

# Speed Control Systems Selection Guide

There are many different characteristics and functions to consider when selecting a speed control system.

## ■ Selection by Speed Control Range

The speed control ranges shown below are for motors only. When adding a gearhead, refer to the page number for the appropriate series as indicated below.

| Model                      |                   | Page                | Speed Control Range |                         |                |                                  |
|----------------------------|-------------------|---------------------|---------------------|-------------------------|----------------|----------------------------------|
| Brushless DC Motor Systems | AC Power Input    | <b>BX</b> Series    | B-10                | (3 r/min)* 30 r/min<br> | 3000 r/min     | 30~3000 r/min<br>(3~3000 r/min)* |
|                            |                   | <b>FBLII</b> Series | B-34                |                         | 3000 r/min     | 300~3000 r/min                   |
|                            |                   | <b>AXU</b> Series   | B-46                |                         | 2000 r/min     | 100~2000 r/min                   |
| DC Power Input             | <b>AXH</b> Series | B-58                |                     | 3000 r/min              | 100~3000 r/min |                                  |
|                            | AC Motor Systems  | AC Power Input      | <b>BHF</b> Series   | B-70                    |                | 2400 r/min                       |
| <b>ES01/ES02</b>           |                   |                     | B-86                |                         | 1600 r/min     | 90~1600 r/min (60 Hz)            |
| <b>US</b> Series           |                   |                     | B-116               |                         |                | 90~1400 r/min (50 Hz)            |

\* With the **BX** Series and **OPX-1A** (sold separately), speed range increases to 3~3000 r/min.

## ■ Selection by Speed Setting

| Model                      |                   | Setting Method      | Potentiometer Control | External DC Voltage | Digital Control |
|----------------------------|-------------------|---------------------|-----------------------|---------------------|-----------------|
| Brushless DC Motor Systems | AC Power Input    | <b>BX</b> Series    | ●                     | ●                   | ●*              |
|                            |                   | <b>FBLII</b> Series | ●                     | ●                   |                 |
|                            |                   | <b>AXU</b> Series   | ●                     |                     |                 |
| DC Power Input             | <b>AXH</b> Series |                     | ●                     | ●                   |                 |
|                            | AC Motor Systems  | AC Power Input      | <b>BHF</b> Series     | ●                   | ●               |
| <b>ES01/ES02</b>           |                   |                     | ●                     |                     |                 |
| <b>US</b> Series           |                   |                     | ●                     |                     |                 |

\* **OPX-1A** is required.

## ■ Speed Control System Function Comparison

|  |                               | Series   | Page   | Slow Start/<br>Slow Down | Instantaneous<br>Stop | Electronic<br>Input<br>Control | Alarm<br>Output | Multiple<br>Speed<br>Operation | Load<br>Holding | Torque<br>Limiting | Digital<br>Speed<br>Indicator | Safety<br>Standards |
|--|-------------------------------|--|--|--------------------------|-----------------------|--------------------------------|-----------------|--------------------------------|-----------------|--------------------|-------------------------------|---------------------|
| Brushless DC Motor Systems   | AC Power Input                | <b>BX</b> Series<br>(Single-Phase 100-115 VAC, Single-Phase 200-230 VAC, Three-Phase 200-230 VAC)    | B-10   | ●                        | ●                     | ●                              | ●               | 8-speed*1                      | ●               | ●*1                | ▲*1                           | ●                   |
|  |                               | <b>FBLII</b> Series<br>(Single-Phase 100-115 VAC, Single-Phase 200-230 VAC, Three-Phase 200-230 VAC) | B-34   | ●                        | ●                     | ●                              | ●               | 2-speed*2                      |                 |                    | OP                            | ●                   |
|  |                               | <b>AXU</b> Series<br>(Single-Phase 100-115 VAC, Single-Phase 200-230 VAC, Three-Phase 200-230 VAC)   | B-46   | ●                        | ●                     | ●                              | ●               |                                |                 |                    | OP                            | ●                   |
| DC Power Input   | <b>AXH</b> Series<br>(24 VDC) |  | B-58   |                          | ●                     | ●                              | ●               | 2-speed*2                      |                 |                    | OP                            | ●                   |
|  | AC Motor Systems              | AC Power Input   | <b>BHF</b> Series<br>(Single-Phase 100-115 VAC, Single-Phase 200-230 VAC, Three-Phase 200-230 VAC) | B-70                     | ●                     | ●*3                            | ●               | ●                              | 2-speed*2       | ●                  |                               | OP                  |
| <b>ES01/ES02</b><br>(Single-Phase 100-115 VAC, Single-Phase 200-230 VAC) |                               |  | B-86   | ●                        | ●                     |                                |                 | 2-speed*2                      |                 |                    | OP                            | ●                   |
| <b>US</b> Series<br>(Single-Phase 110-115 VAC, Single-Phase 220-230 VAC) |                               |  | B-116  |                          |                       |                                |                 |                                |                 |                    | OP                            | ●                   |

\*1 Possible when used with the **OPX-1A** (sold separately).

\*2 Possible by switching between the internal/external potentiometer.

\*3 No instantaneous stop function, however possible to stop within 0.1 second by speed setting.

OP: Possible by using with Motor Speed Indicator, **SDM496** (sold separately).