

ENGINEERING DOCUMENTATION

Miniature Slide Electric Cylinder

Dimensional & Integration Guide

DOCUMENT	REVISION / ISSUE	STATUS
DIG-ES-EC-S01-M003	DRAFT-08 / 28 Aug 2026	Engineering Integration Reference

Integration Overview

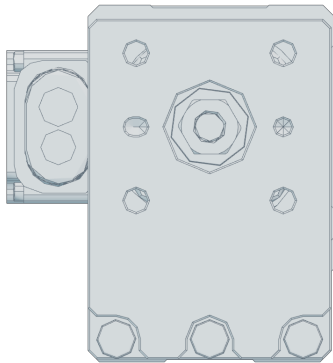
Compact electric linear actuator for precision positioning, tooling and automation integration. This guide supports envelope, mounting, load-path, motion, cable, commissioning and service planning for ES-EC-S01-M003.

Key Integration Facts

INTEGRATION ITEM	VALUE
Maximum horizontal load	5 mm: 15 kg; 10 mm: 15 kg
Minimum Thrust	5 mm: 51 N; 10 mm: 25.5 N
Maximum vertical load	5 mm: 6 kg; 10 mm: 3 kg
Maximum Acceleration	5 mm: 2000 mm/s ² ; 10 mm: 3000 mm/s ²
Lead screw pitch	5 mm; 10 mm
Position Repeatability	±0.02 mm
Continuous Rated Current	2.5 A () / 7 A () * 4A
Stroke	75 mm, 150 mm

3D Orientation and Interface Views

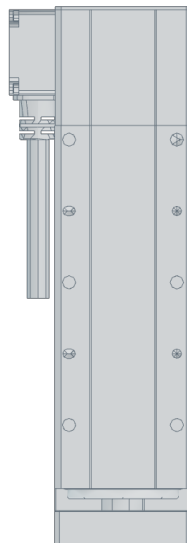
The front, right-side and top views are retained because each exposes a different integration relationship: moving-axis orientation, actuator side envelope and cable or motor-side projection. Dimensions remain governed by the applicable 2D drawing and exact-SKU parameters.



Front View



Right Side View

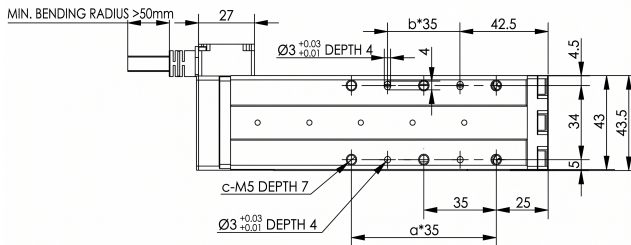


Top View

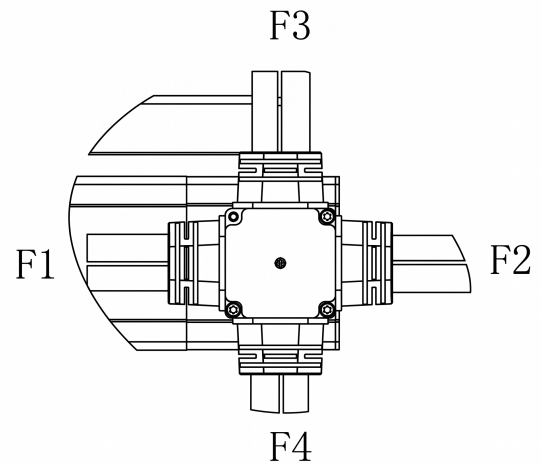
Each selected view contributes a distinct orientation or interface relationship used by the integration guidance.

Product Structure & Views

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

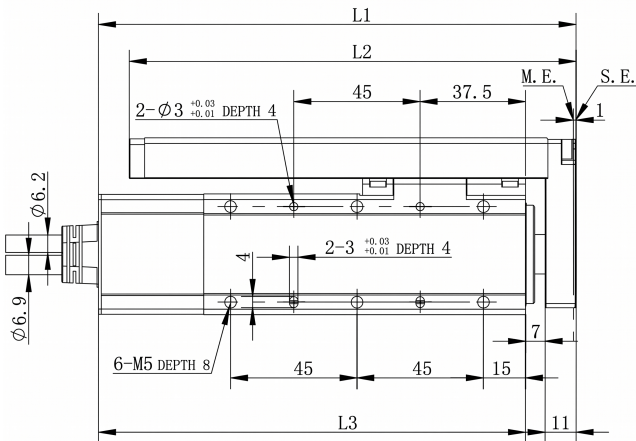


Mechanical View 1

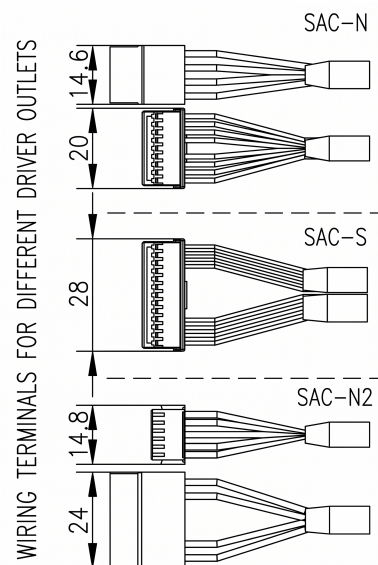


Electric Cylinder Cable Outlet Diagram

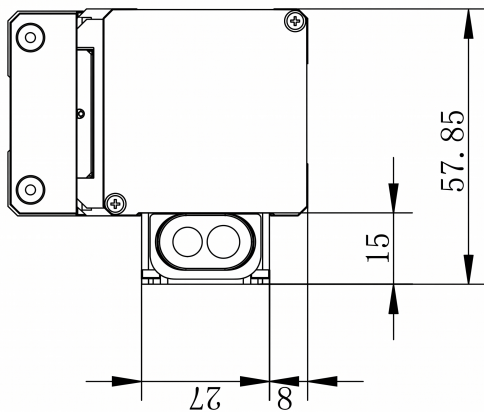
Mechanical View 3



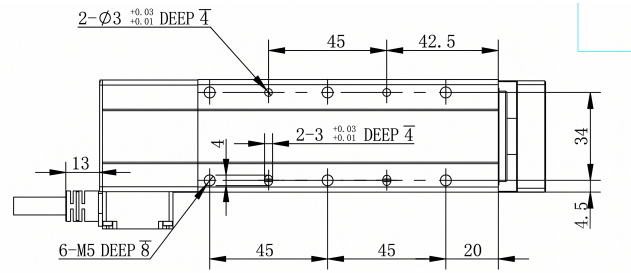
Mechanical View 4



Mechanical View 5



Mechanical View 7



Mechanical View 8

VIEW	FIELD	VALUE
Mechanical View 1	Upper mounting pitch parameter b	b × 35 mm
	Upper right-end mounting pitch	42.5 mm
	Upper locating hole diameter and depth	Diameter 3 mm, tolerance +0.03/+0.01 mm, depth 4 mm
	Upper local vertical offset	4 mm
	Right-end upper vertical offset	4.5 mm
	Body height	34 mm
	Overall height	43 mm
	Maximum overall height	43.5 mm
	Lower edge offset	5 mm
	M5 threaded hole depth	C-M5 threaded holes, depth 7 mm
	Lower locating hole diameter and depth	Diameter 3 mm, tolerance +0.03/+0.01 mm, depth 4 mm
	Lower mounting pitch parameter a	a × 35 mm
	Right-side mounting pitch	35 mm
	Right-end mounting distance	25 mm
Mechanical View 3	Drawing title	Electric Cylinder Cable Outlet Diagram

VIEW	FIELD	VALUE
Mechanical View 4	Overall length L1	L1
	Length L2	L2
	Upper mounting hole pitch segment 1	45 mm
	Upper mounting hole pitch segment 2	37.5 mm
	Upper locating hole specification	2 holes, diameter 3 mm, tolerance +0.03/+0.01 mm, depth 4 mm
	Shaft diameter 1	Diameter 6.2 mm
	Lower locating hole specification	2 features, size 3 mm, tolerance +0.03/+0.01 mm, depth 4 mm
	Shaft diameter 2	Diameter 6.9 mm
	Right end offset distance	7 mm
	Threaded mounting hole specification	6 x M5 threaded holes, depth 8 mm
	Lower mounting hole pitch segment 1	45 mm
	Lower mounting hole pitch segment 2	45 mm
	Lower end spacing	15 mm
	Right end extension distance	11 mm
	Overall length L3	L3
	Right end clearance	1 mm
Mechanical View 5	Outlet terminal compatibility note for different drivers	Outlet terminals for different driver wiring configurations
Mechanical View 7	Local overall height	57.85 mm
Mechanical View 8	Upper row locating hole specification	2 holes, diameter 3 mm, tolerance +0.03/+0.01 mm, depth 4 mm
	Upper row hole spacing 1	45 mm
	Upper row hole spacing 2	42.5 mm
	Middle/lower row locating hole specification	2 holes, diameter 3 mm, tolerance +0.03/+0.01 mm, depth 4 mm
	Vertical spacing between hole rows	4 mm
	Main body height	34 mm
	Right side step height	4.5 mm
	Mounting threaded hole specification	6 x M5 threaded holes, depth 8 mm
	Lower row hole spacing 1	45 mm
	Lower row hole spacing 2	45 mm
	Lower row right end spacing	20 mm

Technical Specifications - 1

PARAMETER	VALUE	UNIT
Maximum horizontal load	5 mm: 15 kg; 10 mm: 15	kg
Minimum Thrust	5 mm: 51 N; 10 mm: 25.5	N
Maximum vertical load	5 mm: 6 kg; 10 mm: 3	kg
Maximum Acceleration	5 mm: 2000 mm/s ² ; 10 mm: 3000	mm/s ²
Lead screw pitch	5 mm; 10	mm
Position Repeatability	±0.02	
Continuous Rated Current	2.5 A () / 7 A () * 4	A
Stroke	75 mm, 150	mm

Technical Specifications - 2

PARAMETER	VALUE	UNIT
Recommended Operating Environment	0~40°C, 85% RH	
Rated Thrust	5 mm: 170 N; 10 mm: 85	N
Weight	Non-brake — 75 mm stroke: 1.40 kg; 150 mm stroke: 1.65 kg; brake — 75 mm stroke: 1.47 kg; 150 mm stroke: 1.72	kg
Allowable Load Moment (My)	18.8 N.m	N.m
Allowable Load Moment (Mx)		
Maximum Linear Speed	5 mm: 165 mm/s; 10 mm: 330	mm/s
Allowable Load Moment (Mz)	30.5 N.m	N.m

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-M003 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.