







## IMPORTANT SAFETY INSTRUCTIONS

Please read this manual carefully and follow its instructions. Improper use or failure to follow these instructions could result in serious injury, death or property damage. Operators should be instructed in the safe and proper use and maintenance of this product. Keep this manual for future reference.

The following safety precautions call attention to potentially dangerous conditions.

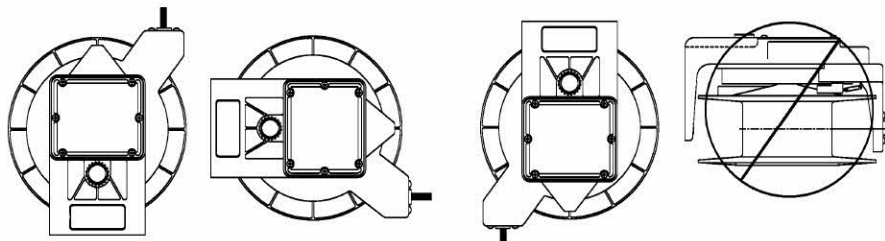
	<b>DANGER:</b> Immediate hazards which <b>WILL</b> result in severe personal injury or death.
	<b>WARNING:</b> Hazards or unsafe practices which <b>COULD</b> result in severe personal injury or death.
	<b>CAUTION:</b> Hazards or unsafe practices which <b>MAY</b> result in <i>minor</i> personal injury or product or property damage.

## INSTALLATION

	<b>WARNING:</b> Lock out all electrical power and remove all spring tension from the reel before opening any enclosure or performing any service to this reel. Make sure all circuits carry appropriate fuse protection. Hazards or unsafe practices <b>COULD</b> result in severe personal injury or death.
	<b>WARNING:</b> Failure to read, understand, and follow these instructions creates hazards that <b>COULD</b> result in personal injury or death.
	<b>CAUTION:</b> Instruct operators in the safe, proper use, and maintenance of the reel. Keep this manual for future reference. Hazards or unsafe practices <b>MAY</b> result in <i>minor</i> personal injury or product or property damage.

### MOUNTING

The fixed base of the reel allows mounting in several different positions including base up, base down, or wall mounted. Here are general mounting requirements:



- Main-shaft must be horizontal.
- Centerline of the spool assembly must be in line with the cable run.
- When mounted overhead in base up position, add a secondary chain, bracket or other safety device to prevent reel from falling in case the mounting bolts are removed or become loosened by vibration.

	<b>DANGER:</b> A secondary safety cable or chain is to be attached to all reels mounted overhead to prevent reel from falling. Immediate hazards <b>WILL</b> result in severe personal injury or death.
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All reels mounted over head should have a secondary support chain to protect personnel in case of structure or mounting component failure. Attach one end of secondary support chain or cable to secondary support point on reel. Attach other end of secondary support chain or cable to a support component other than that which supports the reel. The chain or cable should be as short as possible allowing reel to drop no more than 6 to 12 inches if the primary connection is released. A secondary support is offered as an accessory item.

### PIVOT BASE

If optional pivot base is used, four roller cable guide reel will align reel to direction of cable pull.

## WIRING

**NOTE: On model 228BH and CSA listed reels--in Canada--, the green wire has been grounded to the frame of the reel and spool, and cannot be used as a power conductor.**

A convenient one inch pipe thread opening has been provided at the bottom of the enclosure in base for connecting standard water tight cable connectors or conduit fitting--fittings not supplied. Individual power connections are made to the collector ring bus wires inside the junction box enclosure in base using commercially available twist on wire connectors or compression splices.

amp			220 v		
1 Phase			3 Phase		
Wire	Color	Number	Wire	Color	Number
L1	black	1	L1	black	1
N	white	2	L2	white	2
L3	red	3	L3	red	3
G	green	4	G	green	4

## SAFETY INTERNAL GROUNDING

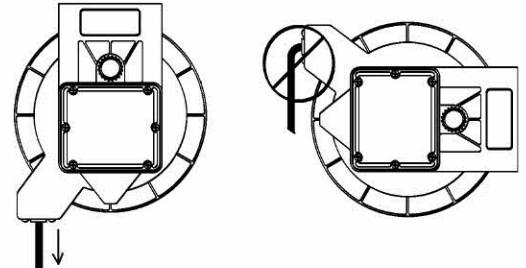
Standard reels are not grounded internally with the exception of reels built to CSA standards and the model 228BH. Internal grounding must be accomplished by running a jumper wire from the brush assembly to the spool grounding screw provided, and attaching the collector ring ground bus to the bolt provided in the junction box enclosure on back of base. See main illustration and diagram.

## WIRING SUPPLY CONNECTION

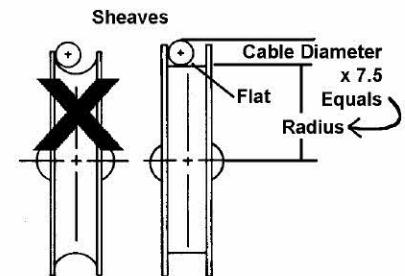
**NOTE: See "Service, Working Cable Replacement/Installation" if cable needs to be installed.**

## ROLLER GUIDE AND SHEAVES

Cable must exit guide in-line with pulling direction. If not, rotate guide arm as needed. The cable guide position is set by rotating spring pocket assembly. Loosen the three clamps holding spring pocket assembly in place by unscrewing the three hex head bolts. Unless required, do not completely remove bolts or clamps. Reposition guide as required, making sure clamps straddle ribs on outside diameter of spring pocket assembly and retighten hex head bolts.



Sheaves are used to bend cable around corners. Typical minimum bend radius of the sheave should be about 7.5 x cable diameter. Requirements can vary depending on cable manufacturer specifications. Sheaves should have flat surfaces for cable to ride on. The movement of cable through a sheave should be in the same plane as the cable spool. Changing planes can greatly reduce cable life.



## CABLE WINDING

There are many types of cable that may be installed on your cable reel depending on application. Select the cable most appropriate for your application requirements. Many cables come from the factory with a wax-like film that can encourage uneven wrapping. At initial set up it is common to use a dry lubricant (talc powder), or silicone based grease to encourage more even winding. Also critical to proper winding is the adequate setting of "Spring Tension". See appropriate section. In some cases sheaves and unanticipated application features can require more tension than offered with standard reels. Contact factory for application assistance.

