

High-Precision Linear Stage

Compact Positioner with Direct Positioning Measuring



M-605

- 25 mm and 50 mm travel ranges
- Integrated linear encoder option for highest accuracy to 0.1 μm
- Max. velocity 30 mm/s
- High load capacity to 30 kg
- Noncontact limit and reference switches
- MTBF >20,000 h

Linear stage with direct position measuring

The M-605 high-precision linear stage is driven by an ActiveDrive DC motor in conjunction with a zero-play ball screw. A stress-relieved aluminum base ensures high stability and flexible bellows protect the mechanics against dirt and dust. The connection grid allows XY and XYZ combinations.

Specifications

	M-605.1DD	M-605.2DD	Unit	Tolerance
Active axes	X	X		
Motion and positioning	M-605.1DD	M-605.2DD	Unit	Tolerance
Travel range	25	50	mm	
Integrated sensor	Linear encoder	Linear encoder		
Sensor resolution	0.1	0.1	μm	
Design resolution	0.1	0.1	μm	
Minimum incremental motion	0.3	0.3	μm	
Unidirectional repeatability	0.1	0.1	μm	
Bidirectional repeatability	0.2	0.2	μm	
Accuracy	1	1	μm	
Pitch	± 30	± 40	μrad	
Yaw	± 30	± 40	μrad	
Velocity	30	30	mm/s	max.
Reference switch repeatability	1	1	μm	
Mechanical properties	M-605.1DD	M-605.2DD	Unit	Tolerance
Drive screw	Ball screw	Ball screw		
Drive screw pitch	1	1	mm	

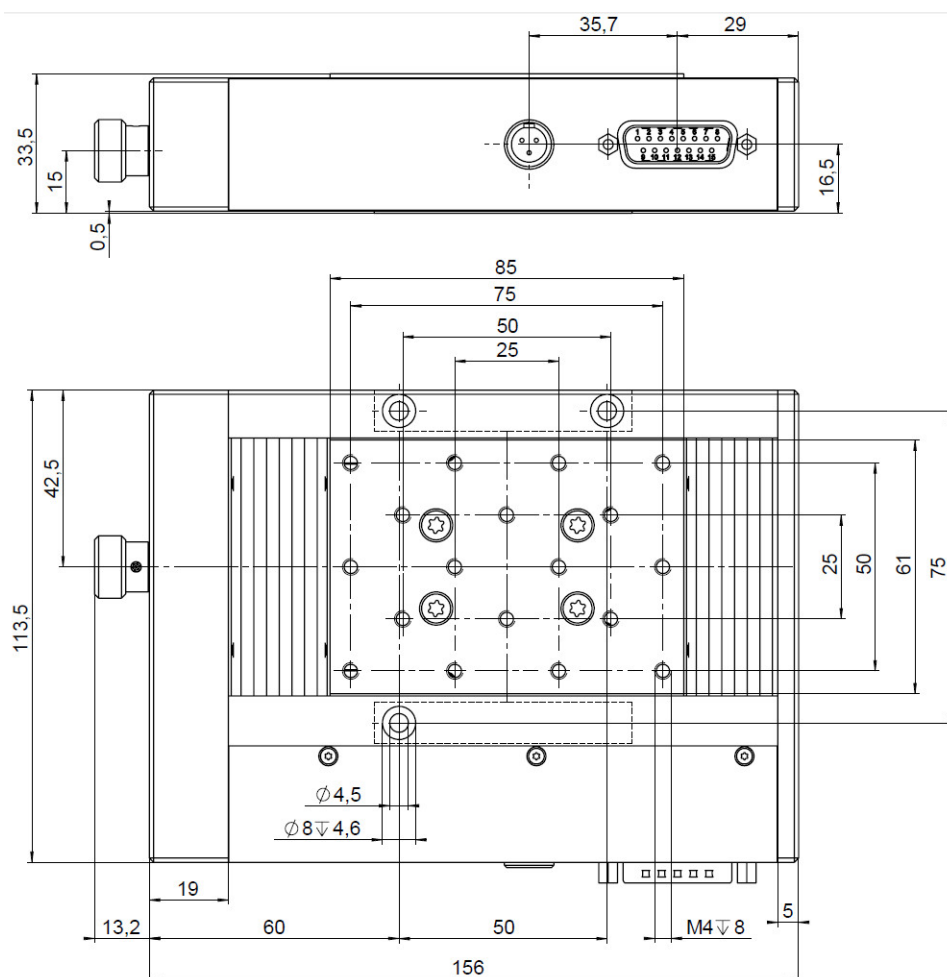
Mechanical properties	M-605.1DD	M-605.2DD	Unit	Tolerance
Load capacity	300	300	N	max.
Push/pull force	20 / 20	20 / 20	N	max.
Lateral force	100	100	N	max.

Drive properties	M-605.1DD	M-605.2DD	Unit	Tolerance
Motor type	DC motor, ActiveDrive	DC motor, ActiveDrive		
Operating voltage	24 (PWM)	24 (PWM)	V	
Motor power	6	6	W	
Reference and limit switches	Hall effect	Hall effect		

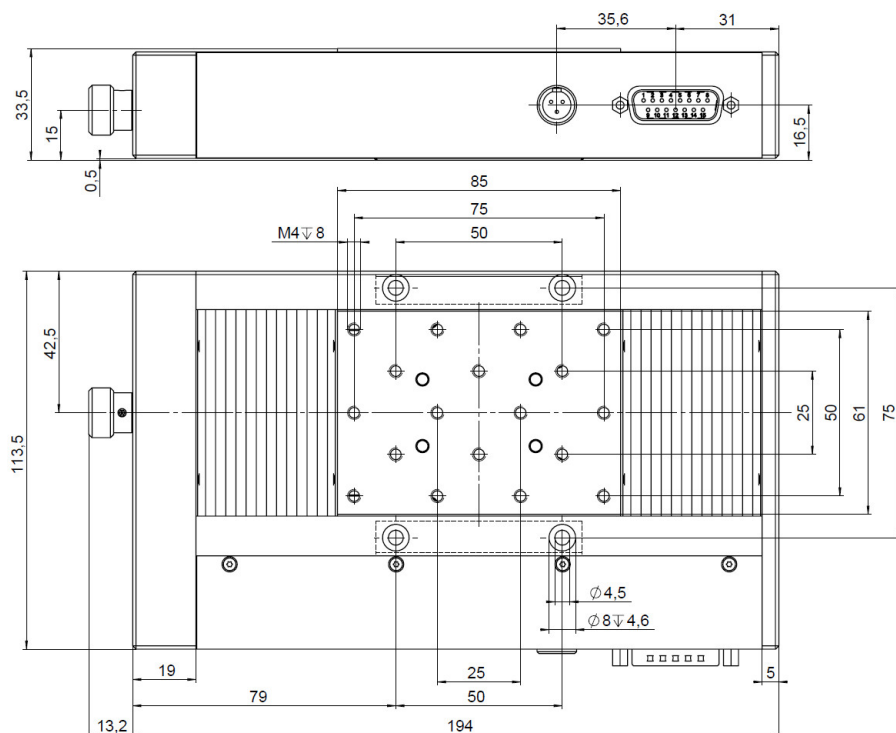
Miscellaneous	M-605.1DD	M-605.2DD	Unit	Tolerance
Operating temperature range	-20 to 65	-20 to 65	°C	
Material	Anodized aluminum	Anodized aluminum		
Mass	1.5	1.8	kg	
Recommended controllers/drivers	C-863 (1 axis), C-884 (4/6 axes)	C-863 (1 axis), C-884 (4/6 axes)		

Ask about customized versions.

Drawings / Images



M-605.1DD, dimensions in mm



M-605.2DD, dimensions in mm

Ordering Information

M-605.1DD

Compact precision linear stage, 25 mm travel range, 0.1 μ m linear encoder, ActiveDrive DC motor

M-605.2DD

Compact precision linear stage, 50 mm travel range, 0.1 μ m linear encoder, ActiveDrive DC motor

Accessories (please order separately)

M-605.AV1

Vertical mounting bracket for M-605 to M-605

M-110.01

Adapter plate for mounting M-110 - M-112, F-130, F-131 and M-605 stages onto honeycomb stages (metric and inches)