

ENGINEERING DOCUMENTATION

Miniature Slide Electric Cylinder

Dimensional & Integration Guide

DOCUMENT	REVISION / ISSUE	STATUS
DIG-ES-EC-S01-M001	DRAFT-08 / 28 Aug 2026	Engineering Integration Reference

Integration Overview

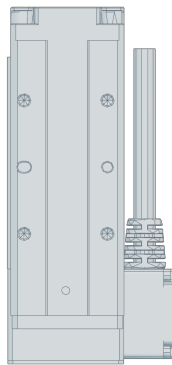
Compact electric linear actuator for precision positioning, tooling and automation integration. This guide supports envelope, mounting, load-path, motion, cable, commissioning and service planning for ES-EC-S01-M001.

Key Integration Facts

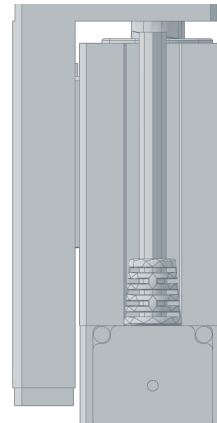
INTEGRATION ITEM	VALUE
Maximum horizontal load	1 mm: 8 kg; 2 mm: 6 kg; 4 mm: 3 kg; 6 mm: 2 kg
Minimum Thrust	1 mm: 78 N; 2 mm: 41 N; 4 mm: 21 N; 6 mm: 12 N
Maximum vertical load	1 mm: 2 kg; 2 mm: 1.5 kg; 4 mm: 0.75 kg; 6 mm: 0.5 kg
Maximum Acceleration	1 mm: 2000 mm/s ² ; 2 mm: 3000 mm/s ² ; 4 mm: 3000 mm/s ² ; 6 mm: 3000 mm/s ²
Lead screw pitch	1 mm; 2 mm; 4 mm; 6 mm
Position Repeatability	±0.01 mm
Continuous Rated Current	1.5 A () / 3 A () *(4) A
Stroke	30 mm, 50 mm

3D Orientation and Interface Views

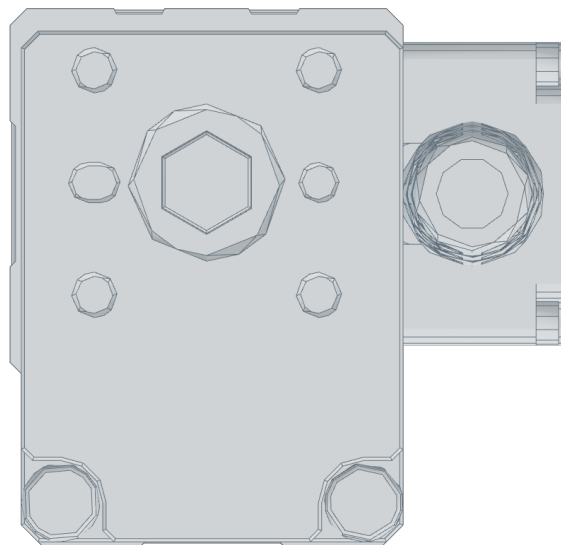
The front, right-side and top views are retained because each exposes a different integration relationship: moving-axis orientation, actuator side envelope and cable or motor-side projection. Dimensions remain governed by the applicable 2D drawing and exact-SKU parameters.



Front View



Right Side View

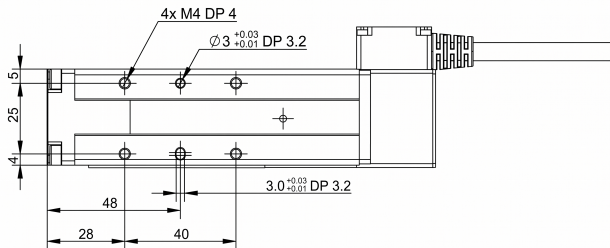


Top View

Each selected view contributes a distinct orientation or interface relationship used by the integration guidance.

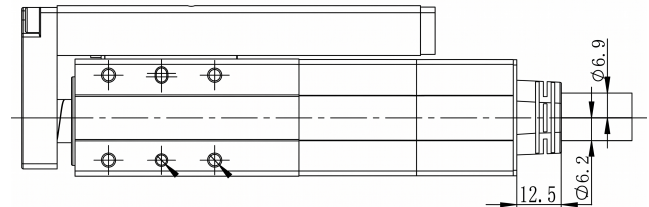
Product Structure & Views

These views present the selected product structure, mounting interfaces and relevant integration geometry for this configuration.

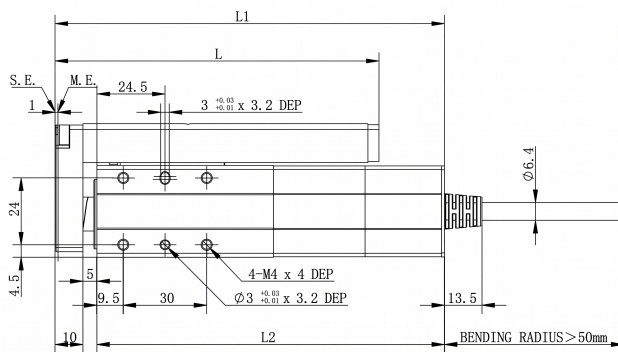


Mechanical View 1

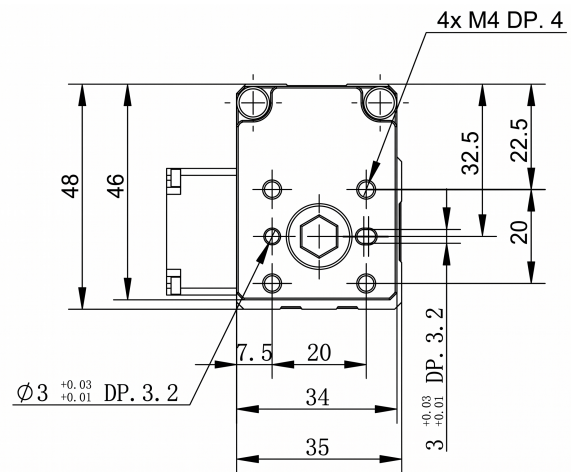
EXTERNAL ELECTRIC CYLINDER ADAPTIVE TERMINALS FOR VARIOUS DRIVE OUTPUT CABLES



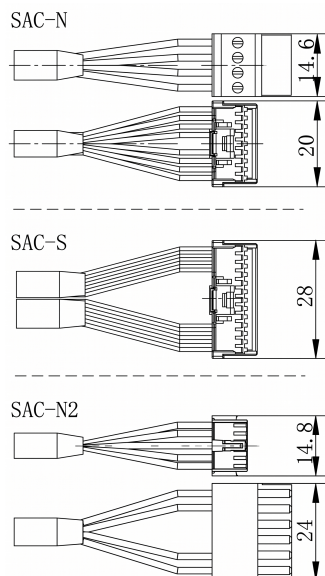
Mechanical View 3



Mechanical View 4

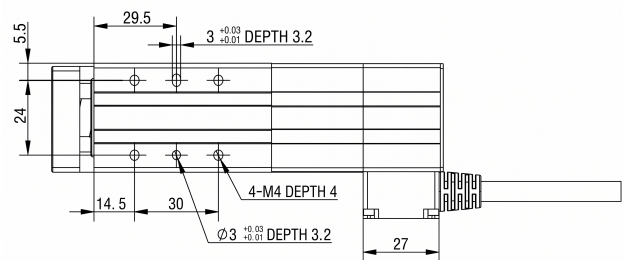


Mechanical View 5



Mechanical View 6

Adapter terminals for different driver outlet ends



Mechanical View 7

VIEW	FIELD	VALUE
Mechanical View 1	Threaded mounting hole quantity and specification	4x M4 threaded holes, depth 4
	Locating hole diameter and depth	Diameter 3 with upper tolerance +0.03 and lower tolerance +0.01, depth 3.2
	Upper edge offset dimension	5
	Middle height dimension	25
	Lower edge offset dimension	4
	Slot width and depth	Width 3.0 with upper tolerance +0.03 and lower tolerance +0.01, depth 3.2
	Horizontal hole position distance	48
	Left horizontal hole position distance	28
	Horizontal spacing between hole centerlines	40
Mechanical View 4	Overall length L1	L1, value Not specified
	Body length L	L, value Not specified
	Slider end reference point	S.E. reference
	Mechanical end reference point	M.E. reference
	Mounting hole pitch from reference	24.5 mm
	Upper row hole or slot depth specification	3 mm with +0.03/+0.01 tolerance x 3.2 mm deep
	Left end small offset	1 mm
	Shaft diameter	Diameter 6.4 mm
	Body height	24 mm
	Threaded mounting hole specification	4 x M4 threaded holes, 4 mm deep
	Left end step width	5 mm
	Lower offset height	4.5 mm
	Lower row hole diameter and depth specification	Diameter 3 mm with +0.03/+0.01 tolerance x 3.2 mm deep
	Mounting hole pitch	9.5 mm
	Overall length L2	L2, value Not specified
	Left bottom end length	10 mm
	Mounting hole spacing	30 mm
Mechanical View 5	Threaded mounting holes and depth	4x M4 threaded holes, depth 4
	Overall external height	Overall height 48
	Body height	Body height 46
	Top edge to right hole center distance	Distance from top edge to hole center 22.5
	Top edge to lower hole center distance	Distance from top edge to lower hole center 32.5
	Vertical pitch between right-side hole centers	Vertical pitch 20
	Horizontal offset to left hole center	Horizontal offset 7.5
	Horizontal pitch between hole centers	Horizontal pitch 20
	Dowel/locating hole diameter tolerance and depth	3 hole with tolerance +0.03/+0.01, depth 3.2
	Right-side locating hole diameter tolerance and depth	3 hole with tolerance +0.03/+0.01, depth 3.2
	Body width	Body width 34
	Overall external width	Overall width 35

VIEW	FIELD	VALUE
Mechanical View 6	Descriptive title	Adapter terminals for different driver outlet ends

VIEW	FIELD	VALUE
Mechanical View 7	Upper row hole horizontal reference distance	29.5 mm
	Upper row hole diameter/depth tolerance callout	Diameter or nominal hole size 3 mm, tolerance +0.03/+0.01 mm, depth 3.2 mm
	Left upper vertical offset	5.5 mm
	Left main vertical mounting pitch or height	24 mm
	Threaded mounting hole specification	4 × M4 threaded holes, depth 4 mm
	Bottom first horizontal distance	14.5 mm
	Bottom second horizontal distance	30 mm
	Lower row hole diameter/depth tolerance callout	3 mm hole, tolerance +0.03/+0.01 mm, depth 3.2 mm

Technical Specifications - 1

PARAMETER	VALUE	UNIT
Maximum horizontal load	1 mm: 8 kg; 2 mm: 6 kg; 4 mm: 3 kg; 6 mm: 2	kg
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Maximum vertical load	1 mm: 2 kg; 2 mm: 1.5 kg; 4 mm: 0.75 kg; 6 mm: 0.5	kg
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Lead screw pitch	1 mm; 2 mm; 4 mm; 6	mm
Position Repeatability	±0.01	
Continuous Rated Current	1.5 A () / 3 A () * (4)	A
Stroke	30 mm, 50	mm

Technical Specifications - 2

PARAMETER	VALUE	UNIT
Recommended Operating Environment	0~40 , 85% RH	
Rated Thrust	1 mm: 200 N; 2 mm: 100 N; 4 mm: 50 N; 6 mm: 30	N
Weight	Non-brake — 30 mm stroke: 0.47 kg; 50 mm stroke: 0.55 kg; brake — 30 mm stroke: 0.54 kg; 50 mm stroke: 0.62	kg
Allowable Load Moment (My)	9.9 N.m	Nm
Allowable Load Moment (Mx)		
Maximum Linear Speed	1 mm: 50 mm/s; 2 mm: 100 mm/s; 4 mm: 200 mm/s; 6 mm: 300	mm/s
Allowable Load Moment (Mz)	3.3 N.m	Nm

Mounting and Load Path

- Support the complete mounting face, preserve locating datums and verify fastener engagement for the installed load path.
- Validate thrust, side load, moment, duty cycle and acceleration for the complete mechanism; do not use component ratings as a machine-level approval.

Motion, Cable and Commissioning

- Keep the full moving envelope clear, provide strain relief through the complete stroke and prevent cable forces from biasing motion.
- Commission at reduced energy and verify homing, travel limits, repeatability, temperature and fault handling before automatic operation.

Integration Checklist

- | | |
|----|---|
| 01 | Confirm the exact-SKU drawing and parameter set. |
| 02 | Verify mounting datums, fasteners and the complete actuator envelope. |
| 03 | Validate stroke, speed, thrust, load path and side-load boundaries. |
| 04 | Provide cable clearance and strain relief through the complete travel. |
| 05 | Commission at reduced energy and verify homing, limits, repeatability and fault behavior. |

[View SKU Product Datasheet](#)[Request controlled 2D drawing](#)[Request controlled STEP review](#)[Request a Quote](#)

Engineering Use and Verification Notice

01. This Dimensional & Integration Guide applies only to EmbodyStack SKU ES-EC-S01-M001 and is intended for dimensional evaluation and preliminary integration. It is not a manufacturing drawing, machine-level load approval, wiring final integration, safety validation or production authorization. Before design freeze, installation or commissioning, verify all dimensions, interfaces, fits, fasteners, loads, motion limits, cable requirements, environmental boundaries and maintenance requirements against the applicable EmbodyStack engineering documentation for this exact SKU. Validate the complete installed system under intended operating and fault conditions.