

SPECIFICATION OF ROBOT

CP180LEE03

1st Edition : Aug.07.2014

KAWASAKI HEAVY INDUSTRIES LTD.

ROBOT DIV.

承認	機械	制御

Doc, No:90101-2262DEA

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1. Specification of Robot

[1] Robot Arm

1. Model	CP180L-A		
2. Type	Articulated robot		
3. Degree of freedom	4 axes		
4. Axis specification	Operating axis	Max. operating range	Max. speed
	Arm rotation (JT1)	+160° ~ -160°	130°/s
	Arm out-in (JT2)	+ 95° ~ - 46°	120°/s
	Arm up-down (JT3)	+ 15° ~ - 110°	125°/s
	Wrist twist (JT4)	+360° ~ -360°	330°/s
5. Palletizing Capacity	Approx. 1800 cycles/h		
	On the condition that robot moves 400 mm stroke upward-downward and 2000 mm stroke in right-left direction.		
6. Repeatability	±0.5 mm (at the tool mounting surface)		
7. Max. payload	180 kg		
8. Load capacity of wrist		Max. torque	Moment of inertia*
	JT4	—	85 kg·m ²
Note * Value in this table shows allowable moment of inertia of JT4 when max. allowed torque is applied to the axis. If more detailed data is required for your application, please contact Kawasaki.			
9. Driving motor	Brushless AC Servomotor		
10. Position detector	Absolute encoder		
11. Working range	See attached drawing		
12. Mass	1600 kg (without options)		
13. Color	Munsell 10GY9/1 equivalent		
14. Installation	Floor mounting		
15. Environment cond.	(Temperature) 0 ~ 45 °C, (Humidity) 35 ~ 85 %, no dew, nor frost allowed		
16. Built-in utilities	Air tube to operate the hand (φ 12 × 2 line)		
	Wirings for valves to operate the hand (DC24 V × 8 circuits)		
	Sensor harness to operate the hand (12 circuits)		
17. Options	Mechanical Stopper for JT1		
	Valve harness (8 point)		
	Sensor harness(12 point)		
	Color (Munsell)		
	Air cleaning equipment		
18. Others	Consult Kawasaki about maintenance parts and spare parts.		

[2] Controller		
1. Model	E03	
2. Enclosure	Enclosed structure / Indirect cooling system	
3. Dimensions	See attached drawing	
4. Number of controlled axes	Max.6 axes (standard 5 axes including dual axes, option 1 axis)	
5. Servo control and drive system	Full Digital Servo System	
6. Type of control	Teach mode	Joint, Base, Tool, Fixed Tool (option) operation mode
	Repeat mode	Joint, Linear, Circular (option) interpolation
7. Teaching method	Teaching or AS language programming	
8. Memory capacity	8 MB	
9. External operation signals	External Emergency stop, External Hold, etc.	
10. Number of IO slots	3 slots	
11. Operation panel	Teach/Repeat SW, Emergency Stop SW, Control power lamp	
12. Communication I/F	Ethernet(100BASE-TX) , USB, RS-232C each 2port (1port on panel, 1port inside controller)	
13. Mass	See attached drawing	
14. Power requirement	AC200 V - AC220 V \pm 10%, 50/60 Hz, 3 phases, Max. 12 kVA	
15. Ground	Less than 100 Ω (robot dedicated ground) Leakage current: max. 100 mA	
16. Ambient temperature	0 - 45°C	
17. Relative humidity	35 - 85 % (non-condensation)	
18. Color	Munsell: 10GY9/1 equivalent	
19. Teach Pendant	TFT color display (5.7 inch LCD) with touch panel Emergency Stop SW, Teach Lock SW and Enable SW	
20. Safety Circuit	Category: 4, Performance Level: e (EN ISO13849-1) ★	
21. Standard Options		
General purpose IO board	IN:32 OUT:32 NPN(sink) type or PNP(source) type	
Fast check mode	Fast check mode Switch	
TP sheet language	English or Japanese or Chinese	
I/O connector	D-SUB 37pin(male,female) with cover	
Power/Signal cable	5m, 10m, 15m	
Teach Pendant cable	5m, 10m, 15m	
Transformer unit	AC400V / AC460V by tap selection	
22. Other Options		
Additional IO board	IN:64/96 OUT:64/96 NPN(sink) type or PNP(source) type	
Motor brake release	Manual brake release switch BOX	
PC cable (RS-232C)	1.5 m, 3 m	
External axes control	Additional amplifier for external axis	
Extended safety functions	Cubic-S(Motion area monitoring, Joint monitoring, Speed monitoring etc)	
Teach Pendant option	Connector for TP less	
Others	Field BUS, Software PLC, Analog input/output, Conveyor Synchronization	
23. Others	Consult Kawasaki about maintenance parts and spare parts.	

★ Category and Performance level (PL) are determined by the whole system and conditions.
The safety circuit of this controller is available in the system of category: up to 4, PL: up to e.