



25 Series

25 Series

PRESSURE SWITCH



FEATURES

- External Setpoint Adjustment
- Internally Adjustable Deadband
- Compact Construction
- All Metal Enclosure



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OVERVIEW

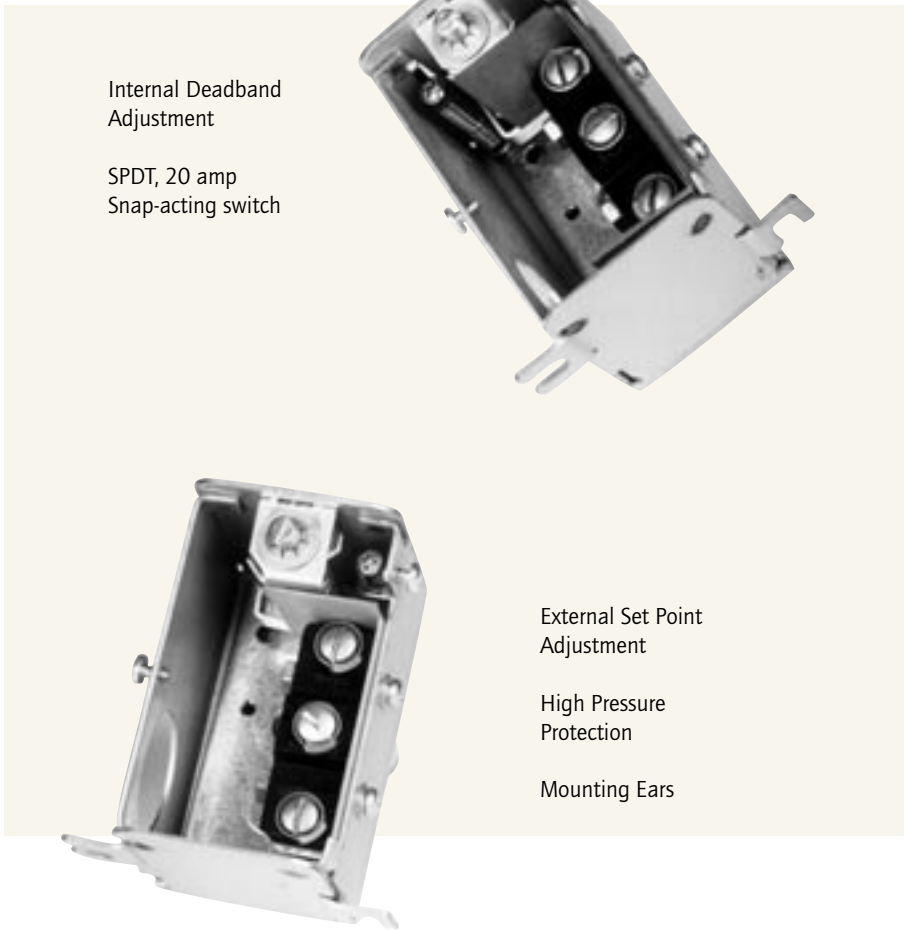
The 25 Series is a low cost pressure switch featuring an externally adjustable set point and an internally adjustable deadband. It offers a self contained solution for direct control of AC loads up to 20 amps with adjustable pressure ranges up to 475 psi.

The adjustable set point and deadband feature is a real benefit for applications where a full function logic controller would not be necessary. Technicians can make on-the-fly corrections during development testing, start-up or maintenance. The compact design and low cost also makes the 25 Series well suited for installation on OEM equipment or in panels.

FEATURES

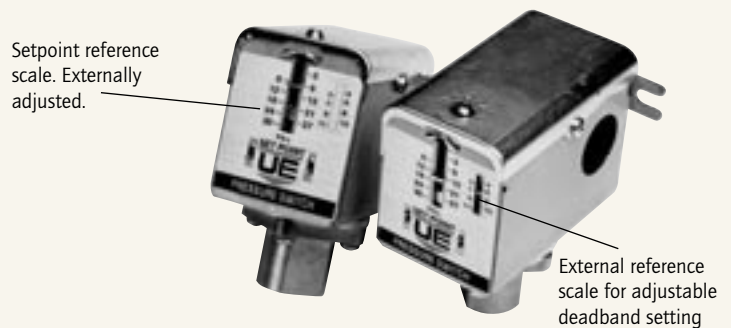
- External Adjustment
- Adjustable Deadband
- Compact Construction
- All Metal Enclosure

The 25 Series features proven diaphragm sensing technology, a 20 amp snap-acting switch, and adjustable ranges up to 475 psi, highlighting its versatility. The 25 Series is cULus listed and is available with a Buna-N, Viton® or EPDM diaphragm pressure sensor. The switch comes with a standard brass pressure connection; however, other materials are available for volume applications. All models achieve a rated proof pressure of 600 psi and are contained in a NEMA housing. The robust design provides repeatability of $\pm 1\%$, even when subjected to shock and vibration.



APPLICATIONS

The 25 Series Adjustable Pressure Switch offers an easy to install solution for direct control of HVAC fans and blowers, as well as control of pumps, compressors and valves. The switch is ideal for alarm and shutdown applications where the user must protect people, equipment or the environment.



TECHNOLOGY

The 25 Series relies on simple, but dependable technology to achieve its purpose: a cost-effective, ideal product for direct pump monitoring/control and similar applications. The 25 uses a diaphragm to sense changes in pressure, which are transmitted through a lever to the 20A snap-action switch. Changes to set point are accomplished easily while the unit is under pressure through the external adjusting screw. This adjustment "pre-loads" the lever, which results in excellent vibration-resistance. On many models, the deadband (the difference between actuation and de-actuation) is also field adjustable, giving the user flexibility in configuring the product to the application.

SPECIFICATIONS

STORAGE TEMPERATURE	-65 to 160°F (-54 to 71 °C)
OPERATING AMBIENT TEMPERATURE	0 to 160°F (17 to 71 °C) Set point shifts less than 1% of range for a 50°F (28°C) ambient temperature change
MAXIMUM MEDIA TEMPERATURE	Buna-N sensor: 200°F (93°C) Viton® sensor: 250°F (121 °C) EPDM sensor: 250°F (121 °C)
ENCLOSURE	Zinc plated steel with bright chromate finish
ENCLOSURE CLASSIFICATION	Complies with enclosure type 1
SHOCK	Set point repeats after 15 G, 10 millisecond duration
VIBRATION	Set point repeats after 2.5 G, 5 to 500 Hz
SET POINT REPEATABILITY	Typically ±1% of span
SWITCH OUTPUT	One SPDT, snap-acting switch
ELECTRICAL RATINGS	20 A @ 480 VAC resistive 1 HP @125 VAC Resistive, adjustable deadband versions (choice F) 2 HP @250 VAC Resistive, adjustable deadband versions (choice F)
ELECTRICAL CONNECTION	7/8" hole for optional NPT conduit connector
WEIGHT	16 oz.
PRESSURE CONNECTION	1/4" NPT female Brass, or 1/8" NPT female Brass
MOUNTING	Surface mount with two screws through clearance holes, or mount by pressure connection Viton is a registered trademark of E.I. DuPont Company.

APPROVALS



UL 873 listed, files # E10667, # E57086
 CSA C22.2 No. 24-1993, Files # E10667, # 57086



CE Compliance with LVD (Low Voltage Directive)

MODEL CHART

Adjustable Deadband Version - Deadband Choice A

Model	Adjustable Range*				Adjustable Deadband Range				Max. Working Pressure		Proof Pressure	
	Low end of range on fall		High end of range on rise									
	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar
A	3	0,2	30	2,1	5	0,3	11	0,8	30	2,1	600	41,4
B	20	1,4	200	13,8	20	1,4	70	4,83	200	13,8	600	41,4
C	25	1,7	475	32,8	35	2,4	140	9,7	475	32,8	600	41,4

Fixed Deadband Version - Deadband Choice F

Model	Adjustable Range*				Fixed Deadband Tolerance				Max. Working Pressure		Proof Pressure	
	Low end of range on fall		High end of range on rise									
	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar
A	3	0,2	30	2,1	2	0,1	5	0,3	30	2,1	600	41,4
B	20	1,4	200	13,8	4	0,3	10	0,7	200	13,8	600	41,4
C	25	1,7	475	32,8	10	0,7	25	1,7	475	32,8	600	41,4

* Value indicated on dial is the set point on falling pressure.
 Deadband represents the reset point above this setting. Dial setting plus deadband must not exceed adjustable range.



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HOW TO ORDER

Select a single letter or number "Code" to make up a part number.

25	A	1	F	2	A	M201
Series Designation	Model/Range	Number of Switches	Pressure Connection	Sensor Material	Deadband	Miscellaneous Options

(Example of "Code") 25 A 1 F 2 A M201

COMPONENTS

CODE SERIES DESIGNATION

25

DESCRIPTION
Designation for 25 Series product line

MODEL/RANGE

A
B
C

3 to 30 psi
20 to 200 psi
25 to 475 psi

NUMBER OF SWITCHES

1

(1) SPDT snap-switch, 20 A @ 480 VAC resistive

PRESSURE CONNECTION

E
F

1/8" NPT(female), Brass Pressure Connection
1/4" NPT(female), Brass Pressure Connection

SENSOR MATERIAL

2
3
4

Buna-N
Viton®
EPDM

DEADBAND

F
A

Fixed
Adjustable

MISCELLANEOUS OPTIONS

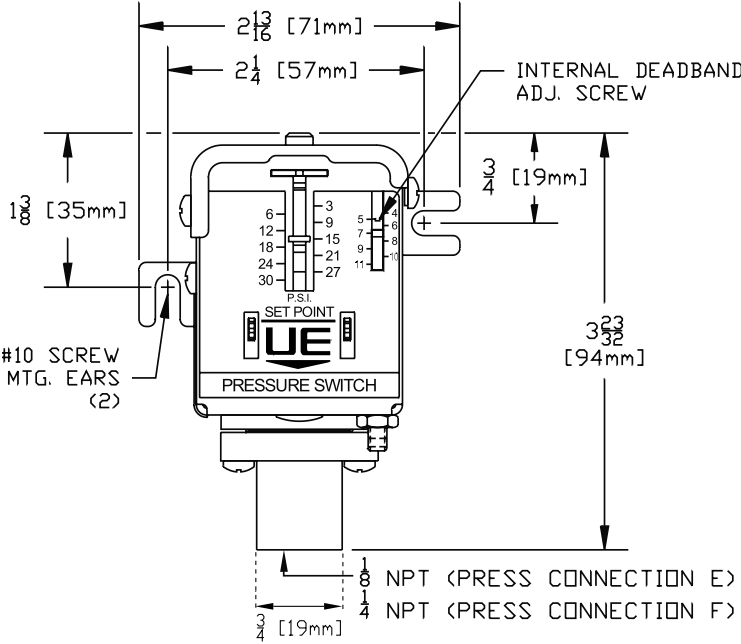
M201
M230*
M444
M446

Factory set point
Set adjustable deadband
Paper tag
Stainless steel tag

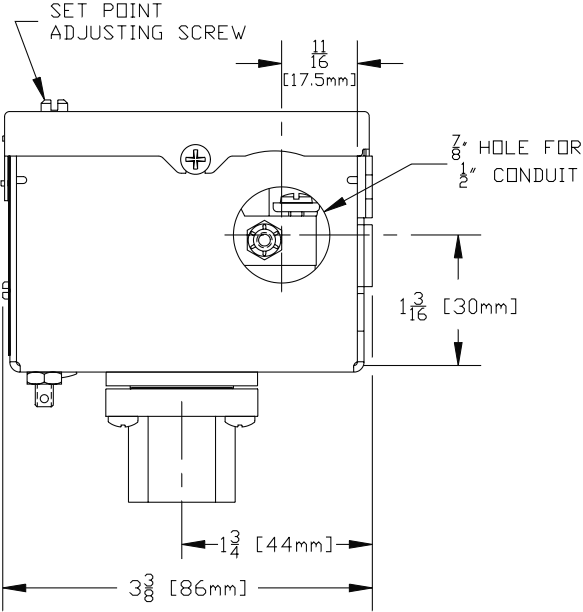
* Do not specify M201 when specifying M230

DIMENSIONAL DRAWINGS

Front View



Side View



RECOMMENDED PRACTICES AND WARNINGS

United Electric Controls Company recommends careful consideration of the following factors when specifying and installing UE pressure and temperature units. Before installing a unit, the Installation and Maintenance instructions provided with unit must be read and understood.

- To avoid damaging unit, proof pressure and maximum temperature limits stated in literature and on nameplates must never be exceeded, even by surges in the system. Operation of the unit up to maximum temperature is acceptable on a limited basis (i.e., start-up, testing) but continuous operation must be restricted to the designated adjustable range. Excessive cycling at maximum temperature limits could reduce sensor life.
- A back-up unit is necessary for applications where damage to a primary unit could endanger life, limb or property. A high or low limit switch is necessary for applications where a dangerous runaway condition could result.
- The adjustable range must be selected so that incorrect, inadvertent or malicious setting at any range point cannot result in an unsafe system condition.
- Install unit where shock, vibration and ambient temperature fluctuations will not damage unit or affect operation. Orient unit so that moisture does not enter the enclosure via the electrical connection. When appropriate, this entry point should be sealed to prevent moisture entry.
- Unit must not be altered or modified after shipment. Consult UE if modification is necessary.
- Monitor operation to observe warning signs of possible damage to unit, such as drift in set point or faulty display. Check unit immediately.
- Preventative maintenance and periodic testing is necessary for critical applications where damage could endanger property or personnel.
- For all applications, a factory set unit should be tested before use.
- Electrical ratings stated in literature and on nameplate must not be exceeded. Overload on a switch can cause damage, even on the first cycle. Wire unit according to local and national electrical codes, using wire size recommended in installation sheet.
- Use only factory authorized replacement parts and procedures.
- Do not mount unit in ambient temp. exceeding published limits.

LIMITED WARRANTY OF REPAIR AND REPLACEMENT

Seller warrants that the product hereby purchased is, upon delivery, free from defects in material and workmanship and that any such product which is found to be defective in such workmanship or material will be repaired or replaced by Seller (F.O.B. UE Watertown); provided, however, that this warranty applies only to equipment found to be so defective within a period of 18 months from the date of manufacture by the Seller (36 months for the Spectra 12 and One Series products). 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 products 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 PRODUCT, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

LIABILITY LIMITATION

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 IMPUTED TO SELLER, IS LIMITED TO THE LIMITED WARRANTY OF REPAIR AND REPLACEMENT STATED HEREIN. 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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