

Installation Instruction of Sectos downrod assembly kit and automatic locking Mid-Pole Operator

Δ WARNING: Before installing downrod assembly kit and automatic locking mid-pole operator carefully read and understand the content of this instruction and “Installation, Operation and Maintenance instruction of Sectos Pole mounted switch-disconnector”. Improper installation and operation of sectos unit can result death, sever personal injury and equipment damage.

Δ WARNING: The instructions covered in this publication are intended only for qualified personnel and are not a substitute for adequate training and experience in safety procedures.

Δ WARNING: The ABB gas switch has linear spring charge with high operational life expectancy. Operate with firm but not harsh, continuous force to operate the switch until it changes state.

⚠ CAUTION: The Mid-pole operator is equipped with an automatic locking mechanism thus after each opening or closing operation the mid-operator will be locked automatically.

⚠ CAUTION: To close the unit turn the operating arm of mid-pole operator about 90° clockwise by pulling from the right-side end of the arm by one continuous movement. The switch is fully closed when the Sectos position indicator shows closed position. 

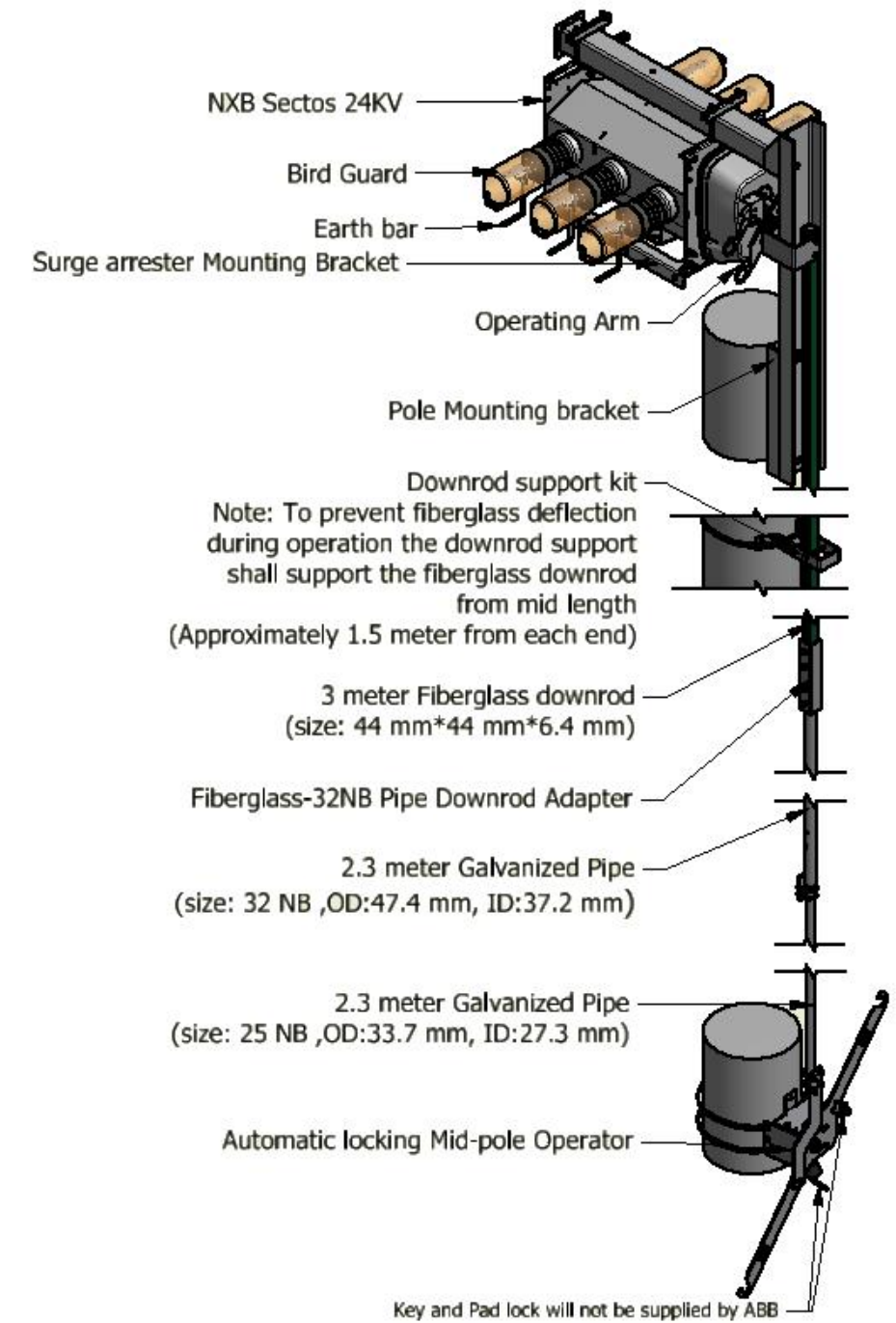
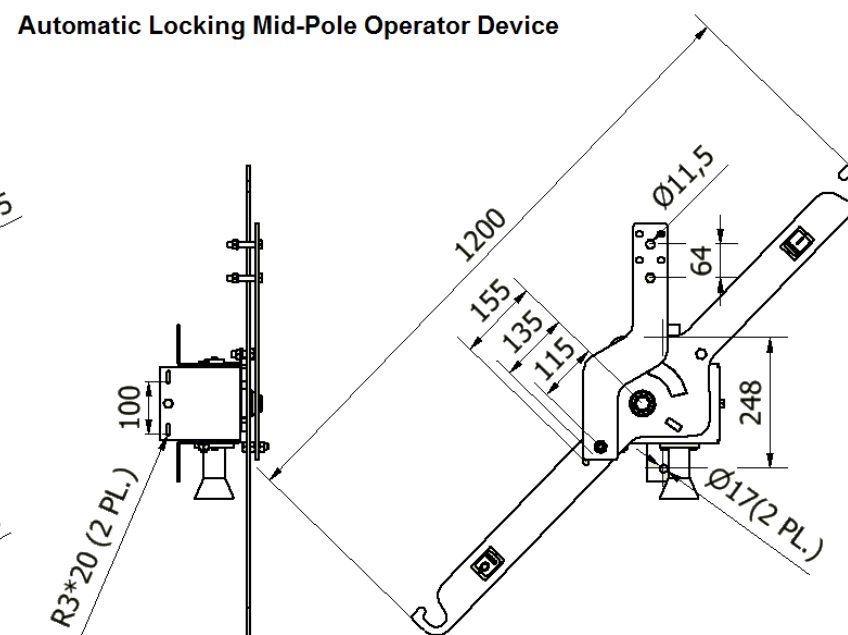
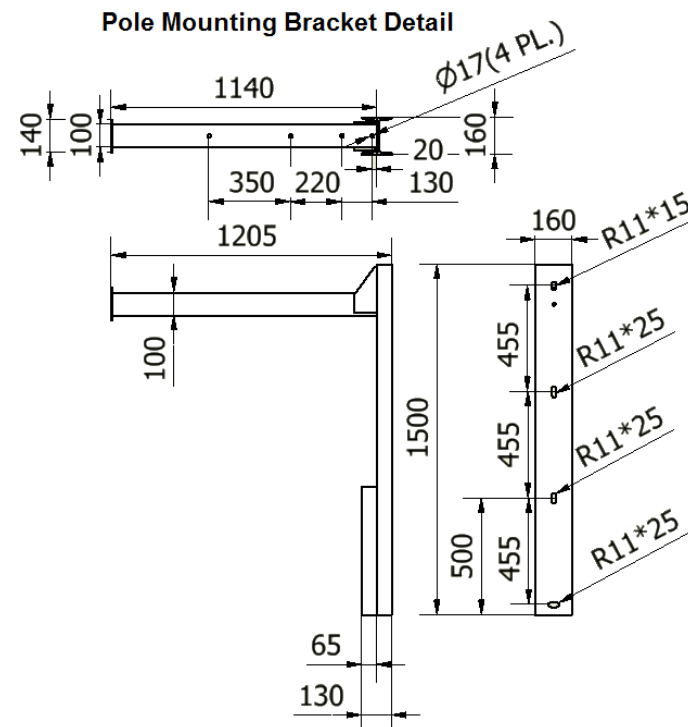
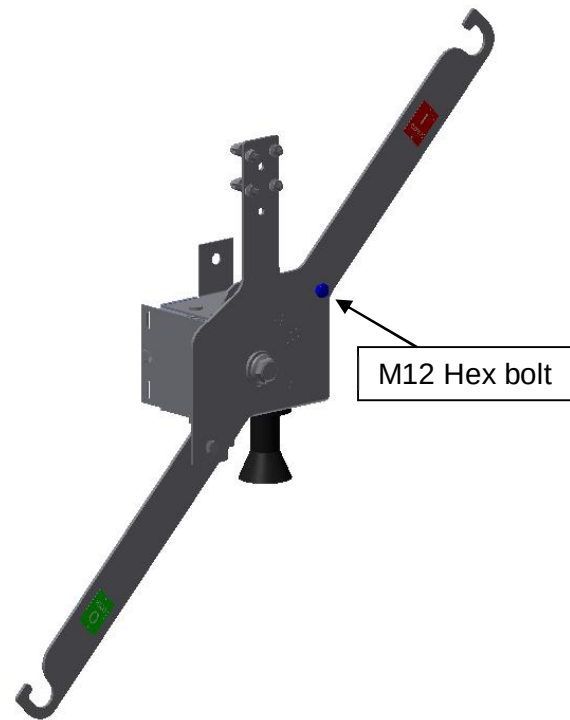
To open the unit turn the operating arm of mid-pole operator about 90° counter clockwise by pulling from the left-side end of the arm by one **continuous movement**. The switch is fully opened when the Sectos position indicator shows Open position. 

On both opening and closing operation If the arm is not turned with one continuous movement and is stopped half-way the mid-pole automatic locking mechanism will be reset and the arm will be locked again thus mechanism needs to be unlocked using the operator Key.

Δ CAUTION: Important Set up Procedure.

Do not remove the M12 Hex bolt from mid-pole operator **until after** the down rods have been adjusted to the correct length, and the mid-pole operator device is securely attached to the pole according to the procedure given in this document (Steps 1 to 8).

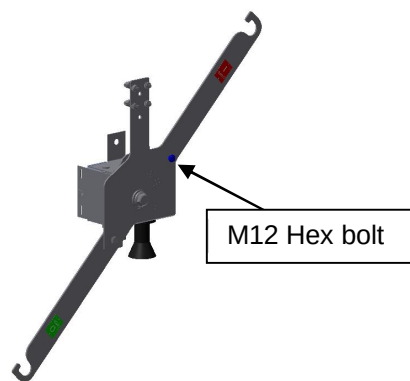
This “locating” bolt keeps the operating handle in a position that provides some extra tolerance in the amount of available travel. Remove the bolt after installation to operate and test the Mid-pole operator. Holes can then be used with a padlock device.



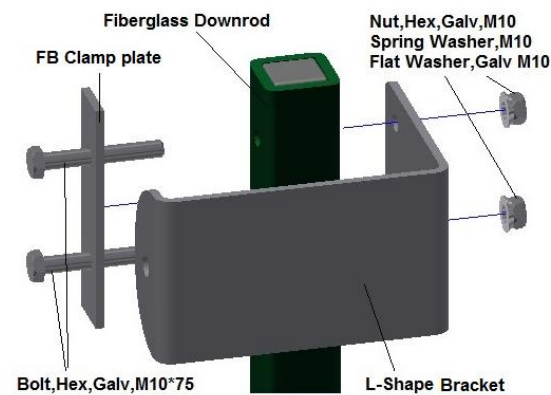
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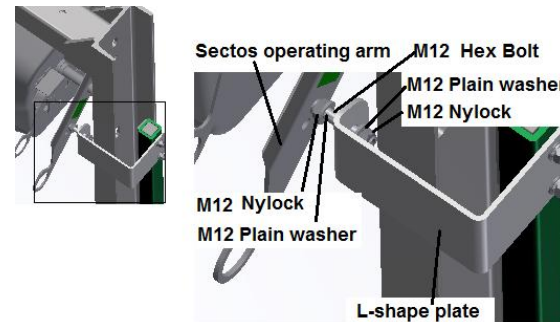
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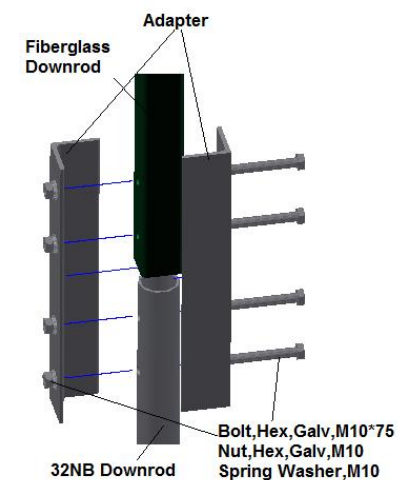
Δ CAUTION: Do not remove the M12 Hex bolt from mid-pole operator until after the down rods have been adjusted to the correct length, and the mid-pole operator device is securely attached to the pole according to the procedure given in this document (Steps 1 to 8). Remove the bolt after installation to operate and test the Mid-pole operator. Holes can then be used with a padlock device.



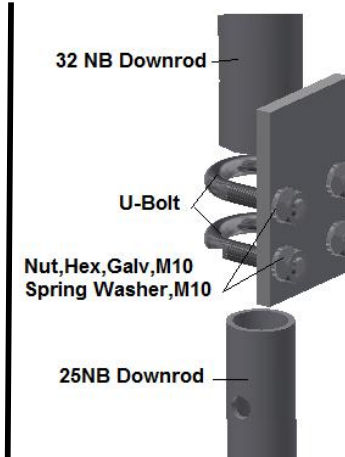
Step 1: It is recommended that The L-Shape bracket to be connected to the Fiberglass downrod using 2 of M10x75 Gal Hex bolts, Nuts and Washers and tighten to 64N.m prior to connection to Sectos unit.



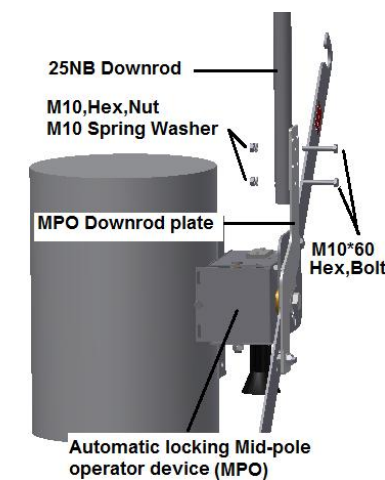
Step 2: Ensure the Sectos unit is in open position and sectos position indicator shows Open . Attach L-shape plate to M12 bolt attached to Sectos operating arm and secure it using a M12 Plain washer and M12 Nylock. Note: L-shape plate must rotate freely around M12 bolt.



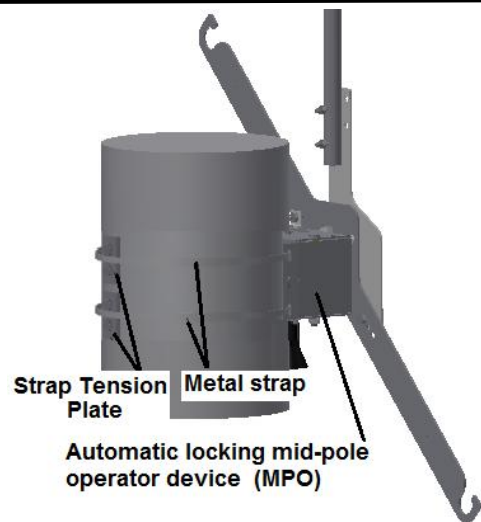
Step 3: Connect 32NB downrod to the end of Fiberglass downrod using 2 L-Angle adapters, 4*M10*75 Bolt, Hex, Galv, 4*M10 Nut, Hex, Galv, 4*M10 Spring Washer. (Recommended tightening torque: 59 to 64 N.m)



Step 4: Loosen U-bolts attached to the end of 32NB Downrod and slide 25NB downrod into 32NB downrod to proper length and tighten the M10 Nuts (tightening torque: 59 to 64 N.m)

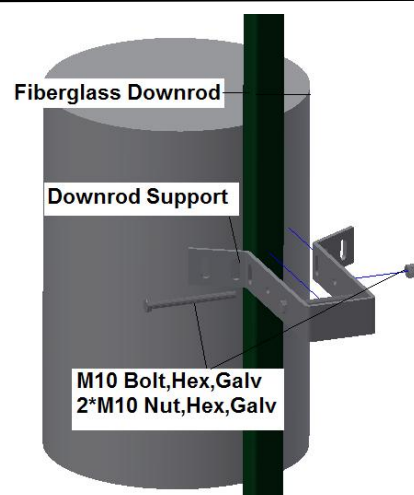


Step 5: Attach 25NB downrod to MPO downrod plate using two M10*60 bolts, M10 spring washer and M10 nut (Recommended tightening torque: 59 to 64 N.m)



Step 6: Secure Mid-Pole operator to Pole using two metal straps.

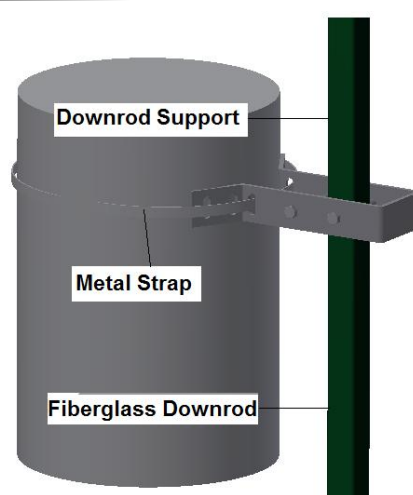
Optional: In order to securely tighten each metal strap, it is recommended to place a strap tension plate between pole and strap and tighten two M10 bolts until the strap strengthen sufficiently and the mid-pole operator is tightly secured. Use of strap tension plates will provide adjustable tension for the life of installation but they are not part of downrod kit and can be ordered separately.



Step 7: Untighten one M10 bolt and Nuts (pre-attached to downrod support) and guide the downrod support around fiberglass downrod. When the downrod support positioned around the fiberglass downrod place back the M10 bolt and nuts and tighten them securely.

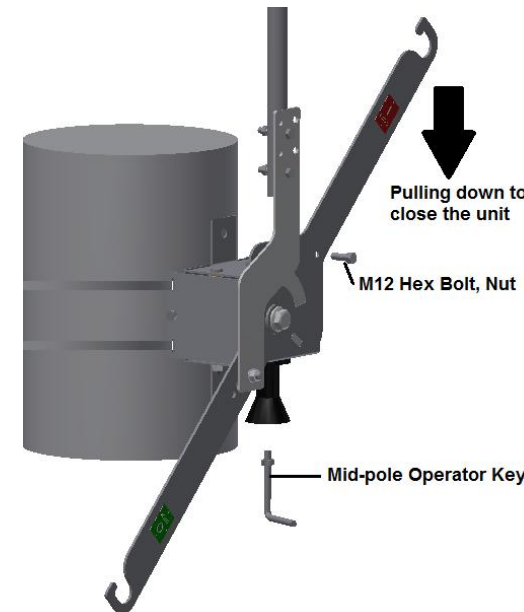
Note 1: To prevent fiberglass deflection during operation the downrod support shall support the fiberglass downrod from mid length (**1.5 meter distance to Sectos unit**)

Note 2: To maintain correct operation of Sectos unit the deflection of all downrods must be kept in minimum. If required use an extra downrod support to guide galvanized downrods.



Step 8: Secure downrod support to Pole using one metal strap.

Optional: In order to securely tighten each metal strap, it is recommended to place a strap tension plate between pole and strap and tighten two M10 bolts until the strap strengthen sufficiently and the mid-pole operator is tightly secured (refer to step 6). Use of strap tension plates will provide adjustable tension for the life of installation but they are not part of downrod kit and can be ordered separately.



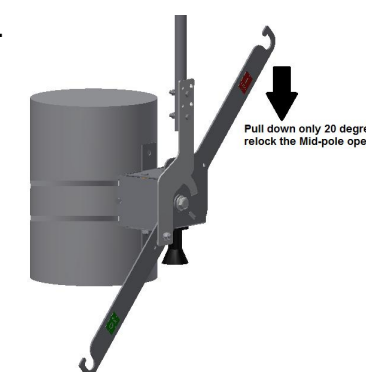
Step 9 (Final Step): Remove M12 Bolt and Insert the mid-pole operator key in the operator slot and rotate the key counter clock-wise 90 degree to unlock the mechanism.

Remove the key and **close the unit** (turn the operating arm about 90° clockwise by pulling from the right-side end of the arm by one continuous movement).

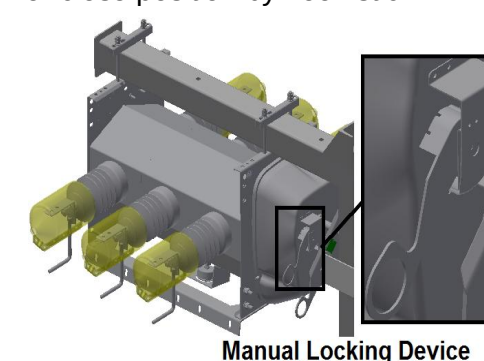
Note1: The switch is fully closed when the position indicator shows closed position 

Note 1: In circumstances when the mid-pole operator unit is unlocked and the operator tends to relock the mid pole operator unit,
a) If the unit is in open position pull the Mid-pole operator arm approximately 20 degree clockwise and release the arm so the MPO will be locked again and for the next operation the Mid-pole operator device should be unlocked using the mid-pole operator Key.

b) If the unit is in close position pull the MPO arm approximately 20 degree counter clockwise and release the arm so the MPO will be locked again and for the next operation the Mid-pole operator device should be unlocked using the mid-pole operator Key.



Note 2: The unit can be locked with manual locking device at open or close position by hook stick.



Manual Locking Device