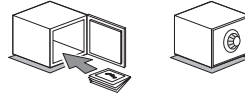
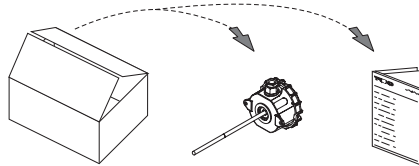


Thermistor Insertion Temperature Sensor

Important: Retain these instructions

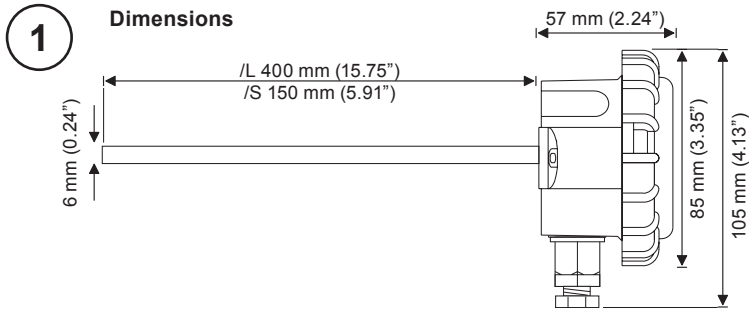


UNPACKING



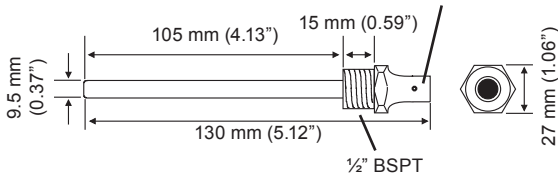
TB/TI Installation
Instructions TG200727

INSTALLATION



Pockets for use as immersion sensor
Brass (POC/B/6)
Stainless steel (POC/SS/6)

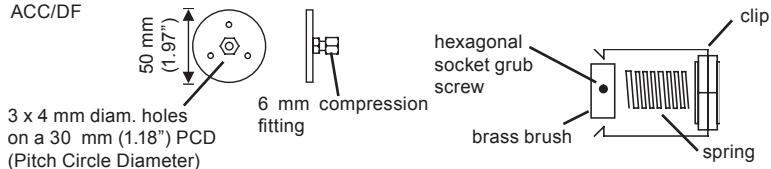
2 mm hexagonal socket
grub screw (each side)



Mounting flange for use as duct sensor

Universal Fitting Kit for immersion sensor use in
existing pockets (ACC/UF)



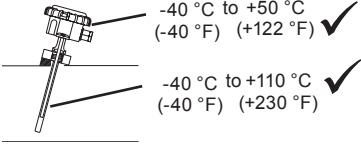

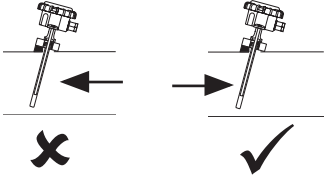
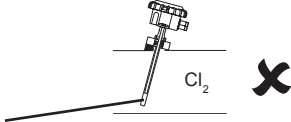
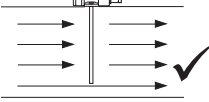
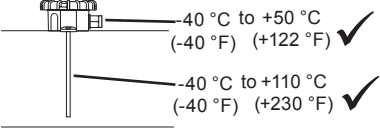
ACC/DF



INSTALLATION (continued)

2

Requirements

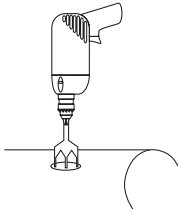
<p>a</p>  <p>measurement range</p> <p>-30 °C to +110 °C (-22 °F) (+230 °F)</p>  <p>0 %RH → 95 %RH ✓</p> <p>H₂O</p> <p>Protection :IP67 (NEMA6)</p>	<p>b Immersion</p>  <p>-40 °C to +50 °C (-40 °F) (+122 °F) ✓</p> <p>-40 °C to +110 °C (-40 °F) (+230 °F) ✓</p>
<p>c Immersion</p>  <p>Ensure no stratification (e.g. downstream of mixing valves, junctions)</p> <p>(minimum distance from junctions =10xd). ✓</p>	<p>d Immersion</p>  <p>✗ ✓</p>
<p>e Immersion</p>  <p>Cl₂ ✗</p> <p>Note that POC/SS/6 or POC/B/6 are NOT suitable for use in chlorine rich environments</p>	<p>f Duct</p>  <p>Ensure no stratification (e.g. downstream of mixing dampers, heating coils, cooling coils) otherwise use averaging sensor. ✓</p>
<p>g Duct</p>  <p>-40 °C to +50 °C (-40 °F) (+122 °F) ✓</p> <p>-40 °C to +110 °C (-40 °F) (+230 °F) ✓</p>	

INSTALLATION (continued)

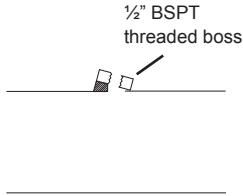
3 Install Imersion Sensor

a Install Pocket (if installing new pocket)

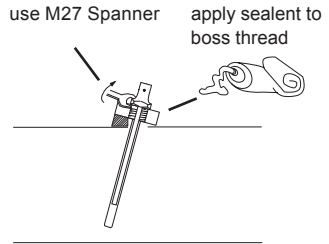
a1 Drill hole for boss



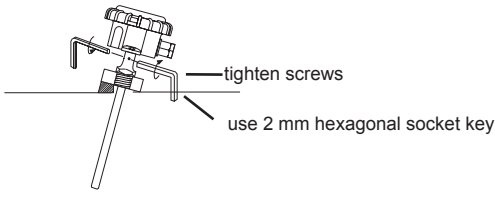
a2 Fix threaded boss



a3 *Screw pocket into boss

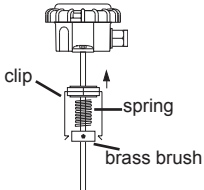


b *Install Sensor into Pocket If using compatible pocket

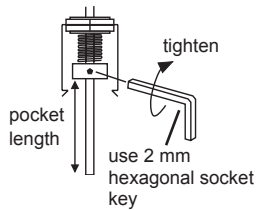


c Install Sensor into Pocket If using Universal Fitting Kit

c1 Push adaptor onto probe



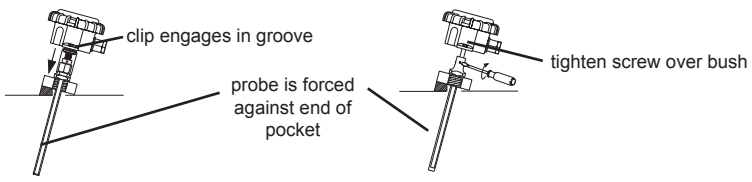
c2 Adjust probe length



c3 *Mount in pocket

if pocket has clip retaining groove, push clip over pocket

if pocket has grub screw, discard spring and clip



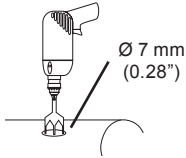
*If used for chilled water ensure pocket is sealed around probe or fill pocket with thermally conducting oil to avoid the build up of condensation in bottom of pocket.

INSTALLATION (continued)

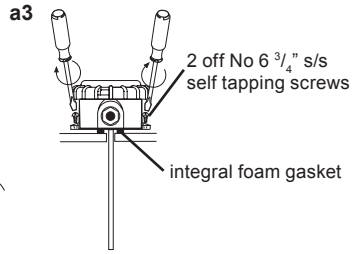
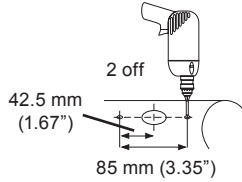
4 Install Duct Sensor
either

a Direct mount sensor on duct

a1 Drill hole in duct



a2 Drill 2 pilot holes

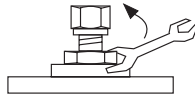


or

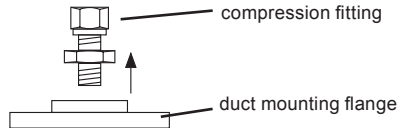
b Use compression fitting

b1 Separate compression fitting

(1) Loosen nut



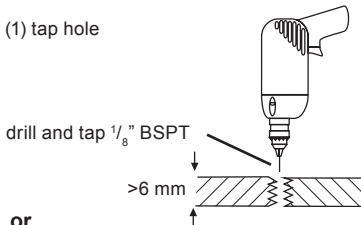
(2) Unscrew fitting



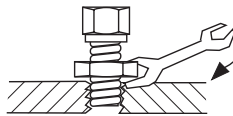
either

b2 (for thicker material) use compression fitting only

(1) tap hole



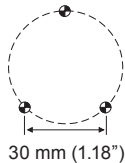
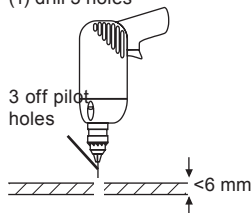
(2) screw in fitting



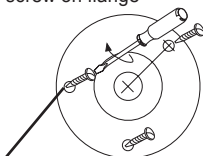
or

b3 (for thinner material) use complete mounting flange

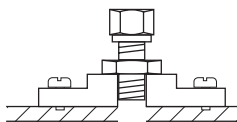
(1) drill 3 holes



(2) screw on flange



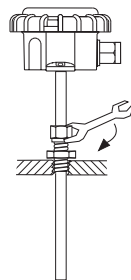
(3) mounted flange



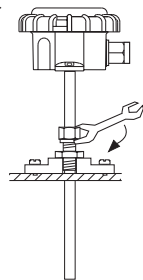
3 off No 6 3/4" s/s self tapping screws

b4 Adjust depth of probe

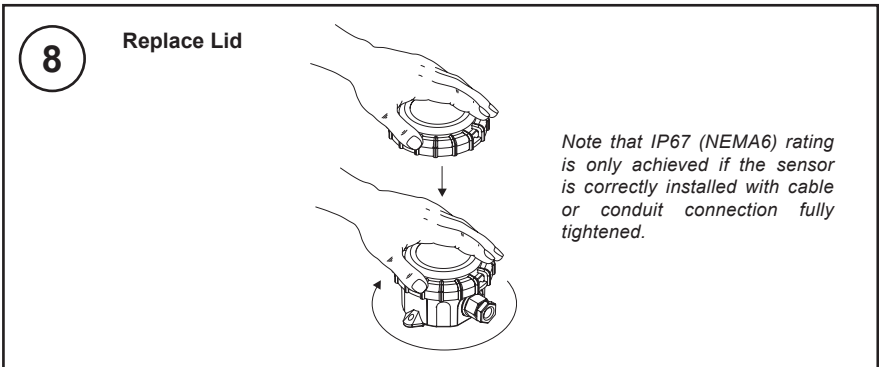
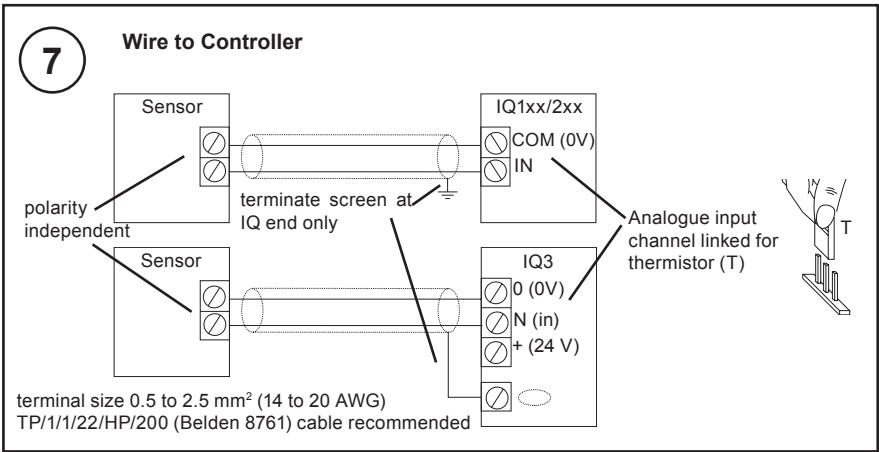
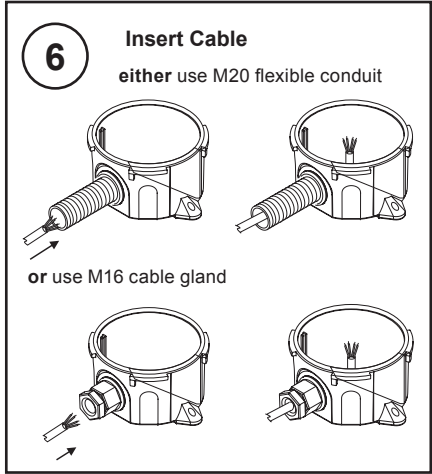
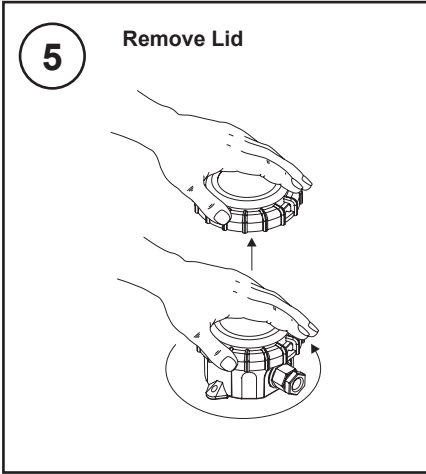
either



or





INSTALLATION (continued)

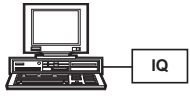
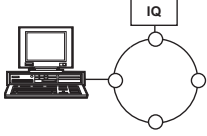


INSTALLATION (continued)

9

Configure IQ


or


IQ Configuration Manual 90-1533
 IQ3 Configuration Manual TE200768

10

Set up IQ Sensor Type

It is recommended to use SET (software tool) for the setting of the sensor type module. For all IQ2 series controllers with firmware version 2.1 or greater, or IQ3 series controllers, the following SET Unique Sensor References should be used:

Thermistor: **Thermistor TBTI** (-30 °C to +110 °C)
 Thermistor TBTI F (-22 °F to +230 °F)

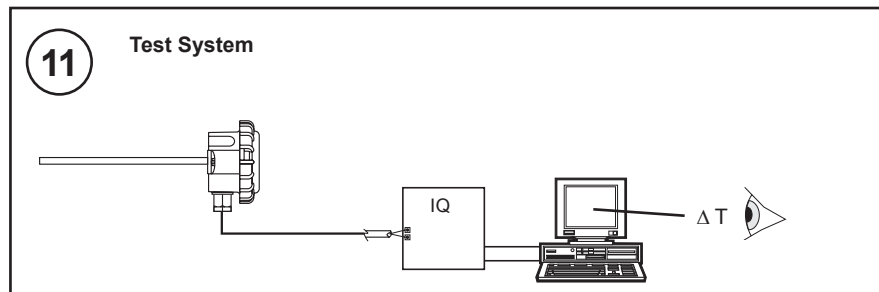
Alternatively set scaling mode to 5 (characterise) and enter scaling manually as defined in the table below. Note that for IQ3, scaling mode and exponent do not need to be set up.

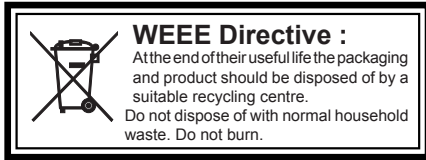
For all other IQ controllers see Sensor Scaling Reference Card TB100521A.

Thermistor (-30 °C to +110 °C, -22 °F to +230 °F)

Units:		°C	°F
Y	Input type	1 (therm V)	
E	Exponent	3	
U	Upper	115	239
L	Lower	-35	-31
P	Points	20	
x	I_x	O_x	
1	0.480	110	230
2	0.549	105	220
3	0.630	100	212
4	0.724	95	203
5	0.833	90	194
6	0.961	85	185
7	1.110	80	176
8	1.484	70	158
9	1.985	60	140
10	2.641	50	122
11	3.470	40	104
12	4.460	30	86
13	6.663	10	50
14	7.668	0	32
15	8.102	-5	23
16	8.482	-10	14
17	8.807	-15	5
18	9.078	-20	-4
19	9.299	-25	-13
20	9.476	-30	-22

INSTALLATION (continued)



DISPOSAL

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