

R88M-K□, R88M-KH□

# Accurax G5 servo motors

**Servo family for accurate motion control.  
Power range extended up to 15 kW.**

- Standard and high inertia servo motor models
- Peak torque 300% of rated torque during 3 seconds or more depending on model
- High resolution serial encoder provided by 20 bits encoder
- IP67 protection in all models
- Ultra-light and compact size motor
- Low speed ripple and low torque ripple due to low torque cogging
- Various shaft, brake and seal options

**Ratings**

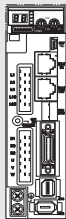
- 230 VAC from 50 W to 1.5 kW (rated torque from 0.16 to 8.59 Nm)
- 400 VAC from 400 W to 15 kW (rated torque from 1.91 Nm to 95.5 Nm)



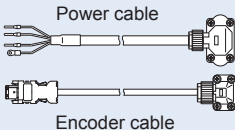
## System configuration

(Refer to servo drive chapter)

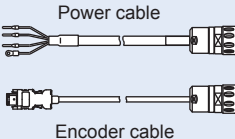
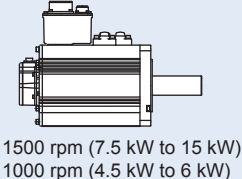
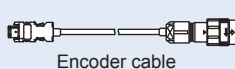
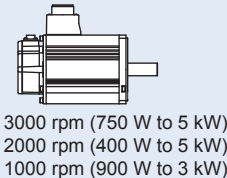
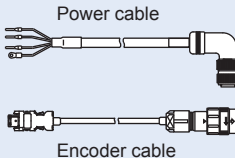
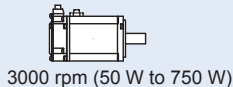
Servo drive options



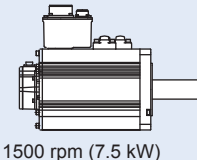
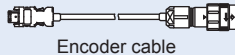
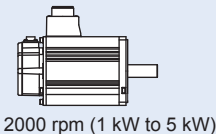
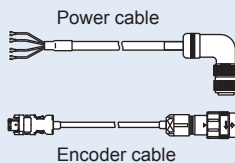
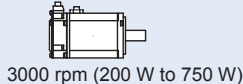
**Accurax G5 servo drives**  
EtherCAT, ML2 and  
Analogue/pulse models



**Standard servo motors**







**High inertia servo motors**





Servo motor / servo drive combination

Standard servo motors

| Accurax G5 rotary servo motor  |                        |                        |              |                 |                    | Accurax G5 servo drive models |              |                 |
|--|------------------------|------------------------|--------------|-----------------|--------------------|-------------------------------|--------------|-----------------|
|  | Voltage                | Speed                  | Rated torque | Capacity        | Model              | EtherCAT                      | Analog/pulse | MECHATROLINK-II |
|   | 230 V                  | 3000 min <sup>-1</sup> | 0.16 Nm      | 50 W            | R88M-K05030(H/T)-□ | R88D-KN01H-ECT                | R88D-KT01H   | R88D-KN01H-ML2  |
|  |                        |                        | 0.32 Nm      | 100 W           | R88M-K10030(H/T)-□ | R88D-KN01H-ECT                | R88D-KT01H   | R88D-KN01H-ML2  |
|  |                        |                        | 0.64 Nm      | 200 W           | R88M-K20030(H/T)-□ | R88D-KN02H-ECT                | R88D-KT02H   | R88D-KN02H-ML2  |
|  |                        |                        | 1.3 Nm       | 400 W           | R88M-K40030(H/T)-□ | R88D-KN04H-ECT                | R88D-KT04H   | R88D-KN04H-ML2  |
|  |                        |                        | 2.4 Nm       | 750 W           | R88M-K75030(H/T)-□ | R88D-KN08H-ECT                | R88D-KT08H   | R88D-KN08H-ML2  |
|  |                        |                        | 3.18 Nm      | 1000 W          | R88M-K1K030(H/T)-□ | R88D-KN15H-ECT                | R88D-KT15H   | R88D-KN15H-ML2  |
| <br>230 V<br>(1 kW to 1.5 kW)<br>400 V<br>(400 W to 5 kW) | 400 V                  | 3000 min <sup>-1</sup> | 4.77 Nm      | 1500 W          | R88M-K1K530(H/T)-□ | R88D-KN15H-ECT                | R88D-KT15H   | R88D-KN15H-ML2  |
|  |                        |                        | 2.39 Nm      | 750 W           | R88M-K75030(F/C)-□ | R88D-KN10F-ECT                | R88D-KT10F   | R88D-KN10F-ML2  |
|  |                        |                        | 3.18 Nm      | 1000 W          | R88M-K1K030(F/C)-□ | R88D-KN15F-ECT                | R88D-KT15F   | R88D-KN15F-ML2  |
|  |                        |                        | 4.77 Nm      | 1500 W          | R88M-K1K530(F/C)-□ | R88D-KN15F-ECT                | R88D-KT15F   | R88D-KN15F-ML2  |
|  |                        |                        | 6.37 Nm      | 2000 W          | R88M-K2K030(F/C)-□ | R88D-KN20F-ECT                | R88D-KT20F   | R88D-KN20F-ML2  |
|  |                        |                        | 9.55 Nm      | 3000 W          | R88M-K3K030(F/C)-□ | R88D-KN30F-ECT                | R88D-KT30F   | R88D-KN30F-ML2  |
|  | 400 V                  | 2000 min <sup>-1</sup> | 12.7 Nm      | 4000 W          | R88M-K4K030(F/C)-□ | R88D-KN50F-ECT                | R88D-KT50F   | R88D-KN50F-ML2  |
|  |                        |                        | 15.9 Nm      | 5000 W          | R88M-K5K030(F/C)-□ | R88D-KN50F-ECT                | R88D-KT50F   | R88D-KN50F-ML2  |
|  |                        |                        | 4.77 Nm      | 1000 W          | R88M-K1K020(H/T)-□ | R88D-KN10H-ECT                | R88D-KT10H   | R88D-KN10H-ML2  |
|  |                        |                        | 7.16 Nm      | 1500 W          | R88M-K1K520(H/T)-□ | R88D-KN15H-ECT                | R88D-KT15H   | R88D-KN15H-ML2  |
|  |                        |                        | 1.91 Nm      | 400 W           | R88M-K40020(F/C)-□ | R88D-KN06F-ECT                | R88D-KT06F   | R88D-KN06F-ML2  |
|  |                        |                        | 2.86 Nm      | 600 W           | R88M-K60020(F/C)-□ | R88D-KN06F-ECT                | R88D-KT06F   | R88D-KN06F-ML2  |
| <br>7.5 KW to 15 KW                                       | 230 V                  | 2000 min <sup>-1</sup> | 4.77 Nm      | 1000 W          | R88M-K1K020(F/C)-□ | R88D-KN10F-ECT                | R88D-KT10F   | R88D-KN10F-ML2  |
|  |                        |                        | 7.16 Nm      | 1500 W          | R88M-K1K520(F/C)-□ | R88D-KN15F-ECT                | R88D-KT15F   | R88D-KN15F-ML2  |
|  |                        |                        | 9.55 Nm      | 2000 W          | R88M-K2K020(F/C)-□ | R88D-KN20F-ECT                | R88D-KT20F   | R88D-KN20F-ML2  |
|  | 400 V                  | 2000 min <sup>-1</sup> | 14.3 Nm      | 3000 W          | R88M-K3K020(F/C)-□ | R88D-KN30F-ECT                | R88D-KT30F   | R88D-KN30F-ML2  |
|  |                        |                        | 19.1 Nm      | 4000 W          | R88M-K4K020(F/C)-□ | R88D-KN50F-ECT                | R88D-KT50F   | R88D-KN50F-ML2  |
|  |                        |                        | 23.9 Nm      | 5000 W          | R88M-K5K020(F/C)-□ | R88D-KN50F-ECT                | R88D-KT50F   | R88D-KN50F-ML2  |
| 400 V  | 1500 min <sup>-1</sup> | 47.8 Nm                | 7500 W       | R88M-K7K515C-□  | R88D-KN75F-ECT     | R88D-KT75F                    | -            |                 |
|  |                        | 70.0 Nm                | 11000 W      | R88M-K11K015C-□ | R88D-KN150F-ECT    | R88D-KT150F                   | -            |                 |
|  |                        | 95.5 Nm                | 15000 W      | R88M-K15K015C-□ | R88D-KN150F-ECT    | R88D-KT150F                   | -            |                 |
|   | 230 V                  | 1000 min <sup>-1</sup> | 8.59 Nm      | 900 W           | R88M-K90010(H/T)-□ | R88D-KN15H-ECT                | R88D-KT15H   | R88D-KN15H-ML2  |
|  |                        |                        | 8.59 Nm      | 900 W           | R88M-K90010(F/C)-□ | R88D-KN15F-ECT                | R88D-KT15F   | R88D-KN15F-ML2  |
|  | 400 V                  |                        | 19.1 Nm      | 2000 W          | R88M-K2K010(F/C)-□ | R88D-KN30F-ECT                | R88D-KT30F   | R88D-KN30F-ML2  |
|  |                        |                        | 28.7 Nm      | 3000 W          | R88M-K3K010(F/C)-□ | R88D-KN50F-ECT                | R88D-KT50F   | R88D-KN50F-ML2  |
|  |                        |                        | 43.0 Nm      | 4500 W          | R88M-K4K510C-□     | R88D-KN50F-ECT                | R88D-KT50F   | R88D-KN50F-ML2  |
|  |                        |                        | 57.3 Nm      | 6000 W          | R88M-K6K010C-□     | R88D-KN75F-ECT                | R88D-KT75F   | -               |

High inertia servo motors

| Accurax G5 rotary servo motor   |         |                        |              |          |                     | Accurax G5 servo drive models |              |                 |
|---|---------|------------------------|--------------|----------|---------------------|-------------------------------|--------------|-----------------|
|   | Voltage | Speed                  | Rated torque | Capacity | Model               | EtherCAT                      | Analog/pulse | MECHATROLINK-II |
|                  | 230 V   | 3000 min <sup>-1</sup> | 0.64 Nm      | 200 W    | R88M-KH20030(H/T)-□ | R88D-KN02H-ECT                | R88D-KT02H   | R88D-KN02H-ML2  |
|   |         |                        | 1.3 Nm       | 400 W    | R88M-KH40030(H/T)-□ | R88D-KN04H-ECT                | R88D-KT04H   | R88D-KN04H-ML2  |
|   |         |                        | 2.4 Nm       | 750 W    | R88M-KH75030(H/T)-□ | R88D-KN08H-ECT                | R88D-KT08H   | R88D-KN08H-ML2  |
| <br>1 kW to 5 kW | 400 V   | 2000 min <sup>-1</sup> | 4.77 Nm      | 1000 W   | R88M-KH1K020(F/C)-□ | R88D-KN10F-ECT                | R88D-KT10F   | R88D-KN10F-ML2  |
|   |         |                        | 7.16 Nm      | 1500 W   | R88M-KH1K520(F/C)-□ | R88D-KN15F-ECT                | R88D-KT15F   | R88D-KN15F-ML2  |
|   |         |                        | 9.55 Nm      | 2000 W   | R88M-KH2K020(F/C)-□ | R88D-KN20F-ECT                | R88D-KT20F   | R88D-KN20F-ML2  |
|   |         |                        | 14.3 Nm      | 3000 W   | R88M-KH3K020(F/C)-□ | R88D-KN30F-ECT                | R88D-KT30F   | R88D-KN30F-ML2  |
|   |         |                        | 19.1 Nm      | 4000 W   | R88M-KH4K020(F/C)-□ | R88D-KN50F-ECT                | R88D-KT50F   | R88D-KN50F-ML2  |
|   |         |                        | 23.9 Nm      | 5000 W   | R88M-KH5K020(F/C)-□ | R88D-KN50F-ECT                | R88D-KT50F   | R88D-KN50F-ML2  |
|   | 400 V   | 1500 min <sup>-1</sup> | 47.8 Nm      | 7500 W   | R88M-KH7K515C-□     | R88D-KN75F-ECT                | R88D-KT75F   | -               |

**Note:** 1. For servo motor and cables part numbers refer to ordering information at the end of this chapter  
 2. Refer to the servo drive chapter for drive options selection and detailed specifications

**Servo motor type designation**

**Standard servo motors**

**R88M-K05030H-BOS2**

Accurax G5 servomotor

Capacity

|      |        |
|------|--------|
| 050  | 50 W   |
| 100  | 100 W  |
| 200  | 200 W  |
| 400  | 400 W  |
| 600  | 600 W  |
| 750  | 750 W  |
| 900  | 900 W  |
| 1K0  | 1 kW   |
| 1K5  | 1.5 kW |
| 2K0  | 2 kW   |
| 3K0  | 3 kW   |
| 4K0  | 4 kW   |
| 4K5  | 4.5 kW |
| 5K0  | 5 kW   |
| 6K0  | 6 kW   |
| 7K5  | 7.5 kW |
| 11K0 | 11 kW  |
| 15K0 | 15 kW  |

Rated Speed (r/min)

|    |      |
|----|------|
| 10 | 1000 |
| 15 | 1500 |
| 20 | 2000 |
| 30 | 3000 |

Shaft end specifications

|       |                                  |
|-------|----------------------------------|
| Blank | Straight shaft, no key           |
| S2    | Straight, key, tapped (standard) |

Oil seal specifications

|       |             |
|-------|-------------|
| Blank | No oil seal |
| O     | Oil seal    |

Brake specifications

|       |          |
|-------|----------|
| Blank | No brake |
| B     | Brake    |

Voltage and encoder specifications

- H: 230 V and 20-bit incremental encoder
- T: 230 V and 17-bit absolute encoder
- F: 400 V and 20-bit incremental encoder
- C: 400 V and 17-bit absolute encoder

**High inertia servo motors**

**R88M-KH1K020F-BS1-D**

Accurax G5 high inertia servomotor

Capacity

|     |        |
|-----|--------|
| 200 | 200 W  |
| 400 | 400 W  |
| 750 | 750 W  |
| 1K0 | 1 kW   |
| 1K5 | 1.5 kW |
| 2K0 | 2 kW   |
| 3K0 | 3 kW   |
| 4K0 | 4 kW   |
| 5K0 | 5 kW   |
| 7K5 | 7.5 kW |

Rated Speed (r/min)

|    |      |
|----|------|
| 15 | 1500 |
| 20 | 2000 |
| 30 | 3000 |

Circular connector (only for 230 V models)

Shaft end specifications

|       |   |
|-------|---|
| Blank | Straight shaft, no key                                |
| S1    | 400 V motor models - Shaft end with key (standard)    |
| S2    | 230 V motor models - Straight, key, tapped (standard) |

Brake specifications

|       |          |
|-------|----------|
| Blank | No brake |
| B     | Brake    |

Voltage and encoder specifications

- H: 230 V and 20-bit incremental encoder
- T: 230 V and 17-bit absolute encoder
- F: 400 V and 20-bit incremental encoder
- C: 400 V and 17-bit absolute encoder

Servo motor specifications

Standard servo motors 3000 r/min, 230 V

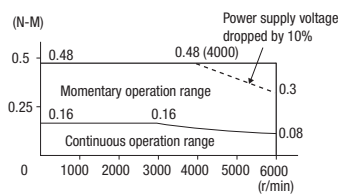
Ratings and specifications

| Voltage                               |   | 230 V   |          |          |          |                 |                             |          |  |
|---------------------------------------|---|---|----------|----------|----------|-----------------|-----------------------------|----------|--|
| Servo motor model R88M-K□             | 20-bit incremental encoder                          | 05030H-□  | 10030H-□ | 20030H-□ | 40030H-□ | 75030H-□        | 1K030H-□                    | 1K530H-□ |  |
|                                       | 17-bit absolute encoder                             | 05030T-□  | 10030T-□ | 20030T-□ | 40030T-□ | 75030T-□        | 1K030T-□                    | 1K530T-□ |  |
| Rated output                          | W   | 50  | 100      | 200      | 400      | 750             | 1000                        | 1500     |  |
| Rated torque                          | N·m   | 0.16  | 0.32     | 0.64     | 1.3      | 2.4             | 3.18                        | 4.77     |  |
| Instantaneous peak torque             | N·m   | 0.48  | 0.95     | 1.91     | 3.8      | 7.1             | 9.55                        | 14.3     |  |
| Rated current                         | A (rms)   | 1.1   | 1.1      | 1.5      | 2.4      | 4.1             | 6.6                         | 8.2      |  |
| Instantaneous max. current            | A (rms)   | 4.7   | 4.7      | 6.5      | 10.2     | 17.4            | 28                          | 35       |  |
| Rated speed                           | min <sup>-1</sup>                                   | 3000  |          |          |          |                 |                             |          |  |
| Max. speed                            | min <sup>-1</sup>                                   | 6000  |          |          |          |                 | 5000                        |          |  |
| Torque constant                       | N·m/A   | 0.11±10%  | 0.21±10% | 0.31±10% | 0.39±10% | 0.42±10%        | 0.37                        | 0.45     |  |
| Rotor moment of inertia (JM)          | kg·m <sup>2</sup> ×10 <sup>-4</sup> (without brake) | 0.025   | 0.051    | 0.14     | 0.26     | 0.87            | 2.03                        | 2.84     |  |
|                                       | kg·m <sup>2</sup> ×10 <sup>-4</sup> (with brake)    | 0.027   | 0.054    | 0.16     | 0.28     | 0.97            | 2.35                        | 3.17     |  |
| Allowable load moment of inertia (JL) | Multiple of (JM)                                    | 30 <sup>1</sup>   |          |          |          | 20 <sup>1</sup> | 15 <sup>1</sup>             |          |  |
| Rated power rate                      | kW/s (without brake)                                | 10.1  | 19.9     | 29.0     | 62.4     | 65.6            | 49.8                        | 80.1     |  |
|                                       | kW/s (with brake)                                   | 9.4   | 18.8     | 25.4     | 58       | 58.8            | 43                          | 71.8     |  |
| Allowable radial load                 | N   | 68  |          |          | 245      |                 | 490                         |          |  |
| Allowable thrust load                 | N   | 58  |          |          | 98       |                 | 196                         |          |  |
| Approx. mass                          | kg (without brake)                                  | 0.32  | 0.47     | 0.82     | 1.2      | 2.3             | 3.5                         | 4.4      |  |
|                                       | kg (with brake)                                     | 0.53  | 0.68     | 1.3      | 1.7      | 3.1             | 4.5                         | 5.4      |  |
| Brake specifications                  | Rated voltage                                       | 24 VDC ±10%   |          |          |          |                 |                             |          |  |
|                                       | Holding brake moment of inertia J                   | kg·m <sup>2</sup> ×10 <sup>-4</sup> 0.002                         |          |          | 0.0018   |                 | 0.33                        |          |  |
|                                       | Power consumption (at 20°C)                         | W 7   |          |          | 9        |                 | 17                          | 19       |  |
|                                       | Current consumption (at 20°C)                       | A 0.3   |          |          | 0.36     |                 | 0.70±10%                    | 0.81±10% |  |
|                                       | Static friction torque                              | N·m (minimum) 0.29  |          |          | 1.27     |                 | 2.5                         | 7.8      |  |
|                                       | Rise time for holding torque                        | ms (max.) 35  |          |          |          |                 | 50                          |          |  |
| Release time                          | ms (max) 20   |   |          |          |          | 15              |                             |          |  |
| Basic specifications                  | Time Rating   | Continuous  |          |          |          |                 |                             |          |  |
|                                       | Insulation class                                    | Type B  |          |          |          |                 | Type F                      |          |  |
|                                       | Ambient operating/ storage temperature              | 0 to +40°C/-20 to 65°C  |          |          |          |                 |                             |          |  |
|                                       | Ambient operating/ storage humidity                 | 20% to 80% (non-condensing)                                       |          |          |          |                 | 20% to 85% (non-condensing) |          |  |
|                                       | Vibration class                                     | V-15  |          |          |          |                 |                             |          |  |
|                                       | Insulation resistance                               | 20 MΩ min. at 500 VDC between the power terminals and FG terminal |          |          |          |                 |                             |          |  |
|                                       | Enclosure   | Totally-enclosed, self-cooling, IP67 (excluding shaft opening)    |          |          |          |                 |                             |          |  |
| Vibration resistance                  | Vibration acceleration 49 m/s <sup>2</sup>          |   |          |          |          |                 |                             |          |  |
| Mounting                              | Flange-mounted                                      |   |          |          |          |                 |                             |          |  |

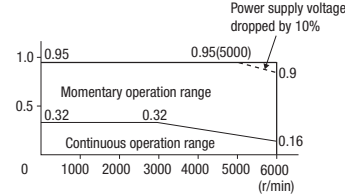
<sup>1</sup> Applicable load inertia: The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.

Torque-speed characteristics

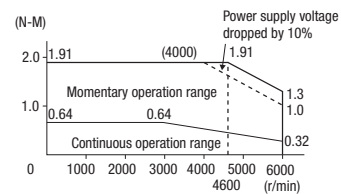
R88M-K05030H/T (50 W)



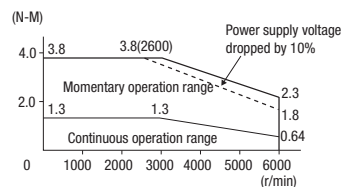
R88M-K10030H/T (100 W)



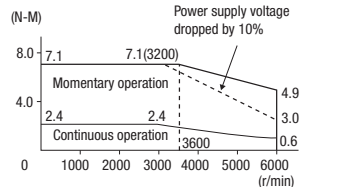
R88M-K20030H/T (200 W)



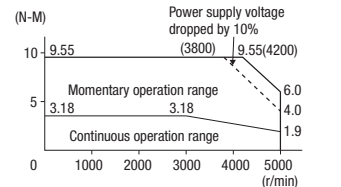
R88M-K40030H/T (400 W)



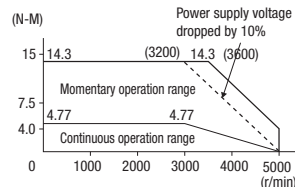
R88M-K75030H/T (750 W)



R88M-K1K030H/T (1 kW)



R88M-K1K530H/T (1.5 kW)



Standard servo motors 3000 r/min, 400 V

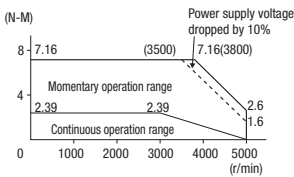
Ratings and specifications

| Voltage                               |   | 400 V   |          |          |                 |          |          |          |      |
|---------------------------------------|---|---|----------|----------|-----------------|----------|----------|----------|------|
| Servo motor model R88M-K□             | 20-bit incremental encoder                          | 75030F-□  | 1K030F-□ | 1K530F-□ | 2K030F-□        | 3K030F-□ | 4K030F-□ | 5K030F-□ |      |
|                                       | 17-bit absolute encoder                             | 75030C-□  | 1K030C-□ | 1K530C-□ | 2K030C-□        | 3K030C-□ | 4K030C-□ | 5K030C-□ |      |
| Rated output                          | W   | 750   | 1000     | 1500     | 2000            | 3000     | 4000     | 5000     |      |
| Rated torque                          | N·m   | 2.39  | 3.18     | 4.77     | 6.37            | 9.55     | 12.7     | 15.9     |      |
| Instantaneous peak torque             | N·m   | 7.16  | 9.55     | 14.3     | 19.1            | 28.6     | 38.2     | 47.7     |      |
| Rated current                         | A (rms)   | 2.4   | 3.3      | 4.2      | 5.7             | 9.2      | 9.9      | 12       |      |
| Instantaneous max. current            | A (rms)   | 10  | 14       | 18       | 24              | 39       | 42       | 51       |      |
| Rated speed                           | min <sup>-1</sup>                                   | 3000  |          |          |                 |          |          |          |      |
| Max. speed                            | min <sup>-1</sup>                                   | 5000  |          |          |                 |          | 4500     |          |      |
| Torque constant                       | N·m/A   | 0.78  | 0.75     | 0.89     | 0.87            | 0.81     | 0.98     |          |      |
| Rotor moment of inertia (JM)          | kg·m <sup>2</sup> ×10 <sup>-4</sup> (without brake) | 1.61  | 2.03     | 2.84     | 3.68            | 6.5      | 12.9     | 17.4     |      |
|                                       | kg·m <sup>2</sup> ×10 <sup>-4</sup> (with brake)    | 1.93  | 2.35     | 3.17     | 4.01            | 7.85     | 14.2     | 18.6     |      |
| Allowable load moment of inertia (JL) | Multiple of (JM)                                    | 20 <sup>1</sup>   |          |          | 15 <sup>1</sup> |          |          |          |      |
| Rated power rate                      | kW/s (without brake)                                | 35.5  | 49.8     | 80.1     | 110             | 140      | 126      | 146      |      |
|                                       | kW/s (with brake)                                   | 29.6  | 43       | 71.8     | 101             | 116      | 114      | 136      |      |
| Allowable radial load                 | N   | 490   |          |          |                 | 784      |          |          |      |
| Allowable thrust load                 | N   | 196   |          |          |                 | 343      |          |          |      |
| Approx. mass                          | kg (without brake)                                  | 3.1   | 3.5      | 4.4      | 5.3             | 8.3      | 11       | 14       |      |
|                                       | kg (with brake)                                     | 4.1   | 4.5      | 5.4      | 6.3             | 9.4      | 12.6     | 16       |      |
| Brake specifications                  | Rated voltage                                       | 24 VDC ±10%   |          |          |                 |          |          |          |      |
|                                       | Holding brake moment of inertia J                   | kg·m <sup>2</sup> ×10 <sup>-4</sup> 0.33                          |          |          |                 |          |          | 1.35     |      |
|                                       | Power consumption (at 20°C)                         | W   | 17       | 19       |                 |          |          | 22       |      |
|                                       | Current consumption (at 20°C)                       | A   | 0.70±10% |          |                 | 0.81±10% |          | 0.90±10% |      |
|                                       | Static friction torque                              | N·m (minimum)   | 2.5      |          | 7.8             |          | 11.8     |          | 16.1 |
|                                       | Rise time for holding torque                        | ms (max.)   | 50       |          |                 |          | 110      |          |      |
| Release time                          | ms (max)  | 15  |          |          |                 | 50       |          |          |      |
| Basic specifications                  | Time Rating   | Continuous  |          |          |                 |          |          |          |      |
|                                       | Insulation class                                    | Type F  |          |          |                 |          |          |          |      |
|                                       | Ambient operating/ storage temperature              | 0 to +40°C/-20 to 65°C  |          |          |                 |          |          |          |      |
|                                       | Ambient operating/ storage humidity                 | 20% to 85% (non-condensing)                                       |          |          |                 |          |          |          |      |
|                                       | Vibration class                                     | V-15  |          |          |                 |          |          |          |      |
|                                       | Insulation resistance                               | 20 MΩ min. at 500 VDC between the power terminals and FG terminal |          |          |                 |          |          |          |      |
|                                       | Enclosure   | Totally-enclosed, self-cooling, IP67(excluding shaft opening)     |          |          |                 |          |          |          |      |
|                                       | Vibration resistance                                | Vibration acceleration 49 m/s <sup>2</sup>                        |          |          |                 |          |          |          |      |
| Mounting                              | Flange-mounted                                      |   |          |          |                 |          |          |          |      |

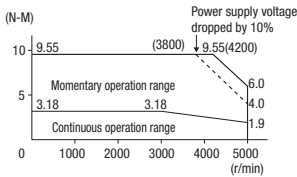
<sup>1</sup> Applicable load inertia: The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.

Torque-speed characteristics

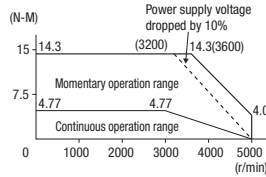
R88M-K75030F/C (750 W)



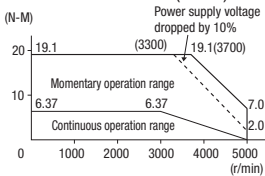
R88M-K1K030F/C (1 kW)



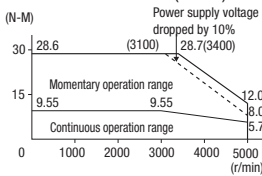
R88M-K1K530F/C (1.5 kW)



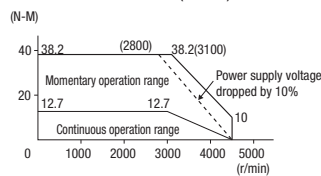
R88M-K2K030F/C (2 kW)



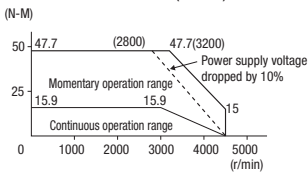
R88M-K3K030F/C (3 kW)



R88M-K4K030F/C (4 kW)



R88M-K5K030F/C (5 kW)



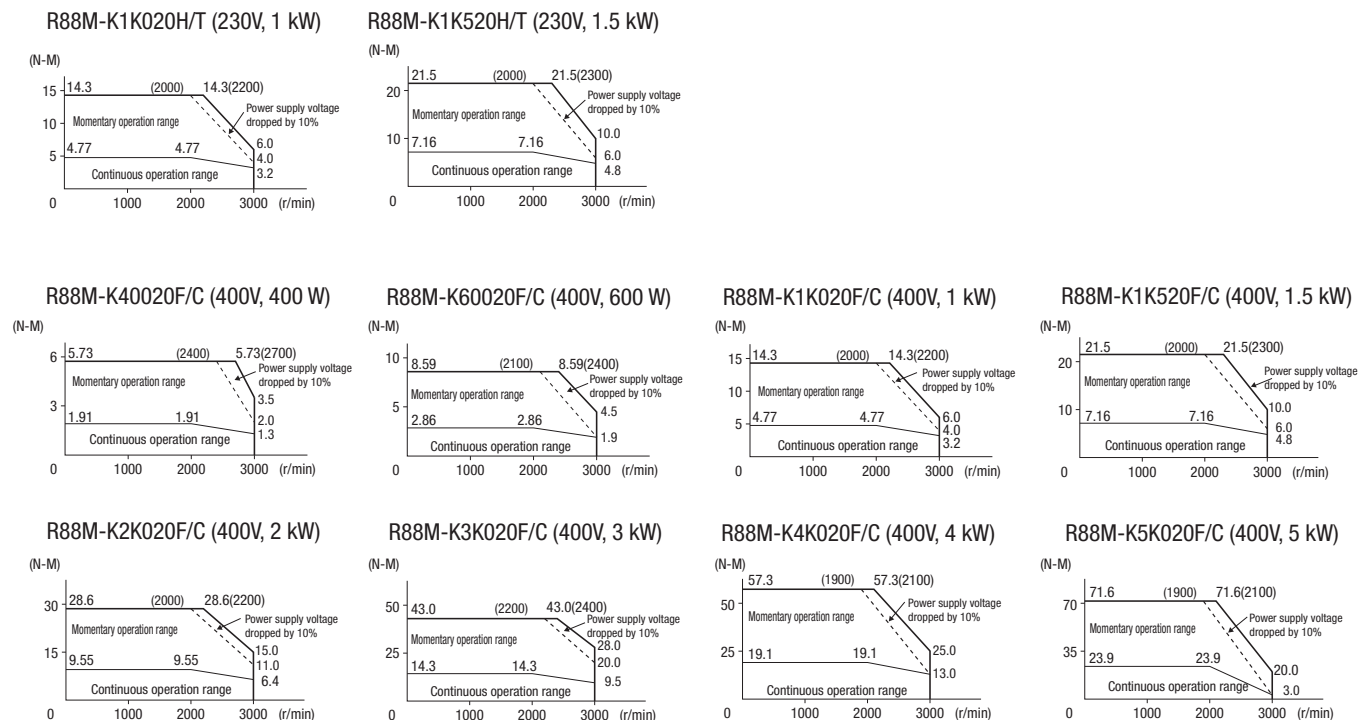
## Standard servo motors 2000 r/min, 230 V/400 V

### Ratings and specifications

| Voltage                          |  | 230 V   |          |          |           |          | 400 V     |          |          |          |          |     |
|----------------------------------|--|---|----------|----------|-----------|----------|-----------|----------|----------|----------|----------|-----|
| Servo motor model<br>R88M-K□     | 20-bit incremental encoder                                     | 1K020H-□  | 1K520H-□ | 40020F-□ | 60020F-□  | 1K020F-□ | 1K520F-□  | 2K020F-□ | 3K020F-□ | 4K020F-□ | 5K020F-□ |     |
|                                  | 17-bit absolute encoder  | 1K020T-□  | 1K520T-□ | 40020C-□ | 60020C-□  | 1K020C-□ | 1K520C-□  | 2K020C-□ | 3K020C-□ | 4K020C-□ | 5K020C-□ |     |
| Rated output                     | W  | 1000  | 1500     | 400      | 600       | 1000     | 1500      | 2000     | 3000     | 4000     | 5000     |     |
| Rated torque                     | N·m  | 4.77  | 7.16     | 1.91     | 2.86      | 4.77     | 7.16      | 9.55     | 14.3     | 19.1     | 23.9     |     |
| Instantaneous peak torque        | N·m  | 14.3  | 21.5     | 5.73     | 8.59      | 14.3     | 21.5      | 28.7     | 43       | 57.3     | 71.6     |     |
| Rated current                    | A (rms)  | 5.7   | 9.4      | 1.2      | 1.5       | 2.8      | 4.7       | 5.9      | 8.7      | 10.6     | 13       |     |
| Instantaneous max. current       | A (rms)  | 24  | 40       | 4.9      | 6.5       | 12       | 20        | 25       | 37       | 45       | 55       |     |
| Rated speed                      | min <sup>-1</sup>  | 2000  |          |          |           |          |           |          |          |          |          |     |
| Max. speed                       | min <sup>-1</sup>  | 3000  |          |          |           |          |           |          |          |          |          |     |
| Torque constant                  | N·m/A  | 0.63  | 0.58     | 1.27     | 1.38      | 1.27     | 1.16      | 1.27     | 1.18     | 1.40     | 1.46     |     |
| Rotor moment of inertia (JM)     | kg·m <sup>2</sup> ×10 <sup>-4</sup><br>(without brake)         | 4.60  | 6.70     | 1.61     | 2.03      | 4.60     | 6.70      | 8.72     | 12.9     | 37.6     | 48       |     |
|                                  | kg·m <sup>2</sup> ×10 <sup>-4</sup><br>(with brake)            | 5.90  | 7.99     | 1.90     | 2.35      | 5.90     | 7.99      | 10       | 14.2     | 38.6     | 48.8     |     |
| Max. load moment of inertia (JL) | Multiple of (JM)   | 10 <sup>1</sup>   |          |          |           |          |           |          |          |          |          |     |
| Rated power rate                 | kW/s (without brake)   | 49.5  | 76.5     | 22.7     | 40.3      | 49.5     | 76.5      | 105      | 159      | 97.1     | 119      |     |
|                                  | kW/s (with brake)  | 38.6  | 64.2     | 19.2     | 34.8      | 38.6     | 64.2      | 91.2     | 144      | 94.5     | 117      |     |
| Allowable radial load            | N  | 490   |          |          |           |          | 784       |          |          |          |          |     |
| Allowable thrust load            | N  | 196   |          |          |           |          | 343       |          |          |          |          |     |
| Approx. mass                     | kg (without brake)   | 5.2   | 6.7      | 3.1      | 3.5       | 5.2      | 6.7       | 8        | 11       | 15.5     | 18.6     |     |
|                                  | kg (with brake)  | 6.7   | 8.2      | 4.1      | 4.5       | 6.7      | 8.2       | 9.5      | 12.6     | 18.7     | 21.8     |     |
| Brake specifications             | Rated voltage  | 24VDC ±10%  |          |          |           |          |           |          |          |          |          |     |
|                                  | Holding brake moment inertia                                   | (J) kg·m <sup>2</sup> ×10 <sup>-4</sup>                           |          |          |           |          | 1.35      |          |          |          |          | 4.7 |
|                                  | Power consumption (20°C)                                       | W   | 14       | 19       | 17        | 14       | 19        | 22       | 31       |          |          |     |
|                                  | Current consumption (20°C)                                     | A   | 0.59±10% | 0.79±10% | 0.70 ±10% | 0.59±10% | 0.79 ±10% | 0.90±10% | 1.3±10%  | 1.3 ±10% |          |     |
|                                  | Static friction torque   | N·m (minimum)   | 4.9      | 13.7     | 2.5       | 4.9      | 13.7      | 16.2     | 24.5     |          |          |     |
|                                  | Rise time for holding torque                                   | ms (max.)   | 80       | 100      | 50        | 80       | 100       | 110      | 80       |          |          |     |
| Release time                     | ms (max)   | 70  | 50       | 15       | 70        | 50       | 25        |          |          |          |          |     |
| Basic specifications             | Time Rating  | Continuous  |          |          |           |          |           |          |          |          |          |     |
|                                  | Insulation class   | Type F  |          |          |           |          |           |          |          |          |          |     |
|                                  | Ambient operating/ storage temperature                         | 0 to +40°C/-20 to 65°C  |          |          |           |          |           |          |          |          |          |     |
|                                  | Ambient operating/ storage humidity                            | 20% to 85% (non-condensing)                                       |          |          |           |          |           |          |          |          |          |     |
|                                  | Vibration class  | V-15  |          |          |           |          |           |          |          |          |          |     |
|                                  | Insulation resistance  | 20 MΩ min. at 500 VDC between the power terminals and FG terminal |          |          |           |          |           |          |          |          |          |     |
| Enclosure                        | Totally-enclosed, self-cooling, IP67 (excluding shaft opening) |   |          |          |           |          |           |          |          |          |          |     |
| Vibration resistance             | Vibration acceleration 49 m/s <sup>2</sup>                     |   |          |          |           |          |           |          |          |          |          |     |
| Mounting                         | Flange-mounted   |   |          |          |           |          |           |          |          |          |          |     |

\*1. Applicable load inertia: The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.

### Torque-speed characteristics



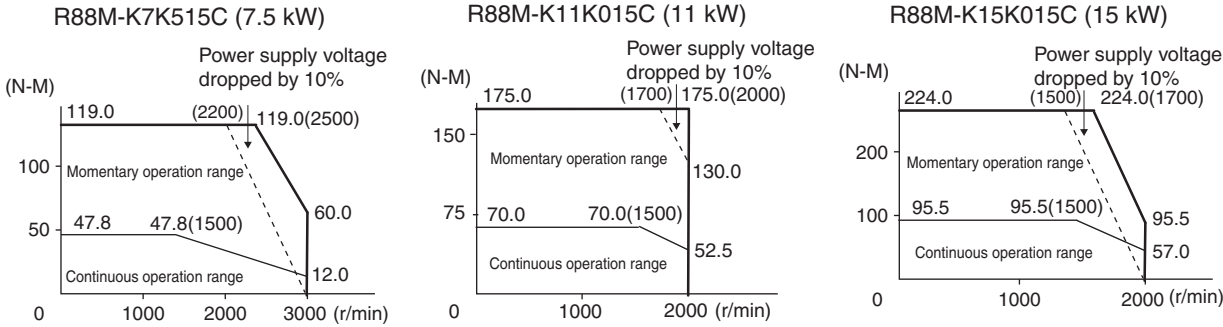
Standard servo motors 1500 r/min, 400 V

Ratings and specifications

| Applied voltage                       |   | 400 V   |           |           |
|---------------------------------------|---|---|-----------|-----------|
| Servo motor model R88M-K□             | 17-bit absolute encoder                             | 7K515C-□  | 11K015C-□ | 15K015C-□ |
| Rated output                          | W   | 7500  | 11000     | 15000     |
| Rated torque                          | N·m   | 47.8  | 70.0      | 95.5      |
| Instantaneous peak torque             | N·m   | 119.0   | 175.0     | 224.0     |
| Rated current                         | A (rms)   | 22.0  | 27.1      | 33.1      |
| Instantaneous max. current            | A (rms)   | 83  | 101       | 118       |
| Rated speed                           | min <sup>-1</sup>                                   | 1500  |           |           |
| Max. speed                            | min <sup>-1</sup>                                   | 3000  | 2000      |           |
| Torque constant                       | N·m/A   | 1.54  | 1.84      | 2.10      |
| Rotor moment of inertia (JM)          | kg·m <sup>2</sup> ×10 <sup>-4</sup> (without brake) | 101   | 212       | 302       |
|                                       | kg·m <sup>2</sup> ×10 <sup>-4</sup> (with brake)    | 107   | 220       | 311       |
| Allowable load moment of inertia (JL) | Multiple of (JM)                                    | 10 <sup>-1</sup>  |           |           |
| Rated power rate                      | kW/s (without brake)                                | 226   | 231       | 302       |
|                                       | kW/s (with brake)                                   | 213   | 223       | 293       |
| Allowable radial load                 | N   | 1176  | 2254      |           |
| Allowable thrust load                 | N   | 490   | 686       |           |
| Approx. mass                          | kg (without brake)                                  | 36.4  | 52.7      | 70.2      |
|                                       | kg (with brake)                                     | 40.4  | 58.9      | 76.3      |
| Brake specifications                  | Rated voltage                                       | 24VDC ±10%  |           |           |
|                                       | Holding brake moment of inertia J                   | kg·m <sup>2</sup> ×10 <sup>-4</sup>                               | 4.7       | 7.1       |
|                                       | Power consumption (at 20°C)                         | W   | 34        | 26        |
|                                       | Current consumption (at 20°C)                       | A   | 1.4±10%   | 1.08±10%  |
|                                       | Static friction torque                              | N·m (minimum)   | 58.8      | 100       |
|                                       | Release time  | ms (max)  | 50        | 140       |
| Basic specifications                  | Time Rating   | Continuous  |           |           |
|                                       | Insulation class                                    | Type F  |           |           |
|                                       | Ambient operating/ storage temperature              | 0 to +40°C/-20 to 65°C  |           |           |
|                                       | Ambient operating/ storage humidity                 | 20% to 85% RH (non-condensing)                                    |           |           |
|                                       | Vibration class                                     | V-15  |           |           |
|                                       | Insulation resistance                               | 20 MΩ min. at 500 VDC between the power terminals and FG terminal |           |           |
|                                       | Enclosure   | Totally-enclosed, self-cooling, IP67 (excluding shaft opening)    |           |           |
|                                       | Mounting  | Flange-mounted  |           |           |

\*1 Applicable load inertia: The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.

Torque-speed characteristics





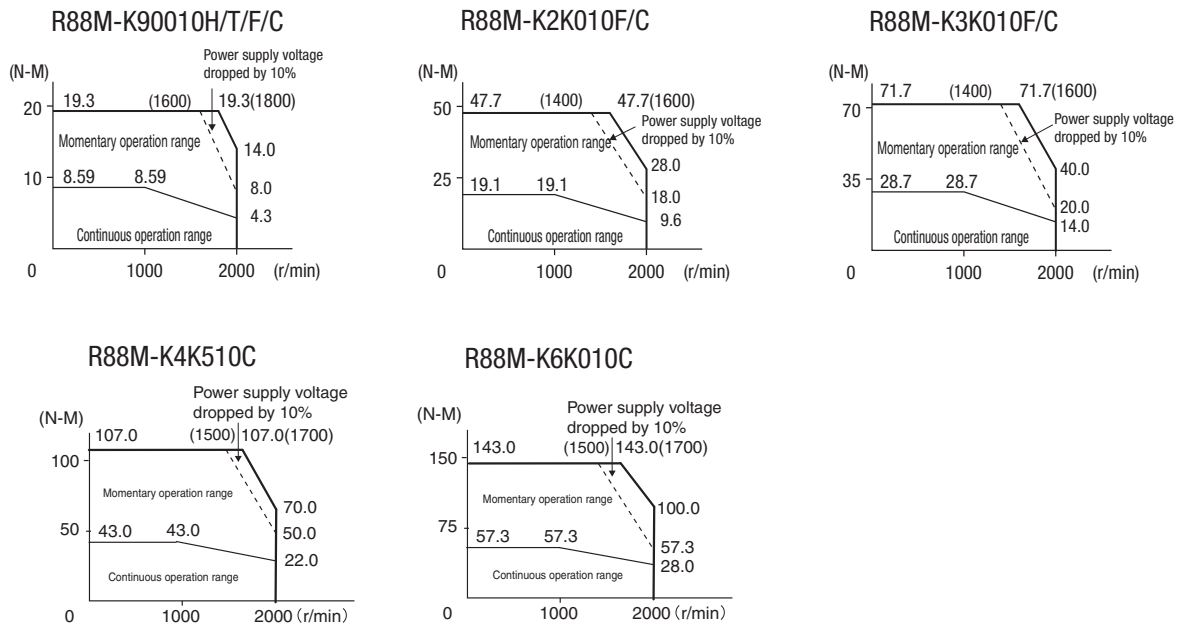
Standard servo motors 1000 r/min, 230 V/400 V

Ratings and specifications

| Applied voltage                       |   | 230 V   |          | 400 V    |          |          |          |
|---------------------------------------|---|---|----------|----------|----------|----------|----------|
| Servo motor model R88M-K□             | 20-bit incremental encoder                          | 90010H-□  | 90010F-□ | 2K010F-□ | 3K010F-□ |          |          |
|                                       | 17-bit absolute encoder                             | 90010T-□  | 90010C-□ | 2K010C-□ | 3K010C-□ | 4K510C-□ | 6K010C-□ |
| Rated output                          | W   | 900   | 900      | 2000     | 3000     | 4500     | 6000     |
| Rated torque                          | N·m   | 8.59  |          | 19.1     | 28.7     | 43.0     | 57.3     |
| Instantaneous peak torque             | N·m   | 19.3  |          | 47.7     | 71.7     | 107.0    | 143.0    |
| Rated current                         | A (rms)   | 7.6   | 3.8      | 8.5      | 11.3     | 14.8     | 19.4     |
| Instantaneous max. current            | A (rms)   | 24  | 12       | 30       | 40       | 55       | 74       |
| Rated speed                           | min <sup>-1</sup>                                   | 1000  |          |          |          |          |          |
| Max. speed                            | min <sup>-1</sup>                                   | 2000  |          |          |          |          |          |
| Torque constant                       | N·m/A   | 0.86  | 1.72     | 1.76     | 1.92     | 2.05     | 2.08     |
| Rotor moment of inertia (JM)          | kg·m <sup>2</sup> ×10 <sup>-4</sup> (without brake) | 6.70  |          | 30.3     | 48.4     | 79.1     | 101      |
|                                       | kg·m <sup>2</sup> ×10 <sup>-4</sup> (with brake)    | 7.99  |          | 31.4     | 49.2     | 84.4     | 107      |
| Allowable load moment of inertia (JL) | Multiple of (JM)                                    | 10 <sup>1</sup>   |          |          |          |          |          |
| Rated power rate                      | kW/s (without brake)                                | 110   |          | 120      | 170      | 233      | 325      |
|                                       | kW/s (with brake)                                   | 92.4  |          | 116      | 167      | 219      | 307      |
| Allowable radial load                 | N   | 686   |          | 1176     | 1470     |          | 1764     |
| Allowable thrust load                 | N   | 196   |          | 490      |          |          | 588      |
| Approx. mass                          | kg (without brake)                                  | 6.7   |          | 14       | 20       | 29.4     | 36.4     |
|                                       | kg (with brake)                                     | 8.2   |          | 17.5     | 23.5     | 33.3     | 40.4     |
| Brake specifications                  | Rated voltage                                       | 24VDC ±10%  |          |          |          |          |          |
|                                       | Holding brake moment of inertia J                   | kg·m <sup>2</sup> ×10 <sup>-4</sup>                               |          | 1.35     |          | 4.7      |          |
|                                       | Power consumption (at 20°C)                         | W   | 19       |          | 31       | 34       |          |
|                                       | Current consumption (at 20°C)                       | A   | 0.79±10% |          | 1.3±10%  | 1.4±10%  |          |
|                                       | Static friction torque                              | N·m (minimum)   | 13.7     |          | 24.5     | 58.8     |          |
|                                       | Rise time for holding torque                        | ms (max.)   | 100      |          | 80       | 150      |          |
|                                       | Release time  | ms (max)  | 50       |          | 25       | 50       |          |
| Basic specifications                  | Time Rating   | Continuous  |          |          |          |          |          |
|                                       | Insulation class                                    | Type F  |          |          |          |          |          |
|                                       | Ambient operating/ storage temperature              | 0 to +40°C/-20 to 65°C  |          |          |          |          |          |
|                                       | Ambient operating/ storage humidity                 | 20% to 85% RH (non-condensing)                                    |          |          |          |          |          |
|                                       | Vibration class                                     | V-15  |          |          |          |          |          |
|                                       | Insulation resistance                               | 20 MΩ min. at 500 VDC between the power terminals and FG terminal |          |          |          |          |          |
|                                       | Enclosure   | Totally-enclosed, self-cooling, IP67 (excluding shaft opening)    |          |          |          |          |          |
| Vibration resistance                  | Vibration acceleration 49 m/s <sup>2</sup>          |   |          |          |          |          |          |
| Mounting                              | Flange-mounted                                      |   |          |          |          |          |          |

\*1 Applicable load inertia: The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.

Torque-speed characteristics





High inertia servo motors 3000 r/min, 230 V

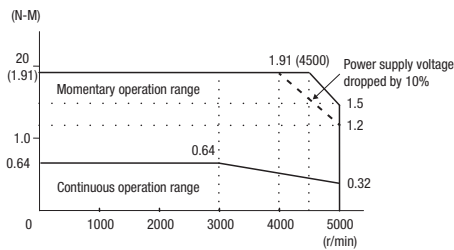
Ratings and specifications

| Voltage                               |   | 230 V   |          |          |
|---------------------------------------|---|---|----------|----------|
| Servo motor model R88M-KH□            | 20-bit incremental encoder                          | 20030H-□  | 40030H-□ | 75030H-□ |
|                                       | 17-bit absolute encoder                             | 20030T-□  | 40030T-□ | 75030T-□ |
| Rated output                          | W   | 200   | 400      | 750      |
| Rated torque                          | N·m   | 0.64  | 1.3      | 2.4      |
| Instantaneous peak torque             | N·m   | 1.91  | 3.8      | 7.1      |
| Rated current                         | A (rms)   | 1.6   | 2.6      | 4.0      |
| Instantaneous max. current            | A (rms)   | 6.9   | 11.0     | 17.0     |
| Rated speed                           | min <sup>-1</sup>                                   | 3000  |          |          |
| Max. speed                            | min <sup>-1</sup>                                   | 5000  |          |          |
| Torque constant                       | N·m/A   | 0.29±10%  | 0.36±10% | 0.45±10% |
| Rotor moment of inertia (JM)          | kg·m <sup>2</sup> ×10 <sup>-4</sup> (without brake) | 0.42  | 0.67     | 1.51     |
|                                       | kg·m <sup>2</sup> ×10 <sup>-4</sup> (with brake)    | 0.45  | 0.70     | 1.61     |
| Allowable load moment of inertia (JL) | Multiple of (JM)                                    | 30 <sup>*1</sup>  |          |          |
| Rated power rate                      | kW/s (without brake)                                | 9.58  | 24.1     | 37.7     |
|                                       | kW/s (with brake)                                   | 9.06  | 23.3     | 35.3     |
| Allowable radial load                 | N   | 245   |          |          |
| Allowable thrust load                 | N   | 98  |          |          |
| Approx. mass                          | kg (without brake)                                  | 0.96  | 1.4      | 2.5      |
|                                       | kg (with brake)                                     | 1.4   | 1.8      | 3.3      |
| Brake specifications                  | Rated voltage                                       | 24 VDC ±5%  |          |          |
|                                       | Holding brake moment of inertia J                   | kg·m <sup>2</sup> ×10 <sup>-4</sup>   | 0.018    | 0.075    |
|                                       | Power consumption (at 20°C)                         | W   | 9        | 10       |
|                                       | Current consumption (at 20°C)                       | A   | 0.36     | 0.42     |
|                                       | Static friction torque                              | N·m (minimum)   | 1.27     | 2.45     |
|                                       | Release time  | ms (max)  | 15       | 20       |
| Basic specifications                  | Time Rating   | Continuous  |          |          |
|                                       | Insulation class                                    | Type B  |          |          |
|                                       | Ambient operating/ storage temperature              | 0 to +40°C/-20 to 65°C  |          |          |
|                                       | Ambient operating/ storage humidity                 | 20% to 85% RH (non-condensing)  |          |          |
|                                       | Vibration class                                     | V-15  |          |          |
|                                       | Insulation resistance                               | 20 MΩ min. at 500 VDC between the power terminals and FG terminal                 |          |          |
|                                       | Enclosure   | Totally-enclosed, self-cooling, IP65 (excluding shaft opening and lead wire ends) |          |          |
| Vibration resistance                  | Vibration acceleration 49 m/s <sup>2</sup>          |   |          |          |
| Mounting                              | Flange-mounted                                      |   |          |          |

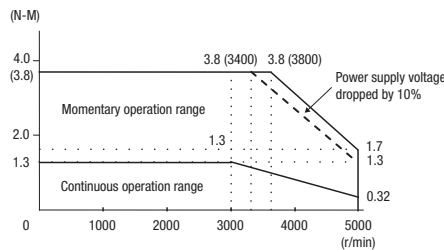
\*1 Applicable load inertia: The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.

Torque-speed characteristics

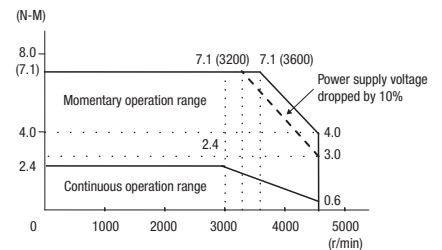
R88M-KH20030H/T (230 V, 200 W)



R88M-KH40030H/T (230 V, 400 W)



R88M-KH75030H/T (230 V, 750 W)



## High inertia servo motors 2000 and 1500 r/min, 400 V

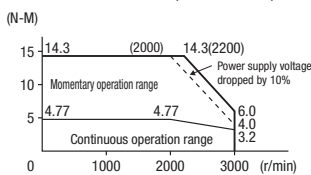
### Ratings and specifications

| R/min, Voltage                   |  | 2000 r/min, 400 V   |          |          |          |          |          | 1500 r/min, 400 V |
|----------------------------------|--|---|----------|----------|----------|----------|----------|-------------------|
| Servo motor model<br>R88M-KH□    | 20-bit incremental encoder   | 1K020F-□  | 1K520F-□ | 2K020F-□ | 3K020F-□ | 4K020F-□ | 5K020F-□ |                   |
|                                  | 17-bit absolute encoder  | 1K020C-□  | 1K520C-□ | 2K020C-□ | 3K020C-□ | 4K020C-□ | 5K020C-□ | 7K515C-□          |
| Rated output                     | W  | 1000  | 1500     | 2000     | 3000     | 4000     | 5000     | 7500              |
| Rated torque                     | N·m  | 4.77  | 7.16     | 9.55     | 14.3     | 19.1     | 23.9     | 47.8              |
| Instantaneous peak torque        | N·m  | 14.3  | 21.5     | 28.6     | 43.0     | 57.3     | 71.6     | 119               |
| Rated current                    | A (rms)  | 2.9   | 4.7      | 5.5      | 8.0      | 10.5     | 13.0     | 22.0              |
| Instantaneous max. current       | A (rms)  | 12  | 20       | 24       | 34       | 45       | 55       | 83                |
| Rated speed                      | min <sup>-1</sup>  | 2000  |          |          |          |          |          | 1500              |
| Max. speed                       | min <sup>-1</sup>  | 3000  |          |          |          |          |          | 3000              |
| Torque constant                  | N·m/A  | 1.27  | 1.16     | 1.31     | 1.34     | 1.38     | 1.39     | 1.54              |
| Rotor moment of inertia (JM)     | kg·m <sup>2</sup> ×10 <sup>-4</sup> (without brake)                  | 24.7  | 37.1     | 57.8     | 90.2     | 112      | 162      | 273               |
|                                  | kg·m <sup>2</sup> ×10 <sup>-4</sup> (with brake)                     | 26.0  | 38.4     | 62.9     | 95.3     | 117      | 167      | 279               |
| Max. load moment of inertia (JL) | Multiple of (JM)   | 5 <sup>*1</sup>   |          |          |          |          |          |                   |
| Rated power rate                 | kW/s (without brake)   | 9.2   | 13.8     | 15.8     | 22.7     | 32.5     | 35.1     | 86.7              |
|                                  | kW/s (with brake)  | 8.8   | 13.4     | 14.5     | 21.5     | 31.1     | 34.1     | 85.1              |
| Allowable radial load            | N  | 490   |          |          | 784      |          |          | 1176              |
| Allowable thrust load            | N  | 196   |          |          | 343      |          |          | 490               |
| Approx. mass                     | kg (without brake)   | 6.7   | 8.6      | 12.2     | 16.0     | 18.6     | 23.0     | 42.3              |
|                                  | kg (with brake)  | 8.1   | 10.1     | 15.5     | 19.2     | 21.8     | 26.2     | 46.2              |
| Rated voltage                    |  | 24 VDC ±10%   |          |          |          |          |          |                   |
| Brake specifications             | Holding brake moment inertia (J) kg·m <sup>2</sup> ×10 <sup>-4</sup> | 1.35  |          |          | 4.7      |          |          |                   |
|                                  | Power consumption (20°C) W   | 14  | 19       | 31       |          |          | 34       |                   |
|                                  | Current consumption (20°C) A   | 0.59±10%  | 0.79±10% | 1.30±10% |          |          | 1.40±10% |                   |
|                                  | Static friction torque N·m (minimum)                                 | 4.9   | 13.7     | 24.5     |          |          | 58.8     |                   |
|                                  | Rise time for holding torque ms (max.)                               | 80  | 100      | 80       |          |          | 150      |                   |
|                                  | Release time ms (max)  | 70  | 50       | 25       |          |          | 50       |                   |
|                                  | Time Rating  | Continuous  |          |          |          |          |          |                   |
| Basic specifications             | Insulation class   | Type F  |          |          |          |          |          |                   |
|                                  | Ambient operating/ storage temperature                               | 0 to +40°C/-20 to 65°C  |          |          |          |          |          |                   |
|                                  | Ambient operating/ storage humidity                                  | 20% to 85% RH (non-condensing)                                    |          |          |          |          |          |                   |
|                                  | Vibration class  | V-15  |          |          |          |          |          |                   |
|                                  | Insulation resistance  | 20 MΩ min. at 500 VDC between the power terminals and FG terminal |          |          |          |          |          |                   |
|                                  | Enclosure  | Totally-enclosed, self-cooling, IP67 (excluding shaft opening)    |          |          |          |          |          |                   |
|                                  | Vibration resistance   | Vibration acceleration 49 m/s <sup>2</sup>                        |          |          |          |          |          |                   |
| Mounting                         | Flange-mounted   |   |          |          |          |          |          |                   |

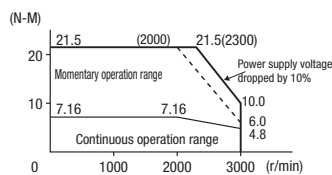
\*1 Applicable load inertia: The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.

### Torque-speed characteristics

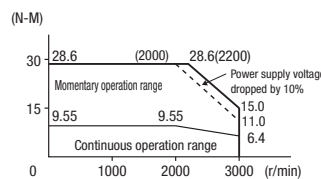
R88M-KH1K020F/C (400 V, 1 kW)



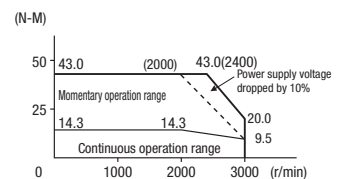
R88M-KH1K520F/C (400 V, 1.5 kW)



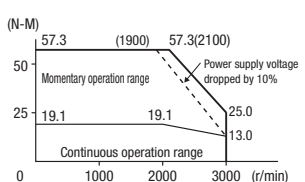
R88M-KH2K020F/C (400 V, 2 kW)



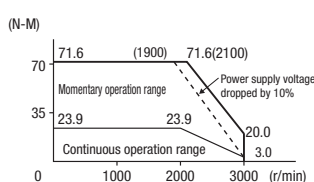
R88M-KH3K020F/C (400 V, 3 kW)



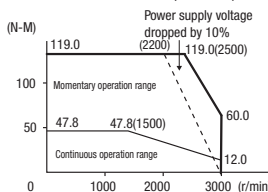
R88M-KH4K020F/C (400 V, 4 kW)



R88M-KH5K020F/C (400 V, 5 kW)



R88M-KH7K515C (7.5 kW)

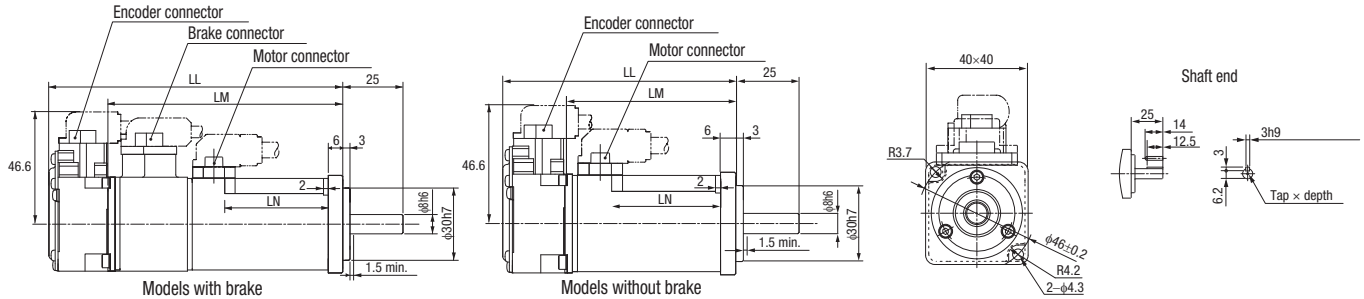


Dimensions

Standard servo motors

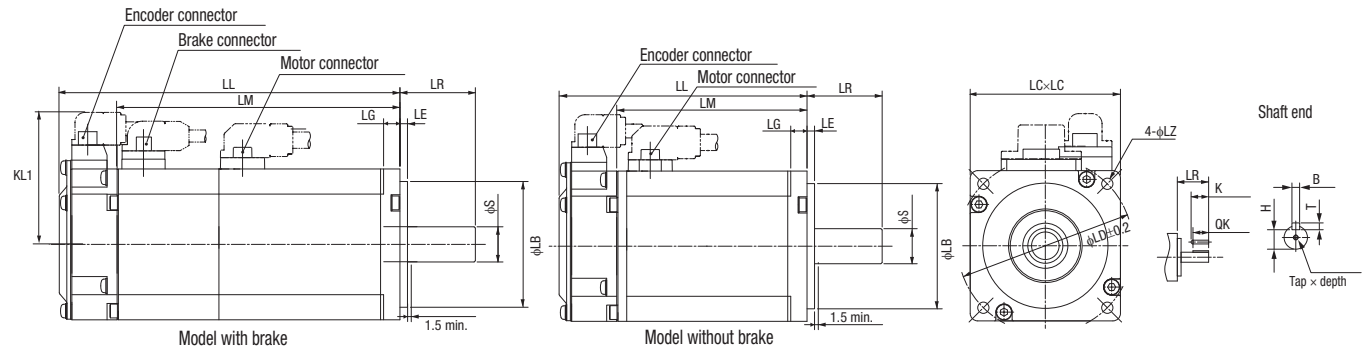
Type 3000 r/min motors (230 V, 50 to 100 W)

| Dimensions (mm)      | Without brake |    | With brake |    | LN | Shaft end dimensions | Approx. mass (kg) |            |
|----------------------|---------------|----|------------|----|----|----------------------|-------------------|------------|
|                      | LL            | LM | LL         | LM |    |                      | Without brake     | With brake |
| R88M-K05030(H/T)-□S2 | 72            | 48 | 102        | 78 | 23 | M3 × 6L              | 0.32              | 0.53       |
| R88M-K10030(H/T)-□S2 | 92            | 68 | 122        | 98 | 43 |                      | 0.47              | 0.68       |



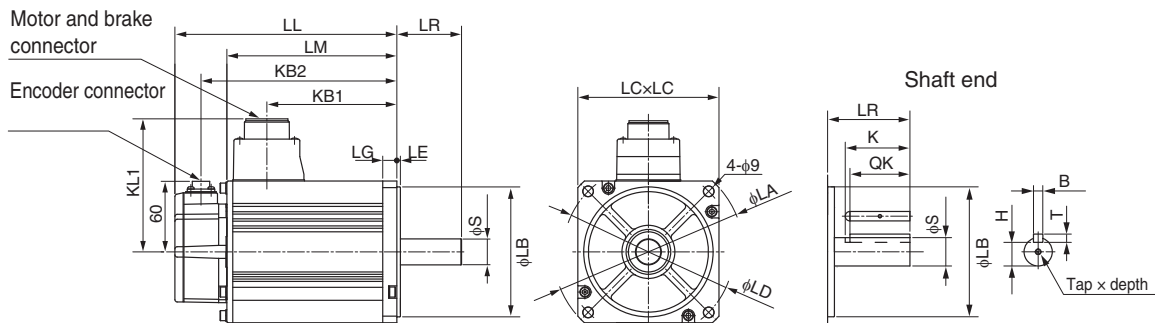
Type 3000 r/min motors (230 V, 200 to 750 W)

| Dimensions (mm)      | Without brake |      |      | With brake |       |      | LR | Flange surface   |    |    |    |     |     | Shaft end dimensions |    |      |      |                 |   | Approx. mass kg |               |            |
|----------------------|---------------|------|------|------------|-------|------|----|------------------|----|----|----|-----|-----|----------------------|----|------|------|-----------------|---|-----------------|---------------|------------|
|                      | LL            | LM   | KL1  | LL         | LM    | KL1  |    | LB               | LC | LD | LE | LG  | LZ  | S                    | K  | QK   | H    | B               | T | Tap × Depth     | Without brake | With brake |
| R88M-K20030(H/T)-□S2 | 79.5          | 56.5 | 52.5 | 116        | 93    | 52.5 | 30 | 50 <sup>H7</sup> | 60 | 70 | 3  | 6.5 | 4.5 | 11 <sup>H6</sup>     | 20 | 18   | 8.5  | 4 <sup>H9</sup> | 4 | M4 × 8L         | 0.82          | 1.3        |
| R88M-K40030(H/T)-□S2 | 99            | 76   | 52.5 | 135.5      | 112.5 | 52.5 |    |                  |    |    |    |     |     | 14 <sup>H6</sup>     | 25 | 22.5 | 11   | 5 <sup>H9</sup> | 5 | M5 ×            | 1.2           | 1.7        |
| R88M-K75030(H/T)-□S2 | 112.2         | 86.2 | 60   | 148.2      | 122.2 | 61.6 | 35 | 70 <sup>H7</sup> | 80 | 90 |    | 8   | 6   | 19 <sup>H6</sup>     |    | 22   | 15.5 | 6 <sup>H9</sup> | 6 | 10L             | 2.3           | 3.1        |



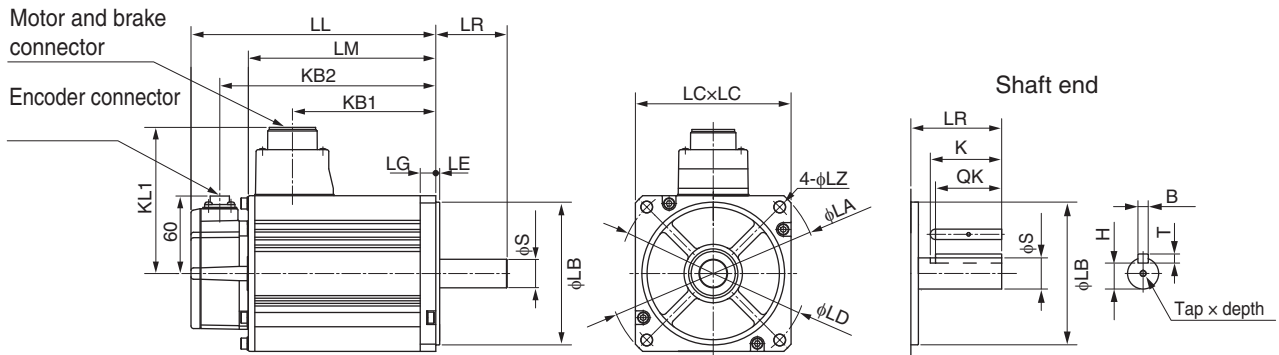
Type 3000 r/min motors (230 V, 1 to 1.5 kW/400V, 750 W to 5 kW)

| Voltage | Model          | Without brake |       |       |       |     | With brake |       |       |       |     | LR  | Flange surface    |                  |     |     |                  |          | Shaft end dimensions |             |    |    |                 |                 | Approx. Mass (kg) |               |            |
|---------|----------------|---------------|-------|-------|-------|-----|------------|-------|-------|-------|-----|-----|-------------------|------------------|-----|-----|------------------|----------|----------------------|-------------|----|----|-----------------|-----------------|-------------------|---------------|------------|
|         |                | LL            | LM    | KB1   | KB2   | KL1 | LL         | LM    | KB1   | KB2   | KL1 |     | LA                | LB               | LC  | LD  | LE               | LG       | S                    | Tap × Depth | K  | QK | H               | B               | T                 | Without brake | With brake |
| 230     | 1K030(H/T)-□S2 | 141           | 97    | 66    | 119   | 101 | 168        | 124   | 66    | 146   | 101 | 55  | 135               | 95 <sup>H7</sup> | 100 | 115 | 3                | 10       | 19 <sup>H6</sup>     | M5 × 12L    | 45 | 42 | 15.5            | 6 <sup>H9</sup> | 6                 | 3.5           | 4.5        |
|         | 1K530(H/T)-□S2 | 159.5         | 115.5 | 84.5  | 137.5 |     | 186.5      | 142.5 | 84.5  | 164.5 |     |     |                   |                  |     |     |                  |          |                      |             |    |    |                 |                 |                   | 4.4           | 5.4        |
| 400     | 75030(F/C)-□S2 | 131.5         | 87.5  | 56.5  | 109.5 |     | 158.5      | 114.5 | 53.5  | 136.5 | 103 |     |                   |                  |     |     |                  |          |                      |             |    |    |                 |                 |                   | 3.1           | 4.1        |
|         | 1K030(F/C)-□S2 | 141           | 97    | 66    | 119   |     | 168        | 124   | 63    | 146   |     |     |                   |                  |     |     |                  |          |                      |             |    |    |                 |                 |                   | 3.5           | 4.5        |
|         | 1K530(F/C)-□S2 | 159.5         | 115.5 | 84.5  | 137.5 |     | 186.5      | 142.5 | 81.5  | 164.5 |     |     |                   |                  |     |     |                  |          |                      |             |    |    |                 |                 |                   | 4.4           | 5.4        |
|         | 2K030(F/C)-□S2 | 178.5         | 134.5 | 103.5 | 156.5 |     | 205.5      | 161.5 | 100.5 | 183.5 |     |     |                   |                  |     |     |                  |          |                      |             |    |    |                 |                 |                   | 5.3           | 6.3        |
|         | 3K030(F/C)-□S2 | 190           | 146   | 112   | 168   | 113 | 215        | 171   | 112   | 193   | 113 | 162 | 110 <sup>H7</sup> | 120              | 145 | 12  | 22 <sup>H6</sup> |          |                      |             | 41 | 18 | 8 <sup>H9</sup> | 7               | 8.3               | 9.4           |            |
|         | 4K030(F/C)-□S2 | 208           | 164   | 127   | 186   | 118 | 233        | 189   | 127   | 211   | 118 | 65  | 165               |                  | 130 | 6   | 24 <sup>H6</sup> | M8 × 20L | 55                   | 51          | 20 |    |                 |                 | 11                | 12.6          |            |
|         | 5K030(F/C)-□S2 | 243           | 199   | 162   | 221   |     | 268        | 224   | 162   | 246   |     |     |                   |                  |     |     |                  |          |                      |             |    |    |                 |                 |                   | 14            | 16         |



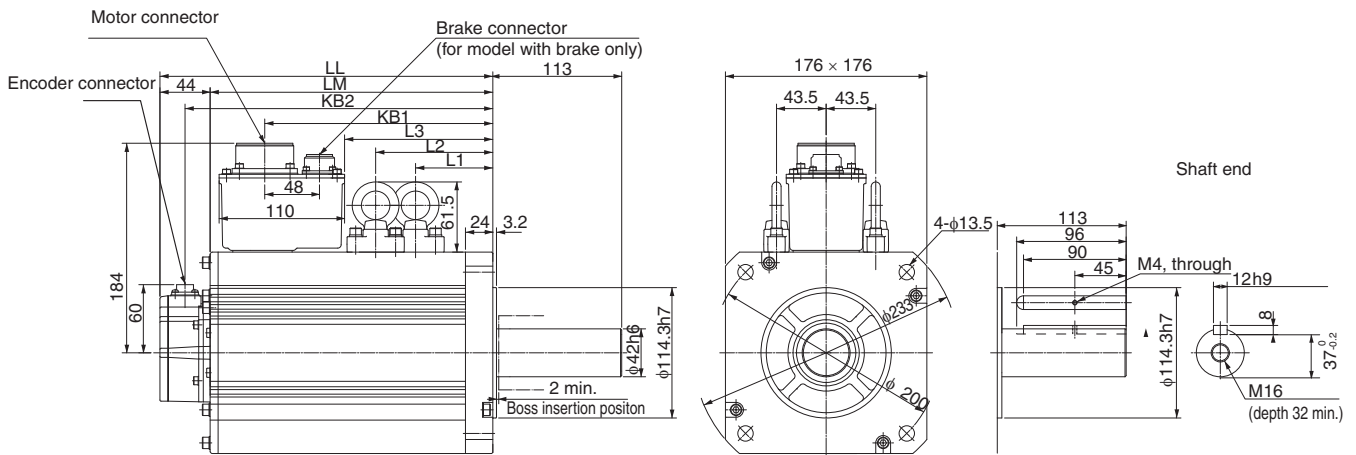
Type 2000 r/min motors (230 V, 1 to 1.5 kW /400 V, 400 W to 5 kW)

| Dimensions (mm) |                | Without brake |       |      |       |     | With brake |       |      |       |     | LR  | Flange surface   |                     |     |     |     |    |                  | Shaft end dimensions |             |    |      |                  | Approx. mass (kg) |      |               |            |
|-----------------|----------------|---------------|-------|------|-------|-----|------------|-------|------|-------|-----|-----|------------------|---------------------|-----|-----|-----|----|------------------|----------------------|-------------|----|------|------------------|-------------------|------|---------------|------------|
| Voltage         | Model          | LL            | LM    | KB1  | KB2   | KL1 | LL         | LM    | KB1  | KB2   | KL1 |     | LA               | LB                  | LC  | LD  | LE  | LG | LZ               | S                    | Tap x Depth | K  | QK   | H                | B                 | T    | Without brake | With brake |
| 230             | 1K020(H/T)-□S2 | 138           | 94    | 60   | 116   | 116 | 163        | 119   | 60   | 141   | 116 | 55  | 165              | 110 <sup>h7</sup>   | 130 | 145 | 6   | 12 | 9                | 22 <sup>h6</sup>     | M5 x 12L    | 45 | 41   | 18               | 8 <sup>h9</sup>   | 7    | 5.2           | 6.7        |
|                 | 1K520(H/T)-□S2 | 155.5         | 111.5 | 77.5 | 133.5 | 101 | 180.5      | 136.5 | 77.5 | 158.5 | 103 | 135 | 95 <sup>h7</sup> | 100                 | 115 | 3   | 10  |    | 19 <sup>h6</sup> |                      |             | 42 | 15.5 | 6 <sup>h9</sup>  | 6                 | 3.1  | 4.1           |            |
| 400             | 60020(F/C)-□S2 | 141           | 97    | 66   | 119   |     | 168        | 124   | 63   | 146   |     |     |                  |                     |     |     |     |    |                  |                      |             |    |      |                  |                   | 3.5  | 4.5           |            |
|                 | 1K020(F/C)-□S2 | 138           | 94    | 60   | 116   | 116 | 163        | 119   | 57   | 141   | 118 | 65  | 165              | 110 <sup>h7</sup>   | 130 | 145 | 6   | 12 |                  | 22 <sup>h6</sup>     |             | 41 | 18   | 8 <sup>h9</sup>  | 7                 | 5.2  | 6.7           |            |
|                 | 1K520(F/C)-□S2 | 155.5         | 111.5 | 77.5 | 133.5 |     | 180.5      | 136.5 | 74.5 | 158.5 |     |     |                  |                     |     |     |     |    |                  |                      |             |    |      |                  |                   | 6.7  | 8.2           |            |
|                 | 2K020(F/C)-□S2 | 173           | 129   | 95   | 151   |     | 198        | 154   | 92   | 176   |     |     |                  |                     |     |     |     |    |                  |                      |             |    |      |                  |                   | 8    | 9.5           |            |
|                 | 3K020(F/C)-□S2 | 208           | 164   | 127  | 186   | 118 | 233        | 189   | 127  | 211   |     |     |                  |                     |     |     |     |    |                  |                      |             |    |      |                  |                   | 11   | 12.6          |            |
|                 | 4K020(F/C)-□S2 | 177           | 133   | 96   | 155   | 140 | 202        | 158   | 96   | 180   | 140 | 70  | 233              | 114.3 <sup>h7</sup> | 176 | 200 | 3.2 | 18 | 13.5             | 35 <sup>h6</sup>     | M12 x 25L   | 50 | 30   | 10 <sup>h9</sup> | 8                 | 15.5 | 18.7          |            |
| 5K020(F/C)-□S2  | 196            | 152           | 115   | 174  |       | 221 | 177        | 115   | 199  |       |     |     |                  |                     |     |     |     |    |                  |                      |             |    |      |                  |                   | 18.6 | 21.8          |            |



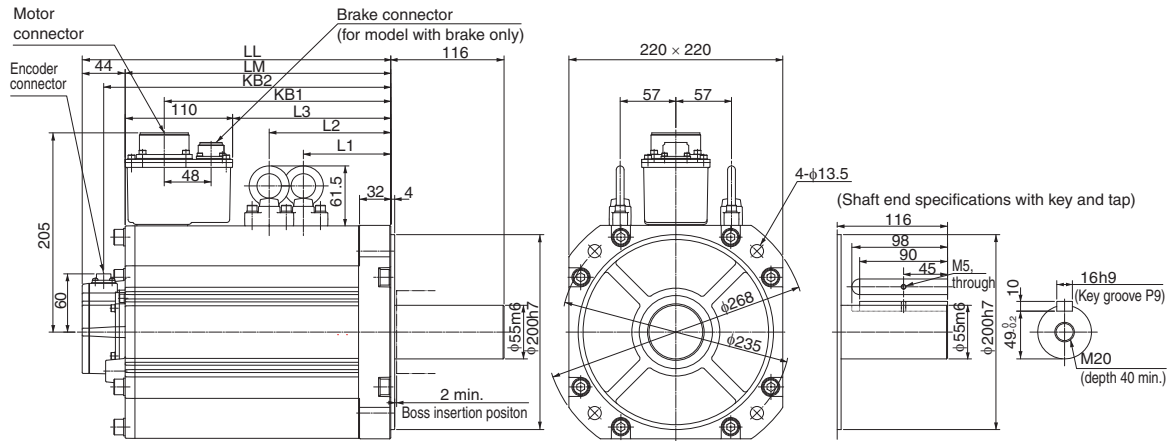
Type 1500 r/min motors (400 V, 7.5kW)

| Dimensions (mm) |            | Without brake |     |     |     |       |       |     | With brake |     |     |     |       |       |     | Approx. mass (kg) |            |
|-----------------|------------|---------------|-----|-----|-----|-------|-------|-----|------------|-----|-----|-----|-------|-------|-----|-------------------|------------|
| Voltage         | Model      | LL            | LM  | KB1 | KB2 | L1    | L2    | L3  | LL         | LM  | KB1 | KB2 | L1    | L2    | L3  | Without brake     | With brake |
| 400             | 7K515C-□S2 | 312           | 268 | 219 | 290 | 117.5 | 117.5 | 149 | 337        | 293 | 253 | 315 | 117.5 | 152.5 | 183 | 36.4              | 40.4       |



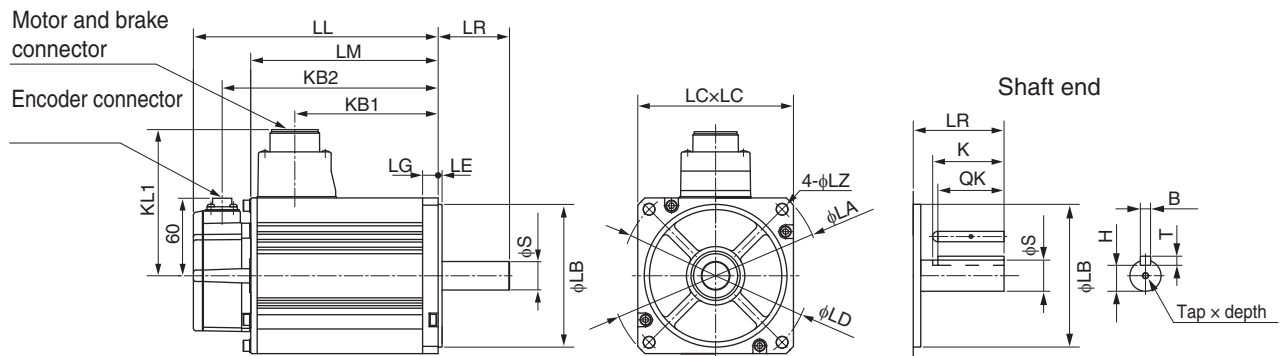
Type 1500 r/min motors (400 V, 11 to 15 kW)

| Dimensions (mm) |             | Without brake |     |     |     |       |       |     | With brake |     |     |     |       |       |     | Approx. Mass (kg) |            |
|-----------------|-------------|---------------|-----|-----|-----|-------|-------|-----|------------|-----|-----|-----|-------|-------|-----|-------------------|------------|
| Voltage         | Model       | LL            | LM  | KB1 | KB2 | L1    | L2    | L3  | LL         | LM  | KB1 | KB2 | L1    | L2    | L3  | Without brake     | With brake |
| 400             | R88M-K□     |               |     |     |     |       |       |     |            |     |     |     |       |       |     |                   |            |
|                 | 11K015C-□S2 | 316           | 272 | 232 | 294 | 124.5 | 124.5 | 162 | 364        | 320 | 266 | 342 | 124.5 | 159.5 | 196 | 52.7              | 58.9       |
|                 | 15K015C-□S2 | 384           | 340 | 300 | 362 | 158.5 | 158.5 | 230 | 432        | 388 | 334 | 410 | 158.5 | 193.5 | 264 | 70.2              | 76.3       |



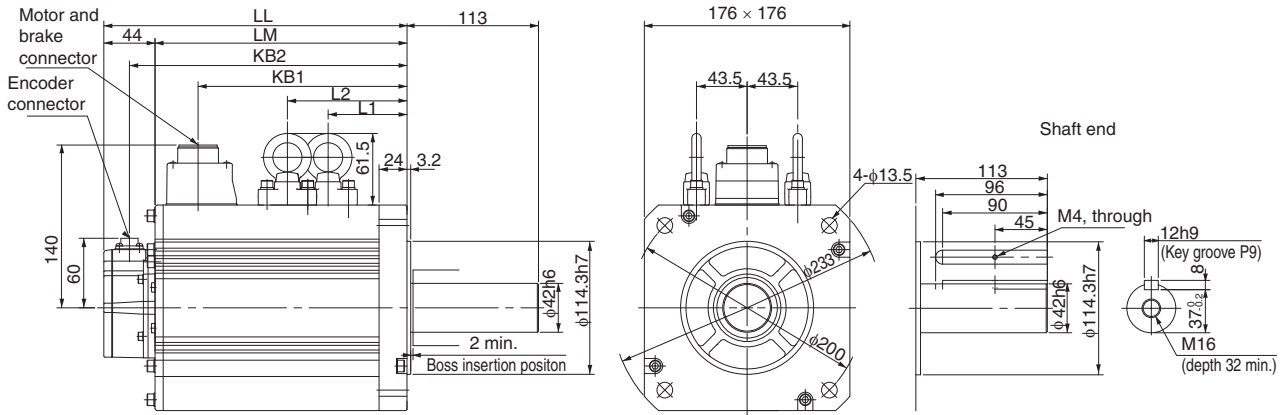
Type 1000 r/min motors (230 V, 900W/400 V, 900 W to 3 kW)

| Dimensions (mm) |                | Without brake |                |       |       |      | With brake |       |       |       |      | LR | Flange surface |                     |     |     |                   |     |      | Shaft end dimensions |             |    |    |                  |                  | Approx. mass (kg) |               |            |
|-----------------|----------------|---------------|----------------|-------|-------|------|------------|-------|-------|-------|------|----|----------------|---------------------|-----|-----|-------------------|-----|------|----------------------|-------------|----|----|------------------|------------------|-------------------|---------------|------------|
| Voltage         | Model          | LL            | LM             | KB1   | KB2   | KL1  | LL         | LM    | KB1   | KB2   | KL1  | LR | LA             | LB                  | LC  | LD  | LE                | LG  | LZ   | S                    | Tap × Depth | K  | QK | H                | B                | T                 | Without brake | With brake |
|                 |                | 230           | 90010(H/T)-□S2 | 155.5 | 111.5 | 77.5 | 133.5      | 116   | 180.5 | 136.5 | 77.5 |    | 158.5          | 116                 | 70  | 165 | 110 <sup>h7</sup> | 130 | 145  | 6                    |             | 12 | 9  | 22 <sup>h8</sup> | M5 × 12L         | 45                |               |            |
| 400             | 90010(F/C)-□S2 |               |                |       |       |      |            |       | 74.5  | 118   |      |    |                |                     |     |     |                   |     |      |                      |             |    |    |                  |                  |                   |               |            |
|                 | 2K010(F/C)-□S2 | 163.5         | 119.5          | 82.5  | 141.5 | 140  | 188.5      | 144.5 | 82.5  | 166.5 | 140  | 80 | 233            | 114.3 <sup>h7</sup> | 176 | 200 | 3.2               | 18  | 13.5 | 35 <sup>h8</sup>     | M12 × 25L   | 55 | 50 | 30               | 10 <sup>h9</sup> | 8                 | 14            | 17.5       |
|                 | 3K010(F/C)-□S2 | 209.5         | 165.5          | 128.5 | 187.5 |      | 234.5      | 190.5 | 128.5 | 212.5 |      |    |                |                     |     |     |                   |     |      |                      |             |    |    |                  |                  |                   |               |            |



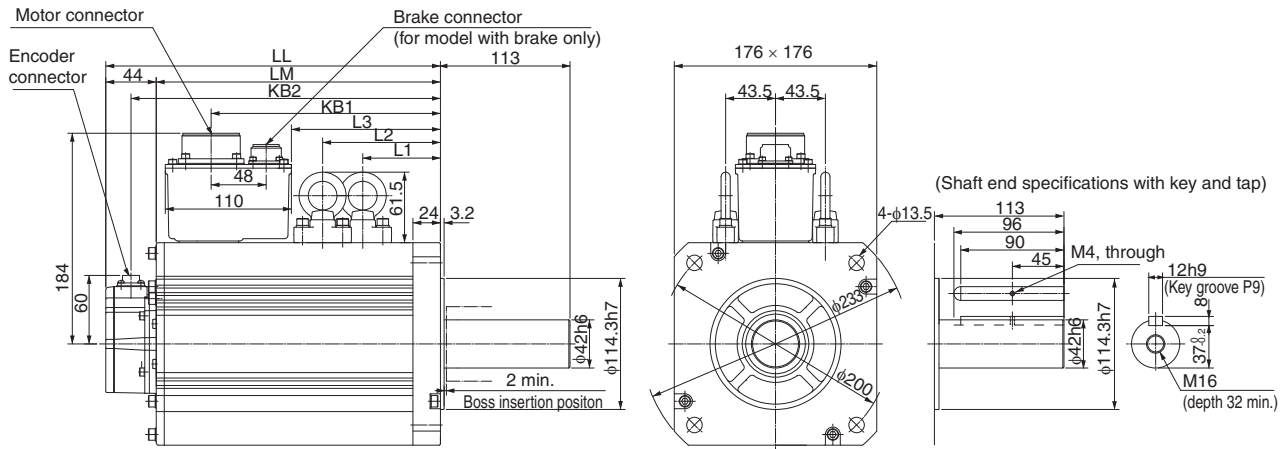
Type 1000 r/min motors (400 V, 4.5 kW)

| Dimensions (mm) |                       | Without brake |     |     |     |    |    | With brake |     |     |     |    |     | Approx. mass (kg) |            |
|-----------------|-----------------------|---------------|-----|-----|-----|----|----|------------|-----|-----|-----|----|-----|-------------------|------------|
| Voltage         | Model                 | LL            | LM  | KB1 | KB2 | L1 | L2 | LL         | LM  | KB1 | KB2 | L1 | L2  | Without brake     | With brake |
| 400             | R88M-K□<br>4K510C-□S2 | 266           | 222 | 185 | 244 | 98 | 98 | 291        | 247 | 185 | 269 | 98 | 133 | 29.4              | 33.3       |



Type 1000 r/min motors (400 V, 6 kW)

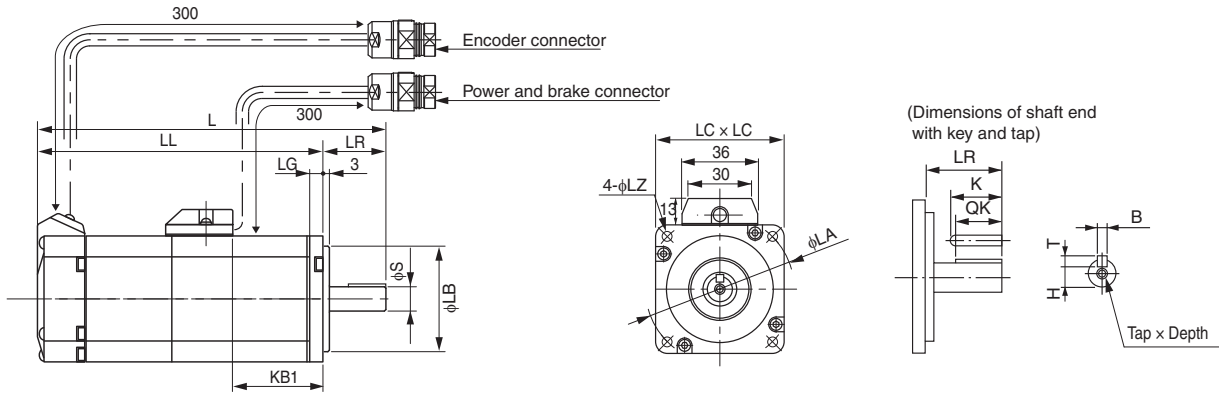
| Dimensions (mm) |                       | Without brake |     |     |     |       |       |     | With brake |     |     |     |       |       | Approx. mass (kg) |               |            |
|-----------------|-----------------------|---------------|-----|-----|-----|-------|-------|-----|------------|-----|-----|-----|-------|-------|-------------------|---------------|------------|
| Voltage         | Model                 | LL            | LM  | KB1 | KB2 | L1    | L2    | L3  | LL         | LM  | KB1 | KB2 | L1    | L2    | L3                | Without brake | With brake |
| 400             | R88M-K□<br>6K010C-□S2 | 312           | 268 | 219 | 290 | 117.5 | 117.5 | 149 | 337        | 293 | 253 | 315 | 117.5 | 152.5 | 183               | 36.4          | 40.4       |



High inertia servo motors

Type 3000 r/min motors (230 V, 200 W to 750 W)

| Dimensions (mm) |                  | Without brake |       | With brake |       | KB1  | LR | Flange surface |                  |    |     |     | Shaft end dimensions |             |    |      |      |                 | Approx. mass (kg) |               |            |
|-----------------|------------------|---------------|-------|------------|-------|------|----|----------------|------------------|----|-----|-----|----------------------|-------------|----|------|------|-----------------|-------------------|---------------|------------|
| Voltage         | Model            | L             | LL    | L          | LL    |      |    | LA             | LB               | LC | LG  | LZ  | S                    | Tap x Depth | K  | QK   | H    | B               | T                 | Without brake | With brake |
| 230             | R88M-KH□         |               |       |            |       |      |    |                |                  |    |     |     |                      |             |    |      |      |                 |                   |               |            |
|                 | 20030(H/T)-□S2-D | 129           | 99    | 165.5      | 135.5 | 42   | 30 | 70             | 50 <sup>h7</sup> | 60 | 6.5 | 4.5 | 11 <sup>h6</sup>     | M4x8L       | 20 | 18   | 8.5  | 4 <sup>h9</sup> | 4                 | 0.96          | 1.4        |
|                 | 40030(H/T)-□S2-D | 148.5         | 118.5 | 185        | 155   | 61.5 |    |                |                  |    |     |     | 14 <sup>h6</sup>     | M5x10L      | 25 | 22.5 | 11   | 5 <sup>h9</sup> | 5                 | 1.4           | 1.8        |
|                 | 75030(H/T)-□S2-D | 162.2         | 127.2 | 199.2      | 164.2 | 67.2 | 35 | 90             | 70 <sup>h7</sup> | 80 | 8   | 6   | 19 <sup>h6</sup>     | M5x10L      | 25 | 22   | 15.5 | 6 <sup>h9</sup> | 6                 | 2.5           | 3.3        |



Encoder connector wiring

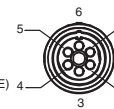


Cable length 300±30  
Connector optional  
Made by Hypertac  
SRUC-17G-MRWVN040 (MALE)

| Pin No.        | Signal             |
|----------------|--------------------|
| 1              | BAT - (0 V)        |
| 2              | BAT +              |
| 3              | S +                |
| 4              | S -                |
| 5 to 7         | Free               |
| 8              | ESV (power supply) |
| 9              | E0V (power supply) |
| 10 to 17       | Free               |
| Connector case | FG (Ground)        |

\*Note: Pins 1 and 2 used only for motors with ABS encoder.

Power and brake connector wiring



Cable length 300±30  
Connector optional  
Made by Hypertac  
SRUC-06J-MSCN236 (MALE)

| Pin No. | Output          |
|---------|-----------------|
| 1       | Phase U         |
| 2       | Phase V         |
| 3       | Phase W         |
| 4       | *Brake terminal |
| 5       | *Brake terminal |
| 6       | FG (ground)     |

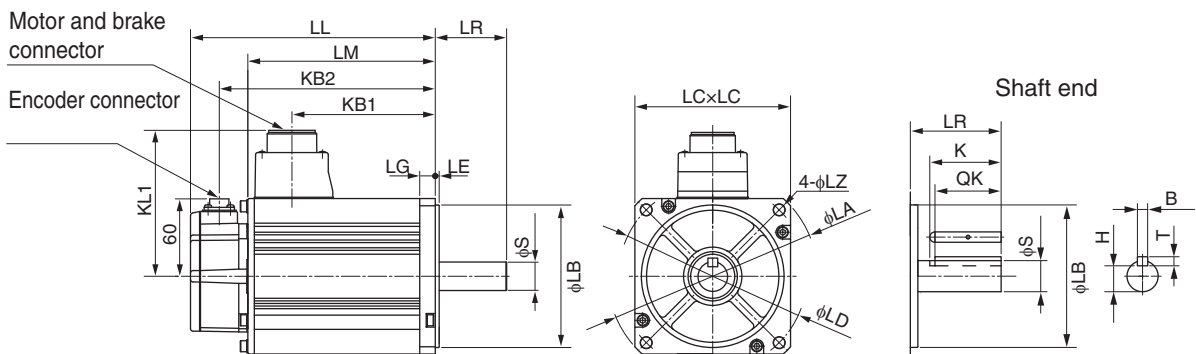
\*Note: Pins 4 and 5 used only for motors with brake.

Mating connector:  
Plug type: SPOC-06K-FSDN169 (FEMALE)

Mating connector:  
Plug type: SPOC-17H-FRON169 (FEMALE)

Type 2000 r/min motors (400 V, 1 kW to 5 kW)

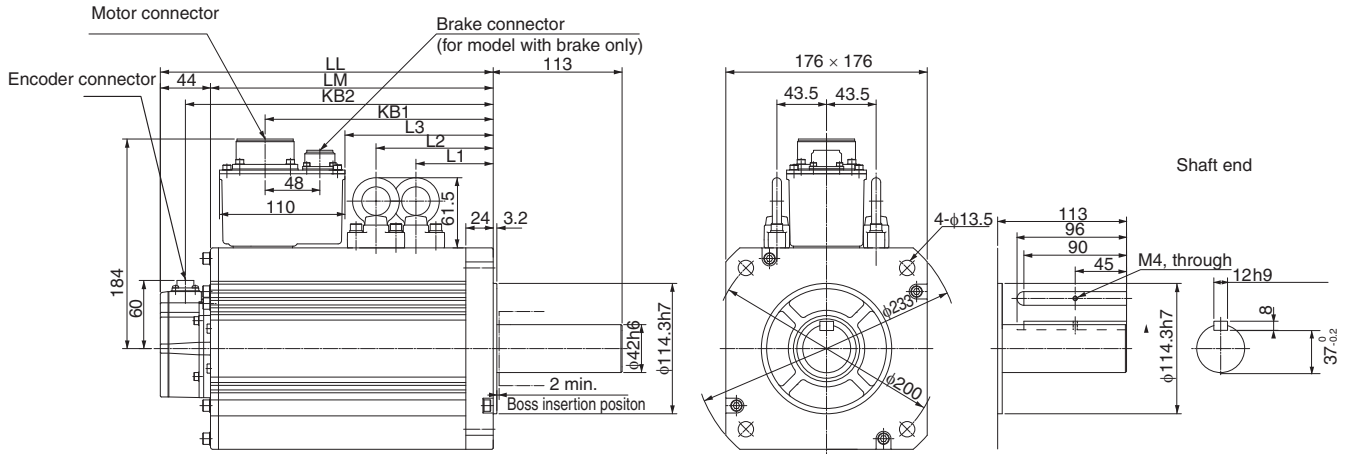
| Dimensions (mm) |                | Without brake |       |       | With brake |     |       | LR    | Flange surface |       |     |     |     |                     | Shaft end dimensions |     |     |    |      | Approx. mass (kg) |    |    |    |                  |   |               |            |  |  |
|-----------------|----------------|---------------|-------|-------|------------|-----|-------|-------|----------------|-------|-----|-----|-----|---------------------|----------------------|-----|-----|----|------|-------------------|----|----|----|------------------|---|---------------|------------|--|--|
| Voltage         | Model          | LL            | LM    | KB1   | KB2        | KL1 | LL    |       | LM             | KB1   | KB2 | KL1 | LA  | LB                  | LC                   | LD  | LE  | LG | LZ   | S                 | K  | QK | H  | B                | T | Without brake | With brake |  |  |
| 400             | R88M-KH□       |               |       |       |            |     |       |       |                |       |     |     |     |                     |                      |     |     |    |      |                   |    |    |    |                  |   |               |            |  |  |
|                 | 1K020(F/C)-□S1 | 173           | 129   | 95    | 151        | 116 | 201   | 157   | 92             | 179   | 118 | 70  | 165 | 110 <sup>h7</sup>   | 130                  | 145 | 6   | 12 | 9    | 22 <sup>h6</sup>  | 45 | 41 | 18 | 8 <sup>h9</sup>  | 7 | 6.7           | 8.1        |  |  |
|                 | 1K520(F/C)-□S1 | 190.5         | 146.5 | 112.5 | 168.5      |     | 218.5 | 174.5 | 109.5          | 196.5 |     |     |     |                     |                      |     |     |    |      |                   |    |    |    |                  |   |               |            |  |  |
|                 | 2K020(F/C)-□S1 | 177           | 133   | 96    | 155        | 140 | 206   | 162   | 96             | 184   | 140 | 80  | 233 | 114.3 <sup>h7</sup> | 176                  | 200 | 3.2 | 18 | 13.5 | 35 <sup>h6</sup>  | 55 | 50 | 30 | 10 <sup>h9</sup> | 8 | 12.2          | 15.5       |  |  |
|                 | 3K020(F/C)-□S1 | 196           | 152   | 115   | 174        |     | 225   | 181   | 115            | 203   |     |     |     |                     |                      |     |     |    |      |                   |    |    |    |                  |   |               |            |  |  |
|                 | 4K020(F/C)-□S1 | 209.5         | 165.5 | 128.5 | 187.5      |     | 238.5 | 194.5 | 128.5          | 216.5 |     |     |     |                     |                      |     |     |    |      |                   |    |    |    |                  |   |               |            |  |  |
|                 | 5K020(F/C)-□S1 | 238.5         | 194.5 | 157.5 | 216.5      |     | 267.5 | 223.5 | 157.5          | 245.5 |     |     |     |                     |                      |     |     |    |      |                   |    |    |    |                  |   |               |            |  |  |





Type 1500 r/min motors (400 V, 7.5 kW)

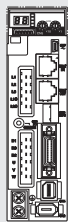
| Dimensions (mm) |            | Without brake |     |     |     |       |       |     | With brake |     |     |     |       |       |     | Approx. mass (kg) |            |
|-----------------|------------|---------------|-----|-----|-----|-------|-------|-----|------------|-----|-----|-----|-------|-------|-----|-------------------|------------|
| Voltage         | Model      | LL            | LM  | KB1 | KB2 | L1    | L2    | L3  | LL         | LM  | KB1 | KB2 | L1    | L2    | L3  | Without brake     | With brake |
|                 | R88M-KH□   |               |     |     |     |       |       |     |            |     |     |     |       |       |     |                   |            |
| 400             | 7K515C-□S1 | 357           | 313 | 264 | 335 | 146.5 | 146.5 | 194 | 382        | 338 | 298 | 360 | 146.5 | 181.5 | 228 | 42.3              | 46.2       |



Ordering information

(Refer to servo drive chapter)

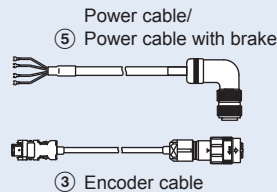
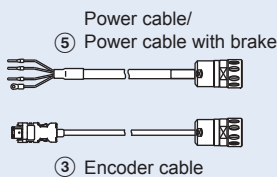
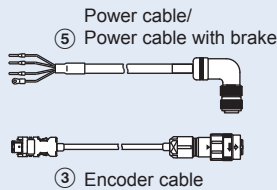
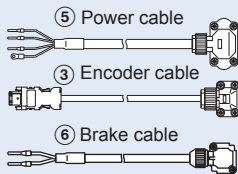
② Drive options



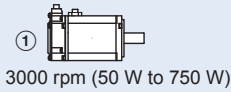
Accurax G5 servo drive  
EtherCAT, ML2 and  
Analogue/pulse models



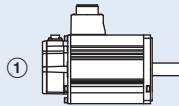
④ Extension cable for  
absolute encoder  
(with battery holder)



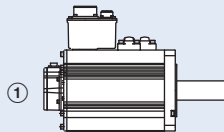
Standard servo motors



3000 rpm (50 W to 750 W)

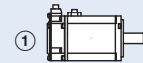


3000 rpm (750 W to 5 kW)  
2000 rpm (400 W to 5 kW)  
1000 rpm (900 W to 3 kW)

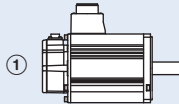


1500 rpm (7.5 kW to 15 kW)  
1000 rpm (4.5 kW to 6 kW)

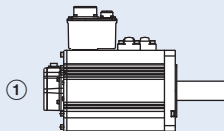
High inertia servo motors



3000 rpm (200 W to 750 W)



2000 rpm (1 kW to 5 kW)



1500 rpm (7.5 kW)

Note: The symbols ①②③... show the recommended sequence to select the servo motor and cables

Servo motor



① Select motor from R88M-K or R88M-KH families using motor tables in next pages.

Servo drive


② Refer to Accurax G5 servo drive chapter for detailed drive specifications and selection of drive accessories.

Standard servo motors


Servo motors 3000 r/min (50 to 5000 W)

| Symbol   | Specifications |  |  |               | Servo motor model | Compatible servo drives <sup>(2)</sup> |                  |              |            |
|--|----------------|--|--|---------------|-------------------|--|------------------|--------------|------------|
|  | Voltage        | Encoder and design   | Rated torque   | Capacity      |                   | G5 EtherCAT/ ML2                       | G5 Analog/pulse  |              |            |
| <p>①</p>  <p>230V (50 to 750 W)</p>  <p>230 V (1 kW to 1.5 kW)<br/>400 V (750 W to 5 kW)</p> | 230 V          | <b>Incremental encoder (20 bit)</b><br>Straight shaft with key and tap | Without brake  | 0.16 Nm       | 50 W              | R88M-K05030H-S2                        | R88D-KN01H-□     | R88D-KT01H   |            |
|  |                |  |  | 0.32 Nm       | 100 W             | R88M-K10030H-S2                        | R88D-KN01H-□     | R88D-KT01H   |            |
|  |                |  |  | 0.64 Nm       | 200 W             | R88M-K20030H-S2                        | R88D-KN02H-□     | R88D-KT02H   |            |
|  |                |  |  | 1.3 Nm        | 400 W             | R88M-K40030H-S2                        | R88D-KN04H-□     | R88D-KT04H   |            |
|  |                |  |  | 2.4 Nm        | 750 W             | R88M-K75030H-S2                        | R88D-KN08H-□     | R88D-KT08H   |            |
|  |                |  |  | 3.18 Nm       | 1000 W            | R88M-K1K030H-S2                        | R88D-KN15H-□     | R88D-KT15H   |            |
|  |                |  | 4.77 Nm  | 1500 W        | R88M-K1K530H-S2   | R88D-KN15H-□                           | R88D-KT15H       |              |            |
|  |                |  | With brake   | 0.16 Nm       | 50 W              | R88M-K05030H-BS2                       | R88D-KN01H-□     | R88D-KT01H   |            |
|  |                |  |  | 0.32 Nm       | 100 W             | R88M-K10030H-BS2                       | R88D-KN01H-□     | R88D-KT01H   |            |
|  |                |  |  | 0.64 Nm       | 200 W             | R88M-K20030H-BS2                       | R88D-KN02H-□     | R88D-KT02H   |            |
|  |                |  |  | 1.3 Nm        | 400 W             | R88M-K40030H-BS2                       | R88D-KN04H-□     | R88D-KT04H   |            |
|  |                |  |  | 2.4 Nm        | 750 W             | R88M-K75030H-BS2                       | R88D-KN08H-□     | R88D-KT08H   |            |
|  |                | 3.18 Nm  |  | 1000 W        | R88M-K1K030H-BS2  | R88D-KN15H-□                           | R88D-KT15H       |              |            |
|  |                | 400 V  | <b>Incremental encoder (20 bit)</b><br>Straight shaft with key and tap | Without brake | 2.39 Nm           | 750 W                                  | R88M-K75030F-S2  | R88D-KN10F-□ | R88D-KT10F |
|  |                |  |  |               | 3.18 Nm           | 1000 W                                 | R88M-K1K030F-S2  | R88D-KN15F-□ | R88D-KT15F |
|  |                |  |  |               | 4.77 Nm           | 1500 W                                 | R88M-K1K530F-S2  | R88D-KN15F-□ | R88D-KT15F |
|  |                |  |  |               | 6.37 Nm           | 2000 W                                 | R88M-K2K030F-S2  | R88D-KN20F-□ | R88D-KT20F |
|  |                |  |  |               | 9.55 Nm           | 3000 W                                 | R88M-K3K030F-S2  | R88D-KN30F-□ | R88D-KT30F |
|  |                |  |  |               | 12.7 Nm           | 4000 W                                 | R88M-K4K030F-S2  | R88D-KN50F-□ | R88D-KT50F |
|  |                |  |  | With brake    | 2.39 Nm           | 750 W                                  | R88M-K75030F-BS2 | R88D-KN10F-□ | R88D-KT10F |
|  |                |  |  |               | 3.18 Nm           | 1000 W                                 | R88M-K1K030F-BS2 | R88D-KN15F-□ | R88D-KT15F |
|  |                |  |  |               | 4.77 Nm           | 1500 W                                 | R88M-K1K530F-BS2 | R88D-KN15F-□ | R88D-KT15F |
|  |                |  |  |               | 6.37 Nm           | 2000 W                                 | R88M-K2K030F-BS2 | R88D-KN20F-□ | R88D-KT20F |
|  |                |  |  |               | 9.55 Nm           | 3000 W                                 | R88M-K3K030F-BS2 | R88D-KN30F-□ | R88D-KT30F |
|  | 12.7 Nm        |  |  |               | 4000 W            | R88M-K4K030F-BS2                       | R88D-KN50F-□     | R88D-KT50F   |            |
|  | 400 V          | <b>Absolute encoder (17 bit)</b><br>Straight shaft with key and tap    | Without brake  | 2.39 Nm       | 750 W             | R88M-K75030C-S2                        | R88D-KN10F-□     | R88D-KT10F   |            |
|  |                |  |  | 3.18 Nm       | 1000 W            | R88M-K1K030C-S2                        | R88D-KN15F-□     | R88D-KT15F   |            |
|  |                |  |  | 4.77 Nm       | 1500 W            | R88M-K1K530C-S2                        | R88D-KN15F-□     | R88D-KT15F   |            |
|  |                |  |  | 6.37 Nm       | 2000 W            | R88M-K2K030C-S2                        | R88D-KN20F-□     | R88D-KT20F   |            |
|  |                |  |  | 9.55 Nm       | 3000 W            | R88M-K3K030C-S2                        | R88D-KN30F-□     | R88D-KT30F   |            |
|  |                |  |  | 12.7 Nm       | 4000 W            | R88M-K4K030C-S2                        | R88D-KN50F-□     | R88D-KT50F   |            |
|  |                |  | With brake   | 2.39 Nm       | 750 W             | R88M-K75030C-BS2                       | R88D-KN10F-□     | R88D-KT10F   |            |
|  |                |  |  | 3.18 Nm       | 1000 W            | R88M-K1K030C-BS2                       | R88D-KN15F-□     | R88D-KT15F   |            |
|  |                |  |  | 4.77 Nm       | 1500 W            | R88M-K1K530C-BS2                       | R88D-KN15F-□     | R88D-KT15F   |            |
|  |                |  |  | 6.37 Nm       | 2000 W            | R88M-K2K030C-BS2                       | R88D-KN20F-□     | R88D-KT20F   |            |
|  |                |  |  | 9.55 Nm       | 3000 W            | R88M-K3K030C-BS2                       | R88D-KN30F-□     | R88D-KT30F   |            |
|  |                |  |  | 12.7 Nm       | 4000 W            | R88M-K4K030C-BS2                       | R88D-KN50F-□     | R88D-KT50F   |            |



Servo motors 2000 r/min (1 to 5 kW)

| Symbol  | Specifications   |   |  |   | Servo motor model | Compatible servo drives (2) |                 |                 |              |            |
|---|--|---|--|---|-------------------|-----------------------------|-----------------|-----------------|--------------|------------|
|   | Voltage  | Encoder and design  | Rated torque   | Capacity  |                   | G5 EtherCAT/ ML2            | G5 Analog/pulse |                 |              |            |
|  | 230 V  | Incremental encoder (20 bit)<br>Straight shaft with key and tap | Without brake  | 4.77 Nm   | 1000 W            | R88M-K1K020H-S2             | R88D-KN10H-□    | R88D-KT10H      |              |            |
|   |  |   |  | 7.16 Nm   | 1500 W            | R88M-K1K520H-S2             | R88D-KN15H-□    | R88D-KT15H      |              |            |
|   |  |   | With brake   | 4.77 Nm   | 1000 W            | R88M-K1K020H-BS2            | R88D-KN10H-□    | R88D-KT10H      |              |            |
|   |  |   |  | 7.16 Nm   | 1500 W            | R88M-K1K520H-BS2            | R88D-KN15H-□    | R88D-KT15H      |              |            |
|   |  |   | Absolute encoder (17 bit)<br>Straight shaft with key and tap | Without brake   | 4.77 Nm           | 1000 W                      | R88M-K1K020T-S2 | R88D-KN10H-□    | R88D-KT10H   |            |
|   |  |   |  |   | 7.16 Nm           | 1500 W                      | R88M-K1K520T-S2 | R88D-KN15H-□    | R88D-KT15H   |            |
|   |  | With brake  |  | 4.77 Nm   | 1000 W            | R88M-K1K020T-BS2            | R88D-KN10H-□    | R88D-KT10H      |              |            |
|   |  |   |  | 7.16 Nm   | 1500 W            | R88M-K1K520T-BS2            | R88D-KN15H-□    | R88D-KT15H      |              |            |
|   |  | 400 V   |  | Incremental encoder (20 bit)<br>Straight shaft with key and tap | Without brake     | 1.91 Nm                     | 400 W           | R88M-K40020F-S2 | R88D-KN06F-□ | R88D-KT06F |
|   |  |   |  |   |                   | 2.86 Nm                     | 600 W           | R88M-K60020F-S2 | R88D-KN06F-□ | R88D-KT06F |
|   |  |   | 4.77 Nm  |   |                   | 1000 W                      | R88M-K1K020F-S2 | R88D-KN10F-□    | R88D-KT10F   |            |
|   |  |   | 7.16 Nm  |   |                   | 1500 W                      | R88M-K1K520F-S2 | R88D-KN15F-□    | R88D-KT15F   |            |
|   | 9.55 Nm  |   | 2000 W   |   |                   | R88M-K2K020F-S2             | R88D-KN20F-□    | R88D-KT20F      |              |            |
|   | 14.3 Nm  |   | 3000 W   |   |                   | R88M-K3K020F-S2             | R88D-KN30F-□    | R88D-KT30F      |              |            |
|   | With brake   |   | 1.91 Nm  |   | 400 W             | R88M-K40020F-BS2            | R88D-KN06F-□    | R88D-KT06F      |              |            |
|   |  |   | 2.86 Nm  |   | 600 W             | R88M-K60020F-BS2            | R88D-KN06F-□    | R88D-KT06F      |              |            |
|   |  |   | 4.77 Nm  |   | 1000 W            | R88M-K1K020F-BS2            | R88D-KN10F-□    | R88D-KT10F      |              |            |
|   |  |   | 7.16 Nm  |   | 1500 W            | R88M-K1K520F-BS2            | R88D-KN15F-□    | R88D-KT15F      |              |            |
|   |  |   | 9.55 Nm  |   | 2000 W            | R88M-K2K020F-BS2            | R88D-KN20F-□    | R88D-KT20F      |              |            |
|   |  |   | 14.3 Nm  |   | 3000 W            | R88M-K3K020F-BS2            | R88D-KN30F-□    | R88D-KT30F      |              |            |
|   | Absolute encoder (17 bit)<br>Straight shaft with key and tap |   | Without brake  |   | 1.91 Nm           | 400 W                       | R88M-K40020C-S2 | R88D-KN06F-□    | R88D-KT06F   |            |
|   |  |   |  |   | 2.86 Nm           | 600 W                       | R88M-K60020C-S2 | R88D-KN06F-□    | R88D-KT06F   |            |
|   |  |   |  |   | 4.77 Nm           | 1000 W                      | R88M-K1K020C-S2 | R88D-KN10F-□    | R88D-KT10F   |            |
|   |  |   |  |   | 7.16 Nm           | 1500 W                      | R88M-K1K520C-S2 | R88D-KN15F-□    | R88D-KT15F   |            |
|   |  | 9.55 Nm   |  |   | 2000 W            | R88M-K2K020C-S2             | R88D-KN20F-□    | R88D-KT20F      |              |            |
|   |  | 14.3 Nm   |  |   | 3000 W            | R88M-K3K020C-S2             | R88D-KN30F-□    | R88D-KT30F      |              |            |
|   | With brake   | 1.91 Nm   | 400 W  | R88M-K40020C-BS2  | R88D-KN06F-□      | R88D-KT06F                  |                 |                 |              |            |
|   |  | 2.86 Nm   | 600 W  | R88M-K60020C-BS2  | R88D-KN06F-□      | R88D-KT06F                  |                 |                 |              |            |
| 4.77 Nm   |  | 1000 W  | R88M-K1K020C-BS2   | R88D-KN10F-□  | R88D-KT10F        |                             |                 |                 |              |            |
| 7.16 Nm   |  | 1500 W  | R88M-K1K520C-BS2   | R88D-KN15F-□  | R88D-KT15F        |                             |                 |                 |              |            |
| 9.55 Nm   |  | 2000 W  | R88M-K2K020C-BS2   | R88D-KN20F-□  | R88D-KT20F        |                             |                 |                 |              |            |
| 14.3 Nm   |  | 3000 W  | R88M-K3K020C-BS2   | R88D-KN30F-□  | R88D-KT30F        |                             |                 |                 |              |            |
|   |  |   | 19.1 Nm  | 4000 W  | R88M-K4K020C-BS2  | R88D-KN50F-□                | R88D-KT50F      |                 |              |            |
|   |  |   | 23.9 Nm  | 5000 W  | R88M-K5K020C-BS2  | R88D-KN50F-□                | R88D-KT50F      |                 |              |            |

Servo motors 1500 r/min (7.5 to 15 kW)


| Symbol  | Specifications |  |               |          | Servo motor model | Compatible servo drives (2) |                 |             |
|---|----------------|--|---------------|----------|-------------------|-----------------------------|-----------------|-------------|
|   | Voltage        | Encoder and design   | Rated torque  | Capacity |                   | G5 EtherCAT                 | G5 Analog/pulse |             |
|  | 400 V          | Absolute encoder (17 bit)<br>Straight shaft with key and tap | Without brake | 47.8 Nm  | 7500 W            | R88M-K7K515C-S2             | R88D-KN75F-ECT  | R88D-KT75F  |
|   |                |  |               | 70.0 Nm  | 11000 W           | R88M-K11K015C-S2            | R88D-KN150F-ECT | R88D-KT150F |
|   |                |  |               | 95.5 Nm  | 15000 W           | R88M-K15K015C-S2            | R88D-KN150F-ECT | R88D-KT150F |
|   |                |  | With brake    | 47.8 Nm  | 7500 W            | R88M-K7K515C-BS2            | R88D-KN75F-ECT  | R88D-KT75F  |
|   |                |  |               | 70.0 Nm  | 11000 W           | R88M-K11K015C-BS2           | R88D-KN150F-ECT | R88D-KT150F |
|   |                |  |               | 95.5 Nm  | 15000 W           | R88M-K15K015C-BS2           | R88D-KN150F-ECT | R88D-KT150F |

Servo motors 1000 r/min (900 to 6000 W)


| Symbol   | Specifications   |   |   |            | Servo motor model | Compatible servo drives (2) |                  |              |            |
|--|--|---|---|------------|-------------------|-----------------------------|------------------|--------------|------------|
|  | Voltage  | Encoder and design  | Rated torque  | Capacity   |                   | G5 EtherCAT/ML2             | G5 Analog/pulse  |              |            |
|  <p>900 W - 3 kW</p>  <p>4.5 kW - 6 kW</p> | 230 V  | Incremental encoder (20 bit)<br>Straight shaft with key and tap | No brake  | 8.59 Nm    | 900 W             | R88M-K90010H-S2             | R88D-KN15H-□     | R88D-KT15H   |            |
|  |  |   | With brake  | 8.59 Nm    | 900 W             | R88M-K90010H-BS2            | R88D-KN15H-□     | R88D-KT15H   |            |
|  |  |   | Absolute encoder (17 bit)<br>Straight shaft with key and tap    | No brake   | 8.59 Nm           | 900 W                       | R88M-K90010T-S2  | R88D-KN15H-□ | R88D-KT15H |
|  |  |   |   | With brake | 8.59 Nm           | 900 W                       | R88M-K90010T-BS2 | R88D-KN15H-□ | R88D-KT15H |
|  |  | 400 V   | Incremental encoder (20 bit)<br>Straight shaft with key and tap | No brake   | 8.59 Nm           | 900 W                       | R88M-K90010F-S2  | R88D-KN15F-□ | R88D-KT15F |
|  |  |   |   |            | 19.1 Nm           | 2000 W                      | R88M-K2K010F-S2  | R88D-KN30F-□ | R88D-KT30F |
|  |  |   |   | With brake | 8.59 Nm           | 900 W                       | R88M-K90010F-BS2 | R88D-KN15F-□ | R88D-KT15F |
|  |  |   |   |            | 19.1 Nm           | 2000 W                      | R88M-K2K010F-BS2 | R88D-KN30F-□ | R88D-KT30F |
|  | Absolute encoder (17 bit)<br>Straight shaft with key and tap | No brake  |   | 28.7 Nm    | 3000 W            | R88M-K3K010F-S2             | R88D-KN50F-□     | R88D-KT50F   |            |
|  |  |   |   | 8.59 Nm    | 900 W             | R88M-K90010C-S2             | R88D-KN15F-□     | R88D-KT15F   |            |
|  |  | With brake  |   | 19.1 Nm    | 2000 W            | R88M-K2K010C-S2             | R88D-KN30F-□     | R88D-KT30F   |            |
|  |  |   |   | 28.7 Nm    | 3000 W            | R88M-K3K010C-S2             | R88D-KN50F-□     | R88D-KT50F   |            |
|  | 400 V  | Absolute encoder (17 bit)<br>Straight shaft with key and tap    | No brake  | 43.0 Nm    | 4500 W            | R88M-K4K510C-S2             | R88D-KN50F-□     | R88D-KT50F   |            |
|  |  |   |   | 57.3 Nm    | 6000 W            | R88M-K6K010C-S2             | R88D-KN75F-ECT   | R88D-KT75F   |            |
|  |  |   |   | 8.59 Nm    | 900 W             | R88M-K90010C-BS2            | R88D-KN15F-□     | R88D-KT15F   |            |
|  |  |   |   | 19.1 Nm    | 2000 W            | R88M-K2K010C-BS2            | R88D-KN30F-□     | R88D-KT30F   |            |
| With brake   |  |   | 28.7 Nm   | 3000 W     | R88M-K3K010C-BS2  | R88D-KN50F-□                | R88D-KT50F       |              |            |
|  |  |   | 43.0 Nm   | 4500 W     | R88M-K4K510C-BS2  | R88D-KN50F-□                | R88D-KT50F       |              |            |
|  |  |   | 57.3 Nm   | 6000 W     | R88M-K6K010C-BS2  | R88D-KN75F-ECT              | R88D-KT75F       |              |            |
|  |  |   | 8.59 Nm   | 900 W      | R88M-K90010C-S2   | R88D-KN15F-□                | R88D-KT15F       |              |            |

High inertia servo motors


Servo motors 3000 r/min (200 to 750 W)

| Symbol  | Specifications |   |               |          | Servo motor model | Compatible servo drives (2) |                 |            |
|---|----------------|---|---------------|----------|-------------------|-----------------------------|-----------------|------------|
|   | Voltage        | Encoder and design  | Rated torque  | Capacity |                   | G5 EtherCAT/ ML2            | G5 Analog/pulse |            |
|  | 230 V          | Incremental encoder (20 bit)<br>Straight shaft with key and tap | Without brake | 0.64 Nm  | 200 W             | R88M-KH20030H-S2-D          | R88D-KN02H-□    | R88D-KT02H |
|   |                |   |               | 1.3 Nm   | 400 W             | R88M-KH40030H-S2-D          | R88D-KN04H-□    | R88D-KT04H |
|   |                |   |               | 2.4 Nm   | 750 W             | R88M-KH75030H-S2-D          | R88D-KN08H-□    | R88D-KT08H |
|   |                |   | With brake    | 0.64 Nm  | 200 W             | R88M-KH20030H-BS2-D         | R88D-KN02H-□    | R88D-KT02H |
|   |                |   |               | 1.3 Nm   | 400 W             | R88M-KH40030H-BS2-D         | R88D-KN04H-□    | R88D-KT04H |
|   |                |   |               | 2.4 Nm   | 750 W             | R88M-KH75030H-BS2-D         | R88D-KN08H-□    | R88D-KT08H |
|   |                | Absolute encoder (17 bit)<br>Straight shaft with key and tap    | Without brake | 0.64 Nm  | 200 W             | R88M-KH20030T-S2-D          | R88D-KN02H-□    | R88D-KT02H |
|   |                |   |               | 1.3 Nm   | 400 W             | R88M-KH40030T-S2-D          | R88D-KN04H-□    | R88D-KT04H |
|   |                |   |               | 2.4 Nm   | 750 W             | R88M-KH75030T-S2-D          | R88D-KN08H-□    | R88D-KT08H |
|   |                |   | With brake    | 0.64 Nm  | 200 W             | R88M-KH20030T-BS2-D         | R88D-KN02H-□    | R88D-KT02H |
|   |                |   |               | 1.3 Nm   | 400 W             | R88M-KH40030T-BS2-D         | R88D-KN04H-□    | R88D-KT04H |
|   |                |   |               | 2.4 Nm   | 750 W             | R88M-KH75030T-BS2-D         | R88D-KN08H-□    | R88D-KT08H |

Servo motors 2000 r/min (1 to 5 kW)


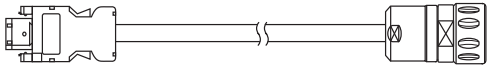

| Symbol  | Specifications |  |               |          | Servo motor model | Compatible servo drives (2) |                 |            |
|---|----------------|--|---------------|----------|-------------------|-----------------------------|-----------------|------------|
|   | Voltage        | Encoder and design                                 | Rated torque  | Capacity |                   | G5 EtherCAT/ML2             | G5 Analog/pulse |            |
|  | 400 V          | Incremental encoder (20 bit)<br>Shaft end with key | Without brake | 4.77 Nm  | 1000 W            | R88M-KH1K020F-S1            | R88D-KN10F-□    | R88D-KT10F |
|   |                |  |               | 7.16 Nm  | 1500 W            | R88M-KH1K520F-S1            | R88D-KN15F-□    | R88D-KT15F |
|   |                |  |               | 9.55 Nm  | 2000 W            | R88M-KH2K020F-S1            | R88D-KN20F-□    | R88D-KT20F |
|   |                |  |               | 14.3 Nm  | 3000 W            | R88M-KH3K020F-S1            | R88D-KN30F-□    | R88D-KT30F |
|   |                |  |               | 19.1 Nm  | 4000 W            | R88M-KH4K020F-S1            | R88D-KN50F-□    | R88D-KT50F |
|   |                |  |               | 23.9 Nm  | 5000 W            | R88M-KH5K020F-S1            | R88D-KN50F-□    | R88D-KT50F |
|   |                |  | With brake    | 4.77 Nm  | 1000 W            | R88M-KH1K020F-BS1           | R88D-KN10F-□    | R88D-KT10F |
|   |                |  |               | 7.16 Nm  | 1500 W            | R88M-KH1K520F-BS1           | R88D-KN15F-□    | R88D-KT15F |
|   |                |  |               | 9.55 Nm  | 2000 W            | R88M-KH2K020F-BS1           | R88D-KN20F-□    | R88D-KT20F |
|   |                |  |               | 14.3 Nm  | 3000 W            | R88M-KH3K020F-BS1           | R88D-KN30F-□    | R88D-KT30F |
|   |                |  |               | 19.1 Nm  | 4000 W            | R88M-KH4K020F-BS1           | R88D-KN50F-□    | R88D-KT50F |
|   |                |  |               | 23.9 Nm  | 5000 W            | R88M-KH5K020F-BS1           | R88D-KN50F-□    | R88D-KT50F |
|   |                | Absolute encoder (17 bit)<br>Shaft end with key    | Without brake | 4.77 Nm  | 1000 W            | R88M-KH1K020C-S1            | R88D-KN10F-□    | R88D-KT10F |
|   |                |  |               | 7.16 Nm  | 1500 W            | R88M-KH1K520C-S1            | R88D-KN15F-□    | R88D-KT15F |
|   |                |  |               | 9.55 Nm  | 2000 W            | R88M-KH2K020C-S1            | R88D-KN20F-□    | R88D-KT20F |
|   |                |  |               | 14.3 Nm  | 3000 W            | R88M-KH3K020C-S1            | R88D-KN30F-□    | R88D-KT30F |
|   |                |  |               | 19.1 Nm  | 4000 W            | R88M-KH4K020C-S1            | R88D-KN50F-□    | R88D-KT50F |
|   |                |  |               | 23.9 Nm  | 5000 W            | R88M-KH5K020C-S1            | R88D-KN50F-□    | R88D-KT50F |
|   |                |  | With brake    | 4.77 Nm  | 1000 W            | R88M-KH1K020C-BS1           | R88D-KN10F-□    | R88D-KT10F |
|   |                |  |               | 7.16 Nm  | 1500 W            | R88M-KH1K520C-BS1           | R88D-KN15F-□    | R88D-KT15F |
|   |                |  |               | 9.55 Nm  | 2000 W            | R88M-KH2K020C-BS1           | R88D-KN20F-□    | R88D-KT20F |
|   |                |  |               | 14.3 Nm  | 3000 W            | R88M-KH3K020C-BS1           | R88D-KN30F-□    | R88D-KT30F |
|   |                |  |               | 19.1 Nm  | 4000 W            | R88M-KH4K020C-BS1           | R88D-KN50F-□    | R88D-KT50F |
|   |                |  |               | 23.9 Nm  | 5000 W            | R88M-KH5K020C-BS1           | R88D-KN50F-□    | R88D-KT50F |

Servo motors 1500 r/min (7.5 kW)

| Symbol  | Specifications |   |               |              | Servo motor model | Compatible servo drives (2) |                |                 |
|---|----------------|---|---------------|--------------|-------------------|-----------------------------|----------------|-----------------|
|   | Voltage        | Encoder and design                              |               | Rated torque |                   | Capacity                    | G5 EtherCAT    | G5 Analog/pulse |
|  | 400 V          | Absolute encoder (17 bit)<br>Shaft end with key | Without brake | 47.8 Nm      | 7500 W            | R88M-KH7K515C-S1            | R88D-KN75F-ECT | R88D-KT75F      |
|   |                |   | With brake    | 47.8 Nm      | 7500 W            | R88M-KH7K515C-BS1           | R88D-KN75F-ECT | R88D-KT75F      |

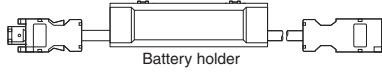
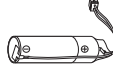
Encoder cables

For absolute and incremental encoders

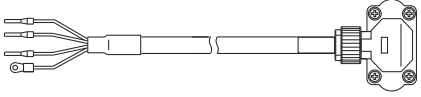
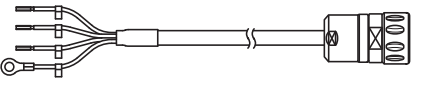
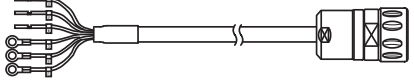
| Symbol | Specifications  | Model                    | Appearance   |
|--------|---|--------------------------|--|
| ③      | Encoder cable for servomotors<br>R88M-K(050/100/200/400/750)30(H/T)□  | 1.5 m R88A-CRKA001-5CR-E |  |
|        |   | 3 m R88A-CRKA003CR-E     |  |
|        |   | 5 m R88A-CRKA005CR-E     |  |
|        |   | 10 m R88A-CRKA010CR-E    |  |
|        |   | 15 m R88A-CRKA015CR-E    |  |
|        | Encoder cable for servomotors<br>R88M-KH(200/400/750)30(H/T)□   | 3 m R88A-CRWA003C-DE     |  |
|        |   | 5 m R88A-CRWA005C-DE     |  |
|        |   | 10 m R88A-CRWA010C-DE    |  |
|        |   | 15 m R88A-CRWA015C-DE    |  |
|        | Encoder cable for servomotors<br>R88M-K(1K0/1K5)30(H/T)□<br>R88M-K(750/1K0/1K5/2K0/3K0/4K0/5K0)30(F/C)□<br>R88M-K(400/600/1K0/1K5/2K0/3K0/4K0/5K0)20□<br>R88M-K(7K5/11K0/15K0)15□<br>R88M-K(900/2K0/3K0/4K5/6K0)10□<br>R88M-KH(1K0/1K5/2K0/3K0/4K0/5K0)20(F/C)□<br>R88M-KH7K515C□ | 1.5 m R88A-CRKC001-5NR-E |  |
|        |   | 3 m R88A-CRKC003NR-E     |  |
|        |   | 5 m R88A-CRKC005NR-E     |  |
|        |   | 10 m R88A-CRKC010NR-E    |  |
|        |   | 15 m R88A-CRKC015NR-E    |  |
|        |   | 20 m R88A-CRKC020NR-E    |  |

**Note:** For servomotors fitted with an absolute encoder you have to add the extension battery cable R88A-CRGD0R3C□ (see below) or connect a backup battery in the CN1 I/O connector.

Absolute encoder battery cable (encoder extension cable only)

| Symbol | Specifications                                  | Model                                      | Appearance  |
|--------|---|--|---|
| ④      | Absolute encoder battery cable                  | Battery not included 0.3 m R88A-CRGD0R3C-E |  |
|        |   | Battery included 0.3 m R88A-CRGD0R3C-BS-E  |   |
|        | Absolute encoder backup battery 2,000 mA.h 3.6V | - R88A-BAT01G                              |  |

Power cables

| Symbol | Specifications  | Model                            | Appearance               |   |
|--------|---|----------------------------------|--------------------------|---|
| ⑤      | For 200 V servomotors<br>R88M-K(050/100/200/400/750)30(H/T)-□□S2<br><b>Note:</b> for servomotors with brake R88M-K(050/100/200/400/750)30(H/T)-BS2, the separate brake cable R88A-CAKA□□□BR-E is needed | Power cable only (without brake) | 1.5 m R88A-CAKA001-5SR-E |  |
|        |   | 3 m R88A-CAKA003SR-E             |                          |   |
|        |   | 5 m R88A-CAKA005SR-E             |                          |   |
|        |   | 10 m R88A-CAKA010SR-E            |                          |   |
|        |   | 15 m R88A-CAKA015SR-E            |                          |   |
|        | For 200 V servomotors<br>R88M-KH(200/400/750)30(H/T)-□□S2   | without brake                    | 3 m R88A-CAWA003S-DE     |  |
|        |   |                                  | 5 m R88A-CAWA005S-DE     |   |
|        |   |                                  | 10 m R88A-CAWA010S-DE    |   |
|        |   |                                  | 15 m R88A-CAWA015S-DE    |   |
|        |   |                                  | 20 m R88A-CAWA020S-DE    |   |
|        |   | with brake                       | 3 m R88A-CAWA003B-DE     |  |
|        |   |                                  | 5 m R88A-CAWA005B-DE     |   |
|        |   |                                  | 10 m R88A-CAWA010B-DE    |   |
|        |   |                                  | 15 m R88A-CAWA015B-DE    |   |
|        |   |                                  | 20 m R88A-CAWA020B-DE    |   |

| Symbol   | Specifications   |                  | Model              | Appearance         |  |
|--|--|------------------|--------------------|--------------------|--|
| ⑤  | For 200 V servomotors<br>R88M-K(1K0/1K5)30(H/T)-□□S2<br>R88M-K(1K0/1K5)20(H/T)-□□S2<br>R88M-K90010(H/T)-□□S2   | without<br>brake | 1.5 m              | R88A-CAGB001-5SR-E |  |
|  |  |                  | 3 m                | R88A-CAGB003SR-E   |  |
|  |  |                  | 5 m                | R88A-CAGB005SR-E   |  |
|  |  |                  | 10 m               | R88A-CAGB010SR-E   |  |
|  |  |                  | 15 m               | R88A-CAGB015SR-E   |  |
|  |  | 20 m             | R88A-CAGB020SR-E   |                    |  |
|  |  | with<br>brake    | 1.5 m              | R88A-CAGB001-5BR-E |  |
|  |  |                  | 3 m                | R88A-CAGB003BR-E   |  |
|  |  |                  | 5 m                | R88A-CAGB005BR-E   |  |
|  |  |                  | 10 m               | R88A-CAGB010BR-E   |  |
|  | 15 m   |                  | R88A-CAGB015BR-E   |                    |  |
|  | For 400 V servomotors<br>R88M-K(750/1K0/1K5/2K0)30(F/C)-□□S2<br>R88M-K(400/600/1K0/1K5/2K0)20(F/C)-□□S2<br>R88M-K90010(F/C)-□□S2<br>R88M-KH(1K0/1K5)20(F/C)-□□S1 | without<br>brake | 1.5 m              | R88A-CAGB001-5SR-E |  |
|  |  |                  | 3 m                | R88A-CAGB003SR-E   |  |
|  |  |                  | 5 m                | R88A-CAGB005SR-E   |  |
|  |  |                  | 10 m               | R88A-CAGB010SR-E   |  |
|  |  |                  | 15 m               | R88A-CAGB015SR-E   |  |
|  |  | 20 m             | R88A-CAGB020SR-E   |                    |  |
|  |  | with<br>brake    | 1.5 m              | R88A-CAKF001-5BR-E |  |
|  |  |                  | 3 m                | R88A-CAKF003BR-E   |  |
|  |  |                  | 5 m                | R88A-CAKF005BR-E   |  |
| 10 m   |  |                  | R88A-CAKF010BR-E   |                    |  |
| 15 m   | R88A-CAKF015BR-E   |                  |                    |                    |  |
| For 400 V servomotors<br>R88M-KH2K020(F/C)-□□S1  | without<br>brake   | 1.5 m            | R88A-CAKC001-5SR-E |                    |  |
|  |  | 3 m              | R88A-CAKC003SR-E   |                    |  |
|  |  | 5 m              | R88A-CAKC005SR-E   |                    |  |
|  |  | 10 m             | R88A-CAKC010SR-E   |                    |  |
|  |  | 15 m             | R88A-CAKC015SR-E   |                    |  |
|  | 20 m   | R88A-CAKC020SR-E |                    |                    |  |
|  | with<br>brake  | 1.5 m            | R88A-CAKF001-5BR-E |                    |  |
|  |  | 3 m              | R88A-CAKF003BR-E   |                    |  |
|  |  | 5 m              | R88A-CAKF005BR-E   |                    |  |
|  |  | 10 m             | R88A-CAKF010BR-E   |                    |  |
| 15 m   |  | R88A-CAKF015BR-E |                    |                    |  |
| For 400 V servomotors<br>R88M-K(3K0/4K0/5K0)30(F/C)-□□S2<br>R88M-K(3K0/4K0/5K0)20(F/C)-□□S2<br>R88M-K(2K0/3K0)10(F/C)-□□S2<br>R88M-K4K510C-□□S2<br>R88M-KH(3K0/4K0/5K0)20(F/C)-□□S1  | without<br>brake   | 1.5 m            | R88A-CAGD001-5SR-E |                    |  |
|  |  | 3 m              | R88A-CAGD003SR-E   |                    |  |
|  |  | 5 m              | R88A-CAGD005SR-E   |                    |  |
|  |  | 10 m             | R88A-CAGD010SR-E   |                    |  |
|  |  | 15 m             | R88A-CAGD015SR-E   |                    |  |
|  | 20 m   | R88A-CAGD020SR-E |                    |                    |  |
|  | with<br>brake  | 1.5 m            | R88A-CAGD001-5BR-E |                    |  |
|  |  | 3 m              | R88A-CAGD003BR-E   |                    |  |
|  |  | 5 m              | R88A-CAGD005BR-E   |                    |  |
|  |  | 10 m             | R88A-CAGD010BR-E   |                    |  |
| 15 m   |  | R88A-CAGD015BR-E |                    |                    |  |
| For 400 V servomotors<br>R88M-K6K010C-□□S2<br>R88M-K7K515C-□□S2<br>R88M-KH7K515C-□□S1<br><b>Note:</b> for servomotors with brake R88M-K(6K010/7K515)C-BS2 and R88M-KH7K515C-BS1 the separate brake cable R88A-CAGE□□BR-E is needed | Power<br>cable<br>only<br>(without<br>brake)   | 1.5 m            | R88A-CAKE001-5SR-E |                    |  |
|  |  | 3 m              | R88A-CAKE003SR-E   |                    |  |
|  |  | 5 m              | R88A-CAKE005SR-E   |                    |  |
|  |  | 10 m             | R88A-CAKE010SR-E   |                    |  |
|  |  | 15 m             | R88A-CAKE015SR-E   |                    |  |
|  |  | 20 m             | R88A-CAKE020SR-E   |                    |  |
| For 400 V servomotors<br>R88M-K(11K0/15K0)15C-□□S2<br><b>Note:</b> for servomotors with brake R88M-K(11K0/15K0)15C-BS2, the separate brake cable R88A-CAGE□□BR-E is needed   | Power<br>cable<br>only<br>(without<br>brake)   | 1.5 m            | R88A-CAKG001-5SR-E |                    |  |
|  |  | 3 m              | R88A-CAKG003SR-E   |                    |  |
|  |  | 5 m              | R88A-CAKG005SR-E   |                    |  |
|  |  | 10 m             | R88A-CAKG010SR-E   |                    |  |
|  |  | 15 m             | R88A-CAKG015SR-E   |                    |  |
|  |  | 20 m             | R88A-CAKG020SR-E   |                    |  |

**Brake cables (for 200 V 50 to 750 W servo motors and 400 V 6 to 15 kW servo motors)**

| Symbol | Specifications  | Model | Appearance         |  |
|--------|---|-------|--------------------|--|
| ⑥      | Brake cable only.<br>For 200 V servo motors with brake<br>R88M-K(050/100/200/400/750)30(H/T)-BS2                                | 1.5 m | R88A-CAKA001-5BR-E |  |
|        |   | 3 m   | R88A-CAKA003BR-E   |  |
|        |   | 5 m   | R88A-CAKA005BR-E   |  |
|        |   | 10 m  | R88A-CAKA010BR-E   |  |
|        |   | 15 m  | R88A-CAKA015BR-E   |  |
|        | Brake cable only.<br>For 400 V servo motors with brake<br>R88M-K6K010C-BS2<br>R88M-K(7K5/11K0/15K0)15C-BS2<br>R88M-KH7K515C-BS1 | 1.5 m | R88A-CAGE001-5BR-E |  |
|        |   | 3 m   | R88A-CAGE003BR-E   |  |
|        |   | 5 m   | R88A-CAGE005BR-E   |  |
|        |   | 10 m  | R88A-CAGE010BR-E   |  |
|        |   | 15 m  | R88A-CAGE015BR-E   |  |
| 20 m   | R88A-CAGE020BR-E  |       |                    |  |



Connectors for encoder, power and brake cables

| Specifications                                 |  | Applicable Servomotor                       | Model            |
|--|--|---|------------------|
| Connectors for making encoder cables           | Drive side (CN2)                                   | All models                                  | R88A-CNW01R      |
|  | Motor side   | R88M-K(050/100/200/400/750)30(H/T)□         | R88A-CNK02R      |
|  | Motor side   | R88M-KH(200/400/750)□                       | SPOC-17H-FRON169 |
|  | Motor side   | R88M-K(1K0/1K5)30(H/T)□                     | R88A-CNK04R      |
|  |  | R88M-K(750/1K0/1K5/2K0/3K0/4K0/5K0)30(F/C)□ |                  |
| R88M-K(400/600/1K0/1K5/2K0/3K0/4K0/5K0)20□     |  |   |                  |
| R88M-K(900/2K0/3K0)10□                         |  |   |                  |
| Connectors for making power cables             | Motor side   | R88M-K(050/100/200/400/750)30(H/T)□         | R88A-CNK11A      |
|  | Motor side   | R88M-KH(200/400/750)30(H/T)□                | SPOC-06K-FSDN169 |
|  | Motor side   | R88M-K(1K0/1K5)30(H/T)-S2                   | MS3108E20-4S     |
|  |  | R88M-K(1K0/1K5)20(H/T)-S2                   |                  |
|  |  | R88M-K90010(H/T)-S2                         |                  |
|  |  | R88M-K(750/1K0/1K5/2K0)30(F/C)-S2,          |                  |
|  |  | R88M-K(400/600/1K0/1K5/2K0)20(F/C)-S2       |                  |
|  |  | R88M-K90010(F/C)-S2                         |                  |
|  | Motor side   | R88M-KH(1K0/1K5)20(F/C)-S1                  | MS3108E20-18S    |
|  | Motor side   | R88M-K(1K0/1K5)30(H/T)-BS2                  | MS3108E24-11S    |
|  |  | R88M-K(1K0/1K5)20(H/T)-BS2                  |                  |
| R88M-K90010(H/T)-BS2                           |  |   |                  |
| R88M-K(750/1K0/1K5/2K0/3K0/4K0/5K0)30(F/C)-BS2 |  |   |                  |
| Motor side                                     | R88M-K(400/600/1K0/1K5/2K0/3K0/4K0/5K0)20(F/C)-BS2 | MS3108E22-22S                               |                  |
|  | R88M-K(900/2K0/3K0)10(F/C)-BS2                     |   |                  |
|  | R88M-K4K510C-BS2                                   |   |                  |
|  | R88M-KH(1K0/1K5/2K0/3K0/4K0/5K0)20(F/C)-BS1        |   |                  |
|  | R88M-K(3K0/4K0/5K0)30(F/C)-S2                      |   |                  |
| Motor side                                     | R88M-K(3K0/4K0/5K0)20(F/C)-S2                      | MS3108E32-17S                               |                  |
|  | R88M-K(2K0/3K0)10(F/C)-S2                          |   |                  |
|  | R88M-K4K510C-S2                                    |   |                  |
|  | R88M-KH(2K0/3K0/4K0/5K0)20(F/C)-S1                 |   |                  |
| Connector for brake cable                      | Motor side   | R88M-K(050/100/200/400/750)30(H/T)-BS2      | R88A-CNK11B      |
|  | Motor side   | R88M-K6K010C-BS2                            | MS3108E14S-2S    |
|  |  | R88M-K(7K5/11K0/15K0)15C-BS2                |                  |
|  |  | R88M-KH7K515C-BS1                           |                  |

- Note:** 1. All cables listed are flexible and shielded (except the R88A-CAKA□□□-BR-E which is only a flexible cable).  
 2. All connectors and cables listed have IP67 class (except R88A-CNW01R connector and R88A-CRGD0R3C cable).

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.  
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А