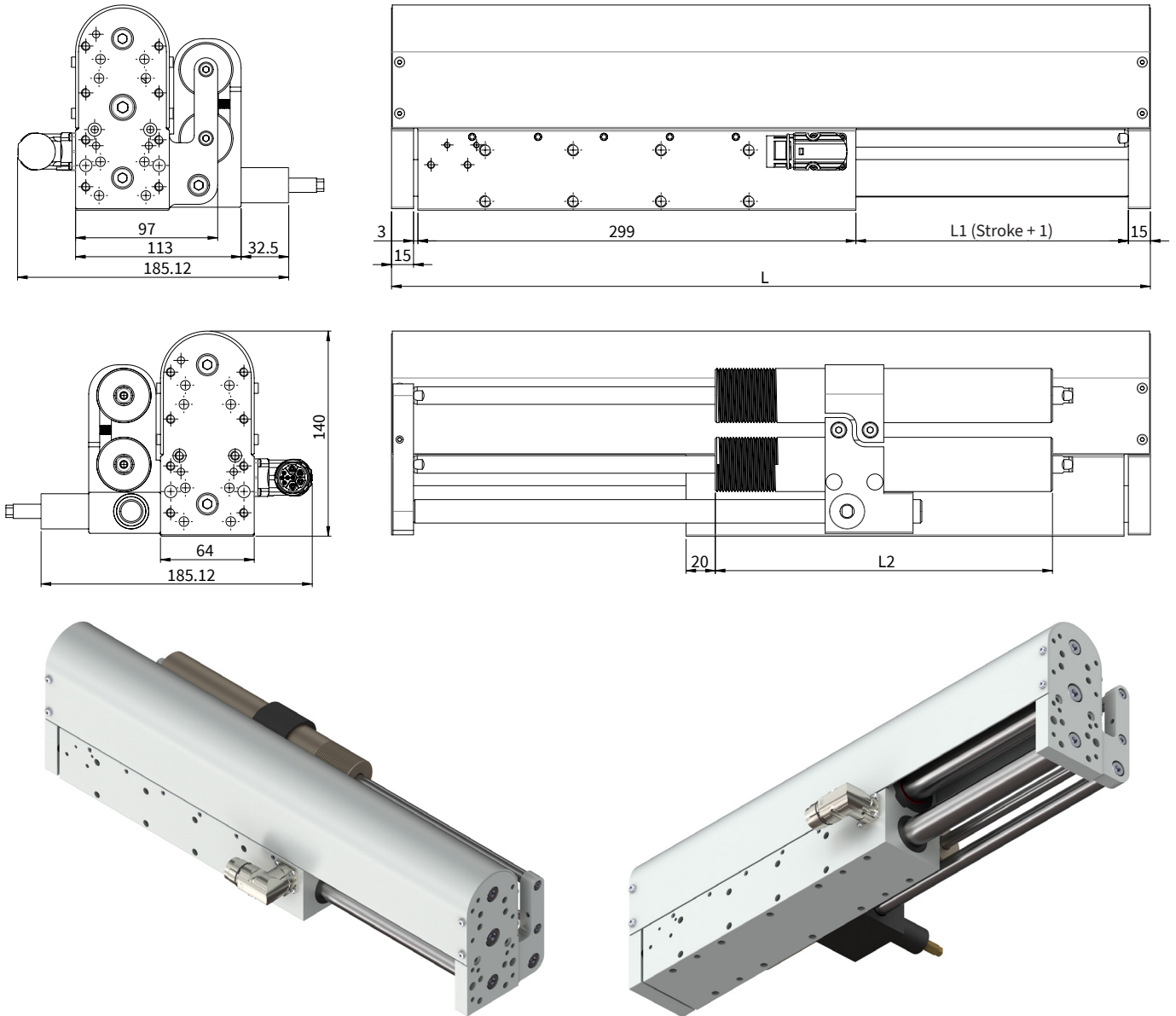
¹⁾ Mass: Slider, Shafts, Front plate, Front plate back, MagSpring slider

²⁾ MagSpring with constant force 120 N

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 25 mm | Linear ball bearing | H-ECOPUR |

LINEAR MODULE DM01-48x240_CS01_MS08_BK01 WITH VERTICAL LOAD COMPENSATION AND HOLDING BRAKE



Dimensions in mm

| Linear module with MagSpring + holding brake | Stroke H [mm (inch)] | MS Stator length L2 [mm (inch)] | Carriage length L [mm (inch)] | Moving mass ¹⁾ [g (lb)] | Total weight [g (lb)] |
|---|----------------------|---------------------------------|-------------------------------|------------------------------------|-----------------------|
| DM01-48x240F-HP-C-95_CS01_MS08_BK01 ²⁾ | 95 (3.74) | 155 (6.10) | 428 (16.85) | 5598 (12.34) | 13144 (28.98) |
| DM01-48x240F-HP-C-185_CS01_MS08_BK01 ²⁾ | 185 (7.28) | 230 (9.06) | 518 (20.39) | 6842 (15.08) | 15267 (33.66) |
| DM01-48x240F-HP-C-305_CS01_MS08_BK01 ²⁾ | 305 (12.0) | 380 (14.96) | 638 (25.12) | 8459 (18.64) | 17765 (39.17) |

¹⁾ Mass: Slider, Shafts, Front plate, Front plate back, Brake shaft, MagSpring slider
²⁾ MagSpring with constant force 120 N, Pneumatic holding brake with max. holding force 1000 N

MATERIALS

| Guide Block & Front Plate | Guide Shaft | Bearing | Wipers |
|---------------------------|---|---------------------|----------|
| Anodized Aluminum | Hardened steel, hard chrome-plated, ø 25 mm | Linear ball bearing | H-ECOPUR |

PERFORMANCE DATA DM01-48x240



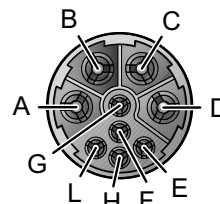
| Performance Data Linear Module DM01-48x240 | | | |
|---|--|--|-------------------------------|
| Stroke | | | |
| Max. Stroke | mm (in) | | 485 (19.09) |
| Force | | | |
| Max. Force @ 48VDC | N (lbf) | | 572 (129) |
| Max. Force @ 72VDC | N (lbf) | | 572 (129) |
| Max. Cont. Force [Passive cooling / Fan / Fluid] | N (lbf) | | 170 / 233 / - (38 / 53.3 / -) |
| Force Constant | N/A _{pk} (lbf/A _{pk}) | | 22 (4.95) |
| Position Detection | | | |
| Position Resolution | mm (in) | | 0.007 (0.0003) |
| Repeatability | mm (in) | | ±0.05 (±0.002) |
| Position Resolution with ES | mm (in) | | - (-) |
| Repeatability with ES | mm (in) | | - (-) |
| Electrical Data | | | |
| Max. Current @ 48VDC | A _{pk} | | 25.9 |
| Max. Current @ 72VDC | A _{pk} | | 25.9 |
| Max. Cont. Current [Passive cooling / Fan / Fluid] | A _{pk} | | 7.7 / 10.6 / - |
| Terminal Resistance 25 °C / 120 °C | Ohm | | 0.97 / 1.4 |
| Terminal Inductivity | mH | | 1.1 |
| Magnetic Period | mm (in) | | 60 (2.35) |
| Thermal Data | | | |
| Max. Winding Temperature (Sensor) | °C | | 120 |
| Thermal Resistance [Passive cooling / Fan / Fluid] | K/W | | 0.94 / 0.5 / - |
| Thermal Time Constant [Passive cooling / Fan / Fluid] | s | | 800 / 270 / - |
| Mechanical Data | | | |
| Stator Diameter | mm (in) | | 48 (1.9) |
| Slider Diameter | mm (in) | | 28 (1.1) |
| IP Code | | | IP 64 S |
| Certification | | | |
| cURus | File-No. | | E354430 |

CONNECTOR

13

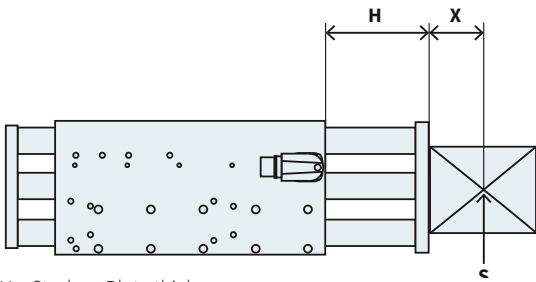
| Motor Connector Wiring | C-Stecker | Wire Color Motor Cable |
|------------------------|-----------|------------------------|
| Ph 1+ | A | red |
| Ph 1- | B | pink |
| Ph 2+ | C | blue |
| Ph 2- | D | grey |
| +5VDC | E | white |
| GND | F | inner Shield |
| Sinus | G | yellow |
| Cosinus | H | green |
| Temp. | L | black |
| Shield | Case | outer Shield |

C-Connector



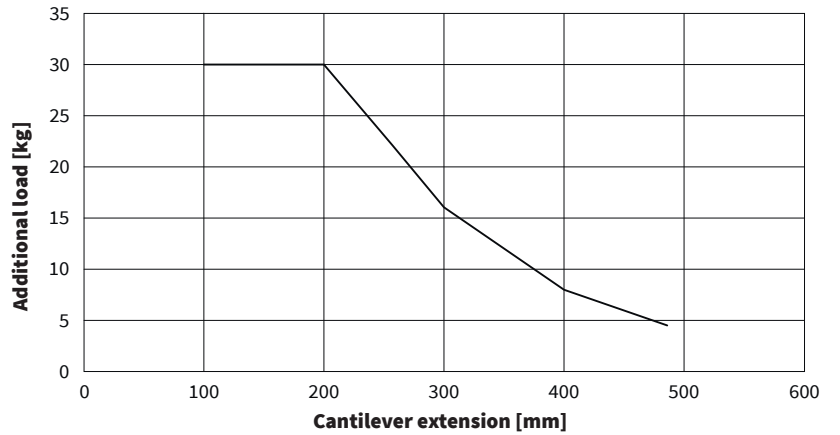
View: Motor connector, plug side
 Material: nickel plated
 IP Code: IP 67

MAXIMUM LOAD

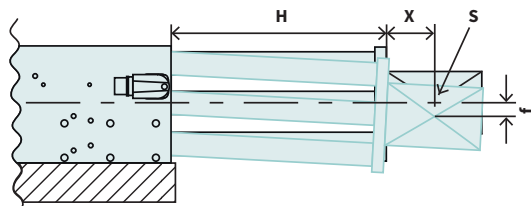


H = Stroke + Plate thickness
 X = Distance to center of gravity
 S = Center of gravity
 Cantilever extension = H + X

The maximum load depends on the cantilever extension (distance H plus distance between the center of gravity of the working load and the mounting surface).

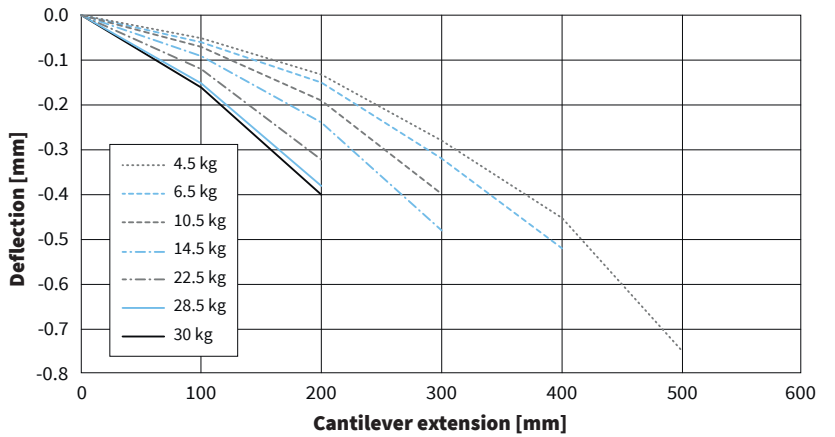


VERTICAL DEFLECTION



H = Stroke + Plate thickness
 S = Center of gravity
 X = Distance to center of gravity
 f = Deflection of theoretical axis

Total deflection =
 Static deflection + deflection under load
 (Deflection measured at standstill)



ORDERING INFORMATION

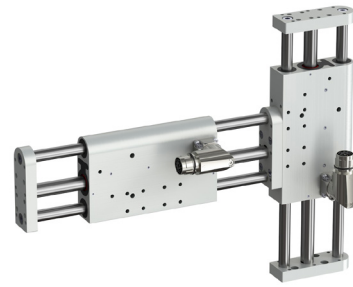
| Item | Description | Item-No. |
|---|---|---------------------------|
| DM01-48x240F-HP-C-95_CS01 | Linear Module, Stroke max 95mm | 0150-4168 |
| DM01-48x240F-HP-C-95_CS01_BK01 | Linear Module with pneumatic holding brake, Stroke max 95mm | 0150-4195 |
| DM01-48x240F-HP-C-95_CS01_MS08 | Linear Module with MagSpring 120N, Stroke max 95mm | 0150-4182 |
| DM01-48x240F-HP-C-95_CS01_MS08_BK01 | Linear Module with MagSpring 120N and pneumatic holding brake, Stroke max 95mm | 0150-4194 |
| DM01-48x240F-HP-C-185_CS01 | Linear Module, Stroke max 185mm | 0150-4169 |
| DM01-48x240F-HP-C-185_CS01_BK01 | Linear Module with pneumatic holding brake, Stroke max 185mm | 0150-4197 |
| DM01-48x240F-HP-C-185_CS01_MS08 | Linear Module with MagSpring 120N, Stroke max 185mm | 0150-4181 |
| DM01-48x240F-HP-C-185_CS01_MS08_BK01 | Linear Module with MagSpring 120N and pneumatic holding brake, Stroke max 185mm | 0150-4196 |
| DM01-48x240F-HP-C-305_CS01 | Linear Module, Stroke max 305mm | 0150-4170 |
| DM01-48x240F-HP-C-305_CS01_BK01 | Linear Module with pneumatic holding brake, Stroke max 305mm | 0150-4199 |
| DM01-48x240F-HP-C-305_CS01_MS08 | Linear Module with MagSpring 120N, Stroke max 305mm | 0150-4183 |
| DM01-48x240F-HP-C-305_CS01_MS08_BK01 | Linear Module with MagSpring 120N and pneumatic holding brake, Stroke max 305mm | 0150-4198 |
| DM01-48x240F-HP-C-395_CS01 | Linear Module, Stroke max 395mm | 0150-4171 |
| DM01-48x240F-HP-C-485_CS01 | Linear Module, Stroke max 485mm | 0150-4172 |

| Item | Description | Item-No. |
|--|--|----------------------------|
| DM01-48x240F-HP-C-95_CS01-2S | Linear Module, Stroke max 95mm - Safety Encoder | 0150-24168 |
| DM01-48x240F-HP-C-95_CS01_BK01-2S | Linear Module with pneumatic holding brake, Stroke max 95mm - Safety Encoder | 0150-24195 |
| DM01-48x240F-HP-C-95_CS01_MS08-2S | Linear Module with MagSpring 120N, Stroke max 95mm - Safety Encoder | 0150-24182 |
| DM01-48x240F-HP-C-95_CS01_MS08_BK01-2S | Linear Module with MagSpring 120N and pneumatic holding brake, Stroke max 95mm - Safety Encoder | 0150-24194 |
| DM01-48x240F-HP-C-185_CS01-2S | Linear Module, Stroke max 185mm - Safety Encoder | 0150-24169 |
| DM01-48x240F-HP-C-185_CS01_BK01-2S | Linear Module with pneumatic holding brake, Stroke max 185mm - Safety Encoder | 0150-24197 |
| DM01-48x240F-HP-C-185_CS01_MS08-2S | Linear Module with MagSpring 120N, Stroke max 185mm - Safety Encoder | 0150-24181 |
| DM01-48x240F-HP-C-185_CS01_MS08_BK01-2S | Linear Module with MagSpring 120N and pneumatic holding brake, Stroke max 185mm - Safety Encoder | 0150-24196 |
| DM01-48x240F-HP-C-305_CS01-2S | Linear Module, Stroke max 305mm - Safety Encoder | 0150-24170 |
| DM01-48x240F-HP-C-305_CS01_BK01-2S | Linear Module with pneumatic holding brake, Stroke max 305mm - Safety Encoder | 0150-24199 |
| DM01-48x240F-HP-C-305_CS01_MS08-2S | Linear Module with MagSpring 120N, Stroke max 305mm - Safety Encoder | 0150-24183 |
| DM01-48x240F-HP-C-305_CS01_MS08_BK01-2S | Linear Module with MagSpring 120N and pneumatic holding brake, Stroke max 305mm - Safety Encoder | 0150-24198 |
| DM01-48x240F-HP-C-395_CS01-2S | Linear Module, Stroke max 395mm - Safety Encoder | 0150-24171 |
| DM01-48x240F-HP-C-485_CS01-2S | Linear Module, Stroke max 485mm - Safety Encoder | 0150-24172 |

| Item | Description | Item-No. |
|--|---|---------------------------|
| DM01-48x240F-HP-C-95_CS01_BE03 | Linear Module, Stroke max. 95mm - Clean Room | 0150-4631 |
| DM01-48x240F-HP-C-185_CS01_BE03 | Linear Module, Stroke max. 185mm - Clean Room | 0150-4753 |
| DM01-48x240F-HP-C-305_CS01_BE03 | Linear Module, Stroke max. 305mm - Clean Room | 0150-4754 |
| DM01-48x240F-HP-C-395_CS01_BE03 | Linear Module, Stroke max. 395mm - Clean Room | 0150-4755 |
| DM01-48x240F-HP-C-485_CS01_BE03 | Linear Module, Stroke max. 485mm - Clean Room | 0150-4632 |

DM01 LINEAR MODULES AS COMBINED YZ MOTION UNITS

DM01 linear modules can be directly screwed together using the LinMot mounting kit, so that any YZ combinations can be realized. In addition, a classic pillar system is available, with which the units can be flexibly adjusted in height if required. LinMot offers protective tubing kits as further accessories, which are used for cable feed to the moving Z-axis. Any additional electrical cables and hoses for grippers or tools can be accommodated in the same protective hoses. The following pictures show the possible combinations of the DM01 linear modules.



DM01-23 to DM01-23



DM01-23 to DM01-37 with columns



DM01-37 to DM01-37 with columns



DM01-37 to DM01-48 with columns



DM01-48 to DM01-48 with columns

MOUNTING KIT

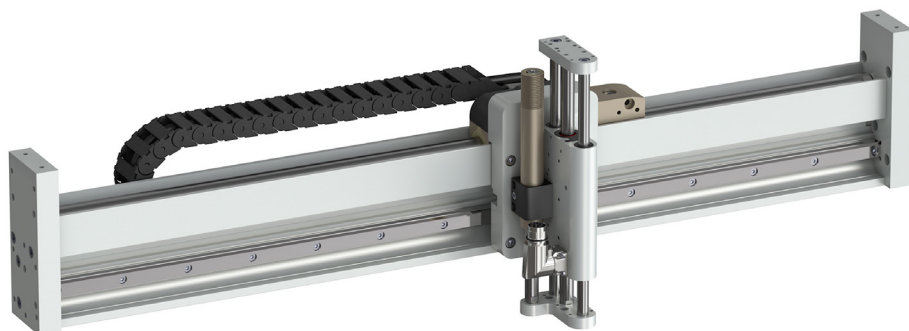
The mounting kit contains all necessary screws and pins to mount all sizes of DM01 linear modules together.

| Item | Description | Item-No. |
|---------------------|--|---------------------------|
| Z01-AsKit-DM01-DM01 | Mounting kit for DM01 on DM01 Linear Modules | 0150-4378 |

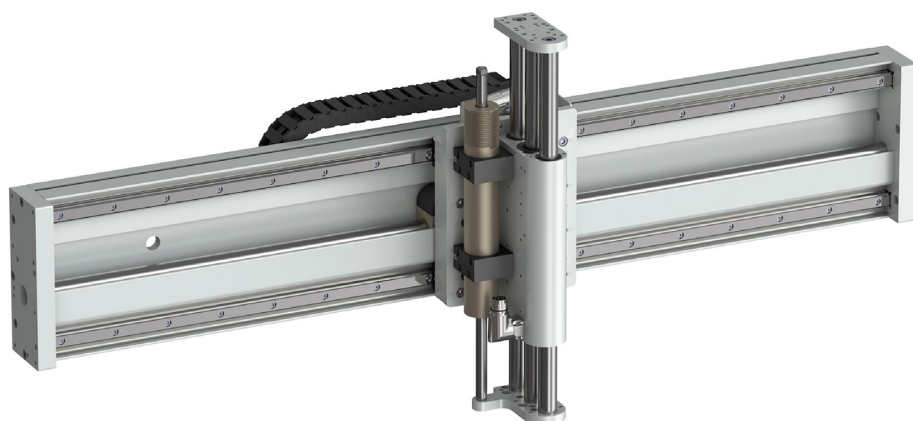
MOUNTING DM01 LINEAR MODULES ON F01 AND E01 LINER GUIDES

For the realisation of various motion systems, the DM01 linear modules can be combined with the proven F01 and E01 linear guides. The modules are attached directly to the guides using the appropriate mounting kits.

The mounting kits consist of an adapter plate, screws, dowel pins and are listed in the accessories of the F01 and E01 guides. The following illustrations show examples of some mounting combinations of the modules with the linear guides.



DM01-23 to F01-37S



DM01-37 to E01-37S



DM01-48 to E01-37S

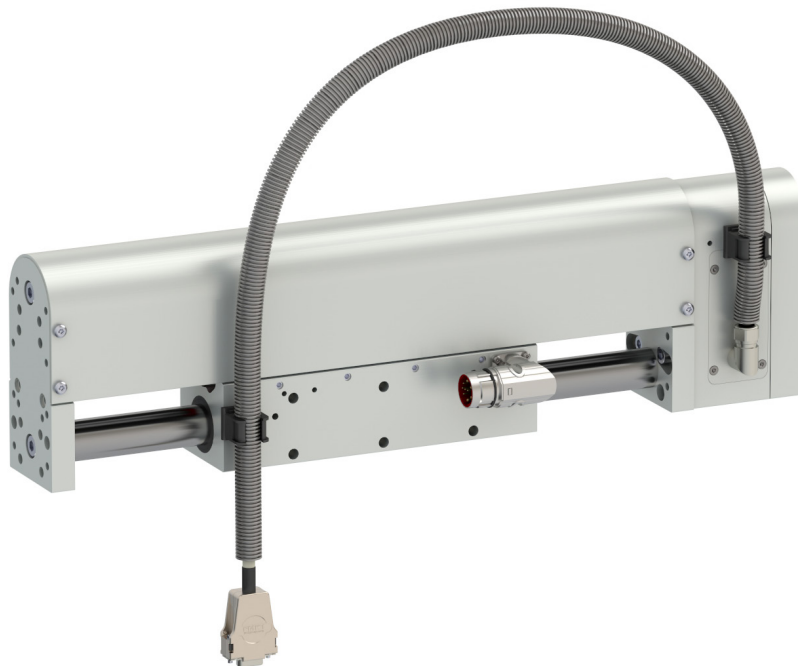
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FORCE SENSOR MODULES

The force sensor modules of the DM01-37-FSxx and DM01-48-FSxx series can be flanged directly to the linear modules of the DM01 series and thus enable the measurement of the forces occurring in the direction of movement of the modules. Together with the C1250 drives, which can also be calibrated, it is thus possible to either execute a process in a force-controlled manner or to implement process monitoring based on the forces that occur.



| Item | Description | Item-No. |
|---------------------|---|---------------------------|
| DM01-37-FS22 | Force sensor module 250N for DM01-37 with accessories | 0150-4797 |



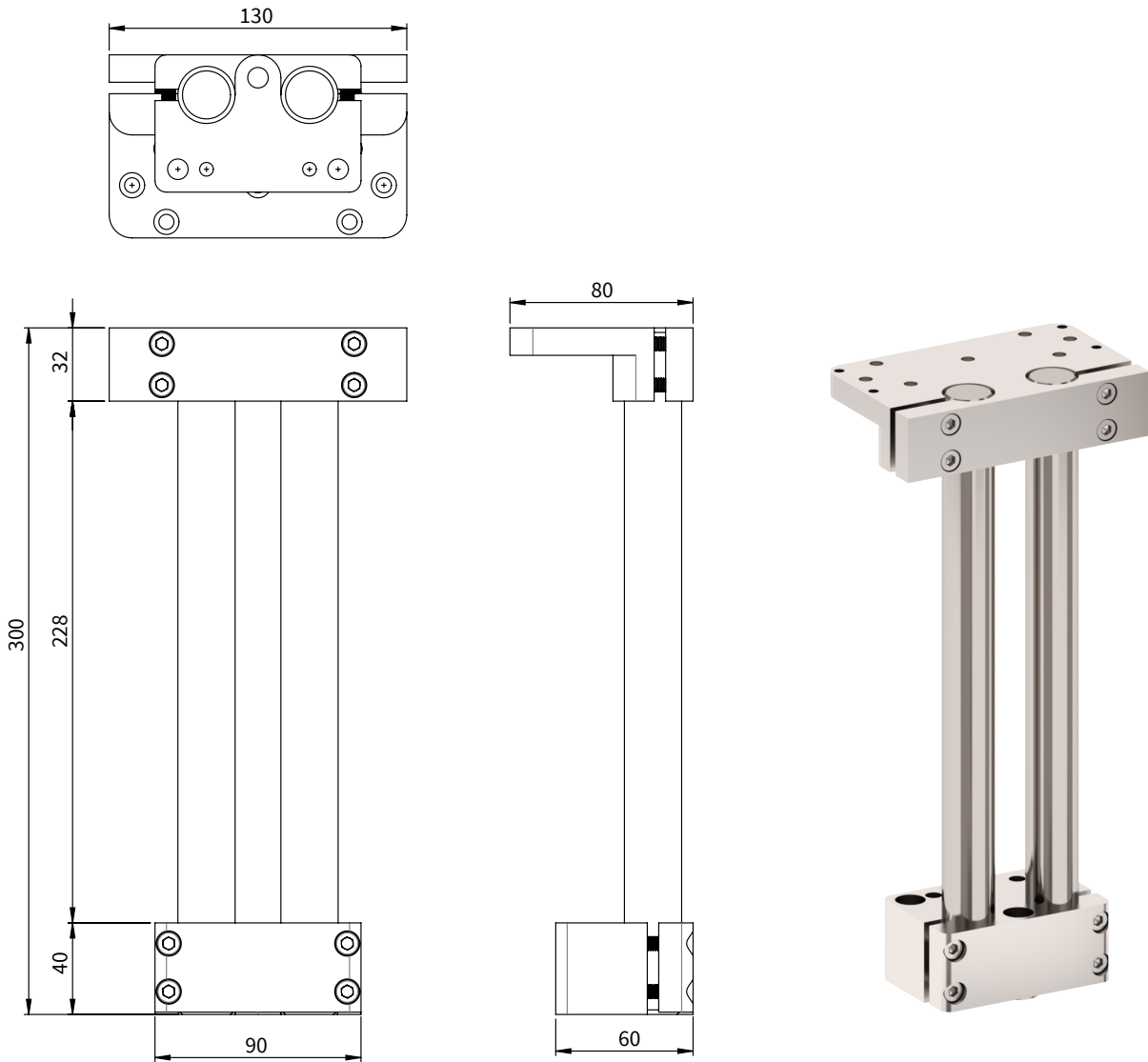
| Item | Description | Item-No. |
|---------------------|--|---------------------------|
| DM01-48-FS25 | Force sensor module for DM01-48 with accessories | 0150-4799 |

PILLAR SYSTEM

For the realization of YZ motion units a classic pillar system is available, with which the units can be flexibly adjusted in height if required. The range consists of the components pillar base, pillars and pillar adapter.



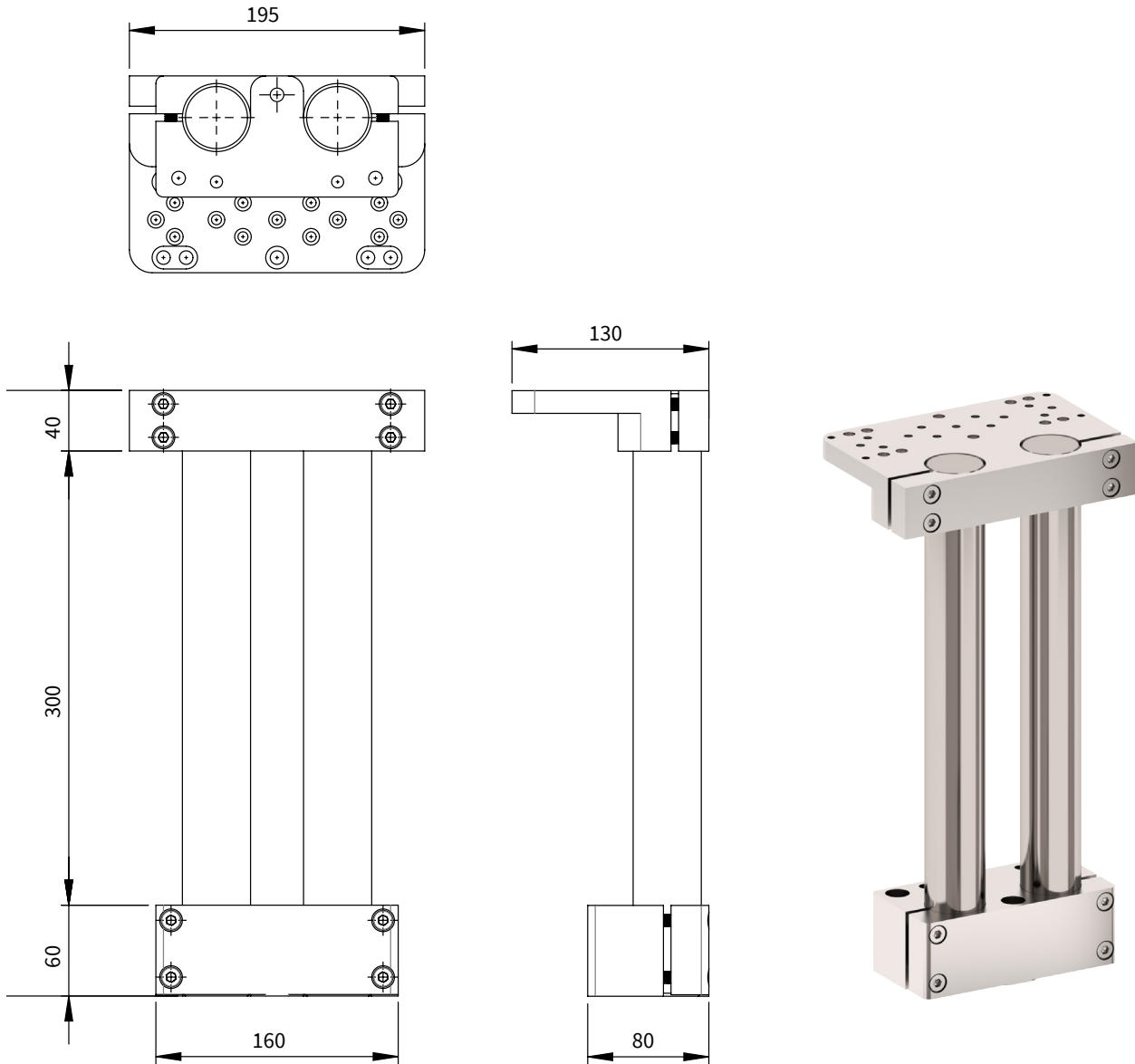
PILLAR SYSTEM 25X2 FOR LINEAR MODULE DM01-37



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| Item | Description | Item-No. |
|----------------------|---|---------------------------|
| Z01-SB-25x2 | Pillar base 25x2 | 0150-4058 |
| Z01-SL-25x300 | Pillar Ø25 Length=300 mm for Pillar System 25x2 | 0150-4025 |
| Z01-SA-25x2 | Pillar adapter 25x2 | 0150-4059 |

PILLAR SYSTEM 45X2 FOR LINEAR MODULE DM01-48



13

| Item | Description | Item-No. |
|----------------------|---|---------------------------|
| Z01-SB-45x2 | Pillar base 45x2 | 0150-4056 |
| Z01-SL-45x400 | Pillar Ø45 Length=400 mm for Pillar System 45x2 | 0150-4045 |
| Z01-SA-45x2 | Pillar adapter 45x2 | 0150-4057 |

CABLE CONDUIT KIT ID 23 MM / 1200 MM FOR DM01-23 AND DM01-37

The cable conduit kit includes the fixing material for the cable conduit supplied. The length of the cable conduit is designed for the maximum horizontal stroke of 500 mm and can be shortened accordingly for smaller strokes.



| Item | Description | Item-No. |
|---------------|--------------------------------------|---------------------------|
| Z01-KS23-1200 | Cable conduit kit ID 23 mm / 1200 mm | 0150-4376 |

CABLE CONDUIT KIT ID 29 MM / 1300 MM FOR DM01-48

The cable conduit kit includes the fixing material for the cable conduit supplied. The length of the cable conduit is designed for the maximum horizontal stroke of 600 mm and can be shortened accordingly for smaller strokes.



| Item | Description | Item-No. |
|---------------|--------------------------------------|---------------------------|
| Z01-KS34-1300 | Cable conduit kit ID 29 mm / 1300 mm | 0150-4377 |

FANS



| Item | Description | Item-No. |
|------------|--|---------------------------|
| HV01-23 | Fan kit 23 | 0150-5050 |
| HV01-37/48 | Fan kit 37/48, suitable for direct mounting on DM01-37 without MagSpring | 0150-5051 |

Note: For DM01-37 linear modules without MagSpring, the threaded holes (P1-P4, see installation guide) can be used to mount the fan HV01-37/48 (Item-No. 0150-5051). Fans cannot be mounted directly on all other DM01 linear modules. It is recommended that the customer design his own adapters for external mounting.

ALL LINEAR MOTION FROM A SINGLE SOURCE

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