



Warrick® Series 3C and 3K Electrode Fittings Installation and Operation Bulletin

Each Series 3C and 3K water column electrode fitting is combined with one or more on/off conductance actuated liquid level controls on steam boilers or other pieces of equipment with a side chamber to provide one the following:

- (a) On/off pump operation
- (b) Low water cutoff or alarm
- (c) High level cutoff or alarm
- (d) A combination of a, b, and c

See literature provided with control for information concerning installation of that particular component.

The electrode lengths of the Series 3C and 3K are measured in inches and referenced to that surface common to the bottom of the blue terminal housing and top of the cast metal chamber. The electrode lengths are listed on the side of the blue terminal housing. **It is suggested that you check all electrode lengths before installation of the fitting on the boiler or tank to verify that the control functions will occur at the desired water levels.** This is easily accomplished by working through the drainpipe tapping in the bottom of the chamber. Measure the distance from the extreme lower end of the chamber to each electrode tip. Electrode lengths, referenced as mentioned above, may then be computed by subtracting each of those measurements from **7-3/8 inches for Series 3C** and from **16-1/8 inches for Series 3K** fitting.

After the fitting has been installed on the boiler, the blue terminal housing can be oriented in the most favorable of several positions, each 90° apart, for the purpose of receiving electrical conduit from the control box. To reorient the housing, simply remove the lid on the top of the housing, reposition the housing, and replace the screws. For high temperature applications, utilize wire with an oil resistance insulation rated at not less than 600 volts and 200° C (392°F). Teflon or silicone rubber insulated wire with those ratings is common and available from electrical supply houses.

CAUTION: Do not employ asbestos insulated wire. That material is hydroscopic (readily absorbs moisture) and is unsuitable for the application.

If the fitting chamber is to be used as the ground/reference, the ground/reference conductor is to be terminated in the housing by securing it beneath the head of the hex head screw provided for Grounding. (#10-32)

Common Specifications

Temperature/Pressure Limits:	250 psig, 406° F, Saturated Steam
Listings:	U/L Guide MBPR File MP 1430 & Guide MCUR2 File MP 2489. CSA Guide 184-N-13,90 File 11644
Terminal Housing:	Diecast aluminium with epoxy coat. 1/2"-14 NPT tapped boss for conduit.

3C Specifications

Attachment to Vessel:	1"-11 ½ NPT tapings for equalizer piping.
Blowdown:	1-11 ½ NPT
Electrodes:	Length not less than 1½ inches or greater than 6 inches
Chamber Material:	Cast Iron or Red Brass

3K Specifications

Attachment to Vessel, Gauge Glass and Tricock Connection:	(See ordering information)
Blowdown:	1-11 ½ NPT
Electrodes:	Length not less than 1-3/4 inches or greater than 13 inches
Chamber Material:	Cast Iron

Ordering Information

3K X X X X (Character assigned by Factory)

Electrode Lengths: inches
 Length # 1 _____ Length # 2 _____
 Length # 3 _____ Length # 4 _____

Size of Gauge & Equalizer Tappings:

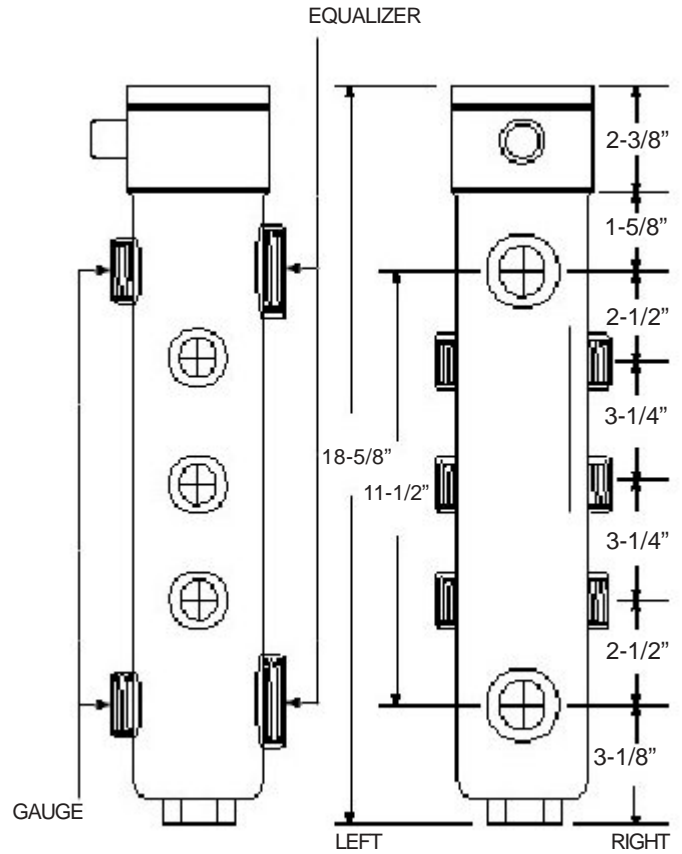
	Gauge	Equalizer
1-	None	1"/ 11-1/2
2-	None	1-1/4"/ 11- 1/2
3-	1/2"-14	1"/ 11-1/2
4-	1/2"-14	1-1/4"/ 11- 1/2
5-	3/4"-14	1"/ 11-1/2
6-	3/4"-14	1-1/4"/ 11- 1/2

Size and Location of Tricock Tappings:

	NPT	*Location
A-	None	None
B-	1/2"-14	Left
C-	3/4"-14	Left
D-	1/2"-14	Right
E-	3/4"-14	Right

* Viewer facing gauge glass

Number of Electrodes:
 1- One, 2- Two, 3- Three, 4- Four



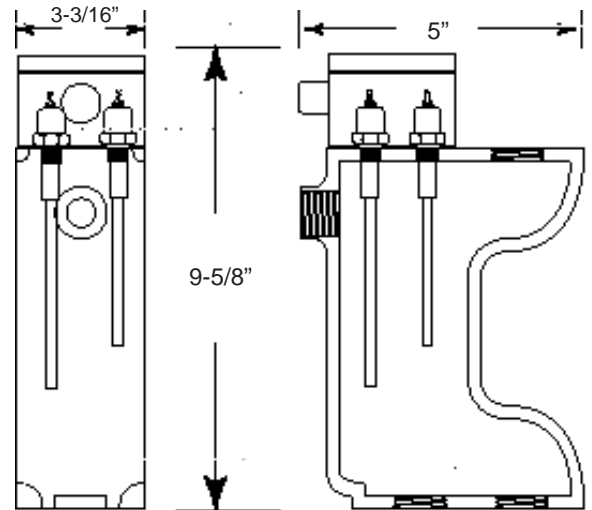
Ordering Information

3C X X X (Character assigned by Factory)

Electrode Lengths: inches
 Length # 1 _____ Length # 2 _____
 Length # 3 _____ Length # 4 _____

Chamber Material: A- Cast Iron, B- Red Brass

Number of Electrodes: 1- One, 2- Two, 3- Three, 4- Four



Gems Sensors Inc.
 One Cowles Road
 Plainville, CT 06062-1198
 Tel: 860-793-4579
 Fax: 860-793-4580