YAC100 Specifications

■ YAC100 controller specifications

Configuration	Standard: IP20 (open structure)
Dimensions	470 mm (W) × 420 mm (D) × 200 mm (H) (Protrusions are not included.)
Mass	20 kg
Cooling System	Direct cooling
Ambient Temperature	During operation: 0˚C to +40˚C During storage : -10˚C to +60˚C
Relative Humidity	90% max. (non-condensing)
Power Supply [Note]	Single-phase 200/230 VAC (+10% to -15%), 50/60 Hz Three-phase 200/220 VAC (+10% to -15%), 50/60 Hz
Grounding	Grounding resistance: 100 Ω or less
Digital I/Os	Specialized signals: 8 inputs and 11 output General signals : 16 inputs and 16 outputs Max. I/O (optional) : 1,024 inputs and 1,024 outputs
Positioning System	By serial encoder
Programming Capacity	JOB: 10,000 steps, 1,000 instructions CIO ladder: 1,500 steps
Expansion Slots	MP2000 bus × 5 slots
LAN (Connection to Host)	1 (10BASE-T/100BASE-TX)
Interface	RS-232C: 1ch
Control Method	Software servo control
Drive Units	Six axes for robots. Two more axes can be added as external axes. (Can be installed in the controller.)
Painting Color	Munsell notation 5Y7/1 (reference value)

Note. YA-R6F: Three-phase only.

■ YAP programming pendant specifications

Dimensions	169 mm (W) × 314.5 mm (H) × 50 mm (D)
Mass	0.990 kg
Material	Reinforced plastics
Operation Device	Select keys, axis keys (8 axes), numerical/application keys, Mode switch with key (mode: teach, play, and remote), emergency stop button, enable switch, compact flash card interface device (compact flash is optional.), USB port (1 port)
Display	640 × 480 pixels color LCD, touch panel (Alphanumeric characters, Chinese characters, Japanese letters, Others)
IEC Protection Class	IP65
Cable Length	Standard: 8 m, 4 m / 8 m / 12 m extension cable (maximum 20 m)

■ Optimum controller for handling and assembly

The YAC100 is a compact controller with improved performance and functions optimized for handling and assembly.

- Fits in a 19-inch rack and can be installed under conveyors.
- Commands specifically designed for workpiece handling with synchronized conveyors.

Hardware Options	Optional Functions
• External axis (max.: 2 axes) • I/O module (28 points, NPN or PNP) • Major fieldbus interface boards DeviceNet™ (master/slave), CC-Link (slave), PROFIBUS (slave), EtherNet/IP™ (slave, I/O communications), EtherCAT (slave), PROFINET (master/slave)	• Conveyor synchronization • Vision function • External reference point control • Software pendant

■ Regarding the concurrent I/O ladder program

The YAC100 controller is equipped with an NPN (or PNP) for standard I/O. Dedicated input/output is assigned to this standard I/O board. For this reason, if dedicated input/output is to be assigned to various types of field bus, concurrent I/O ladder program settings must be made.

Sample programs can be downloaded from our website. [Note]
https://global.yamaha-motor.com/business/robot/

Note. The member site requires registration.

A robot simulator that implements the same functionality as the actual controller

MotoSim EG-VRC-CadPack for YAMAHA

Virtual programming before the actual line is completed allows major reduction in line startup time.

- ■ **Modeling layout**
  Models of workers and workpieces can be easily laid out.
- ■ **Intuitive control of models**
  Models can be moved intuitively, simply by using the mouse.
- ■ **Programming and debugging**
  Automatic generation of robot operating programs, job editing, and job analysis can be performed easily.

- ■ **Intuitive robot operation**
  The robot's posture can be operated intuitively, allowing more efficient teaching.
- ■ **Robot simulation**
  The robot can be watched as it operates, allowing visual verification.