SET-UP / INSTALLATION INSTRUCTIONS for CABLE SWITCHES with FLAG INDICATOR(S)

| $04953-111$ | $04953-112$ | $04953-113$ | $04953-114$ | $04953-121$ | $04953-122$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $04953-123$ | $04953-124$ | $04953-432$ | $04953-442$ | $04954-201$ | $04954-202$ |
| $04954-203$ | $04954-204$ | $04954-212$ | $04954-314$ | $04954-414$ |  |



Note: Seal unused conduit opening(s) with approved plug(s).

Accessories are NOT supplied with switch NOR are they required for all installations.

Since every installation is unique and separate, the following instructions can be considered flexible. There are some basic switch setup procedures that must be observed and they are indicated by the symbol ( $>$ ). The balance of the suggestions and information is subject to change to accommodate those most familiar and responsible for the installation.

## INSTALLATION:

1. Observe all SAFETY REQUIREMENTS and PROCEDURES during installation, set-up and running.
2. N.E.C. and local wiring codes MUST be followed at all times.
3. The cable switch MUST be mounted on a flat surface! (Recommend $1 / 4-20$ Bolts torque to $\sim 60 \mathrm{in} . / \mathrm{lb} . \sim 69 \mathrm{~cm}-\mathrm{kg}$ )
4. Wire as required, torque each used terminal screw to 18 in. -lbs . $(20.7 \mathrm{~cm}-\mathrm{kg})$.
5. Cover screws (4) SHOULD be tightened to 18 in. -lbs . $(20.7 \mathrm{~cm}-\mathrm{kg})$ torque.
6. The first cable support SHOULD be located 6 to 12 in . ( 15 to 30 cm ) from the switch. (see drawing on other side)
7. The first cable support SHOULD be located so that the cable is aligned with the switch shaft within 5 degrees.
8. It is recommended that the balance of the cable supports be spaced at intervals NOT exceeding 10 feet ( $\sim 3 \mathrm{~m}$ ).

Supports at properly spaced intervals are necessary to ensure that the cable weight will NOT affect switch operation.
9. The maximum recommended cable length is 200 feet ( 60.69 m ) and SHOULD be in as straight a line as possible.
10. Wiring SHOULD be through the motor control circuit. (See reference diagram below)

## SET-UP and USE:

> 1. Secure ( 2 cable clamps per end are recommended) and adjust the SLACK cable length so that there is sufficient "droop" or "swale" in the cable between cable supports.
$>$ 2. Pull the trip cable then rotate flag to test and assure that the switch is functioning properly.
$>$ 3. After applying control circuit power then repeat step \# 2 .
$>$ 4. NOTE: All cable material will stretch with use and/or temperature variations. If the switch is set-up during extreme conditions a readjustment will be necessary to ensure proper switch function.

## MAINTENANCE:

1. Regular Preventive Maintenance inspections are recommended.
2. Some conditions to watch for are:
a. Proper trip/reset tensions and slack within the trip cable.
b. Physical damage to the device.
c. Physical damage to the cable.
d. Frayed wiring.
e. Loose cable connections.
f. Any loose components.
g. Any worn components.
3. If other assistance is desired please contact the factory.


All wiring/components provided by user.


| Catalog <br> Number | Contact Arrangement | Style | HConduitOpening | $\mathrm{F}_{\mathrm{T}}$ <br> Trip Force | $\mathrm{SD}=5 \mathrm{ft} . / 1.5 \mathrm{~m}$ |  | $\mathrm{SD}=10 \mathrm{ft} . / 3.0 \mathrm{~m}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | $\mathrm{F}_{0}$ | ST | FO | ST |
| 04953-111 | $1 \mathrm{NO} \& \mathrm{NC}$ | $\begin{aligned} & \text { Single } \\ & \text { End } \\ & \text { Right } \\ & \text { Hand } \end{aligned}$ | 1/2" NPT | $\begin{gathered} 25 \mathrm{lb} . \\ 11.3 \mathrm{~kg} \end{gathered}$ | $\begin{aligned} & 10 \mathrm{lb} . \\ & 4.5 \mathrm{~kg} \end{aligned}$ | $\begin{aligned} & 5 \mathrm{in} . * * \\ & 12.7 \mathrm{~cm} \end{aligned}$ | $\begin{gathered} 6 \mathrm{lb} . \\ 2.7 \mathrm{~kg} \end{gathered}$ | $\begin{aligned} & 7 \mathrm{in} . * * \\ & 17.8 \mathrm{~cm} \end{aligned}$ |
| 04953-112 | 2 (NO + NC) |  |  |  |  |  |  |  |
| 04953-113 | 2 NO |  |  |  |  |  |  |  |
| 04953-114 | 2 NC |  |  |  |  |  |  |  |
| 04953-432 | 2 (NO/NC) MBB |  |  |  |  |  |  |  |
| 04953-121 | $1 \mathrm{NO}+1 \mathrm{NC}$ | Single <br> End <br> Left <br> Hand |  |  |  |  |  |  |
| 04953-122 | 2 ( $\mathrm{NO} / \mathrm{NC}$ ) |  |  |  |  |  |  |  |
| 04953-123 | 2 NO |  |  |  |  |  |  |  |
| 04953-124 | 2 NC |  |  |  |  |  |  |  |
| 04953-442 | 2 ( $\mathrm{NO}+\mathrm{NC}$ ) MBB |  |  |  |  |  |  |  |
| 04954-201 | 2 (2 NO) | Double End |  | $\begin{gathered} 25 \mathrm{lb} . \\ 11.3 \mathrm{~kg} \\ \text { (each end) } \end{gathered}$ | $\begin{gathered} 10 \mathrm{lb} . \\ 4.5 \mathrm{~kg} \\ \text { (each end) } \end{gathered}$ | $\begin{gathered} 5 \mathrm{in.} \text { ** } \\ 12.7 \mathrm{~cm} \\ \text { (each end) } \end{gathered}$ | $\begin{gathered} 6 \mathrm{lb} . \\ 2.7 \mathrm{~kg} \\ \text { (each end) } \end{gathered}$ | $\begin{gathered} 7 \mathrm{in.} .{ }^{* *} \\ 17.8 \mathrm{~cm} \\ \text { (each end) } \end{gathered}$ |
| 04954-202 | $2(1 \mathrm{NO}+1 \mathrm{NC})$ |  |  |  |  |  |  |  |
| 04954-212 | $2(1 \mathrm{NO}+1 \mathrm{NC}) \mathrm{MBB}$ |  |  |  |  |  |  |  |
| 04954-203 | 2 (2 NC) |  |  |  |  |  |  |  |
| 04954-204 | $2(2 \mathrm{NO}+2 \mathrm{NC})$ |  | 3/4 " NPT |  |  |  |  |  |
| ${ }^{*} 04954-314$ | $\frac{2(2 \mathrm{NO}+2 \mathrm{NC}) \mathrm{MBB}}{2(2 \mathrm{NO}+2 \mathrm{NC}) \mathrm{MBB}}$ |  |  |  |  |  |  |  |

* Short (3-7/8")flags with handles


## WARNING-DANGER

These products should only be used where point-of-operation guarding devices have been properly installed \& maintained so that appropriate OSHA and ANSI B11.1 regulations \& standards are met. Misapplication of the products on machinery lacking effective point-of operation safeguards can cause serious injury to the operator of that machinery.

UL listed (File E58589); CSA certified (File LR 3648); CE marked;
These switches comply with: UL-508; CSA-C 22.2 No. 14-08;EN 60947-5-1: 1997;
IEC Ratings: $\quad$ Utilization $=\mathrm{AC} 15, \mathrm{DC} 13 ; \mathrm{Ue}=600 \mathrm{vAC} ; \mathrm{Ue}=125 \mathrm{vDC} ; \quad \mathrm{Ui}=600 \mathrm{vAC} ; \quad \mathrm{Uimp}=2.5 \mathrm{kV} ; \quad \mathrm{Ith}=10 \mathrm{~A}$
NEMA Ratings: $\quad \mathrm{AC}=\mathrm{A} 600 ; \quad \mathrm{DC}=\mathrm{N} 150 \quad$ Temperature: $\quad$ Operating $=0^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}\left(-32^{\circ} \mathrm{F}\right.$ to $\left.+131^{\circ} \mathrm{F}\right)$;
Operating Position: Can be mounted in any position. $\quad$ Storage $=-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right.$ to $\left.+185^{\circ} \mathrm{F}\right)$
Mechanical Life Rating $=150,000$ operations Fusing Requirements: 10A Slow Acting; 16A fast Acting
AVAILABLE ACCESSORIES:

| $02005-605$ | $02005-610$ | $02005-615$ | $02005-620$ | $02005-625$ | $02005-630$ | $02005-635$ | $40100-102$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Turnbuckle | Cable, Steel | Thimble, <br> Strain Relief | Rope Clip <br> Standard | Cable Clip <br> Optional | Spring, <br> Tension | Eye Bolt Cbl. <br> Support | 24 volt Pilot <br> Light |
| Tension Adj. |  |  |  |  |  |  |  |

