# ORDERING INFORMATION

**Model : PRP** 

| PLEASE FILL IN THIS SECTION | FACTORY USE ONLY |                             |  |
|-----------------------------|------------------|-----------------------------|--|
| ¥ ¥ ¥                       | <b>↓ ↓ ↓</b>     | <u> </u>                    |  |
| Model                       | Job No.          | Approved by (Sales office)  |  |
| Company                     | Ser No. –        | Issued by<br>(Sales office) |  |
| Name                        | Sales            |                             |  |
| P/0 No.                     |                  | -                           |  |

# Specify the items you want to change. Default setting will be used if not specified.

DEFAULT shows values in case of nothing specified.

| ITFM | (2) There is no need of this                                                         |  |  |
|------|--------------------------------------------------------------------------------------|--|--|
|      | (1) Fill in the sections enclosed with bold lines or mark $\Box$ with $\checkmark$ . |  |  |

# HARDWARE SETTING Adjusted with switches behind the cover

| ACTION                            | Direct Dreverse                     | Reverse | The output stem turns CCW when the input signal decreases. |
|-----------------------------------|-------------------------------------|---------|------------------------------------------------------------|
| ABNORMALLY LOW<br>INPUT OPERATION | □ Stop □ Full-open<br>□ Full-closed | Stop    |                                                            |

# HARDWARE OR SOFTWARE SETTING Adjusted with switches behind the cover or with Programming Unit

| OUTPUT STEM POSITIONS<br>AT FULL-CLOSED -5 - +50° | □ Full-closed (0°)<br>□ ° | Full-closed (0°) | Stem position at full-closed.            |
|---------------------------------------------------|---------------------------|------------------|------------------------------------------|
| OUTPUT STEM POSITIONS<br>AT FULL-OPEN 40 – 95°    | □ Full-open (90°)<br>□ °  | Full-open (90°)  | Stem position at full-open.              |
| EX-FAC. STEM POSITION<br>0 – 90°                  | □ Full-open (90°)<br>□ °  | Full-open (90°)  | Stem position when the actuator shipped. |

# **SOFTWARE SETTING** Modifiable with Programming Unit

| ITEM                                                                | SET VALUE                                                                              | DEFAULT                                              | COMMENTS                                                                                                                                                                                     |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CLOSED SIDE LIMITER*<br>-5 - +25%, 0.1% incr.                       | %                                                                                      | 0%                                                   |                                                                                                                                                                                              |
| OPEN SIDE LIMITER*<br>75 – 105%, 0.1% incr.                         | %                                                                                      | 100%                                                 |                                                                                                                                                                                              |
| FULL-CLOSED SIGNAL*<br>0 – 25%, 0.1% incr.                          | %                                                                                      | 3.6%                                                 | Specify when the full-open/-closed signal is required. Full-closed signal $\geq$ (Closed side limiter + 0.5%)                                                                                |
| FULL-OPEN SIGNAL*<br>75 – 100%, 0.1% incr.                          | %                                                                                      | 96.4%                                                | Specify when the full-open/-closed signal is required. Full-open signal $\leq$ (Open side limiter – 0.5%)                                                                                    |
| SPLIT RANGE                                                         | 🗅 Without 🗅 With                                                                       | Without                                              | Mark [With] when the split range is required.                                                                                                                                                |
| SPLIT RANGE TYPE                                                    | 🗅 Lo 🗖 Hi                                                                              | LO                                                   | Specify when the split range is required.                                                                                                                                                    |
| SPLIT RANGE POINT*<br>30 – 70%, 0.1% incr.                          | %                                                                                      | 50%                                                  | Specify when the split range is required.                                                                                                                                                    |
| OPENING/CLOSING SPEED<br>PRP-00: 1 – 50<br>PRP-10: 1 – 20           |                                                                                        |                                                      | The opening/closing speed affects the torque. Refer to the next page.<br>Opening/closing speed for following models are shown below.<br>PRP-01: 30<br>PRP-03: 12<br>PRP-11: 20<br>PRP-13: 12 |
| DEADBAND<br>0.1 – 5%, 0.1% incr.                                    | DEADBAND RESOLUTION   □ 0.5% 1/200   □ 0.4% 1/250   □ 0.2% 1/500   □ 0.1% 1/1000   □ % | 0.5%                                                 | Specify % of the rotating span as "Full-closed" and "Full-open" output stem position.<br>Deadband affects the resolution.                                                                    |
| RESTART LIMITING TIMER<br>0 – 30 sec., 0.1 sec. incr.               | sec.                                                                                   | 2 sec.                                               |                                                                                                                                                                                              |
| FAILSAFE OPENING/CLOSING<br>SPEED<br>PRP-0: 1 – 50<br>PRP-1: 1 – 20 |                                                                                        | PRP-01: 30<br>PRP-03: 12<br>PRP-11: 20<br>PRP-13: 12 | Specify when "Failsafe Function" option is selected.<br>The opening/closing speed affects the torque. Refer to the next page.                                                                |
| FAILSAFE TARGET POSITION*<br>0 – 100%, 0.1% incr.                   | □ Full-closed (0%)<br>□ Full-open (100%)<br>□ %                                        | Full-closed<br>(0%)                                  | Specify when "Failsafe Function" option is selected.<br>(Specify % of the angle between "Full-open" and "Full-closed.")<br>The deadband is 0.5% (1/200) in this case.                        |

\*Specify % against the rotating span between "Full-closed" and "Full-open."

# **GUIDE TO ORDERING INFORMATION SHEET**

#### OPERATION AT ABNORMALLY LOW INPUT

When the input goes down to approx. 1.5mA or 0.37V DC or below, the PRP goes to the abnormal low input operation (stop, full-open or full-closed).

# OPENING/CLOSING SPEED LIMIT

<u>Opening/closing speed affects the torque</u>. Refer to the table below for checking required torque and attainable speed. The speeds for normal and failsafe operations can be set independently.

Acceleration or deceleration is not included in the speed. Acceleration or deceleration respectively requires approx. 0 to 2 sec.; takes longer with faster speed.



#### PRP-0 OPENING/CLOSING SPEED

| SPEED | OPERATION TIME | TORQUE |          |  |
|-------|----------------|--------|----------|--|
| SCALE | [sec./90°]     | [N·m]  | [ft·lbs] |  |
| 1     | 125            | 140    | 103      |  |
| 3     | 60             | 125    | 92       |  |
| 5     | 45             | 120    | 88       |  |
| 8     | 33             | 120    | 88       |  |
| 10    | 28             | 110    | 81       |  |
| 12    | 24             | 110    | 81       |  |
| 17    | 18             | 110    | 81       |  |
| 30    | 12             | 110    | 81       |  |
| 34    | 10             | 110    | 81       |  |
| 50    | 8.5            | 90     | 66       |  |
|       |                |        |          |  |

# PRP-1 OPENING/CLOSING SPEED

|       |                | 1      |          |  |
|-------|----------------|--------|----------|--|
| SPEED | OPERATION TIME | TORQUE |          |  |
| SCALE | [sec./90°]     | [N·m]  | [ft·lbs] |  |
| 1     | 125            | 270    | 199      |  |
| 3     | 60             | 270    | 199      |  |
| 5     | 45             | 240    | 177      |  |
| 8     | 33             | 240    | 177      |  |
| 10    | 28             | 220    | 162      |  |
| 12    | 24             | 200    | 147      |  |
| 20    | 16             | 200    | 147      |  |

### RESTART LIMITING TIMER

The timer is provided to protect the motor from overheating, preventing it from restarting for a certain interval once the motor has been stopped within deadband.

When the high temperature protection is activated in a high temperature ambient, adjust the timer to a longer interval.

# SPLIT RANGE

Refer to figure below and determine the type and point of split range. When the split range is set to OFF, the split range type and point are invalid.

