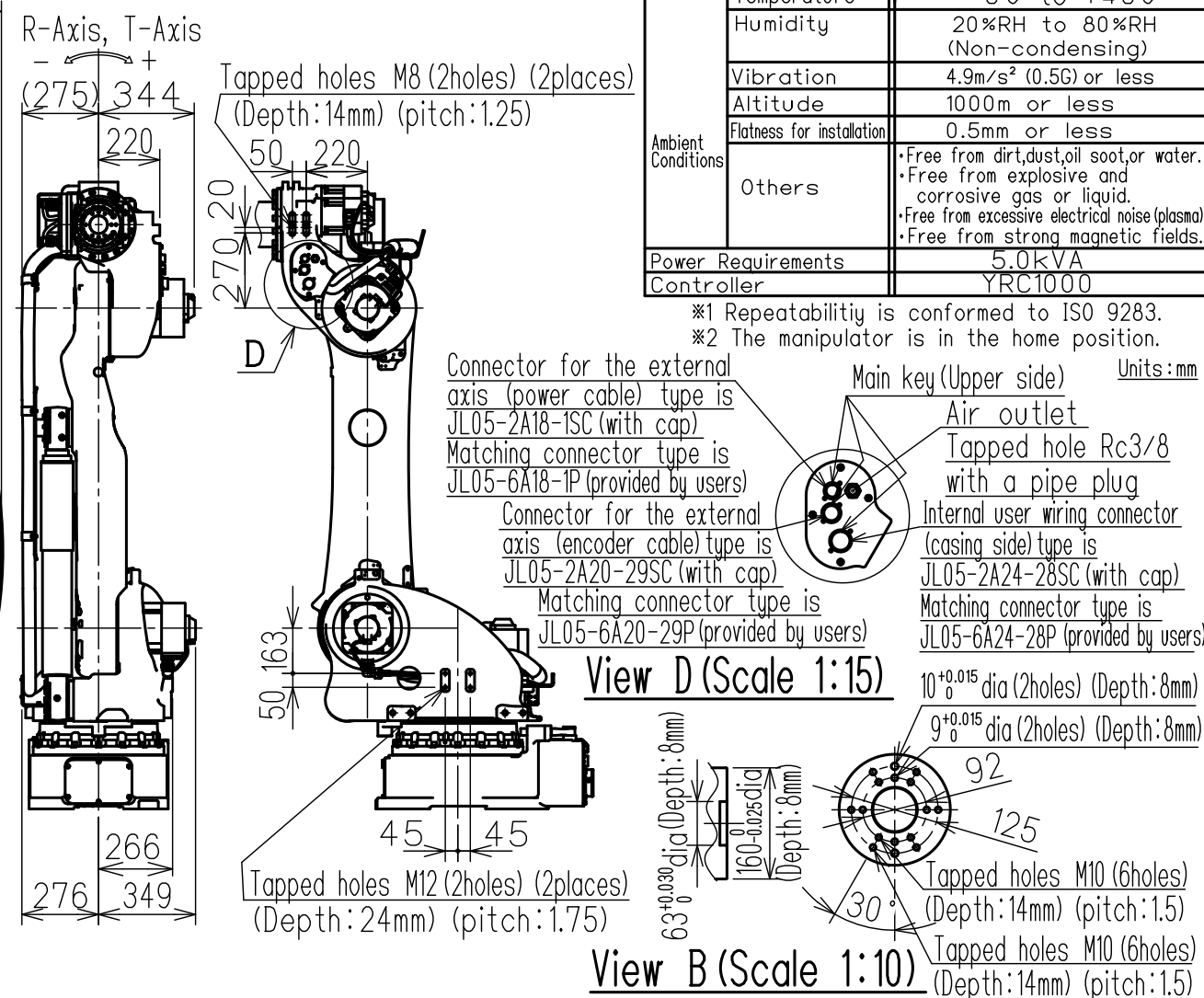


Type	Note
YR-1-06VX180-120-A00	Payload 120kg, U-arm long




Item	Model	MOTOMAN-SP165-105	
Flange for Cabling		not-equipped	equipped
Configuration		Vertically articulated	
Degree of Freedom		6	
Payload	Wrist	120kg	105
	On U-arm	30kg	
Repeatability (※1)		0.05 mm	
Range of Motion	S-Axis (Turning)	-180° - +180°	
	L-Axis (Lower Arm)	-60° - +76°	
	U-Axis (Upper Arm)	-86° - +90°	
	R-Axis (Roll)	-360° - +360°	-210° - +210°
	B-Axis (Pitch/Yaw)	-130° - +130°	-125° - +125°
	T-Axis (Twist)	-360° - +360°	-210° - +210°
Max Speed	S-Axis	2.18 rad/s, 125° /s	
	L-Axis	2.01 rad/s, 115° /s	
	U-Axis	2.18 rad/s, 115° /s	
	R-Axis	3.18 rad/s, 182° /s	
	B-Axis	3.05 rad/s, 175° /s	
	T-Axis	4.63 rad/s, 265° /s	
Allowable Moment	R-Axis	883 N·m (90kgf·m)	834 N·m (85kgf·m)
	B-Axis	883 N·m (90kgf·m)	834 N·m (85kgf·m)
	T-Axis	520N·m ( 53kgf·m)	
Allowable Inertia (GD <sup>2</sup> /4)	R-Axis	79 kg·m <sup>2</sup>	77 kg·m <sup>2</sup>
	B-Axis	79 kg·m <sup>2</sup>	77 kg·m <sup>2</sup>
	T-Axis	40 kg·m <sup>2</sup>	
Approx.Robot mass		1090kg	
Protected structure		Body:IP54 Wrist:IP67	
Mounting method		Floor-mounted	
Ambient Conditions	Temperature	0℃ to +45℃	
	Humidity	20%RH to 80%RH (Non-condensing)	
	Vibration	4.9m/s <sup>2</sup> (0.5G) or less	
	Altitude	1000m or less	
	Flatness for installation	0.5mm or less	
	Others	<ul style="list-style-type: none"> <li>•Free from dirt,dust,oil soot, or water.</li> <li>•Free from explosive and corrosive gas or liquid.</li> <li>•Free from excessive electrical noise (plasma)</li> <li>•Free from strong magnetic fields.</li> </ul>	
Power Requirements		5.0kVA	
Controller		YRC1000	

※1 Repeatability is conformed to ISO 9283.  
※2 The manipulator is in the home position.

Connector for the external axis (power cable) type is JL05-2A18-ISC (with cap)  
Matching connector type is JL05-6A18-1P (provided by users)

Connector for the external axis (encoder cable) type is JL05-2A20-29SC (with cap)  
Matching connector type is JL05-6A20-29P (provided by users)

Main key (Upper side)  
Air outlet  
Tapped hole Rc3/8 with a pipe plug  
Internal user wiring connector (casing side) type is JL05-2A24-28SC (with cap)  
Matching connector type is JL05-6A24-28P (provided by users)



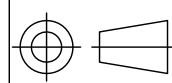
The diagram shows the top view of a motor. It features a central circular area with several connection points. Arrows point from the text labels to specific features: 'Main key (Upper side)' points to a keyway on the top surface; 'Air outlet' points to a small circular feature; 'Tapped hole Rc3/8 with a pipe plug' points to a hole on the top surface; 'Internal user wiring connector (casing side) type is JL05-2A24-28SC (with cap)' points to a connector on the side of the motor housing; and 'Matching connector type is JL05-6A24-28P (provided by users)' points to the corresponding connector on the motor's base.

View D (Scale 1:15)

View B (Scale 1:10)

Note:

- 1.All rights reserved.
- 2.Please note that the data is subject to be deleted without advance notice.
- 3.No warranty is given in relation to the data including the specification.
- 4.We are not responsible for any damages or loss caused by the use of the data.



SCALE 1 : 25

**YASKAWA**  
株式会社 安川電機

Reference Drawing

TITLE	MOTOMAN-SP165-105
	DIMENSION DIAGRAM

DRWN DATE	Oct.03.'17
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DWG.NO.
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HW1385426

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