6 Series

Pressure Switch

Type J6

UNITED ELECTRIC CONTROLS

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 DAMAGE TO EQUIPMENT OR PERSONAL INJURY. THESE INSTRUCTIONS MUST BE THOROUGHLY READ AND UNDERSTOOD BEFORE DEVICE IS INSTALLED.

BEFORE INSTALLING, CHECK THE SENSOR MODEL SELECTED FOR COMPATIBILITY TO THE PROCESS MEDIA IN CONTACT WITH THE SENSOR AND WETTED PARTS.

Cert number	20181026-E42272
Applicable Area	North America
Markings	NONE: UL Recognized
Applicable Standards	UL 508; C22.2 No. 14

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

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

THIS PRODUCT DOES NOT HAVE ANY FIELD REPLACEABLE PARTS. ANY SUBSTITUTION OF COMPONENTS SHALL INVALIDATE AGENCY CERTIFICATION(S).

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

J6 pressure switches are activated when a bellows or piston sensor responds to a pressure change. This response, at a pre-determined set point, actuates a single snap-action switch, converting the pressure signal into an electrical signal. Set point may be varied by turning the internal adjustment screw. (See Part II – Adjustments).

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

* Proof Pressure - the maximum pressure to which a pressure sensor may be occasionally subjected, which causes no permanent damage (e.g., start-up, testing). The unit may require re-gapping (consult factory for re-gapping procedure).
** Over Range Pressure - the maximum pressure to which a pressure sensor may be continuously subjected without causing damage and maintaining set point repeatability.

Please refer to product datasheet at www.ueonline.com for product specifications.

Part I - Installation

Mounting

- Adjustable wrench
- Phillips head screwdriver

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 CAN BE MOUNTED IN ANY ORIENTATION BUT VERTICAL MOUNTING IS RECOMMENDED TO PREVENT MOISTURE FROM ENTERING THE ENCLOSURE.

CONSIDER THE USE OF A PRESSURE SNUBBER IF SEVERE PRESSURE SURGES ARE EXPECTED.

J6 pressure switches may be surface mounted via the two mounting ears on either side of the enclosure, or mounted directly to a rigid pipe by using the pressure connection.

FOR PRESSURE MODELS, MOUNT VIA PRESSURE CONNECTION. ALWAYS USE A WRENCH ON PRESSURE CONNECTION HEX. DO NOT TIGHTEN BY TURNING THE ENCLOSURE AS THIS WILL DAMAGE THE SENSOR AND WEAKEN WELDED JOINTS.

On models supplied with an external reset button, be sure to leave sufficient finger space over the reset button for the operator to reset the switch.

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.

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

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

Remove the four screws retaining the cover and cover gasket. A 1/2" NPT conduit connection is provided on the upper left hand side of the enclosure. The three switch terminals are clearly labeled common, normally open and normally closed. For optional switches supplied with lead wires, the following color coding applies:

TERMINALS	Circuit 1
Common	Violet
Normally Closed	Blue
Normally Open	Black

A threaded grounding boss, tapped #10-32, is provided in the lower left corner of the enclosure. Keep the wires as short as possible to prevent interference with the plunger, or the optional manual reset button or adjustable deadband switch wheel.

Part II - Adjustments

- Models 126, 134, S126B, S134B: 3/16" & 1/4" open-end wrenches
- Models 136-160, S136B-S164B, 680: 5/8" open-end wrench
- Models 258-274, 354-364: 11/16" open-end wrench
- Models 218-230: 1/4" open-end wrench
- Models 610-614: 3/16" open-end wrench

Pressure Models

1. For set point adjustment, connect unit to a calibrated pressure source.
2. Remove cover and gasket.
3. The adjusting screw, labeled "A" in Figures 1 & 2, is located beneath the switch and is turned to adjust the set point. Using the appropriately sized open-end wrench (see Tools Needed above), turn the adjustment screw towards the left (clockwise) to increase set point or towards the right (counter-clockwise) to decrease set point.

Vacuum Models

1. For set point adjustment, connect unit to a calibrated vacuum source.
2. Remove cover and gasket.
3. The adjusting screw, labeled "A" in Figures 1 & 2, is located beneath the switch and is turned to adjust the set point. Using a 1/4" open-end wrench, turn the adjustment screw towards the right (counter-clockwise) to increase set point (towards full vacuum) or towards the left (clockwise) to decrease set point (towards 0 psig).

NOTE: For models 126-134 & S126B-S134B, use 3/16" open-end wrench to keep item B (Figure 2) from turning.

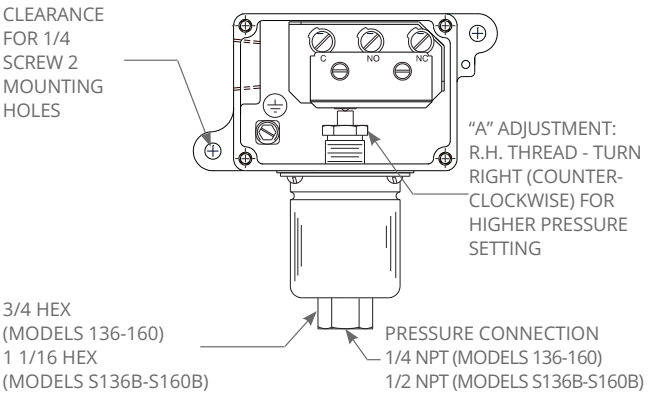


Figure 1: MODELS 136-160, S136B-S164B, 258-274 & 354-364

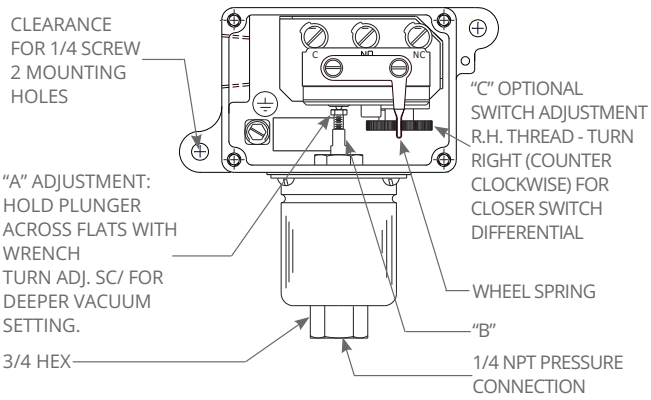


Figure 2: MODELS 126, 134. S126B, S134B, 218-230, 610-614, 680

NOTE: Picture shows optional adjustable deadband switch (option 1520)

Types with Adjustable Deadband Switch (Option 1520)

Types with option code 1520 incorporate a snap switch with integral adjustment wheel (Item C in Fig. 2).

Turning this wheel raises or lowers the pressure rise set point. The fall set point remains constant. To use the adjustable deadband switch:

1. Determine set point and deadband values. For example, a rising set point of 20 psi with a deadband value of 6 psi.

2. Set the falling set point at desired deadband value (determined by subtracting the deadband value from the desired set point) using the standard adjustment screw as outlined above. Using the example from set 1, 20 – 6 = 14, so you would set the fall set point at 14 psi. This is your constant.

3. Set your deadband by turning the adjustment wheel left to raise or right to lower the set point. Using the example from step 1, turn the wheel left or right until 20 psi is achieved. This is your set point.

Consult UE for additional information.

Types with Manual Reset Switch (Option 1530)

These optional models incorporate a snap switch that when actuated, remains actuated until the pressure decreases and the reset button (located on top of the enclosure) is manually depressed to reset the switch.

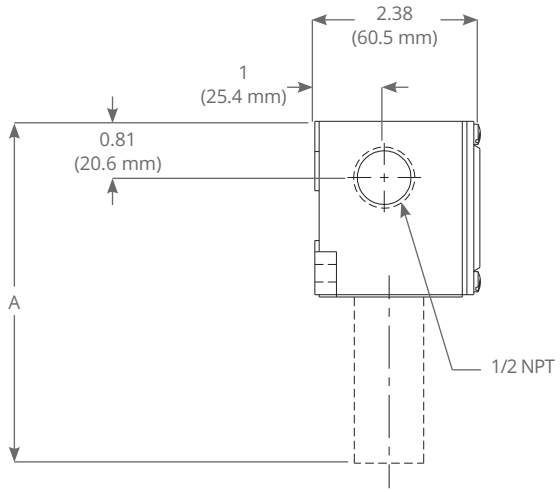
REPLACE COVER AND GASKET WHEN ALL OPERATIONS ARE COMPLETE AND BEFORE USING.

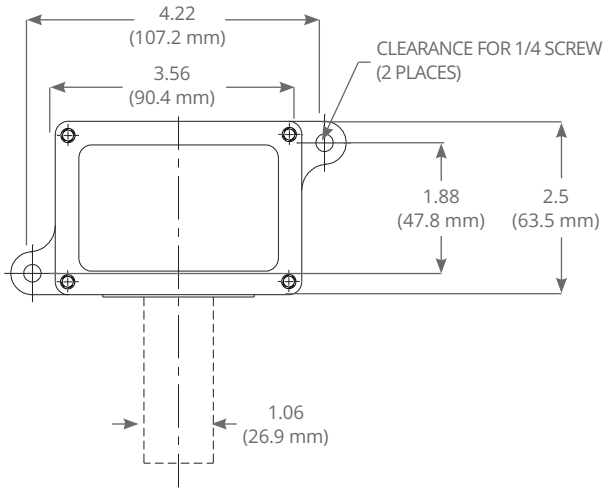
Recommended Practices

- 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.

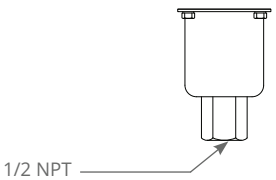
Part III - Dimensions

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

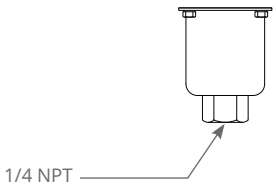




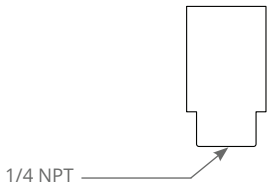
Pressure Connections



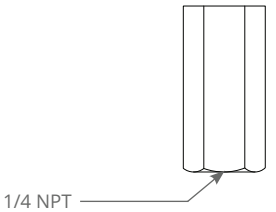
Models S1261B-S164B



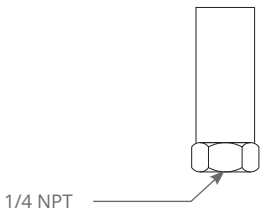
Models 126-160



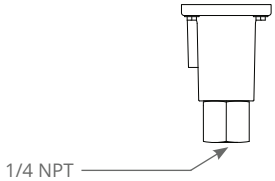
Models 218-230



Models 258-274



Models 354-364, 680



Models 610-614

French Warnings Translations

Pg	Warning Text	Texte d'Avertissement
1	MISUSE OF THIS PRODUCT MAY CAUSE DAMAGE TO EQUIPMENT OR PERSONAL INJURY. THESE INSTRUCTIONS MUST BE THOROUGHLY READ AND UNDERSTOOD BEFORE DEVICE IS INSTALLED.	Une mauvaise utilisation de cet appareil peut endommager l'équipement et/ou provoquer des blessures. Ces consignes doivent être lues attentivement et bien comprises avant l'installation de l'appareil.
1	ATEX AND IEC SPECIFIC CONDITIONS OF USE: ENCLOSURE CONTAINS ALUMINUM. CARE MUST BE TAKEN TO AVOID IGNITION HAZARD DUE TO IMPACT OR FRICTION.	Conditions spécifiques 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	THIS PRODUCT DOES NOT HAVE ANY FIELD REPLACEABLE PARTS. ANY SUBSTITUTION OF COMPONENTS SHALL INVALIDATE AGENCY CERTIFICATION(S).	Aucun composant ne peut être remplacé sur le terrain. Tout remplacement de composant peut invalider toutes les approbations et certifications données par un tiers.
1	INSTALL DEVICE WHERE SHOCK, VIBRATION AND TEMPERATURE FLUCTUATIONS ARE MINIMAL. DO NOT INSTALL DEVICE IN AMBIENT TEMPERATURES THAT EXCEED PUBLISHED LIMITS ON THE NAMEPLATE.	Installer l'appareil dans un endroit où les chocs, les vibrations et les variations de température sont minimes. Ne pas installer l'appareil dans un lieu où les températures ambiantes dépassent les limites indiquées sur la plaque signalétique de l'appareil.
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 etre 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	DO NOT EXCEED ELECTRICAL RATINGS LISTED ON NAMEPLATE. OVERLOAD ON A SWITCH CAN CAUSE FAILURE, EVEN ON THE FIRST CYCLE.	Les seuils électriques indiqués dans la documentation et sur les plaques signalétiques ne doivent jamais etre dépassés. La surtension peut causer une panne de l'appareil dès les premier cycle.

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.

LIMITATION OF SELLER'S LIABILITY

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.

UE specifications subject to change without notice.

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