

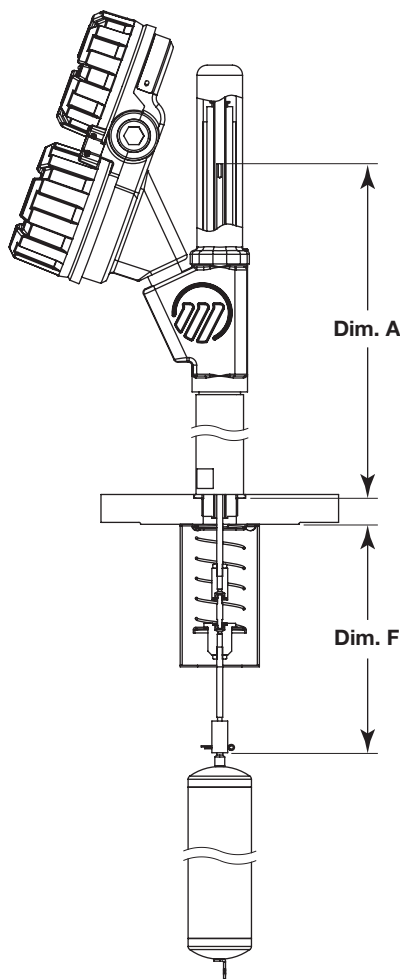


# Electronic Modulelevel<sup>®</sup>

## Stem Replacement Procedure

### Models E5x and E8x

Replacement of the stem assembly in blind flange design electronic Modulelevel types EZ, ES, ES II and E3 requires several stem length adjustments to ensure accurate level measurement with the new stem. Blind flange design models EZ, ES and ES II were originally supplied with an alternate style stem that required no adjustment. E3 has used only the adjustable-type stem. The adjustable stem is the only available replacement and must be used in all of the above Modulelevel types. This adjustable stem is not to be used on top-hat flange design Modulelevels.



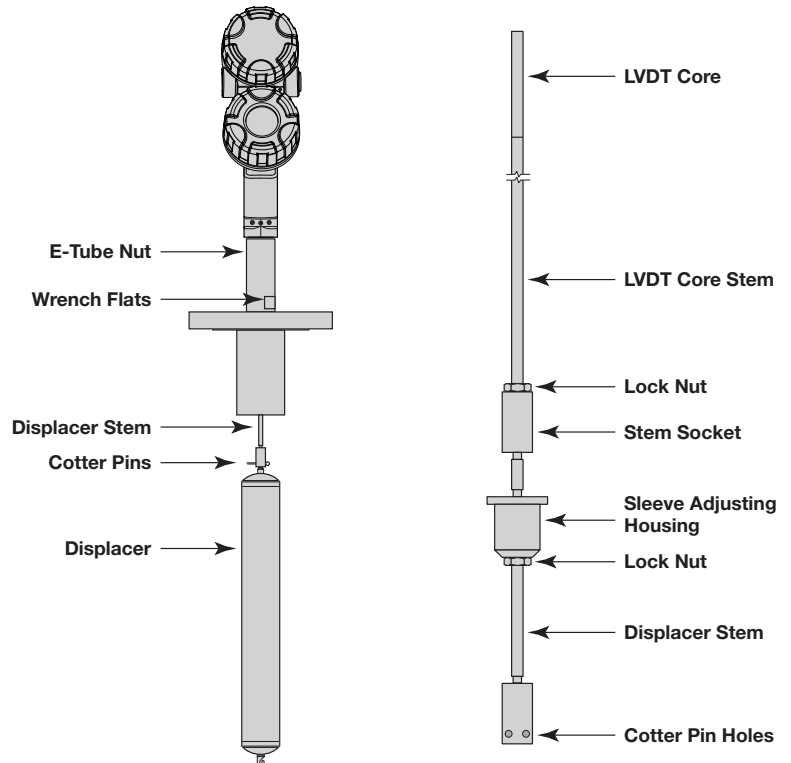
**A & F Dimensions**

1. Disconnect power and wiring from the E3 transmitter head.
2. Loosen the enclosing tube from the head flange using a wrench on the flats of the adaptor nut. Ensure that transmitter head does not tilt as the e-tube becomes loose.
3. Remove the transmitter head and e-tube assembly by lifting straight up.
4. Remove displacer from stem assembly by removing cotter pins.
5. Pull stem assembly up through the opening in the head flange.
6. Loosen the locking nut, and thread the LVDT core stem of the new stem assembly into the stem socket as far as it will go.
7. Loosen the locking nut, and thread the displacer stem of the new stem assembly into the sleeve adjusting housing as far as it will go.
8. Insert the new stem assembly through the head flange. Ensure that the bottom of the sleeve adjusting housing goes through the bottom spring cup and that the lip of the sleeve adjusting housing is seated on it.
9. Attach displacer to bottom connector of the new stem assembly.
10. Measure the "F" dimension from the face of the head flange to the bottom of the displacer connector. Record this dimension.
11. Measure the "A" dimension from the face of the e-tube gasket surface on the head flange to the top of the new stem assembly. Record this dimension.
12. Determine the required "F" and "A" dimensions for your model from the below charts.
13. Remove the displacer from the stem assembly, and pull stem assembly out through head flange opening.
14. Using the measured and required dimensions, determine how much the bottom portion and the top portion of the stem assembly must be adjusted.
15. If the required "F" dimension is greater than the actual dimension, loosen the lock nut securing the displacer stem in the sleeve adjusting housing. Rotate the stem until the required adjustment has been made. Tighten the lock nut to prevent movement of the displacer stem assembly.

Spring/Temp 4th Digit	Pressure Rating 6th Digits	Level Range 7th Digit	"F" Dimension inches (mm)
J, A, M, D	All	A	8.69 (220.7)
		B	8.88 (255.6)
		C	9.25 (235.0)
		D	9.25 (235.0)
		E	9.19 (233.4)
		F	9.19 (233.4)
		G	9.19 (233.4)
		H	9.38 (238.3)
		I	9.38 (238.3)
K, B, N, E	3, 4, 5	A	6.69 (169.9)
		B	6.88 (174.8)
		C	7.25 (184.2)
		D	7.25 (184.2)
		E	7.19 (182.6)
		F	7.19 (182.6)
		G	7.19 (182.6)
		H	7.38 (187.5)
		I	7.38 (187.5)
K, B, N, E	6, 7, 8	A	7.71 (223.8)
		B	8.94 (227.1)
		C	8.94 (227.1)
		D	8.94 (227.1)
L, C, P, F	All	A	6.69 (169.9)
		B	6.88 (174.8)
		C	7.25 (184.2)
		D	7.25 (184.2)
		E	7.19 (182.6)
		F	7.19 (182.6)
		G	7.19 (182.6)
		H	7.38 (187.5)
		I	7.38 (187.5)

Spring/Temp 4th Digit	"A" Dimension inches (mm)
J, K, L	11.25 (285.8)
A, B, C	15.25 (387.4)
M, N, P	19.25 (489.0)
D, E, F	23.25 (590.6)

- If the required "F" dimension is less than the actual measurement, loosen the lock nut, remove the displacer stem from the sleeve adjusting housing and cut off a length from the bottom of the stem that is 0.12" greater than the required adjustment. Example: If the required "F" dimension is 6.88" and the measured dimension is 7.25", trim the stem by 0.49" (7.25" - 6.88" + 0.12").
- If the required "A" dimension is greater than the actual dimension, loosen the lock nut securing the LVDT core stem in the stem socket. Rotate the stem until the required adjustment has been made. Tighten the lock nut to prevent movement of the LVDT core stem assembly.
- If the required "A" dimension is less than the actual measurement, loosen the lock nut, remove the LVDT core stem from the stem socket and cut off a length from the bottom of the stem that is 0.12" greater than the required adjustment. Example: If the required "A" dimension is 11.25" and the measured dimension is 11.50", trim the stem by 0.37" (11.50" - 11.25" + 0.12").
- Rethread the LVDT core stem into the stem socket so that the required "A" dimension is achieved. Tighten the lock nut.
- Insert the stem assembly through the head flange and ensure that it is seated properly in the lower spring cup.
- Reattach the displacer and confirm by measurement that the "A" and "F" dimensions of the new stem assembly are correct. If further adjustment is required, repeat steps 13 through 20 until correct dimensions are achieved.



Major Components

Stem Assembly



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