

120 Series



Explosion-Proof Temperature and Indicating Temperature Switches and Controls

Local Mount Types B121, B122, C120

Remote Mount Types E121, E122, F120; 820E, 822E

Installation and Operation Instructions

Please read all instructional literature carefully and thoroughly before starting.

Refer to the final page for the Warranty.

GENERAL

⚠ MISUSE OF THIS PRODUCT MAY CAUSE EXPLOSION AND PERSONAL INJURY. THESE INSTRUCTIONS MUST BE THOROUGHLY READ AND UNDERSTOOD BEFORE DEVICE IS INSTALLED.

Cert number	E43374
Applicable Area	North America
Markings	Class I, Groups B, C and D; Class II, Groups E, F and G; Class III
Applicable Standards	UL 1203; CAN/CSA C22.2 No. 25 CAN/CSA C22.2 No. 30

Cert number	DEMKO 09 ATEX 0815573X
Applicable Area	Europe (EU)
Markings	II 2 G Ex db IIC T6 Gb; II 2 D Ex tb IIIC T85°C Db IP66
Applicable Standards	EN IEC 60079-0; EN 60079-1; EN 60079-31

Cert number	IECEx UL 03.0001X
Applicable Area	International
Markings	Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP66 -40°C to +75°C
Applicable Standards	IEC 60079-0; IEC 60079-1; IEC 60079-31

Cert number	DEMKO 11 ATEX 1105261X
Applicable Area	Europe (EU)
Markings	II 1 G Ex ia IIC T6 Ga
Applicable Standards	EN IEC 60079-0; EN 60079-11

Cert number	IECEx UL 14.0075X
Applicable Area	International
Markings	Ex ia IIC T6 Ga -50°C ≤ Tamb ≤ +60°C
Applicable Standards	IEC 60079-0; IEC 60079-11

⚠ 120 SERIES FOR USE IN CLASS I, DIV. 1, GROUPS B, C & D; CLASS II, DIV. 1, GROUPS E, F & G; CLASS III HAZARDOUS LOCATIONS. ENCLOSURE TYPE 4X, IP66. AMBIENT TEMPERATURE RANGE -50°C (-58°F) TO 71°C (160°F).

⚠ TO PREVENT IGNITION OF HAZARDOUS ATMOSPHERES, DISCONNECT SUPPLY CIRCUITS BEFORE OPENING. KEEP COVER TIGHT WHILE CIRCUITS ARE ENERGIZED.

⚠ ATEX AND IEC SPECIFIC CONDITIONS OF USE: DIMENSIONS OF THE FLAMEPROOF JOINTS ARE OTHER THAN THE RELEVANT MINIMUM OR MAXIMUM SPECIFIED IN TABLES 1 THROUGH 2 OF EN 60079-1/IEC 60079-1. TEMPERATURE OPERATED SWITCHES ARE TO BE MARKED WITH AN "X" AND THE DIMENSIONS OF THE FLAMEPROOF JOINTS ARE AS FOLLOWS:

120's

- Activation Plunger to adjustment screw hole gap joints: 1.140 in/28.96 mm min length by 0.0039 in/0.099 mm max annular gap
- Plunger Guide to enclosure through threaded joints: minimum 8 ½ fully engaged threads
- Cover to enclosure through threaded joints: minimum 7 ½ fully engaged threads

121's & 122's

- Activation Plunger to enclosure through hole gap joints: 1.00 in/25.40 mm min length by 0.0030 in/0.076 mm max annular gap
- Adjustment shaft to shaft through hole gap joints: 1.050 in/26.67 mm min. length by 0.0035 in/0.089 mm max. annular gap
- Cover to enclosure through threaded joints: minimum 7 ½ fully engaged threads

⚠ ATEX AND IEC SPECIFIC CONDITION OF USE: THE DEVICE MUST BE CLEANED WITH A DAMP CLOTH TO AVOID STATIC DISCHARGE.

⚠ ATEX AND IEC SPECIFIC CONDITION OF USE: ENCLOSURE CONTAINS ALUMINUM. CARE MUST BE TAKEN TO AVOID IGNITION HAZARD DUE TO IMPACT OR FRICTION.

i MAX. TEMPERATURE* LIMITS LISTED ON NAMEPLATE MUST NEVER BE EXCEEDED, EVEN BY SURGES IN THE SYSTEM. OCCASIONAL OPERATION OF UNIT UP TO MAX. TEMPERATURE IS ACCEPTABLE, E.G., START-UP AND TESTING. EXCESSIVE CYCLING AT MAXIMUM TEMPERATURE LIMIT COULD REDUCE SENSOR LIFE. CONTINUOUS OPERATION SHOULD NOT EXCEED THE DESIGNATED ADJUSTABLE TEMPERATURE RANGE.

* Maximum Temperature - the highest temperature to which a sensing element may be occasionally operated without adversely affecting set point calibration and repeatability.

⚠ THIS PRODUCT DOES NOT HAVE ANY FIELD REPLACEABLE PARTS. ANY SUBSTITUTION OF COMPONENTS WILL INVALIDATE THIRD-PARTY ISSUED APPROVALS AND CERTIFICATIONS, AND MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 1 LOCATION.



DEVICE MUST NOT BE ALTERED OR MODIFIED AFTER SHIPMENT. CONSULT UE IF MODIFICATION IS NECESSARY.

The 120 Series temperature switch utilizes either a liquid filled sensing stem (immersion stem, direct mounting) or liquid filled sensing bulb (bulb & capillary, remote mounting) to detect a temperature change. The response at a pre-determined set point(s), actuates a SPDT, dual SPDT, or DPDT snap-acting micro switch(es), converting the temperature signal into an electrical signal. Control set point(s) may be varied by turning the adjustment hex (C120, F120) or the external knob(s) and pointer(s) (B121, B122, E121, E122, 820E, 822E) according to the procedures outlined (See Part II - Adjustments).

Please refer to the product technical datasheet at www.ueonline.com for product specifications. Date code format on nameplate is "YYWW" for year and week.

Part I - Installation



- Screwdriver
- Adjustable Wrench to 1-1/2"

Mounting



INSTALL DEVICE WHERE SHOCK, VIBRATION AND TEMPERATURE FLUCTUATIONS ARE MINIMAL. DO NOT INSTALL DEVICE IN AMBIENT TEMPERATURES THAT EXCEED PUBLISHED LIMITS ON THE NAMEPLATE.



DEVICE IS PROVIDED WITH ONE OR TWO 3/4" NPT ELECTRICAL CONDUIT OPENINGS, EITHER OF WHICH OR BOTH CAN BE USED DURING INSTALLATION. A 3/4" EXPLOSION-PROOF PLUG IS PROVIDED FOR PROPERLY PLUGGING THE UNUSED CONDUIT OPENING. THE EXPLOSION-PROOF PLUG MUST BE PROPERLY INSTALLED AND IS CERTIFIED AS PART OF THE DEVICE AND CARRIES NO INDIVIDUAL MARKINGS.



DO NOT KNOCKOUT ANY PLUGS ON EXPLOSION-PROOF TYPES 820E OR 822E.



THE CONNECTION OF THE DEVICE SHALL BE MADE BY CABLE ENTRIES OR A STOPPING BOX SUITABLE FOR THE CONDITIONS OF USE AND CORRECTLY INSTALLED, AND CERTIFIED BY TYPE OF EXPLOSION PROTECTION - FLAMEPROOF ENCLOSURE 'd'.



DEVICE SHOULD BE MOUNTED TO PREVENT MOISTURE FROM ENTERING THE ENCLOSURE. VERTICAL MOUNTING IS RECOMMENDED.



ALWAYS USE A WRENCH ON LOCAL MOUNT, IMMERSION STEM HEX (SEE DIMENSIONAL DRAWINGS). DO NOT TIGHTEN BY TURNING THE ENCLOSURE AS THIS WILL DAMAGE THE SENSOR AND WEAKEN WELDED JOINTS.



IF THE SENSING BULB (OR UNION CONNECTOR) IS SUBJECTED TO PRESSURE, THE USE OF A THERMOWELL IS RECOMMENDED

The conduit connection must be properly sealed (potted) for horizontal installation. Device may be surface mounted via the four 1/4" screw holes on the enclosure or mounting bracket.

Type 820E and 822E

Units must be surface mounted. Drill mounting holes per Figure 1.

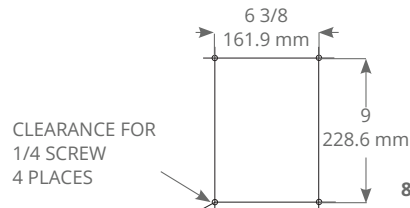


Figure 1:
820E, 822E Mounting



IF A SEAL FITTING IS REQUIRED, INSTALL THE NIPPLE AND THE SEAL FITTING PRIOR TO SURFACE MOUNTING THE CONTROLLER.

Mounting Bulb and Capillary

Fully immerse the bulb and 6" of capillary in the control zone. For best control it is generally desirable to place the bulb close to the heating or cooling source in order to sense temperature fluctuations quickly. Be sure to locate the bulb so it will not be exposed to temperature beyond the device range limits. If a separable well or union connector is used follow separate instructions included with them.



AVOID BENDING OR COILING THE CAPILLARY TUBE TIGHTER THAN 1/2" RADIUS. EXERCISE CAUTION WHEN MAKING BENDS NEAR THE CAPILLARY END.

Wiring



DISCONNECT ALL SUPPLY CIRCUITS BEFORE WIRING DEVICE. WIRE DEVICE IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. MAXIMUM RECOMMENDED WIRE SIZE IS 14 AWG AND RECOMMENDED TIGHTENING TORQUE FOR FIELD WIRING TERMINALS IS 7 TO 17 IN.-LBS. IT IS IMPERATIVE TO USE PROPERLY RATED EXPLOSION-PROOF SEALING FITTINGS FOR ELECTRICAL WIRE ENTRY.



USE 90 °C (194 °F) MIN. RATED COPPER CONDUCTOR ONLY. FOR AMBIENT TEMPERATURES BELOW -10 °C (14 °F), USE SUITABLE FIELD WIRING.



DO NOT EXCEED ELECTRICAL RATINGS LISTED ON NAMEPLATE. OVERLOAD ON A SWITCH CAN CAUSE FAILURE, EVEN ON THE FIRST CYCLE.



THE INTERNAL GROUNDING TERMINAL SHALL BE USED AS THE PRIMARY EQUIPMENT GROUNDING MEANS. THE EXTERNAL GROUNDING TERMINAL IS NOT TO BE USED AS THE PRIMARY EQUIPMENT GROUNDING TERMINAL AND IS ONLY FOR SUPPLEMENTAL (SECONDARY) GROUNDING WHERE LOCAL AUTHORITIES PERMIT OR REQUIRE SUCH A CONNECTION.



TO PREVENT IGNITION OF HAZARDOUS ATMOSPHERES, SEAL CONDUIT RUNS WITHIN 18" OF ENCLOSURE.



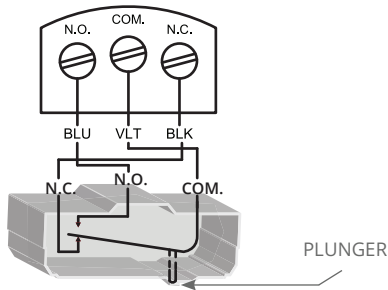
ENSURE ELECTRICAL CONDUIT ENTRIES ARE PROPERLY SEALED TO PREVENT MOISTURE ENTRY.

- 1 Remove cover and wire device (See Figure 2).
- 2 Wire directly to the terminal block. An internal grounding terminal is located near the right-hand conduit opening.
- 3 Replace cover and hand tighten to fully engage cover O-ring.



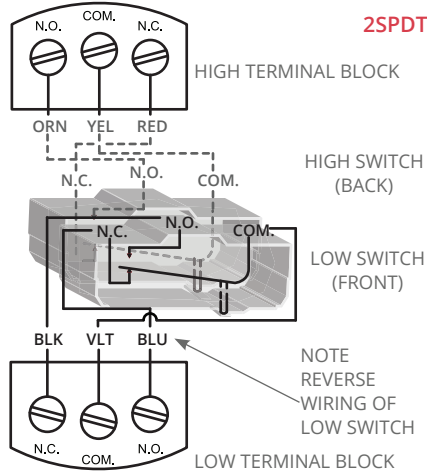
TO PREVENT SEIZURE OF ENCLOSURE COVER, DO NOT REMOVE LUBRICANT FROM THREADS. THREADS SHOULD ALSO BE FREE OF DIRT AND OTHER CONTAMINANTS.

Types B121, C120, E121, F120, 820E, also for option 1180



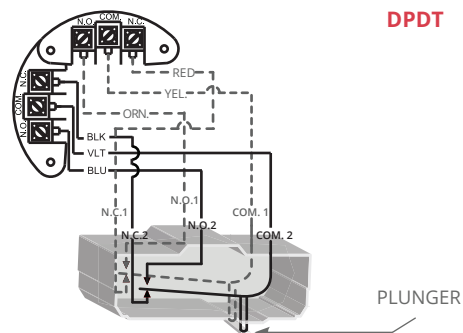
SPDT

Types B122, E122



2SPDT

Options 1010, 1190, 1195 (for types B121, C120, E121, F120 only)



DPDT

Figure 2

Type 822E

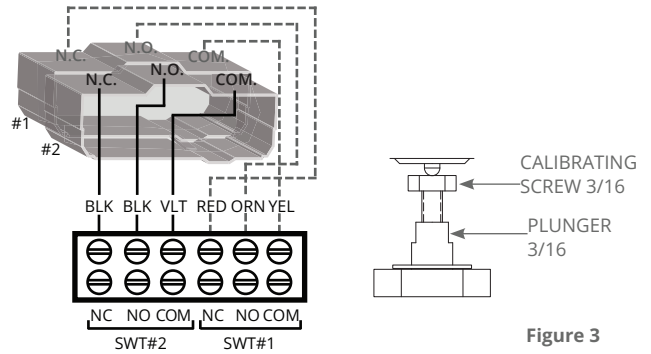


Figure 3

Part II - Adjustments



- 3/16 Open End Wrench (2)
- 1/4 Open End Wrench
- 5/64 Allen Wrench
- 5/16 Open End Wrench (2 required for 822E only)



AFTER COMPLETING SETTING ADJUSTMENT ON B121, B122, E121 & E122, BE SURE TO RE-INSTALL ADJUSTMENT COVER.

For set point adjustment and re-gapping (if necessary), connect device to a calibrated temperature source.

Types C120, F120

- 1 Remove cover
- 2 Adjust set point by holding plunger with 3/16" open end wrench and turning the calibrating screw with another 3/16" open end wrench (see figure 3).
- 3 Turn clockwise to increase setting or counter-clockwise to decrease setting.

Types B121 and E121

- 1 Remove adjustment cover.
- 2 Adjust set point by turning external knob and pointer to desired setting on scale (see figure 4).



EXTERNAL KNOB AND POINTER ADJUSTMENT

Figure 4

Types B122 and E122

Individual switches may be set together or separately by up to 100% of range. The front (low) switch should never be set higher than the rear (high) microswitch. Turning external knobs will increase or decrease each switch setting independently (see figure 4).

Type 820E

To adjust the switch:

- 1 Remove the set point adjustment knob and clear cover from the indicating enclosure (square) to access the pointer mechanism for adjustment.
- 2 Connect test lights or listen for the individual switch clicks to indicate switch operation.
- 3 Move the set point adjustment pointer (red) up the scale past the indicating pointer (black). This permits checking the set point by moving the actuating lever upward with a finger, or tool, simulating thermal assembly movement. Note switch operation on the test lights.
- 4 Loosen adjustment pointer mounting screw "A" and move the adjustment pointer (red) until it aligns with the indicating pointer (black) (see Figure 5). When the switch clicks re-tighten the screw.

Type 822E

NOTE: Type 822E has a single set point adjustment-knob and adjustment pointer (red) for both switches. Both switches are standardly factory set together within 5% of the adjustable set point range. Turning the set point adjustment knob adjusts both switches simultaneously, maintaining a fixed separation between them. To adjust the switches:

- 1 Remove the explosion-proof enclosure cover to access the switches for adjustment.
- 2 Remove the set point adjustment knob and clear cover from the indicating enclosure (square) to access the pointer mechanism for adjustment.
- 3 Connect test lights or listen for the individual switch clicks to indicate switch operation.
- 4 Move the adjustment pointer (red) up the scale past the indicating pointer (black), actuating both switches, by moving the actuating lever upward with a finger, or a tool, simulating thermal assembly movement (see Figure 5). Note switch operation on the test lights.
- 5 The set point of switch #1 is determined by the adjustment pointer (red). The set point of switch #2 may be adjusted by up to 25% of the range span below the switch #1 set point by turning adjustment "D" with a 5/16" open end wrench (clockwise) to lower the set point. See page 6 for 822E dual switch adjustment. The set point of switch #2 should never be set above that of switch #1.
- 6 To align the switch #1 adjustment pointer (red) with the indicating pointer (black), loosen the adjustment pointer mounting screw "A" and align the adjustment pointer (red) with the indicating pointer (black), then re-tighten screw "A" (see Figure 5).

NOTE: Indicating Pointer Deflection (820E, 822E)

The indicating pointers will read slightly low when the bulb temperature is 15° F above the controller setting. This deflection is normal and repeatable (approximately 0.5% of scale range on single switch models) and is due to the transference of the switching mechanism load to the thermal system. It can be measured by moving the setting pointer from the high to the low end of the scale and observing the resultant indicating pointer deflection.

NOTE:

To adjust the Indicating Pointer (820E, 822E):

- 1 Use an accurate test thermometer such as a thermocouple with its probe mounted directly to the center of the sensing bulb.
- 2 Before making any adjustments, allow process temperature to stabilize; i.e., successive on-off cycles repeated.
- 3 Correct any difference between the indicating pointer (black) and the test thermometer by holding the compensator with a 5/16" wrench while turning the zero adjustment "C" on the thermal assembly with a second 5/16" wrench (see Figure 5) until the indicating pointer (black) reads the same value as the test thermometer. Turning the zero adjustment "C" clockwise lowers indicated reading.
- 4 Compare the process temperature with the set point adjustment pointer (red).
- 5 Loosen the adjustment pointer mounting screw "A" to align set point adjustment pointer (red) with the indicating pointer (black), then re-tighten screw "A".

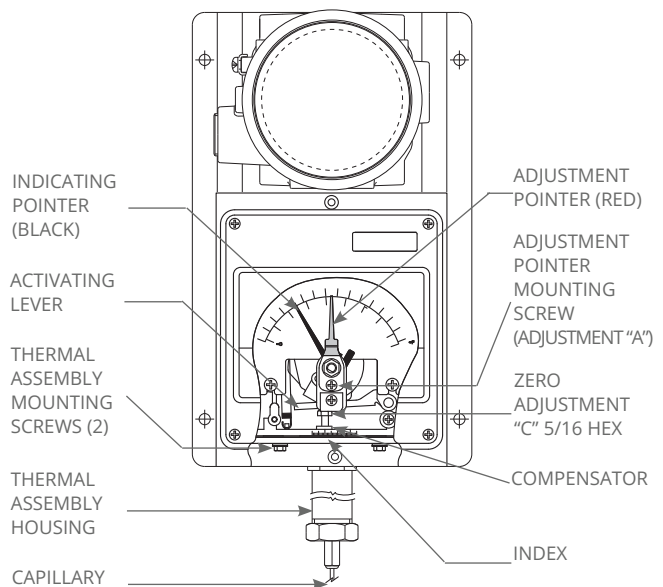


Figure 5: Indicating Enclosure Internals

Correction of Capillary (820E, 822E)

If the length of capillary immersed in the process differs from the amount immersed (6", see Mounting Bulb & Capillary in Part I - Installation) at the factory calibration bath, a calibration shift will occur.

The error may be corrected as follows:

- 1 Move pointer to the highest temperature setting. Note indicating scale reading with the head and sensor at room temperature.
- 2 Loosen the two thermal assembly mounting screws.
- 3 Re-position the housing index against the calibration on the instrument case (or skeleton casting) at a rate of 1 division line per capillary length listed in Table 1. Move to the left if capillary is to be added to the process, or to the right if capillary is to be removed from process.

Model Number	Range	Cap Length / Division ⁽¹⁾
1	-180 to 120°F	2 ft
2	-125 to 350°F	1 1/2 ft
3	-125 to 500°F	1 ft
4	-40 to 120°F	4 ft
5	-40 to 180°F	3 ft
6	0 to 250°F	2 1/2 ft
7	0 to 400°F	2 ft
8	50 to 650°F	2 ft

[1] Added to or taken away from the process

Table 1

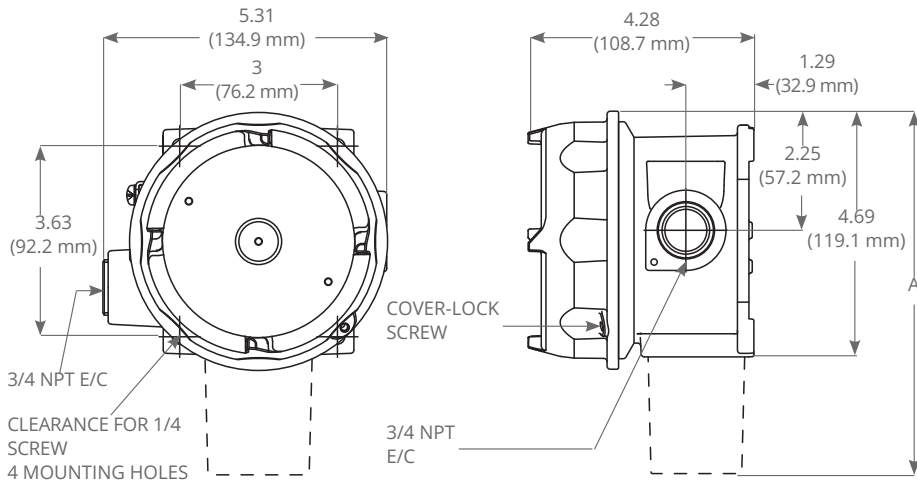
Recommended Practices

- A redundant device is necessary for applications where damage to the primary device could endanger life, limb or property. A high or low limit switch is necessary for applications where a dangerous runaway condition could result.
- Monitor operation to observe warning signs of possible damage to device, such as drift in set point. Check device immediately.
- Preventative maintenance and periodic testing is necessary for critical applications where damage could endanger property or personnel.

Part III - Dimensions

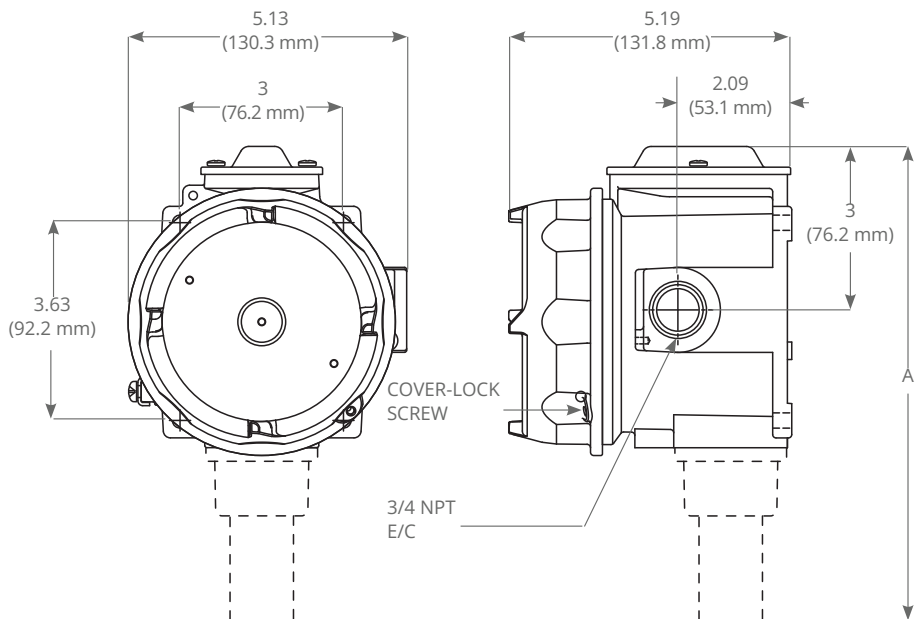
(Dimensional drawings for all models may be found at www.ueonline.com)

Internal Set Point Adjustment, Type C120, F120



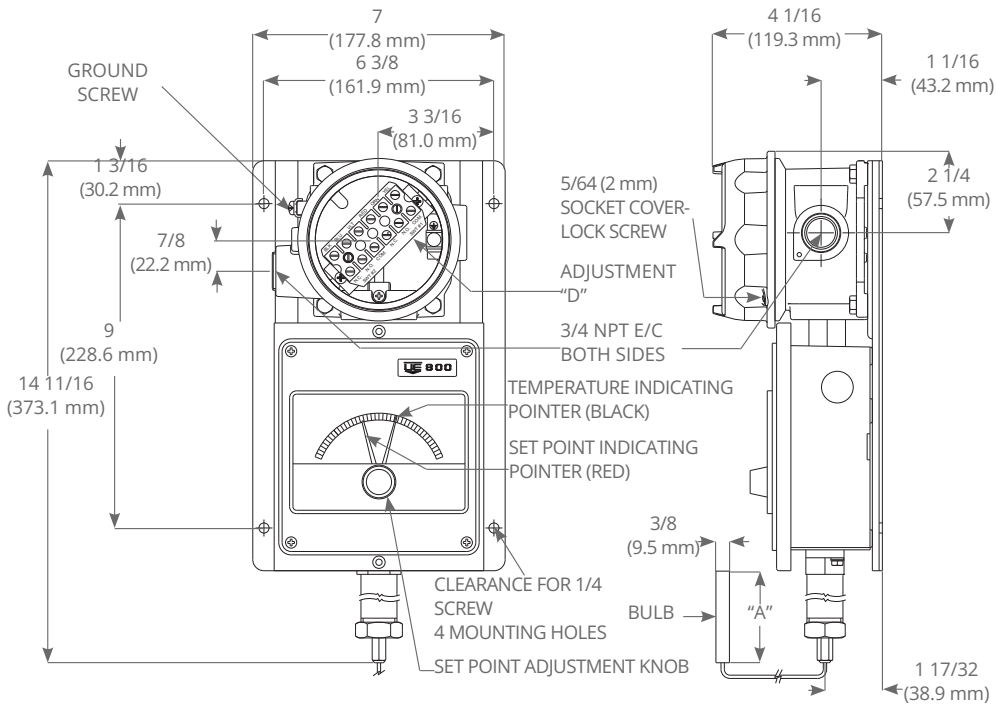
Dimension A			
Model	Inches	mm	Sensor
120	9.12	231,4	Immersion stem
121	8.97	227,4	Immersion stem
1BS-8BS	8.47	214,8	Bulb & capillary

External Set Point Adjustment, Type B121, B122, E121, E122

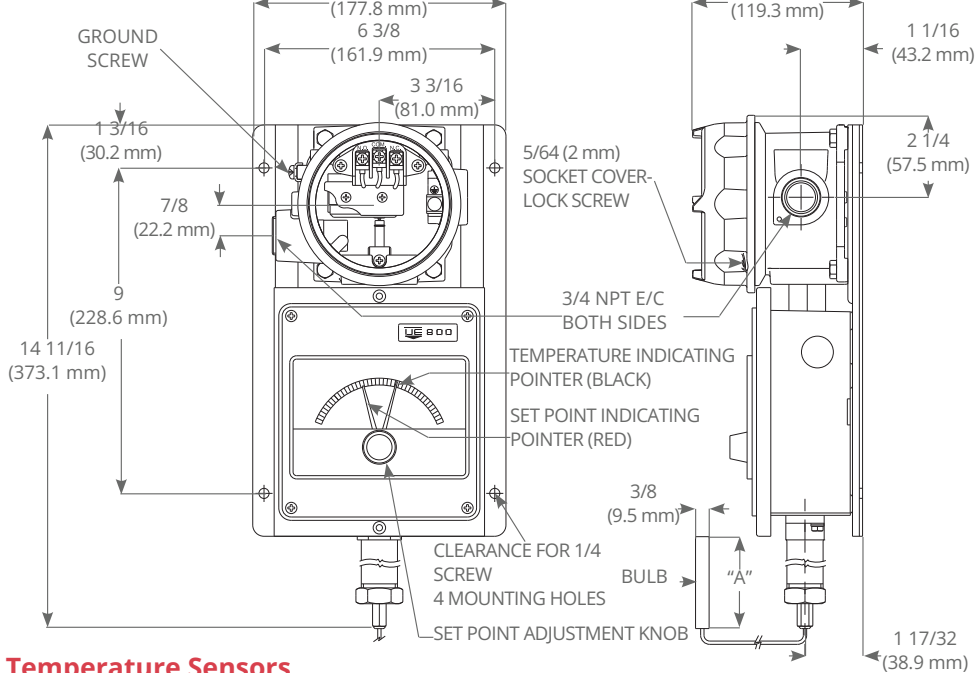


Dimension A			
Model	Inches	mm	Sensor
120, 121 (B121)	10.0	254,0	Immersion stem
120 (B122)	10.0	254,0	Immersion stem
121 (B122)	9.84	250,0	Immersion stem
2BS-8BS	9.31	236,6	Bulb & capillary
13242, 13322	10.0	254,0	Immersion stem (Freeze protection)
13273, 13321	9.31	236,6	Bulb & capillary (Heat tracing)

Type 822E dual switch



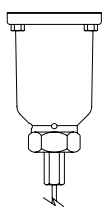
Type 820E single switch



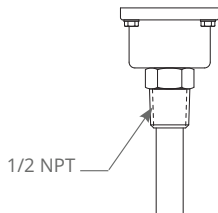
Dimension A		
Models	Inches	mm
2BS	2.44	62,0
3BS	2.13	54,0
4BS	6.75	171,5
5BS	5	127,0
6BS	4.5	114,3
7BS	3	76,2
8BS	3.25	82,6

Dimension B		
Models	Inches	mm
2BS/BSA	2.63	66.7
3BS	2.13	54,1
4BS	6.75	171,5
5BS	5	127,0
6BS	4.5	114,3
7BS	3	76,2
8BS	3.25	82,6
13273	9.51	241,5
13321	9.51	241,5

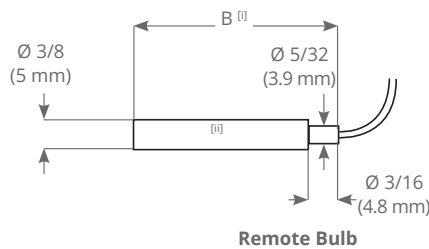
Temperature Sensors



Type E121, E122, F120
Models 2BS-8BS
Remote Mount
Temperature Assembly



Type B121, B122, C120
Models 120-121
Direct Mount
Temperature Assembly



⁽¹⁾ USE DIMENSION "B" FOR SEPARABLE WELL INSTALLATIONS
⁽²⁾ Except model 13273, 13321 bulb OD is \varnothing 1/4 (6,35 mm)

French Warnings Translations

Page	Warning Text	Texte d'Avertissement
1	MISUSE OF THIS PRODUCT MAY CAUSE EXPLOSION AND PERSONAL INJURY. THESE INSTRUCTIONS MUST BE THOROUGHLY READ AND UNDERSTOOD BEFORE UNIT IS INSTALLED.	Une mauvaise utilisation de cet appareil peut provoquer une explosion et/ou des blessures corporelles. Ces consignes doivent être lues attentivement et bien comprises avant l'installation de l'appareil.
1	ATEX AND IEC SPECIFIC CONDITIONS OF USE: DIMENSIONS OF THE FLAMEPROOF JOINTS ARE OTHER THAN THE RELEVANT MINIMUM OR MAXIMUM SPECIFIED IN TABLES 1 THROUGH 2 OF EN 60079-1/IEC 60079-1. PRESSURE OPERATED SWITCHES ARE TO BE MARKED WITH AN "X" AND THE DIMENSIONS OF THE FLAMEPROOF JOINTS ARE AS FOLLOWS:	Conditions spécifiques d'utilisation ATEX et IEC: Les dimensions des joints résistant à la flamme sont différentes du minimum ou du maximum spécifié dans les tableaux 1 à 2 de la norme EN 60079-1:2014 / IEC 60079-1:2014 Les pressostats et les thermostats doivent être marqués d'un "X" et les instructions d'installation du fabricant précisent les dimensions des joints antidéflagrants sont listées page 1.
1	ATEX AND IEC SPECIFIC CONDITION OF USE: THE DEVICE MUST BE CLEANED WITH A DAMP CLOTH TO AVOID STATIC DISCHARGE	Condition spécifique d'utilisation ATEX et IEC: l'appareil doit être nettoyé à l'aide d'un chiffon humide afin d'éviter les décharges électrostatiques.
1	ATEX AND IEC SPECIFIC CONDITION OF USE: ENCLOSURE CONTAINS ALUMINUM. CARE MUST BE TAKEN TO AVOID IGNITION HAZARD DUE TO IMPACT OR FRICTION.	Condition spécifique d'utilisation ATEX et IEC: Le boîtier contient de l'aluminium. Des précautions doivent être prises pour éviter tout risque d'inflammation dû à un choc ou à un frottement.
1	TO PREVENT IGNITION OF HAZARDOUS ATMOSPHERES, DISCONNECT SUPPLY CIRCUITS BEFORE OPENING. KEEP COVER TIGHT WHILE CIRCUITS ARE ENERGIZED.	Pour éviter l'inflammation d'atmosphères dangereuses, déconnecter les circuits d'alimentation avant d'ouvrir l'appareil. Maintenir le couvercle fermé lorsque les circuits sont sous tension.
1	THIS PRODUCT DOES NOT HAVE ANY FIELD REPLACEABLE PARTS. ANY SUBSTITUTION OF COMPONENTS WILL INVALIDATE THIRD-PARTY ISSUED APPROVALS AND CERTIFICATIONS, AND MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 1 LOCATION.	Aucun composant ne peut être remplacé sur le terrain. Tout remplacement de composant invalidera toutes les approbations et certifications données par un tiers. L'appareil peut alors ne plus être adapté à une utilisation dans un lieu de Classe I, Division 2.
2	INSTALL DEVICE WHERE SHOCK, VIBRATION AND TEMPERATURE FLUCTUATIONS ARE MINIMAL. DO NOT MOUNT DEVICE IN AMBIENT TEMPERATURES THAT EXCEED THE LIMITS ON THE NAMEPLATE FOR THE APPROPRIATE AREA	Installer l'appareil dans un endroit où les chocs, les vibrations et les variations de température sont minimales. Ne pas installer l'appareil dans un lieu où les températures ambiantes dépassent les limites indiquées sur la plaque signalétique de l'appareil.
2	IT IS IMPERATIVE TO USE PROPERLY RATED EXPLOSION-PROOF SEALING FITTINGS FOR ELECTRICAL WIRE ENTRY. TYPES C120, F120, 820E AND 822E ARE PROVIDED WITH TWO 3/4" NPT ELECTRICAL CONDUIT OPENINGS, EITHER OF WHICH OR BOTH CAN BE USED DURING INSTALLATION. A 3/4" EXPLOSION PROOF PLUG IS PROVIDED FOR PROPERLY PLUGGING THE UNUSED CONDUIT OPENING. THE EXPLOSION PROOF PLUG MUST BE PROPERLY INSTALLED.	Il est impératif d'utiliser des raccords d'étanchéité antidéflagrants pour les fils électriques. Les types C120, F120, 820E et 822E possèdent deux ouvertures de conduits électriques de 3/4" NPT, l'une ou les deux pouvant être utilisées lors de l'installation. Un presse-étoupe antidéflagrant de 3/4" est fourni pour obturer correctement l'ouverture de conduit non utilisée. Le presse-étoupe antidéflagrant doit être correctement installé.
2	TO PREVENT IGNITION OF HAZARDOUS ATMOSPHERES, SEAL CONDUIT RUNS WITHIN 18 INCHES OF ENCLOSURE	Pour éviter l'inflammation d'atmosphères dangereuses, sceller les conduits situés à moins de 18 inches du boîtier.
2	DO NOT KNOCKOUT ANY PLUGS ON EXPLOSION-PROOF TYPES 820E OR 822E.	Ne pas percer le presse-étoupe antidéflagrant sur les types 820E ou 822E.
2	THE CONNECTION OF THE DEVICE SHALL BE MADE BY CABLE ENTRIES OR A STOPPING BOX SUITABLE FOR THE CONDITIONS OF USE AND CORRECTLY INSTALLED, AND CERTIFIED BY TYPE OF EXPLOSION PROTECTION - FLAMEPROOF ENCLOSURE 'D'	Le raccordement de l'appareil doit être effectué par des presse-étoupes ou raccordé à une boîte de jonction certifiée selon le mode de protection requis, correctement installé et certifié Ex "d".
2	IF A SEAL FITTING IS REQUIRED, INSTALL HE NIPPLE AND THE SEAL FITTING PRIOR TO SURFACE MOUNTING THE CONTROLLER.	Si un joint d'étanchéité est nécessaire, installer l'écrou de raccord et le joint d'étanchéité avant d'installer le contrôleur.
2	DISCONNECT ALL SUPPLY CIRCUITS BEFORE WIRING DEVICE. WIRE DEVICE IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. MAXIMUM RECOMMENDED WIRE SIZE IS 14 AWG AND RECOMMENDED TIGHTENING TORQUE FOR FIELD WIRING TERMINALS IS 7 TO 17 IN-LBS	Avant le branchement de l'appareil, déconnecter l'installation sur laquelle l'appareil doit être monté. Réaliser le branchement électrique selon les codes électriques nationaux et locaux. Le diamètre maximal recommandé pour les fils est de 14 AWG. Le couple de serrage pour la borne de raccordement est de 7 à 17 IN-LBS.
2	ELECTRICAL RATINGS STATED IN LITERATURE AND ON NAMEPLATE MUST NOT BE EXCEEDED—OVERLOAD ON A SWITCH CAN CAUSE FAILURE ON THE FIRST CYCLE.	Les seuils électriques indiqués dans la documentation et sur les plaques signalétiques ne doivent jamais être dépassés. La surtension peut causer une panne de l'appareil dès les premier cycle.
3	USE 90 °C (194 °F) MIN. RATED COPPER CONDUCTOR ONLY. FOR AMBIENT TEMPERATURES BELOW -10 °C (14 °F), USE SUITABLE FIELD WIRING.	Le câblage d'alimentation en cuivre doit être homologué 90°C minimum. Pour des températures ambiantes inférieures à -10°C, utiliser un câblage d'alimentation de terrain approprié.
3	THE EXTERNAL GROUNDING TERMINAL IS NOT TO BE USED AS THE PRIMARY EQUIPMENT GROUNDING TERMINAL. THE INTERNAL GROUNDING TERMINAL SHALL BE USED AS THE PRIMARY EQUIPMENT GROUNDING MEANS AND THE EXTERNAL GROUNDING TERMINAL IS ONLY FOR A SUPPLEMENTAL (SECONDARY) GROUNDING CONNECTION WHERE LOCAL AUTHORITIES PERMIT OR REQUIRE SUCH A CONNECTION	La borne de mise à la terre externe ne doit pas être utilisée comme borne primaire de mise à la terre de l'appareil. La borne de mise à la terre interne doit être utilisée comme moyen de mise à la terre primaire et la borne de mise à la terre externe n'est que supplémentaire (secondaire) lorsque la réglementation locale l'exige.

LIMITED WARRANTY

Seller warrants that the device hereby purchased is, upon delivery, free from defects in material and workmanship and that any such device which is found to be defective in such workmanship or material will be repaired or replaced by Seller (Ex-works, Factory, Watertown, Massachusetts. INCOTERMS); provided, however, that this warranty applies only to device found to be so defective within a period of 24 months from the date of manufacture by the Seller. Seller shall not be obligated under this warranty for alleged defects which examination discloses are due to tampering, misuse, neglect, improper storage, and in any case where devices are disassembled by anyone other than authorized Seller's representatives. EXCEPT FOR THE LIMITED WARRANTY OF REPAIR AND REPLACEMENT STATED ABOVE, SELLER DISCLAIMS ALL WARRANTIES WHATSOEVER WITH RESPECT TO THE DEVICE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

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Seller's liability to Buyer for any loss or claim, including liability incurred in connection with (i) breach of any warranty whatsoever, expressed or implied, (ii) a breach of contract, (iii) a negligent act or acts (or negligent failure to act) committed by Seller, or (iv) an act for which strict liability will be inputted to seller, is limited to the "limited warranty" of repair and/or replacement as so stated in our warranty of device. In no event shall the Seller be liable for any special, indirect, consequential or other damages of a like general nature, including, without limitation, loss of profits or production, or loss or expenses of any nature incurred by the buyer or any third party.

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