YA-U5F

7-axis

Maximum payload 5 kg

Ordering method

YA-U5F - 4L - YAC100 - [ ] - [ ] - [ ] - [ ]

Model	Power cable length	Controller	Safety standard	Language setting	Option I/O	Network option
YA-U5F	4L: 4m	YAC100	N: Normal E: CE marking	JE: Japanese/English JC: Japanese/Chinese EJ: English/Japanese EC: English/Chinese	N, P: Standard I/O 28/28 N1, P1: 56/56 points N2, P2: 84/84 points N3, P3: 112/112 points N4, P4: 140/140 points	No entry : None CC: CC-Link DM: DeviceNet master DS: DeviceNet slave PB: PROFIBUS EP: EtherNet/IP™ PM: Profinet master PT: Profinet slave ES: EtherCAT slave

Note. High degree of motion like a human arm with its 7-axis arm.
Note. The arm has been slimmed by employing a newly developed miniaturized actuator for the wrist section, greatly reducing the interference of the arm with the workpiece.
Note. The narrowing of the motion range that usually results when downsizing a robot is avoided by an ingenious mechanism used for the arm joints, so maximum range is maintained.
Note. Light and weighs only 30 kg, so many installation choices are available: floor, ceiling, or wall. Please contact us separately regarding wall-mounted or ceiling-mounted installations.
Note. By utilizing internal user I/O wiring harness and air lines integrated in the arm, layout can be planned offline without worrying about peripheral interference.
(Internal user I/O wiring harness and air lines specifications: two air lines and eight-core cables)
External axis specification for a hand can be accommodated. Contact YAMAHA regarding your requirements.

Specifications

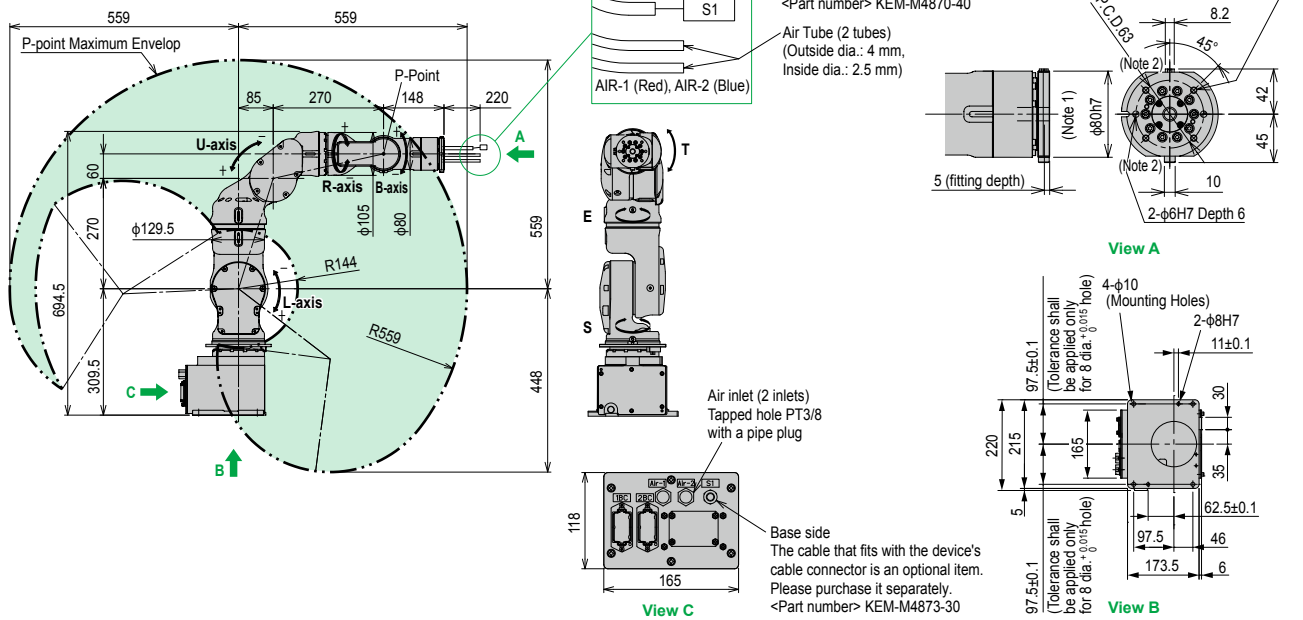
Controlled Axis		7
Payload		5 kg
Repeatability		±0.06 mm
Range of Motion	S-axis (turning)	-180˚ to +180˚
	L-axis (lower Arm)	-110˚ to +110˚
	E-axis (elbow twist)	-170˚ to +170˚
	U-axis (upper arm)	-90˚ to +115˚
	R-axis (wrist roll)	-180˚ to +180˚
	B-axis (wrist pich/yaw)	-110˚ to +110˚
	T-axis (wrist twist)	-180˚ to +180˚
Maximum Speed	S-axis (turning)	3.49 rad/s, 200˚/s
	L-axis (lower Arm)	3.49 rad/s, 200˚/s
	E-axis (elbow twist)	3.49 rad/s, 200˚/s
	U-axis (upper arm)	3.49 rad/s, 200˚/s
	R-axis (wrist roll)	3.49 rad/s, 200˚/s
	B-axis (wrist pich/yaw)	4.01 rad/s, 230˚/s
	T-axis (wrist twist)	6.11 rad/s, 350˚/s

Allowable Moment	R-axis (wrist roll)	14.7 N·m
	B-axis (wrist pich/yaw)	14.7 N·m
	T-axis (wrist twist)	7.35 N·m
Allowable Inertia ($GD^2/4$)	R-axis (wrist roll)	0.45 kg·m^2
	B-axis (wrist pich/yaw)	0.45 kg·m^2
	T-axis (wrist twist)	0.11 kg·m^2
Mass		30 kg
Power Requirements[Note 1]		1.0 kVA
Ambient Conditions	Temperature	0 to +40˚C
	Humidity	20 to 80%RH (non-condensing)
	Vibration	4.9 m/s^2 or less
	Others	•Free from corrosive gasses or liquids, or explosive gasses •Free from exposure to water, oil, or dust •Free from excessive electrical noise (plasma)

Note 1. Varies in accordance with applications and motion patterns.
Note. SI units are used for specifications.

YA-U5F

Units: mm ([ ]: P-point Maximum Envelop)



Note 1. The flange is equipped with a cable through hole. When mounting equipment such as an attachment, ensure that no foreign liquid, oil, or dust go into hole.
Note 2. A bolt is mounted for T-axis grease replenished. When attaching an attachment to 80 dia. -0.035/0 part of the T-axis, enough space for the grease zerk (A-MT6X1) is required to the shape of the attachment.

Controller YAC100 ▶ 117