

IX-NNN1805

Ultra Compact SCARA Robot: Standard Type,
Arm Length 180mm, Vertical Axis 50mm

Type Standard type Arm length 180mm Load capacity 0.2kg rated / 1kg maximum

Model specification items Series Type Cable Length Applicable controller Options
(Example) IX - NNN1805 - 5L - T2 - B



Models/Specifications

Model	Axis configuration	Arm length (mm)	Motor capacity (W)	Work envelope	Positioning repeatability (mm)	Maximum operating speed (Note 1)	Cycle time (sec) (Note 2)	Load capacity (kg) (Note 3)		Axis 3 Push thrust (N)		Axis 4 Allowable load	
								Rated	Maximum	Push mode (Note 4)	Maximum thrust (Note 4)	Allowable inertial moment (kgm ²) (Note 5)	Allowable torque (Nm)
IX-NNN1805-□-T2-□	Axis 1 Arm 1	105	12	±125°	±0.005 (XY)	2555mm/ s (Composite speed)	0.38	0.2	1.0	9.8	17.8	0.000386	0.13
	Axis 2 Arm 2	75	12	±145°									
	Axis 3 Vertical axis	—	12	50mm	±0.010	720mm/ s							
	Axis 4 Rotating axis	—	60	±360°	±0.005	1800°/ s							

Common Specifications

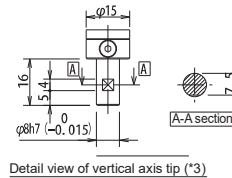
Encoder type	Absolute
User wiring	8-core, AWG26 cable with shield / Connector: SMP-08V-NC (JST)
User tubing	Air tube (O.D. ø3, I.D. ø2) x 2 (Normal working pressure 0.7MPa)
Alarm indicator (Note 6)	Small red LED indicator x 1 (24VDC must be supplied.)

Operating temperature/humidity	Temperature 0~40°C, humidity 20~85% RH or less (non-condensing)
Robot weight	3.0 kg
Cable length	3L: 3m 5L: 5m

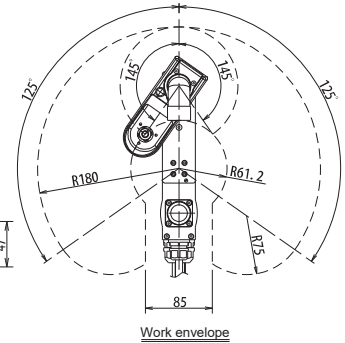
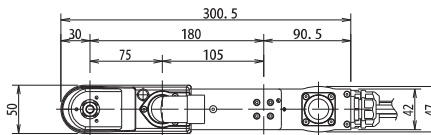
Dimensions

You can download CAD drawings from IAI's website.

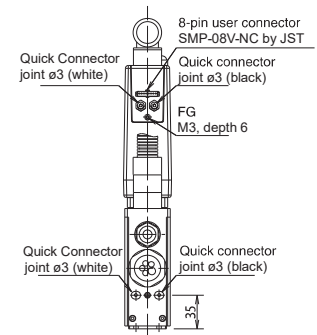
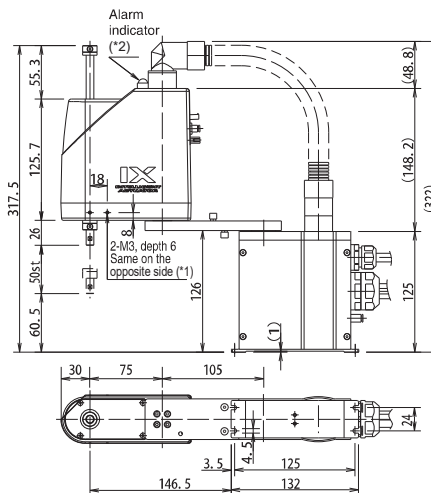
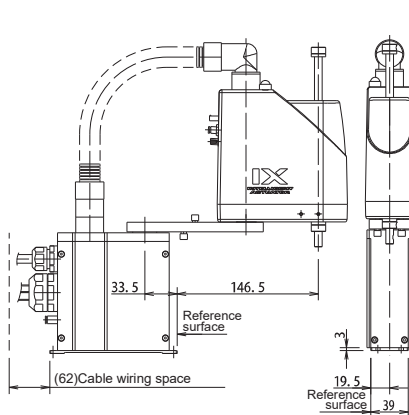
2D CAD



Detail view of vertical axis tip (*3)



Work envelope



*1: The 2-M3 hole (depth 6) passes through the arm. If the mounting screw is too long, the screw will contact the internal mechanical parts. Exercise caution.

*2: To illuminate the alarm indicator, the user must provide a wiring that uses an I/O output signal from the controller to apply 24 VDC to the LED terminal in the user wiring connector.

*3: The vertical axis does not come with a brake. If the power or servo is turned off, the vertical axis may drop. Exercise caution.

Applicable Controller Specifications

Applicable controller	Feature	Maximum I/O points (input/output)	Power-supply voltage	Page
XSEL-PX	Able to control SCARA + 2 axes	192 points /192 points	Single-/ Three-phase 230VAC	→Back cover
XSEL-QX	Conforming to safety category 4			



(Note 1) Based on PTP operation. In CP operation, the maximum speed is limited.
(Note 2) The cycle time is based on reciprocating movements carrying a 0.2-kg load over a horizontal distance of 100 mm and vertical distance of 25 mm.
(Note 3) The rated load capacity indicates the maximum weight that can be operated at the maximum speed and acceleration. The maximum load capacity indicates the maximum weight that can be transported at lower speed and acceleration.
(Note 4) The thrust in the push mode indicates the force generated when a push command is executed from the program. The maximum thrust corresponds to the maximum force generated during normal positioning operation.
(Note 5) The allowable inertial moment indicates an equivalent value measured at the rotational center of axis 4. The offset between the rotational center of axis 4 and the gravity center of the tool must not exceed 17.5 mm.
(Note 6) To use the alarm indicator, the user must provide a circuit that uses an I/O output or other signal to apply 24 VDC to the LED terminal in the user wiring connector.