

### **IPS-383 Pressure Switch and Relay Installation**

**Concept:** Your IPS-383 (specify voltage) Pressure Switch and Relay replaces IPS-35 Pressure Switch or 69-A Pressure Switch on C-50, C-60, or C-70, C-80, WSC-50 and WSC-70 Models.

**Installation:** To replace the pressure switch on one of these models, proceed as follows:

- 1. After applying Teflon thread tape (don't use pipe dope) to the threads of the new IPS-38 pressure switch, remove the old switch and screw the new switch securely into place.
- 2. Drill 5/32" and tap 10-32 into the plastic mount board. Mount the relay with the screw and lock washer provided.
- 3. Make electrical connections as shown on the drawing, and as listed below, with the wires and terminals provided.
- 4. **Before applying power** refer to the wire size chart provided to verify that the proper wire size is used between your power source and the terminal block on the pump mount board. Remember to measure from power to pump **and back again** before referring to the chart.

#### **Electrical Connections:**

- \* Connect Pressure Switch and motor Black to terminal block negative (-).
- \* Connect Pressure Switch to Relay position #85.
- \* Connect Relay positions #86 and #30 to Terminal Block positive (+).
- \* Connect motor Orange to Relay position #87.

## WIRE SIZE INFORMATION

This table allows for a 3% voltage drop, and will help you to select the minimum safe wire size to use for proper and efficient use and operation of **GROCO**<sup>®</sup> motorized equipment.

# HOW TO USE CHARTS

From the individual product instructions packed with the product, determine the fuse or circuit breaker size required. Locate the fuse or circuit breaker size in the left-hand column of the chart below. Determine the distance away from the power source to where the powered equipment will be installed. Double this number and find the total distance across the top line of the chart below. 3

Read down and then across to the required fuse or

circuit breaker size required. At the intersection of the horizontal and vertical selections you have made will be the minimum wire size to use. It is permissible to use heavier gauge wire.

#### FOR 12V-DC SYSTEMS

| Fuse or |    | Feet of wire from power source to motor AND BACK TO POWER SOURCE |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |
|---------|----|--|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Breaker | 10 | 15   | 20 | 25 | 30 | 40 | 50 | 60 | 70  | 80  | 90  | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 |
| 5       | 18 | 16   | 14 | 12 | 12 | 10 | 10 | 10 | 8   | 8   | 8   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   |
| 10      | 14 | 12   | 10 | 10 | 10 | 8  | 6  | 6  | 6   | 6   | 4   | 4   | 4   | 4   | 2   | 2   | 2   | 2   | 2   |
| 15      | 12 | 10   | 10 | 8  | 8  | 6  | 6  | 6  | 4   | 4   | 2   | 2   | 2   | 2   | 2   | 1   | 1   | 1   | 1   |
| 20      | 10 | 10   | 8  | 6  | 6  | 6  | 4  | 4  | 2   | 2   | 2   | 2   | 1   | 1   | 1   | 0   | 0   | 0   | 2/0 |
| 25      | 10 | 8  | 6  | 6  | 6  | 4  | 4  | 2  | 2   | 2   | 1   | 1   | 0   | 0   | 0   | 2/0 | 2/0 | 2/0 | 3/0 |
| 30      | 10 | 8  | 6  | 6  | 4  | 4  | 2  | 2  | 1   | 1   | 0   | 0   | 0   | 2/0 | 2/0 | 3/0 | 3/0 | 3/0 | 3/0 |
| 40      | 8  | 6  | 6  | 4  | 4  | 2  | 2  | 1  | 0   | 0   | 2/0 | 2/0 | 3/0 | 3/0 | 3/0 | 4/0 | 4/0 | 4/0 | 4/0 |
| 50      | 6  | 6  | 4  | 4  | 2  | 2  | 1  | 0  | 2/0 | 2/0 | 3/0 | 3/0 | 4/0 | 4/0 | 4/0 |     |     |     |     |

FOR 24V-DC SYSTEMS

| Fuse or<br>Breaker |    | Feet of wire from power source to motor AND BACK TO POWER SOURCE |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |
|--------------------|----|--|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
|                    | 10 | 15   | 20 | 25 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 |
| 5                  | 18 | 18   | 18 | 16 | 16 | 14 | 12 | 12 | 12 | 10 | 10 | 10  | 10  | 10  | 8   | 8   | 8   | 8   | 8   |
| 10                 | 18 | 16   | 14 | 12 | 12 | 10 | 10 | 10 | 8  | 8  | 8  | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   |
| 15                 | 16 | 14   | 12 | 12 | 10 | 10 | 8  | 8  | 6  | 6  | 6  | 6   | 6   | 4   | 4   | 4   | 4   | 4   | 2   |
| 20                 | 14 | 12   | 10 | 10 | 10 | 8  | 6  | 6  | 6  | 6  | 4  | 4   | 4   | 4   | 2   | 2   | 2   | 2   | 2   |
| 25                 | 12 | 12   | 10 | 10 | 8  | 6  | 6  | 6  | 4  | 4  | 4  | 4   | 2   | 2   | 2   | 2   | 2   | 2   | 1   |
| 30                 | 12 | 10   | 10 | 8  | 8  | 6  | 6  | 4  | 4  | 4  | 2  | 2   | 2   | 2   | 2   | 1   | 1   | 1   | 1   |

### FOR 32V-DC SYSTEMS

| Fuse or |    | Feet of wire from power source to motor AND BACK TO POWER SOURCE |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |
|---------|----|--|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| Breaker | 10 | 15   | 20 | 25 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 |
| 5       | 18 | 18   | 18 | 18 | 16 | 16 | 14 | 14 | 12 | 12 | 12 | 12  | 10  | 10  | 10  | 10  | 10  | 10  | 8   |
| 10      | 18 | 16   | 16 | 14 | 14 | 12 | 12 | 10 | 10 | 10 | 8  | 8   | 8   | 8   | 8   | 6   | 6   | 6   | 6   |
| 15      | 16 | 14   | 14 | 12 | 12 | 10 | 10 | 8  | 8  | 8  | 6  | 6   | 6   | 6   | 6   | 6   | 6   | 4   | 4   |
| 20      | 16 | 14   | 12 | 12 | 10 | 10 | 8  | 8  | 6  | 6  | 6  | 6   | 4   | 4   | 4   | 4   | 4   | 4   | 2   |
|         |    |  |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |