

Standard specifications

RS015XFE02

1st Edition : March 05, 2015

2nd Edition : May 10, 2018

KAWASAKI HEAVY INDUSTRIES, LTD.

ROBOT DIVISION

| | |
|-----------------|---------------|
| Specification : | 90101-2314DEB |
| (Arm) : | 90151-0051DEB |
| (Controller) : | 90152-0005DEA |

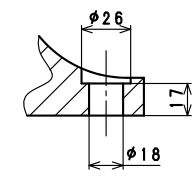
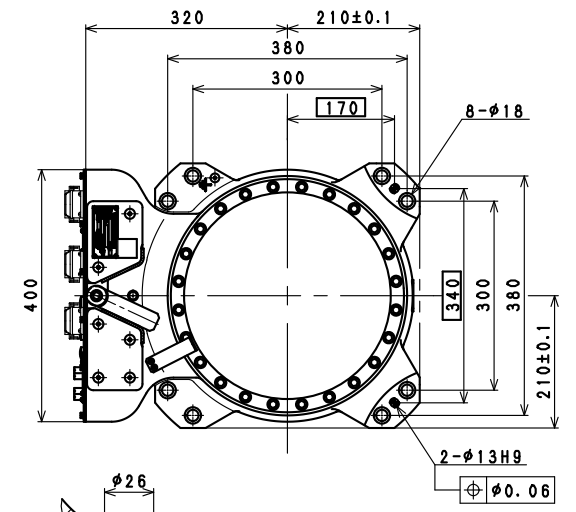
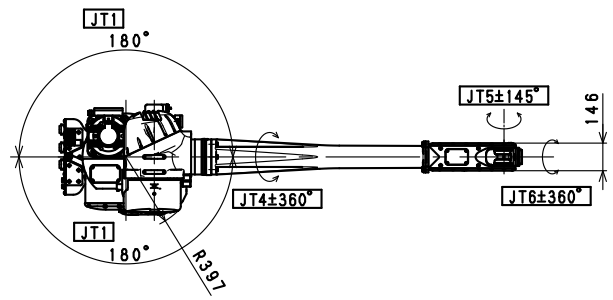
1. Specification of Robot

[1] Robot Arm

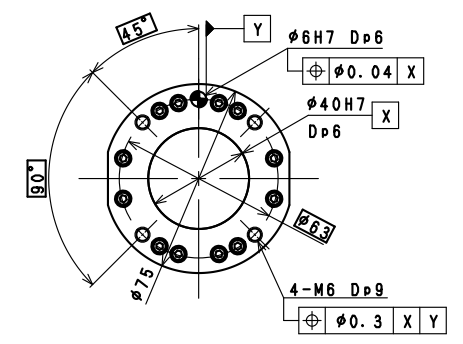
| | | | |
|--|--|---|------------------------|
| 1. Model | RS015X-B | | |
| 2. Type | Articulated robot | | |
| 3. Degree of freedom | 6 axes | | |
| 4. Axis specification | Operating axis | Max. operating range | Max. speed |
| | Arm rotation (JT1) | +180° ~ -180° | 180° /s |
| | Arm out-in (JT2) | +140° ~ -105° | 180° /s |
| | Arm up-down (JT3) | +135° ~ -155° | 200° /s |
| | Wrist swivel (JT4) | +360° ~ -360° | 410° /s |
| | Wrist bend (JT5) | +145° ~ -145° | 360° /s |
| | Wrist twist (JT6) | +360° ~ -360° | 610° /s |
| 5. Repeatability | ±0.06 mm (at the tool mounting surface) | | |
| 6. Max. payload | 15 kg | | |
| 7. Max. speed | 19900 mm/s (at the center of tool mounting surface) | | |
| 8. Load capacity of wrist | | Max. torque | Moment of inertia* |
| | JT4 | 34 N·m | 0.8 kg·m ² |
| | JT5 | 34 N·m | 0.8 kg·m ² |
| | JT6 | 22 N·m | 0.25 kg·m ² |
| Note* Each value in this table shows allowable moment of inertia of JT4/JT5/JT6 when max. allowed torque is applied to each axis. If more detailed data is required for your application, please contact Kawasaki. | | | |
| 9. Driving motor | Brushless AC Servomotor | | |
| 10. Working range | See attached drawing | | |
| 11. Mass | 545 kg (without options) | | |
| 12. Color | Munsell 10GY9/1 equivalent | | |
| 13. Installation | Floor or Ceiling mounting | | |
| 14. Environment cond. | (Temperature) 0 ~ 45 °C, (Humidity) 35 ~ 85 %, no dew, nor frost allowed | | |
| 15. Degree of protection | Wrist : IP67 Arm : IP65 | | |
| 16. Built-in utilities | Pneumatic pipings (φ 10 × 2 lines) | | |
| 17. Options | Wall mounting installation | | |
| | Degree of protection of arm : IP67 | | |
| | Sensor harness (12 circuits), wired inside robot arm | | |
| | Optional harness (7 pairs), wired inside robot arm | | |
| | Double solenoid/ Single solenoid valves (4 units max.) | | |
| | Air cleaning equipment (filter, regulator, mistseparator) | | |
| | Adjustable mechanical stoppers JT1/JT2/JT3 | | |
| | Color (Munsell) | | |
| | Traverse unit (Stroke mm) | | |
| | Arm installation stand (height 600 mm, 300 mm) | | |
| | Arm installation plate (750 mm × 750 mm) | | |
| | 18. Others | Consult Kawasaki about maintenance parts and spare parts. | |

| [2] Controller | | |
|-----------------------------------|---|---|
| 1. Model | E02 | |
| 2. Enclosure | Enclosed structure / Indirect cooling system | |
| 3. Dimensions | See attached drawing | |
| 4. Number of controlled axes | Max.9 axes (standard 7 axes, option 2 axes) | |
| 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. 7.5 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 | |
| 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 | AC380V-415V / AC440V-480V 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 and harnesses for external axes | |
| Extended safety functions | Cubic-S(Motion area monitoring, Joint monitoring, Speed monitoring etc.) | |
| Teach Pendant option | Connector for TP less | |
| Fast check mode | Fast check mode Switch | |
| Others | Field BUS, Software PLC, Analog input/output, Conveyor Synchronization | |
| 23. Others | Consult Kawasaki about maintenance parts and spare parts. | |

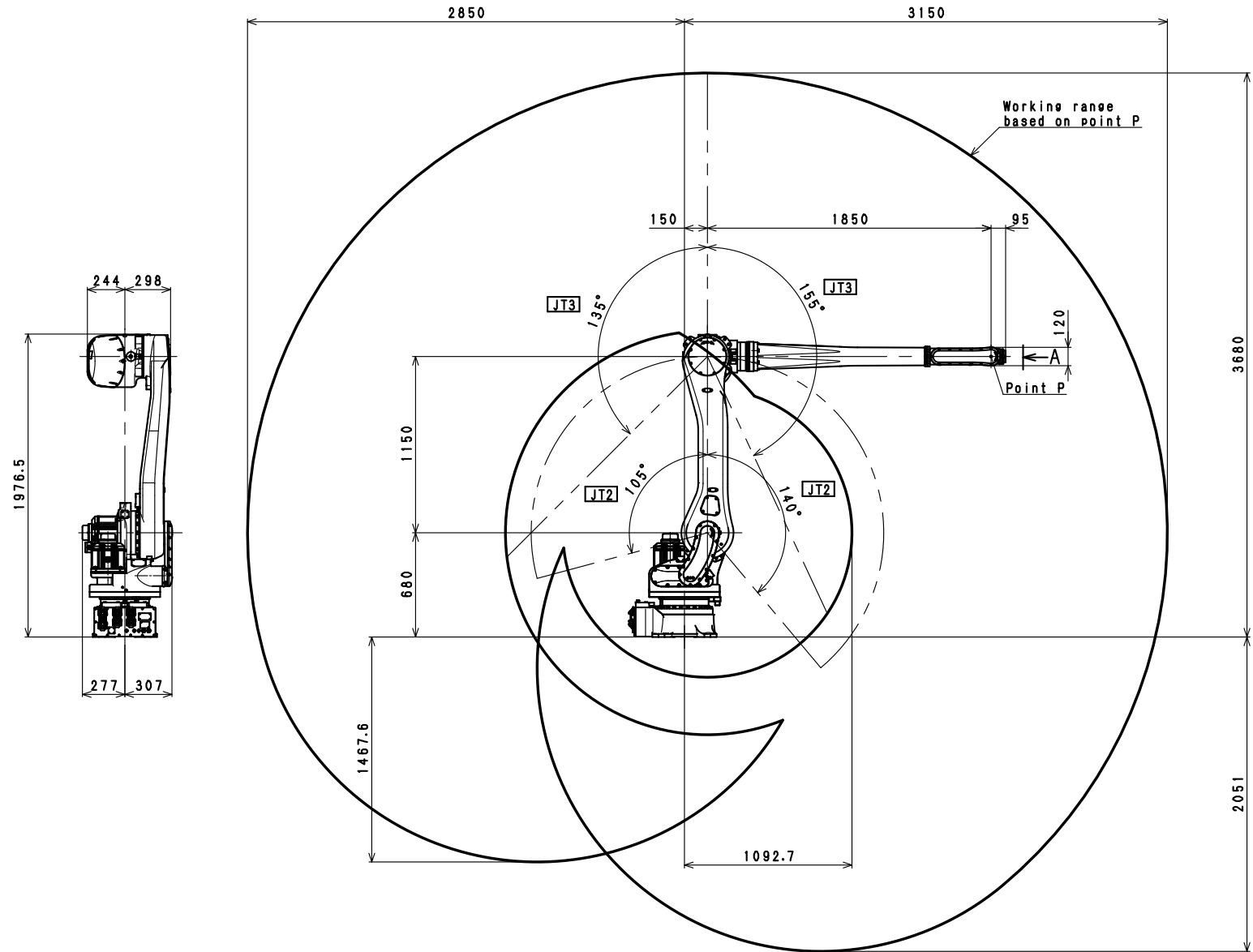
★ Category and Performance level (PL) are determined by the whole system and conditions.
The safety circuit of this controller is available in the system of category: up to 4, PL: up to e.



Installation Dimensions



VIEW A

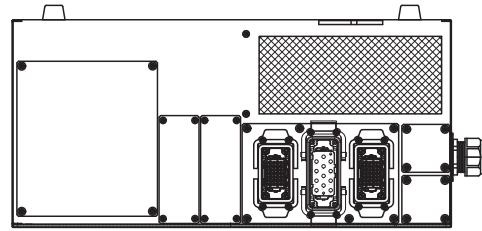


Working range based on point P

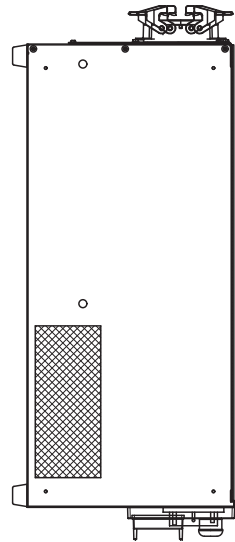
RS015X
WORKING RANGE

E 0 2 C O N T R O L L E R

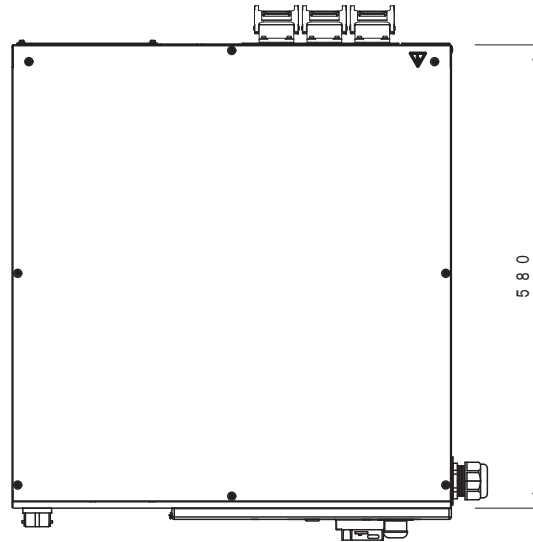
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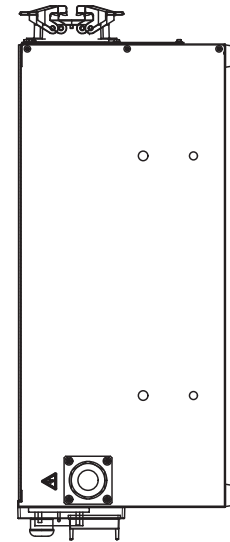
R E A R V I E W



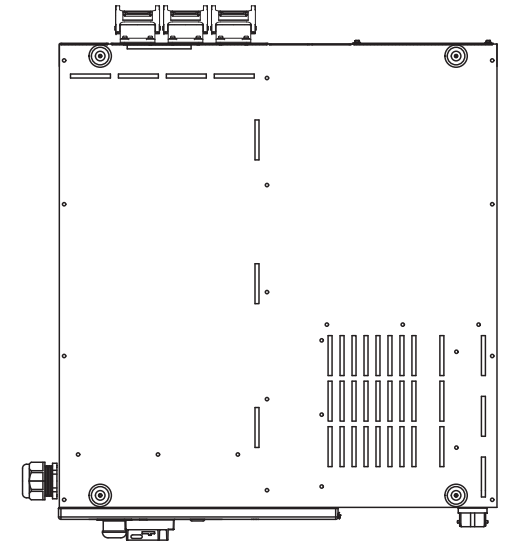
S I D E V I E W



T O P V I E W

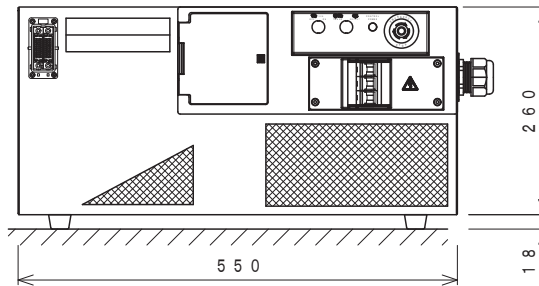
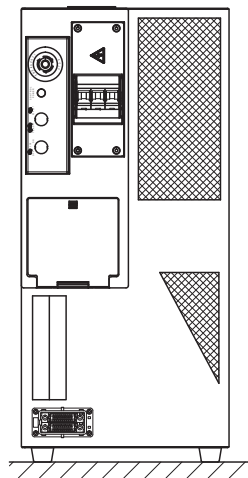


S I D E V I E W



B O T T O M V I E W

Vertical Mount



F R O N T V I E W

