

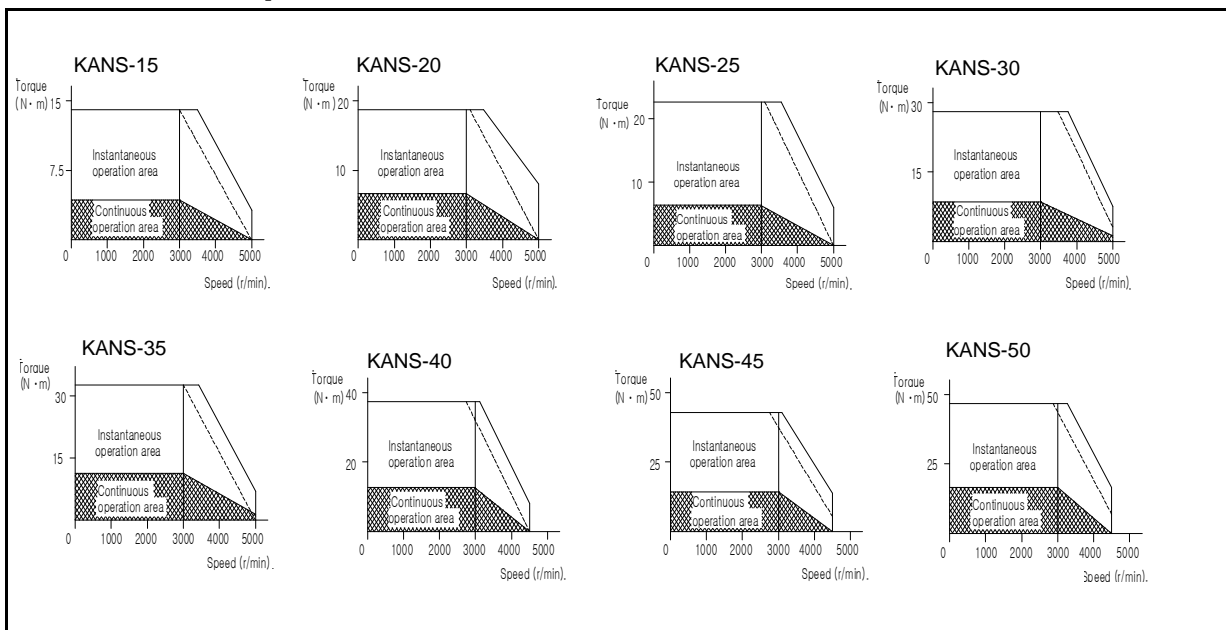
# KANS Series - Specifications and Characteristics

## Servo motor specifications

| Servo motor series                                   |                     | KANS  |       |       |       |       |      |      |      |
|--|---------------------|---|-------|-------|-------|-------|------|------|------|
| Flange size (mm)                                     |                     | 100   |       |       | 120   |       | 130  |      |      |
| Model  |                     | 15  | 20    | 25    | 30    | 35    | 40   | 45   | 50   |
| Specifications                                       |                     |   |       |       |       |       |      |      |      |
| Supply voltage (V <sub>Ac</sub> )                    |                     | 200/220V  |       |       |       |       |      |      |      |
| Continuous running duty                              | Rated output (kW)   | 1.5   | 2.0   | 2.5   | 3.0   | 3.5   | 4.0  | 4.5  | 5.0  |
|  | Rated torque (N·m)  | 4.80  | 6.40  | 7.90  | 9.54  | 11.00 | 12.7 | 14.3 | 15.9 |
| Maximum torque (N·m)                                 |                     | 14.3  | 19.1  | 23.8  | 28.6  | 33.2  | 37.9 | 42.9 | 47.6 |
| Rated rotation speed (r/min)                         |                     | 3000  |       |       |       |       |      |      |      |
| Maximum rotation speed (r/min)                       |                     | 5000  |       |       |       | 4500  |      |      |      |
| Rated power rate (kW/s)                              |                     | 88.0  | 117.0 | 146.0 | 134.0 | 155.0 | 134  | 154  | 161  |
| Rated current (Arms)                                 |                     | 9.4   | 13.0  | 15.9  | 18.6  | 21.6  | 24.7 | 28.0 | 28.5 |
| Momentary maximum current (Arms)                     |                     | 28.3  | 39.6  | 48.1  | 56.6  | 64.8  | 74.2 | 83.4 | 84.9 |
| Rotor inertia (kg·m <sup>2</sup> ×10 <sup>-4</sup> ) | Standard            | 2.59  | 3.46  | 4.31  | 6.77  | 7.9   | 12.4 | 13.6 | 16.0 |
|  | With brake          | 2.84  | 3.81  | 4.74  | 7.45  | 8.69  | 13.7 | 14.9 | 17.3 |
| Encoder  |                     | 2500 P/R Incremental / 17bit Absolute   |       |       |       |       |      |      |      |
| Recommended load/motor inertia ratio                 |                     | Less than 15-times the servo motor's inertia  |       |       |       |       |      |      |      |
| Structure  |                     | Totally enclosed non ventilated (protection degree:IP65)                                |       |       |       |       |      |      |      |
| Environment  | Ambient temperature | 0 to 40°C (32 to 104°F) (non freezing), storage: -15 to 70°C(5 to 158°F) (non freezing) |       |       |       |       |      |      |      |
|  | Ambient humidity    | 85% RH max. (non condensing), storage: 90% RH max.(non condensing)                      |       |       |       |       |      |      |      |
|  | Atmosphere          | Indoors (no direct sunlight); no corrosive gas, inflammable gas, oil mist, or dust      |       |       |       |       |      |      |      |
|  | Elevation/Vibration | 1000meters or less above sea level, 49 m/s <sup>2</sup> below                           |       |       |       |       |      |      |      |
| Weight (kg)  | Standard            | 5.1   | 6.5   | 7.5   | 9.3   | 10.9  | 12.9 | 15.1 | 17.3 |
|  | With brake          | 6.5   | 7.9   | 8.9   | 11.0  | 12.6  | 14.8 | 17.0 | 19.2 |

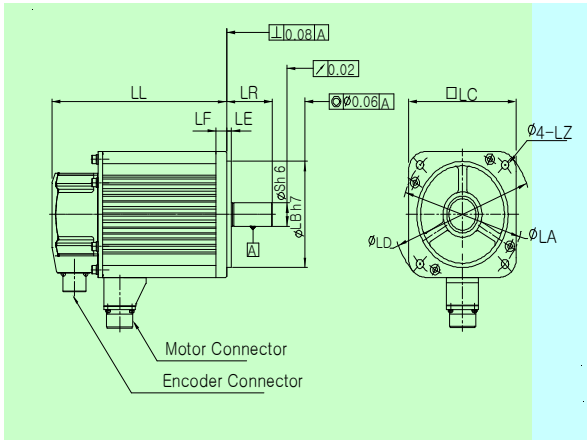
1. If used in location such as actual site of machinery where oil or water may influence the product, special specifications apply, contact KOMOTEK.
2. This specification is guaranteed after combining and adjusting with the driver.
3. All ratings typical and at 20°C unless otherwise noted.
4. Contact KOMOTEK if the load/motor of inertia moment ratio exceeds the figure in the table.

## Servo motor torque characteristics



1. Dotted lines show torque characteristics for 10% derated voltage operation.

## Motor dimensions



Motor connector (MS 3102A~)

| Series           | KANS    |         |
|------------------|---------|---------|
| Rated power [kW] | 1.0~2.5 | 3.0~5.0 |
| Standard         | 20-4P   | 22-22P  |
| With brake       | 20-18P  | 24-11P  |

Specifications of motor/brake connector

| Brake     | Standard                     |                    |                    | With brake         |                    |    |
|-----------|------------------------------|--------------------|--------------------|--------------------|--------------------|----|
| Part no.  | MS 3102A<br>20-4P,<br>22-22P | MS 3102A<br>20-18P | MS 3102A<br>24-11P | MS 3102A<br>20-18P | MS 3102A<br>24-11P |    |
| Pin spec. | Pin no.                      |                    |                    | Signal             |                    |    |
|           |                              | G                  | A                  |                    | G                  | A  |
|           |                              | H                  | B                  |                    | H                  | B  |
|           |                              | A                  | C                  |                    | A                  | C  |
|           | A                            | F                  | D                  | U                  | F                  | D  |
|           | B                            | I                  | E                  | V                  | I                  | E  |
|           | C                            | B                  | F                  | W                  | B                  | F  |
|           | D                            | E                  | G                  | FG                 | E                  | G  |
|           | D                            | H                  | FG                 | D                  | H                  | FG |
|           | C                            | I                  |                    | C                  | I                  |    |
| Outlines  | MS 3102A<br>20-4P, 22-22P    | MS 3102A<br>20-18P | MS 3102A<br>24-11P | MS 3102A<br>20-18P | MS 3102A<br>24-11P |    |
|           |                              |                    |                    |                    |                    |    |
|           |                              |                    |                    |                    |                    |    |
|           |                              |                    |                    |                    |                    |    |
|           |                              |                    |                    |                    |                    |    |

| Series           | KANS       |       |       |         |         |       |     |     |     |
|------------------|------------|-------|-------|---------|---------|-------|-----|-----|-----|
| Rated power [kW] | 1.5        | 2.0   | 2.5   | 3.0     | 3.5     | 4.0   | 4.5 | 5.0 |     |
| LL               | Standard   | 172.5 | 195.5 | 220.5   | 209.5   | 229.5 | 248 | 268 | 288 |
|                  | With brake | 192.5 | 215.5 | 240.5   | 234.5   | 254.5 | 273 | 293 | 313 |
| LR               | 55         | 55    | 55    | 55      | 55      | 65    | 65  | 65  |     |
| S                | 19         | 19    | 19    | 22      | 22      | 24    | 24  | 24  |     |
| LA               | 115        | 115   | 115   | 130/145 | 130/145 | 145   | 145 | 145 |     |
| LB               | 95         | 95    | 95    | 110     | 110     | 110   | 110 | 110 |     |
| LC               | 100        | 100   | 100   | 120     | 120     | 130   | 130 | 130 |     |
| LD               | 135        | 135   | 135   | 162     | 162     | 165   | 165 | 165 |     |
| LE               | 3          | 3     | 3     | 3       | 3       | 6     | 6   | 6   |     |
| LF               | 10         | 10    | 10    | 12      | 12      | 12    | 12  | 12  |     |
| LZ               | 9          | 9     | 9     | 9       | 9       | 9     | 9   | 9   |     |

## Special specifications

### Electromagnetic brake specifications

| Series                     | KANS |      |      |      |      |      |      |      |      |
|----------------------------|------|------|------|------|------|------|------|------|------|
| Rated power [kW]           | 1.5  | 2.0  | 2.5  | 3.0  | 3.5  | 4.0  | 4.5  | 5.0  |      |
| Static friction torque     | Nm   | 12   | 12   | 12   | 12   | 12   | 16.1 | 16.1 | 16.1 |
| Response time              | ms   | 100  | 100  | 100  | 100  | 100  | 110  | 110  | 110  |
| Release time               | ms   | 20   | 20   | 20   | 20   | 20   | 50   | 50   | 50   |
| Rated voltage              | VDC  | 24   | 24   | 24   | 24   | 24   | 24   | 24   | 24   |
| Rated current (A) at 20 °C |      | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.9  | 0.9  | 0.9  |

## Special shaft end specifications

### key

| Series          | KANS    |         |         |
|-----------------|---------|---------|---------|
| Rated power (W) | 1.5~2.5 | 3.0~3.5 | 4.0~5.0 |
| LW              | 45      | 45      | 55      |
| LK              | 42      | 41      | 51      |
| KW              | 6h9     | 8h9     | 8h9     |
| KH              | 6       | 7       | 7       |
| RH              | 15.5    | 18      | 20      |

Key

## Connector pin arrangement

### Encoder connectors

| Model      |             | Part no.           | Pin specifications |    |                 |   |                |   |                |       |       |       | Outlines |
|------------|-------------|--------------------|--------------------|----|-----------------|---|----------------|---|----------------|-------|-------|-------|----------|
| KANS-40~50 | Inc.        | MS 3102A<br>20-29P | Pin                | A  | B               | C | D              | E | F              | G     | H     | J     |          |
|            |             |                    | Signal             | A  | $\overline{A}$  | B | $\overline{B}$ | Z | $\overline{Z}$ | 0V    | +5V   | FG    |          |
|            |             |                    | Pin                | K  | L               | M | N              | P | R              | S     | T     |       |          |
|            |             |                    | Signal             | U  | $\overline{U}$  | V | $\overline{V}$ | W | $\overline{W}$ |       |       |       |          |
|            | Abs.(17bit) | MS 3102A<br>20-29P | Pin                | A  | B               | C | D              | E | F              | G     | H     | J     |          |
|            |             |                    | Signal             |    |                 |   |                |   |                | 0V    | +5V   | FG    |          |
|            |             |                    | Pin                | K  | L               | M | N              | P | R              | S     | T     |       |          |
|            |             |                    | Signal             | SD | $\overline{SD}$ |   |                |   |                | BAT - | BAT + |       |          |
|            | Abs.(11bit) | MS 3102A<br>20-29P | Pin                | A  | B               | C | D              | E | F              | G     | H     | J     |          |
|            |             |                    | Signal             | A  | $\overline{A}$  | B | $\overline{B}$ | Z | $\overline{Z}$ | 0V    | +5V   | FG    |          |
|            |             |                    | Pin                | K  | L               | M | N              | P | R              | S     | T     |       |          |
|            |             |                    | Signal             | RX | $\overline{RX}$ |   |                |   |                | RST   | BAT - | BAT + |          |