

IX-HNN5020[H] Medium SCARA robot, Ceiling-mount type
 Arm length 500mm, Vertical axis 200mm [High-power specification]

IX-INN5020[H] Medium SCARA robot, Ceiling-mount inverse type
 Arm length 500mm, Vertical axis 200mm [High-power specification]



Model items **IX** — **□NN5020[H]** — **□** — **T2**

Series	Type	Cable length	Applicable controller
HNN5020[H] : Ceiling-mount type Arm length 500mm, Vertical axis 200mm		5L : 5 m (standard) 10L: 10 m	T2: XSEL-PX/QX
INN5020[H] : Ceiling-mount inverse type Arm length 500mm, Vertical axis 200mm			

*For details on the model items, refer to page 8.

Model/Specifications

Model	Axis configuration		Arm length (mm)	Motor capacity (W)	Work envelope	Positioning Repeatability (mm) (Note 1)	PTP operation Maximum operating speed (Note 2)	Standard cycle time (sec) (Note 3)	Load capacity (kg) (Note 4)		Axis 3 (vertical axis) push force (N) (Note 5)		Axis 4 allowable load	
	Axis 1	Axis 2							Rated	Maximum	Maximum limit	Minimum limit	Allowable inertial moment (kg·m ²) (Note 6)	Allowable torque (N·m)
IX-HNN5020[H]-□-T2	Axis 1	Arm 1	250	400	±120°	±0.010 (XY)	6283mm/s [6381mm/s] (Composite speed)	0.44 [0.39]	2	10	152.0 [181.0]	78.1 [93.0]	0.06	3.3 [3.7]
IX-INN5020[H]-□-T2	Axis 2	Arm 2	250	200	±135°									
	Axis 3	Vertical axis	-	200	200mm	±0.010	1393mm/s [1473mm/s]							
	Axis 4	Rotating axis	-	100	±360°	±0.005	1200°/s [1857°/s]							

*In the model number above, specify the cable length in □.

*SCARA robots cannot operate continuously at 100% speed and acceleration. For details on the operating conditions, refer to Reference Acceleration/Deceleration Settings on page 45.

Common Specifications

Encoder type	Absolute
User wiring	25-conductor AWG26 D-sub/25-pin connector with shield (socket)
User tubing	Air tube (O.D. ø6, I.D. ø4) x 2 (Normal working pressure 0.8 MPa) Air tube (O.D. ø4, I.D. ø2.5) x 2 (Normal working pressure 0.8 MPa)
Alarm indicator (Note 7)	Small red LED indicator x 1 (24 V DC must be supplied.)
Brake-release switch (Note 8)	Allows remote release of Z-axis (24 VDC required)

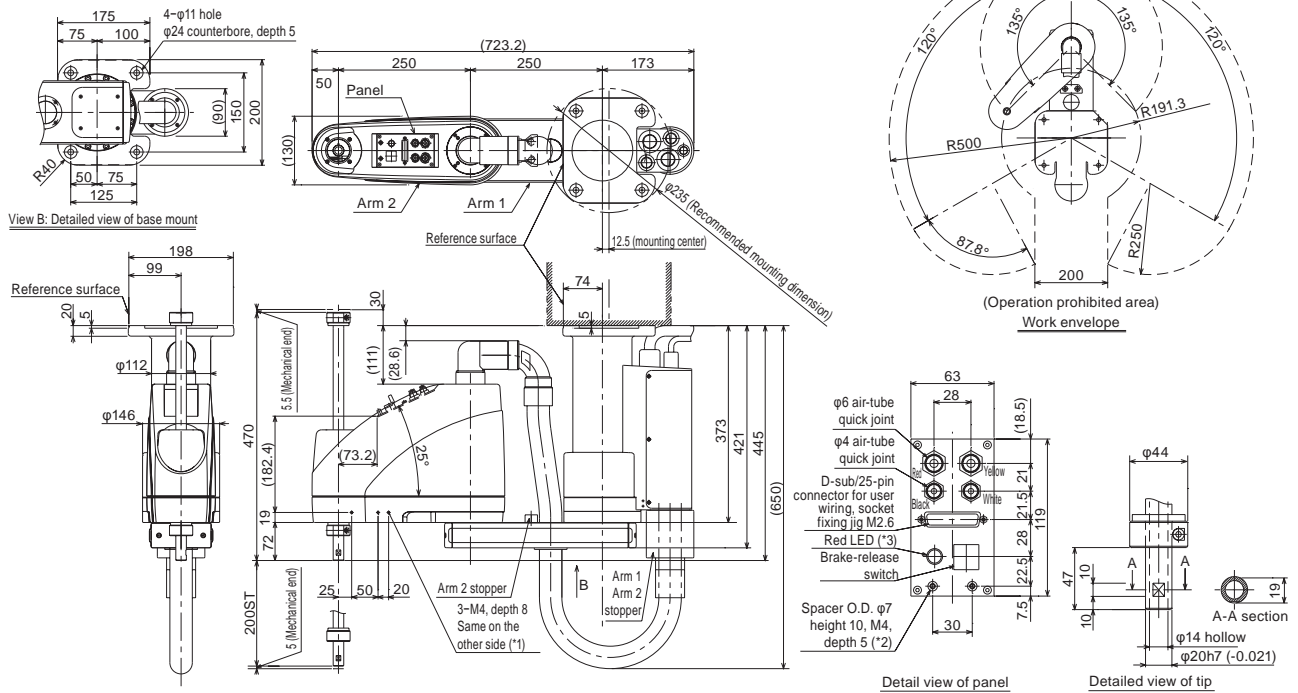
Ambient temperature/humidity	Temperature: 0-40 °C, humidity: 20-85%RH or less (no condensation)
Unit weight	30.5Kg
Applicable controller	T2: XSEL-PX/QX
Cable length (Note 9)	5L: 5 m (standard), 10L: 10 m (optional)

Dimensions

*For the inverse type, the following illustrations should be turned upside down. (See page 2.)

The CAD drawings can be downloaded from our Web site.

2D CAD



- *1: The prepared hole 3-M4, depth 8 passes through the side panel of the arm. If the mounting screw is long, make sure it does not contact internal components.
- *2: The external force applied to a spacer must not exceed 30 N in the axial direction, or 2 N·m in the rotating direction. (for each spacer)
- *3: In order to use the LED, the user must wire it so that it responds to the controller's I/O output signal by supplying 24 V DC to the applicable LED terminal in the user wiring.

Cables/tubes	
• Motor/encoder cable	5m/10m
• Brake power cable	5m/10m
• User Wiring Cable	5m/10m
• Air tube (4 pcs)	0.15m

Applicable Controller Specifications

Applicable Controller	Features	Maximum I/O points (inputs/outputs)	Power-supply voltage	Reference page
XSEL-PX-###-2[3]	Maximum 6 axes, 1600 [2400] W supported	192/192 points	Single-phase [Three-phase] 230 VAC	p. 37
XSEL-QX-###-2[3]	Safety Category 4 supported			

*The SCARA model with high-power specification [H] needs a 2.4 kW three-phase type controller XSEL-PX/QX-###-3.



For explanations of (Note 1) through (Note 9), refer to page 6.

IX-HNN6020[H] Medium SCARA robot, Ceiling-mount type
Arm length 600mm, Vertical axis 200mm [High-power specification]

IX-INN6020[H] Medium SCARA robot, Ceiling-mount inverse type
Arm length 600mm, Vertical axis 200mm [High-power specification]



■ Model items **IX** — **□NN6020[H]** — **□** — **T2**

Series	Type	Cable length	Applicable controller
HNN6020[H] : Ceiling-mount type Arm length 600mm, Vertical axis 200mm		5L : 5 m (standard) 10L : 10 m	T2: XSEL-PX/QX
INN6020[H] : Ceiling-mount inverse type Arm length 600mm, Vertical axis 200mm			

*For details on the model items, refer to page 8.

Model/Specifications

Model	Axis configuration		Arm length (mm)	Motor capacity (W)	Work envelope	Positioning Repeatability (mm) (Note 1)	PTP operation Maximum operating speed (Note 2)	Standard cycle time (sec) (Note 3)	Load capacity (kg) (Note 4)		Axis 3 (vertical axis) push force (N) (Note 5)		Axis 4 allowable load	
									Rated	Maximum	Maximum limit	Minimum limit	Allowable inertial moment (kg·m ²) (Note 6)	Allowable torque (N·m)
IX-HNN6020[H]-T2	Axis 1	Arm 1	350	400	±120°	±0.010 (XY)	7121mm/s [7232mm/s] (Composite speed)	0.52 [0.43]	2	10	152.0 [181.0]	78.1 [93.0]	0.06	3.3 [3.7]
IX-INN6020[H]-T2	Axis 2	Arm 2	250	200	±135°									
	Axis 3	Vertical axis	-	200	200mm	±0.010	1393mm/s [1473mm/s]							
	Axis 4	Rotating axis	-	100	±360°	±0.005	1200°/s [1857°/s]							

*In the model number above, specify the cable length in [□].

*SCARA robots cannot operate continuously at 100% speed and acceleration. For details on the operating conditions, refer to Reference Acceleration/Deceleration Settings on page 45.

Common Specifications

Encoder type	Absolute
User wiring	25-conductor AWG26 D-sub/25-pin connector with shield (socket)
User tubing	Air tube (O.D. ø6, I.D. ø4) x 2 (Normal working pressure 0.8 MPa) Air tube (O.D. ø4, I.D. ø2.5) x 2 (Normal working pressure 0.8 MPa)
Alarm indicator (Note 7)	Small red LED indicator x 1 (24 V DC must be supplied.)
Brake-release switch (Note 8)	Allows remote release of Z-axis (24 VDC required)

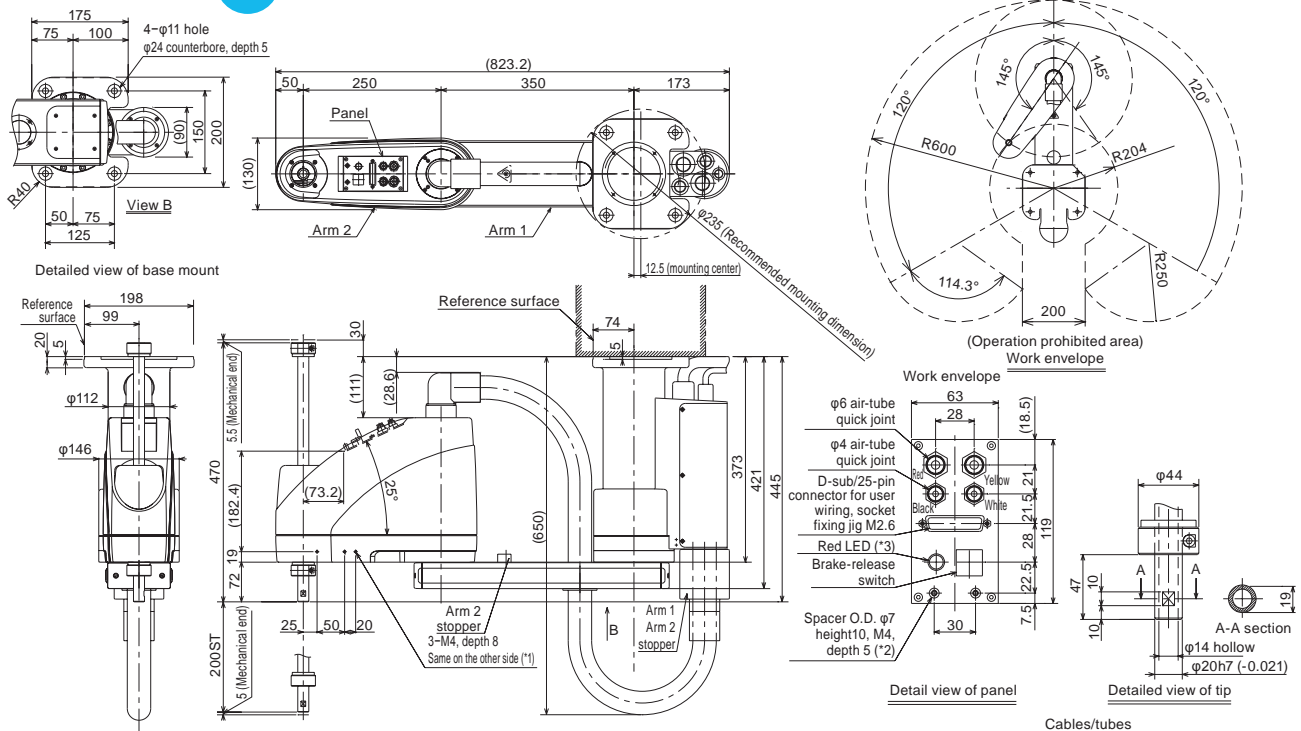
Ambient temperature/humidity	Temperature: 0-40 °C, humidity: 20-85%RH or less (no condensation)
Unit weight	31.5Kg
Applicable controller	T2: XSEL-PX/QX
Cable length (Note 9)	5L: 5 m (standard), 10L: 10 m (optional)

Dimensions

*For the inverse type, the following illustrations should be turned upside down. (See page 2.)

The CAD drawings can be downloaded from our Web site.

2D CAD



- *1: The prepared hole 3-M4, depth 8 passes through the side panel of the arm. If the mounting screw is long, make sure it does not contact internal components.
- *2: The external force applied to a spacer must not exceed 30 N in the axial direction, or 2 N·m in the rotating direction. (for each spacer)
- *3: In order to use the LED, the user must wire it so that it responds to the controller's I/O output signal by supplying 24 V DC to the applicable LED terminal in the user wiring.

Applicable Controller Specifications

Applicable Controller	Features	Maximum I/O points (inputs/outputs)	Power-supply voltage	Reference page
XSEL-PX-###-2[3]	Maximum 6 axes, 1600 [2400] W supported	192/192 points	Single-phase [Three-phase] 230 VAC	p. 37
XSEL-QX-###-2[3]	Safety Category 4 supported			

*The SCARA model with high-power specification [H] needs a 2.4 kW three-phase type controller XSEL-PX/QX-###-3.



Caution

For explanations of (Note 1) through (Note 9), refer to page 6.

IX-HNN70□□[H] Large SCARA robot, Ceiling-mount type, Arm length 700mm
Vertical axis 200mm (400mm) [High-power specification]

IX-INN70□□[H] Large SCARA robot, Ceiling-mount inverse type, Arm length 700mm
Vertical axis 200mm (400mm) [High-power specification]

Model items **IX** — **□NN70□□[H]** — **□** — **T2**

Series	Type	Cable length	Applicable controller
HNN7020(7040)[H]: Ceiling-mount type Arm length 700mm, Vertical axis 200mm (400mm)		5L : 5 m (standard) 10L: 10 m	T2: XSEL-PX/QX
INN7020(7040)[H]: Ceiling-mount inverse type Arm length 700mm, Vertical axis 200mm (400mm)			



*For details on the model items, refer to page 8.

Model/Specifications

Model	Axis configuration		Arm length (mm)	Motor capacity (W)	Work envelope	Positioning Repeatability (mm) (Note 1)	PTP operation Maximum operating speed (Note 2)	Standard cycle time (sec) (Note 3)	Load capacity (kg) (Note 4)		Axis 3 (vertical axis) push force (N) (Note 5)		Axis 4 allowable load	
	Axis 1	Axis 2							Rated	Maximum	Maximum limit	Minimum limit	Allowable inertial moment (kg·m ²) (Note 6)	Allowable torque (N·m)
IX-HNN7020[H]-□-T2 (IX-HNN7040[H]-□-T2)	Axis 1	Arm 1	350	750	±125°	±0.015 (XY)	6597mm/s [7010mm/s] (Composite speed)	0.50 [0.42]	5	20	265 [304]	127.3 [146.0]	0.1	6.7 [11.7]
	Axis 2	Arm 2	350	400	±145°									
IX-INN7020[H]-□-T2 (IX-INN7040[H]-□-T2)	Axis 3	Vertical axis	-	400	200mm (400mm)	±0.010	1583mm/s [1614mm/s]							
	Axis 4	Rotating axis	-	200	±360°	±0.005	1200°/s [1266°/s]							

*In the model number above, specify the cable length in □.

*SCARA robots cannot operate continuously at 100% speed and acceleration. For details on the operating conditions, refer to Reference Acceleration/Deceleration Settings on page 46.

Common Specifications

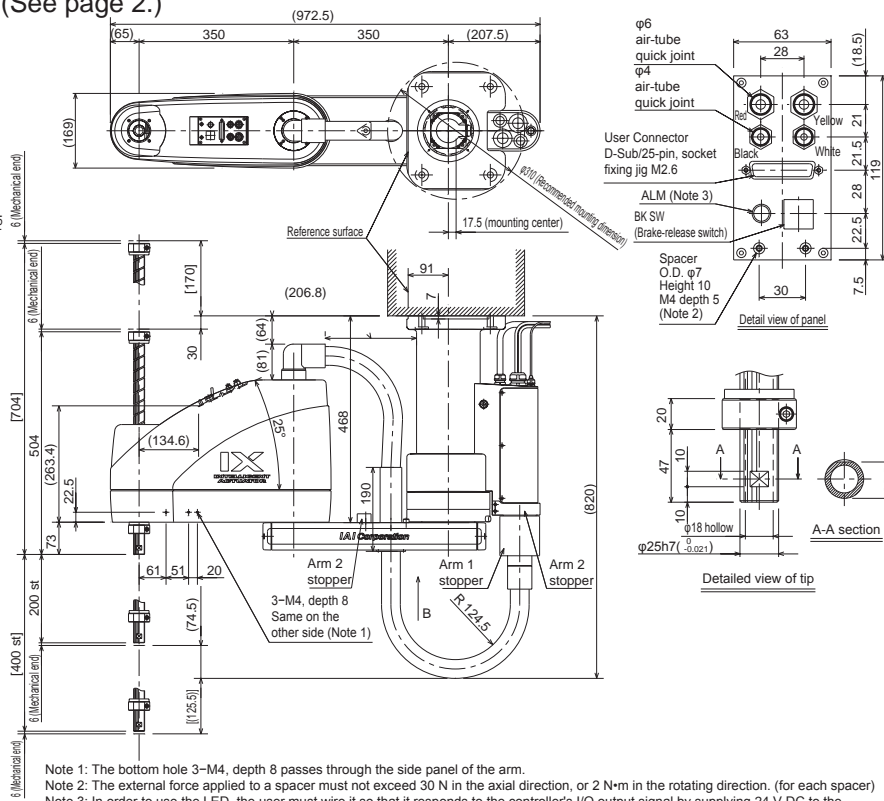
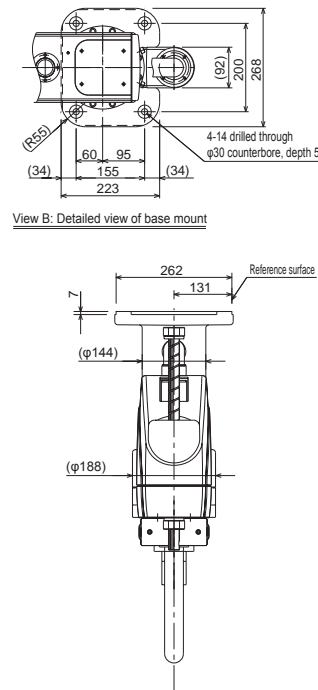
Encoder type	Absolute
User wiring	25-conductor AWG26 D-sub/25-pin connector with shield (socket)
User tubing	Air tube (O.D. φ6, I.D. φ4) x 2 (Normal working pressure 0.8 MPa)
	Air tube (O.D. φ4, I.D. φ2.5) x 2 (Normal working pressure 0.8 MPa)
Alarm indicator (Note 7)	Small red LED indicator x 1 (24 V DC must be supplied.)
Brake-release switch (Note 8)	Allows remote release of Z-axis (24 VDC required)

Ambient temperature/humidity	Temperature: 0-40 °C, humidity: 20-85%RH or less (no condensation)
Unit weight	58Kg
Applicable controller	T2: XSEL-PX/QX
Cable length (Note 9)	5L: 5 m (standard), 10L: 10 m (optional)

Dimensions

*For the inverse type, the following illustrations should be turned upside down. (See page 2.)

The CAD drawings can be downloaded from our Web site.



() indicates vertical axis 400mm (optional) specifications.

Applicable Controller Specifications

Applicable Controller	Features	Maximum I/O points (inputs/outputs)	Power-supply voltage	Reference page
XSEL-PX-###-2[3]	Maximum 5 axes, 1600 [2400] W supported	192/192 points	Single-phase [Three-phase] 230 VAC	p. 37
XSEL-QX-###-2[3]	Safety Category 4 supported			

*The SCARA model with high-power specification [H] needs a 2.4 kW three-phase type controller XSEL-PX/QX-###-3.



For explanations of (Note 1) through (Note 9), refer to page 6.

IX-HNN80□□[H] Large SCARA robot, Ceiling-mount type, Arm length 800mm
Vertical axis 200mm (400mm) [High-power specification]

IX-INN80□□[H] Large SCARA robot, Ceiling-mount inverse type, Arm length 800mm
Vertical axis 200mm (400mm) [High-power specification]



■ Model items **IX — □NN80□□[H] — □ — T2**

Series	Type	Cable length	Applicable controller
HNN8020(8040)[H]: Ceiling-mount type Arm length 800mm, Vertical axis 200mm (400)mm	INN8020(8040)[H]: Ceiling-mount inverse type Arm length 800mm, Vertical axis 200mm (400)mm	5L : 5 m (standard) 10L: 10 m	T2: XSEL-PX/QX

*For details on the model items, refer to page 8.

Model/Specifications

Model	Axis configuration		Arm length (mm)	Motor capacity (W)	Work envelope	Positioning Repeatability (mm) (Note 1)	PTP operation Maximum operating speed (Note 2)	Standard cycle time (sec) (Note 3)	Load capacity (kg) (Note 4)		Axis 3 (vertical axis) push force (N) (Note 5)		Axis 4 allowable load	
	Axis 1	Axis 2							Rated	Maximum	Maximum limit	Minimum limit	Allowable inertial moment (kg·m ²) (Note 6)	Allowable torque (N·m)
IX-HNN8020[H]-①-T2 (IX-HNN8040[H]-①-T2)	Axis 1	Arm 1	450	750	±125°	±0.015 (XY)	7121mms [7586mm/s] (Composite speed)	0.52 [0.43]	5	20	265 [304]	127.3 [146.0]	0.1	6.7 [11.7]
	Axis 2	Arm 2	350	400	±145°									
IX-INN8020[H]-①-T2 (IX-INN8040[H]-①-T2)	Axis 3	Vertical axis	-	400	200mm (400mm)	±0.010	1583mm/s [1614mm/s]							
	Axis 4	Rotating axis	-	200	±360°	±0.005	1200°/s [1266°/s]							

*In the model number above, specify the cable length in ①.

*SCARA robots cannot operate continuously at 100% speed and acceleration. For details on the operating conditions, refer to Reference Acceleration/Deceleration Settings on page 46.

Common Specifications

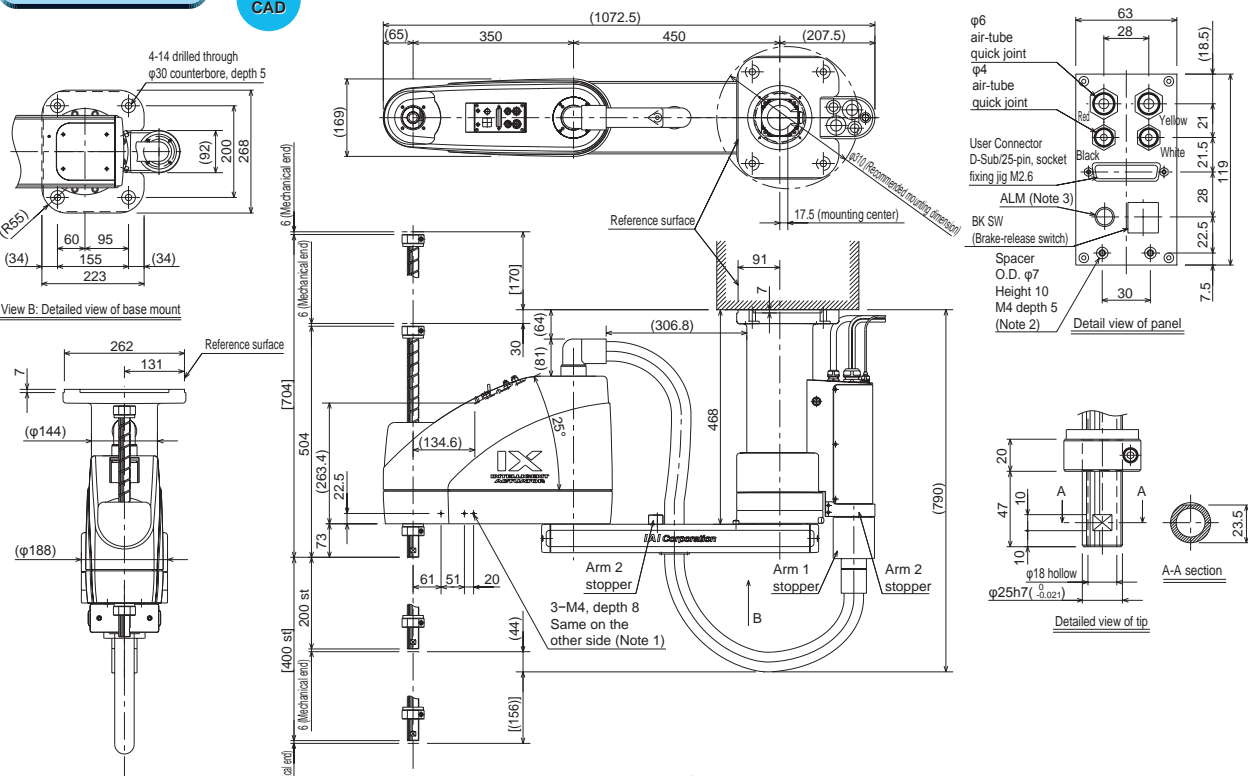
Encoder type	Absolute
User wiring	25-conductor AWG26 D-sub/25-pin connector with shield (socket)
User tubing	Air tube (O.D. ø6, I.D. ø4) x 2 (Normal working pressure 0.8 MPa)
	Air tube (O.D. ø4, I.D. ø2.5) x 2 (Normal working pressure 0.8 MPa)
Alarm indicator (Note 7)	Small red LED indicator x 1 (24 V DC must be supplied.)
Brake-release switch (Note 8)	Allows remote release of Z-axis (24 VDC required)

Ambient temperature/humidity	Temperature: 0-40 °C, humidity: 20-85%RH or less (no condensation)
Unit weight	58Kg
Applicable controller	T2: XSEL-PX/QX
Cable length (Note 9)	5L: 5 m (standard), 10L: 10 m (optional)

Dimensions

*For the inverse type, the following illustrations should be turned upside down. (See page 2.)

The CAD drawings can be downloaded from our Web site.



() indicates vertical axis 400mm (optional) specifications.

Note 1: The bottom hole 3-M4, depth 8 passes through the side panel of the arm.
 Note 2: The external force applied to a spacer must not exceed 30 N in the axial direction, or 2 N·m in the rotating direction. (for each spacer)
 Note 3: In order to use the LED, the user must wire it so that it responds to the controller's I/O output signal by supplying 24 V DC to the applicable LED terminal in the user wiring.

Applicable Controller Specifications

Applicable Controller	Features	Maximum I/O points (inputs/outputs)	Power-supply voltage	Reference page
XSEL-PX-###-2[3]	Maximum 5 axes, 1600 [2400] W supported	192/192 points	Single-phase [Three-phase] 230 VAC	p. 37
XSEL-QX-###-2[3]	Safety Category 4 supported			

*The SCARA model with high-power specification [H] needs a 2.4 kW three-phase type controller XSEL-PX/QX-###-3.



For explanations of (Note 1) through (Note 9), refer to page 6.