

Spot welding robot with built-in cables

# SRA100HS/SRA100HB



## Cable built into the hollow arm

Welding cables and hoses packed tightly inside arms with hollow construction

- Avoids interference with surrounding equipment through the displacement of cables
- Improved reliability and safety of cable performance through wrist operations
- The embedded welding cables in the arm make the off-line programming easier

## Compact body

- Minimized robot height so it can be used in multilevel arrangements

# SRA100HS/SRA100HB

## Robot specifications

| Item                                    | Specifications   |   |
|---|--|---|
| Robot model                             | SRA100HS-01  | SRA100HB-01   |
| Structure                               | Articulated  |   |
| Number of axes                          | 6  |   |
| Drive system                            | AC servo system  |   |
| Max. operating envelope                 | J1   | $\pm 3.14\text{rad}$ ( $\pm 180^\circ$ )  |
|   | J2   | $-2.09 \sim +1.05\text{rad}$ ( $-120 \sim +60^\circ$ ) / $-2.09 \sim +1.05\text{rad}$ ( $-120 \sim +60^\circ$ ) |
|   | J3   | $-2.18 \sim +1.57\text{rad}$ ( $-125 \sim +90^\circ$ ) / $-2.64 \sim +1.57\text{rad}$ ( $-151 \sim +90^\circ$ ) |
|   | J4   | $\pm 3.66\text{rad}$ ( $\pm 210^\circ$ )  |
|   | J5   | $\pm 2.18\text{rad}$ ( $\pm 125^\circ$ )  |
|   | J6   | $\pm 3.66\text{rad}$ ( $\pm 210^\circ$ )  |
| Max. velocity                           | J1   | $2.37\text{rad/s}$ ( $136^\circ/\text{s}$ )   |
|   | J2   | $2.00\text{rad/s}$ ( $115^\circ/\text{s}$ )   |
|   | J3   | $2.79\text{rad/s}$ ( $160^\circ/\text{s}$ )   |
|   | J4   | $3.66\text{rad/s}$ ( $210^\circ/\text{s}$ ) / $3.93\text{rad/s}$ ( $225^\circ/\text{s}$ )                       |
|   | J5   | $3.05\text{rad/s}$ ( $175^\circ/\text{s}$ )   |
|   | J6   | $5.41\text{rad/s}$ ( $310^\circ/\text{s}$ ) / $5.50\text{rad/s}$ ( $315^\circ/\text{s}$ )                       |
| Payload                                 | Wrist  | 100kg   |
|   | Forearm*1  | 20kg  |
| Allowable static load torque for wrist  | J4   | 830N·m / 650N·m   |
|   | J5   | 830N·m / 650N·m   |
|   | J6   | 441N·m / 315N·m   |
| Allowable moment of inertia for wrist*2 | J4   | $85\text{kg}\cdot\text{m}^2$  |
|   | J5   | $85\text{kg}\cdot\text{m}^2$  |
|   | J6   | $45\text{kg}\cdot\text{m}^2$  |
| Position repeatability*3                | $\pm 0.06\text{mm}$  |   |
| Installation                            | Floor  |   |
| Ambient conditions                      | Ambient temperature: $0 \sim 45^\circ\text{C}$ *4<br>Ambient humidity: $20 \sim 85\% \text{RH}$ (without condensation)<br>Vibration: Not more than $0.5\text{G}$ ( $4.9 \text{ m/s}^2$ ) |   |
| Noise level*5                           | 79.6dB   |   |
| Robot mass                              | 690kg  | 750kg   |

1 [rad] =  $180/\pi$  [°], 1 [N·m] =  $1/9.8$  [kgf·m]

\*1: This value changes by placement and load conditions of a wrist.

\*2: The Allowable moment of inertia of a wrist changes with load conditions of a wrist.

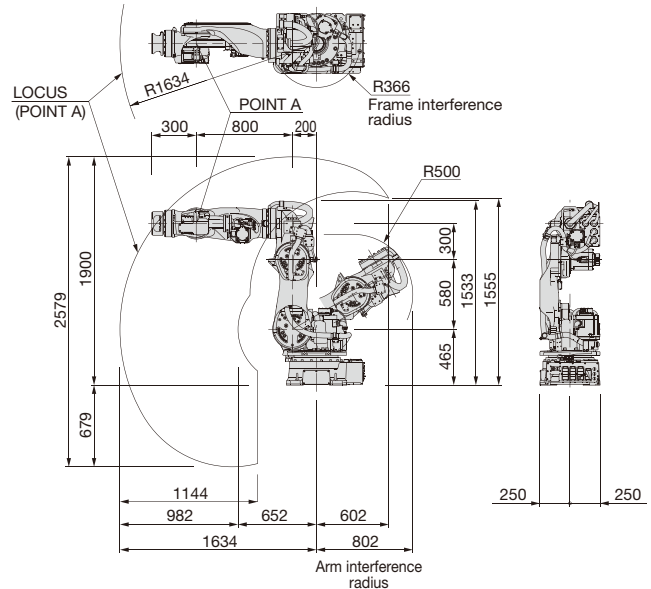
\*3: This value conforms to "JIS B 8432".

\*4: Permitted height is not higher than 1,000m above sea level. If used in higher place, permitted temperature is affected by height.

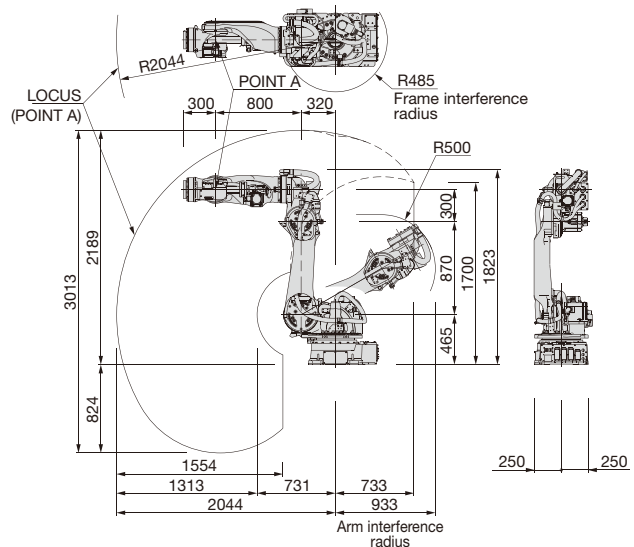
\*5: A-weighted equivalent sound level measured according to JIS Z 8737-1 (ISO 11201). (while operating at maximum speed with rated load)

## Exterior dimensions and operating envelope

SRA100HS-01



SRA100HB-01



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CATALOG NO. R7206E-2

2024.04. \* - ABE-ABE