

ENGINEERING DOCUMENTATION

Two-Finger Parallel Electric Gripper

Dimensional & Integration Guide

DOCUMENT	REVISION / ISSUE	STATUS
DIG-ES-EG-C00-S002-V006	DRAFT-08 / 28 Aug 2026	Engineering Integration Reference

Integration Overview

Electric end effector for automated gripping and workpiece handling. This guide supports mounting, finger interface, load-path, cable, commissioning and service planning for ES-EG-C00-S002-V006.

Key Integration Facts

INTEGRATION ITEM	VALUE
Measurement Repeatability	± 0.02 mm
Gripping Force (Per Side)	0.8~2 N
Maximum Recommended Payload	0.05 kg
Weight	0.15 kg
Driving Method	+
Unweighted Noise Level	< 50 dB
Communication Interface	: Modbus RTU (RS485) Digital I/O (USB2.0 CAN2.0A PROFINET EtherCAT) ⁵
Peak Current	0.1A() 0.2 A() A

3D Orientation and Interface Views

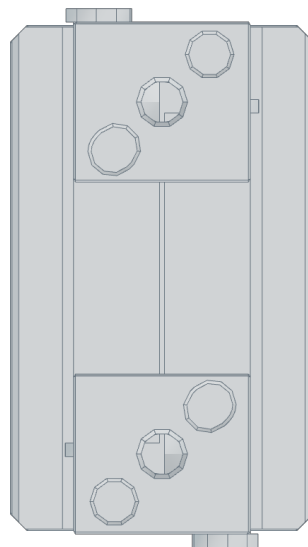
The front, right-side and top views are retained because each exposes a different integration relationship: finger geometry, cable routing direction and robot-side mounting orientation. Dimensions remain governed by the applicable 2D drawing and exact-SKU parameters.



Front View



Right Side View

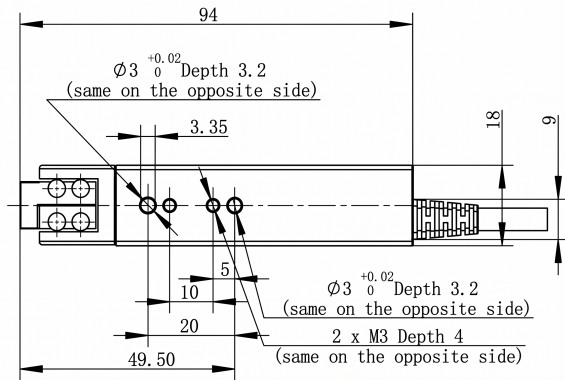


Top View

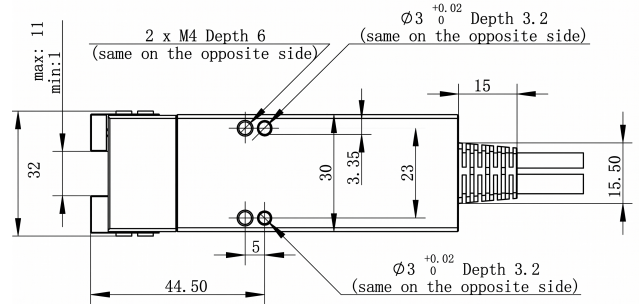
Each selected view contributes a distinct orientation or interface relationship used by the integration guidance.

Product Structure & Views

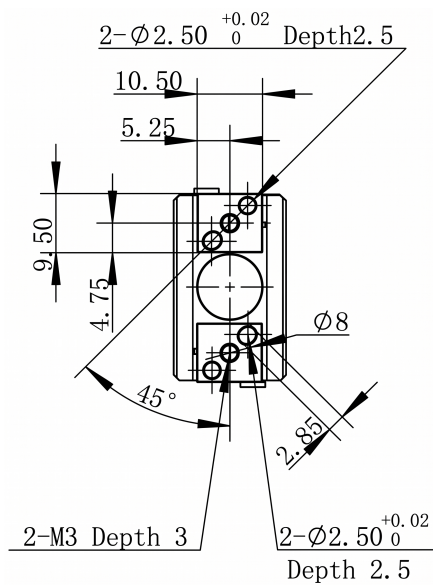
These views present product structure, mounting interfaces and relevant integration geometry for this SKU.



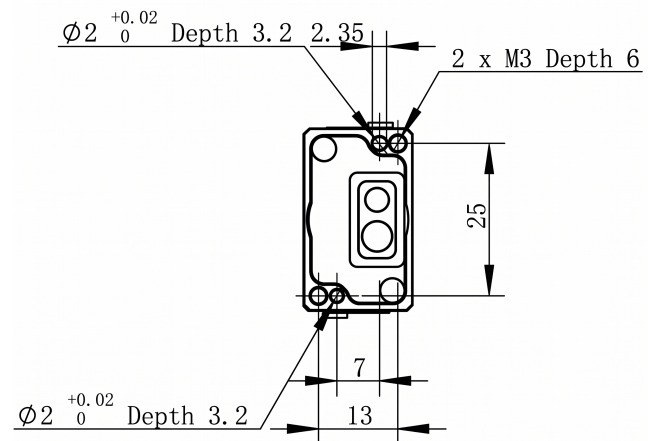
Mechanical View 1



Mechanical View 2



Mechanical View 3



Mechanical View 4

VIEW	FIELD	VALUE
Mechanical View 1	Overall length	Overall length 94 mm
	Upper hole diameter and depth	Diameter 3 mm, tolerance +0.02/0, depth 3.2 mm, same on opposite side
	Connector-side outer height	Outer height 18 mm
	Connector-side inner height	Inner height 9 mm
	Hole spacing	Hole spacing 3.35 mm
	Hole position spacing	Hole position spacing 5 mm
	Lower hole diameter and depth	Diameter 3 mm, tolerance +0.02/0, depth 3.2 mm, same on opposite side
	Hole position reference distance	Hole position distance 10 mm
	Hole position reference distance	Hole position distance 20 mm
	Threaded hole specification	2 x M3 threaded holes, depth 4 mm, same on opposite side
	Left end to datum line distance	Distance 49.50 mm

VIEW	FIELD	VALUE
Mechanical View 2	Maximum adjustment limit	max 11
	Minimum adjustment limit	min 1
	M4 threaded holes	2x M4 tapped holes, depth 6, same on opposite side
	Upper $\varnothing$ hole	$\varnothing +0.02/0$ hole, depth 3.2, same on opposite side
	Right end projection length	15
	Hole position offset from upper edge	3.35
	Main body height	32
	Vertical pitch between mounting holes	30
	Connector shoulder height	23
	Lower hole horizontal pitch	5
	Lower $\varnothing$ hole	$\varnothing +0.02/0$ hole, depth 3.2, same on opposite side
	Horizontal distance from left end to hole centerline	44.50
Mechanical View 3	Upper two locating holes diameter and depth	2 holes, diameter 2.50 mm, tolerance +0.02/0, depth 2.5 mm
	Horizontal hole center spacing	10.50 mm horizontal spacing
	Horizontal hole center spacing	5.25 mm horizontal spacing
	Vertical hole spacing	9.50 mm vertical spacing
	Vertical offset distance	4.75 mm vertical offset
	Central shaft bore diameter	Diameter 8 mm
	Angular dimension	45 degrees
	Two M3 threaded holes depth	2 M3 threaded holes, depth 3 mm
	Lower two locating holes diameter and depth	2 holes, diameter 2.50 mm, tolerance +0.02/0, depth 2.5 mm
Mechanical View 4	Upper precision hole diameter and depth	Diameter $\varnothing$ with tolerance +0.02/0, depth 3.2
	Upper hole spacing or offset dimension	2.35
	Threaded mounting hole count, thread size and depth	2 holes, M3 thread, depth 6
	End-face vertical envelope dimension	25
	Lower hole horizontal spacing	7
	Lower precision hole diameter and depth	Diameter $\varnothing$ with tolerance +0.02/0, depth 3.2
	Lower horizontal mounting dimension	13

Technical Specifications - 1

PARAMETER	VALUE	UNIT
Measurement Repeatability	± 0.02	mm
Gripping Force (Per Side)	0.8~2	N
Maximum Recommended Payload	0.05	kg
Weight	0.15	
Driving Method	+	
Unweighted Noise Level	< 50	dB
Communication Interface	: Modbus RTU (RS485) Digital I/O (USB2.0 CAN2.0A PROFINET EtherCAT) ⁵	
Peak Current	0.1A() 0.2 A()	A

Technical Specifications - 2

PARAMETER	VALUE	UNIT
Standards Compliance	CE, FCC, RoHS	
Permissible Moment (My)	0.4	N·m
Continuous Rated Current	0.1A() 0.2 A()	A
Allowable Static Vertical Load Fz	35	N
Permissible Moment (Mx)	0.45	N·m
Permissible Moment (Mz)		
Peak Power	5	W

Mounting, Fingertip and Workpiece Integration

- Support the complete robot mounting interface and verify locating features, fastener engagement and surrounding clearance.
- Validate fingertip mass, overhang, stiffness, retention, contact pressure and the complete finger and workpiece collision envelope.

Load, Cable and Commissioning

- Validate payload, grip contact, workpiece center of mass, acceleration, emergency stop and allowable moments as one installed load case.
- Provide suitable cable routing and strain relief, then verify supply, interface, initialization, command authority and feedback states before automatic operation.

Integration Checklist

- | | |
|----|--|
| 01 | Confirm the exact-SKU drawing and parameter set. |
| 02 | Verify mounting geometry, locating features, fasteners and body envelope. |
| 03 | Validate fingertips, workpiece contact, payload, acceleration and moments. |
| 04 | Route and strain-relieve the cable through the complete motion envelope. |
| 05 | Verify initialization, command authority, feedback 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-EG-C00-S002-V006 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.