Data Sheet

J40 SERIES

Skeleton Pressure and Vacuum Switches

Supplied by

247able.com

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J40 Series

SKELETON PRESSURE AND VACUUM SWITCHES

FEATURES

- Sealed Metal Bellows Sensor
- Brass or Phosphor Bronze Wetted Material
- Small Size
- I5 A SPDT Switch Output
- Easy to Wire Screw Terminals
- Adjustable Ranges from 30" Hg Vac to 300 psi (-1 to 20,7 bar)

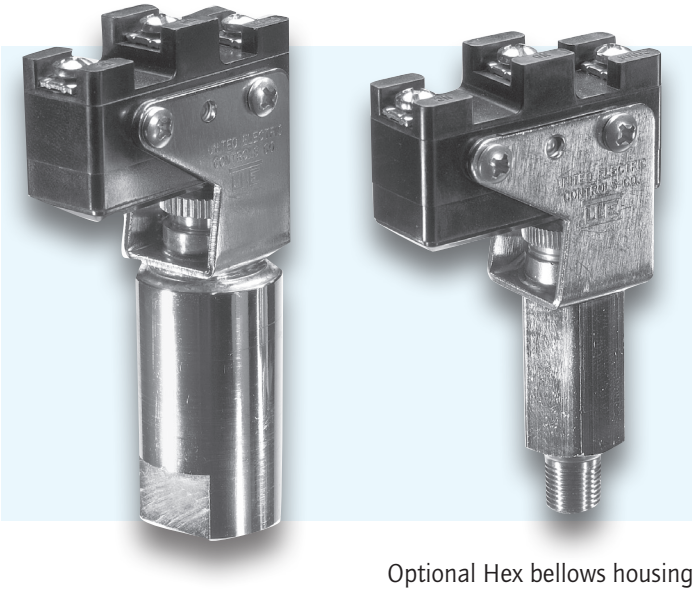
J40 Series

OVERVIEW

The J40 can be utilized in OEM applications where compact size and performance are required. The sealed bellows sensor provides a "leak-free" sensor for applications where elastomers are unacceptable. Proven reliability involving sterilizers, plasma-cutting, anesthesia equipment, and even protective switching devices for power equipment, have made the J40 a versatile OEM pressure switch.

FEATURES

- Sealed metal bellows sensor
- Brass or phosphor bronze wetted material
- Compact size
- Easy external adjustment
- Optional adjustable deadband switch
- UL recognized for the US and Canada; CE compliant to LVD & PED



Optional Hex bellows housing

SPECIFICATIONS

AMBIENT TEMPERATURE LIMITS	-40 to 160°F (-40 to 71°C)
SHOCK	Set point repeats after 15 G, 10 millisecond duration
VIBRATION	Set point repeats after 2.5 G, 5-500 CPS
ENCLOSURE CLASSIFICATION	Not applicable
SET POINT REPEATABILITY	± 1% of full scale range
SWITCH OUTPUT	One SPDT; switch may be wired "normally open" or "normally closed"
ELECTRICAL RATING	15 A 125/250 VAC resistive. Electrical switches have limited DC capabilities. Consult UE for additional information.
ENCLOSURE	Skeleton construction
WEIGHT	Approx. 4 oz.
ELECTRICAL CONNECTION	Direct to switch terminals
PRESSURE CONNECTION	Models 218-230: 1/4" NPT (female); Models 256-274: 1/8" NPT (male)
MOUNTING	Via NPT pressure connection

Approvals

UE declarations and third-party issued Agency certifications are available for download at www.ueonline.com/prod_approval.

UNITED STATES AND CANADA
UL Recognized, cUL Recognized
UL 508; CSA C22.2 No. 14, file #E42272

Canadian Registration Number (CRN): Refer to www.ueonline.com/certifications for list of approved models

EUROPE
Low Voltage Directive (LVD) (2006/95/EC)
UEC Compliant to LVD
Products rated lower than 50 VAC and 75 VDC are outside the scope of the LVD
The Low Voltage Directive does not apply to products for use in hazardous locations

Pressure Equipment Directive (PED) (97/23/EC)
Compliant to PED
Products rated below 7.5 psi are outside of the scope of the PED

MODEL CHART

Model	Adjustable Set Point Range		Deadband		*Proof Pressure	
	psi (unless noted)	bar	psi (unless noted)	bar (unless noted)	psi	bar
Phosphor bronze bellows with brass 1/8" NPT (male) pressure connection						
256	0 to 30	0 to 2,1	1.5 to 2.5	0,1 to 0,2	45	3,1
260	0 to 60	0 to 4,1	1.5 to 4	0,1 to 0,3	90	6,2
262	0 to 90	0 to 6,2	1.5 to 4	0,1 to 0,3	135	9,3
266	0 to 100	0 to 6,9	2 to 4	0,1 to 0,3	150	10,3
271	0 to 240	0 to 16,5	2 to 5	0,1 to 0,4	330	22,8
274	0 to 300	0 to 20,7	4 to 6	0,3 to 0,4	350	24,1
Phosphor bronze bellows with brass 1/4" NPT (female) pressure connection						
218	30" Hg Vac to 0	-1 to 0	1 to 2.5" Hg Vac	33,9 to 84,7 mbar	5	0,3
222	0 to 20	0 to 1,4	0.2 to 1.3	13,8 to 89,6 mbar	30	2,1
224	0 to 30	0 to 2,1	0.2 to 1.3	13,8 to 89,6 mbar	45	3,1
226	0 to 50	0 to 3,4	0.2 to 1.3	13,8 to 89,6 mbar	75	5,2
230	0 to 100	0 to 6,9	1 to 2.3	0,1 to 0,2	110	7,6

* **Proof Pressure:** The maximum pressure to which a pressure sensor may be occasionally subjected, which causes no permanent damage. The unit may require calibration (e.g. start-up, testing).

HOW TO ORDER

BUILDING A PART NUMBER

Select a **Type**

Refer to the "Type" section below.

Determine type number based on switch output, enclosure, adjustment and reference.

Fill in the type portion of your part number with the corresponding number.

Select a **Model**

Refer to the "Model Charts"
Determine model based on adjustable range, deadband and proof pressure.

Fill in the model portion of your part number with the corresponding number.

Select an **Option**

Refer to the "Options" section

Determine option number based on switch output, optional materials or other product enhancements.

Fill in the option portion of your part number with the corresponding number. Leave "option" portion blank if no options are needed.

FOR MULTIPLE OPTIONS: Call United Electric Controls.

TYPE	DESCRIPTION
J40	One SPDT output; skeleton open frame construction; external adjustment with no reference dial

SWITCH OPTIONS*

0140	Gold contacts, 1 A 125 VAC resistive
0500	Close deadband, 5 A 125/250 VAC resistive
1070	10 A 125 VDC or VAC resistive; deadband and minimum set point will increase; consult factory for information
1520	Adjustable deadband, 15 A 125/250/277 VAC resistive. Adjustable wheel changes rise setting only. If adjustment of fall setting is required, use primary adjustment
1535	High ambient, 15 A 125/250 VAC resistive; temperatures up to 250°F (121°C)

GENERAL

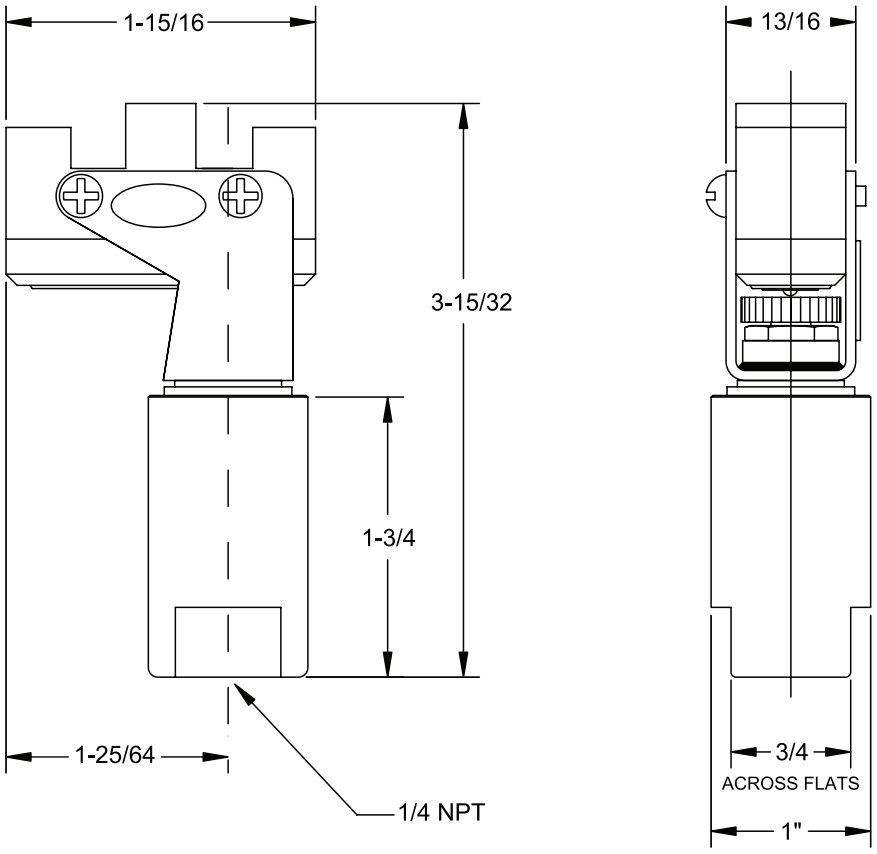
M201	Factory set one switch; specify set point on increasing or decreasing pressure
M444	Paper ID tag
M446	Stainless steel ID tag and wire attachment
M514	Hex bellows housing. NOT AVAILABLE ON MODELS 218-230
M550	Oxygen service cleaning; alcohol cleaning to remove residue from the process connection.

** All switches have limited DC capabilities. Consult factory for details.*

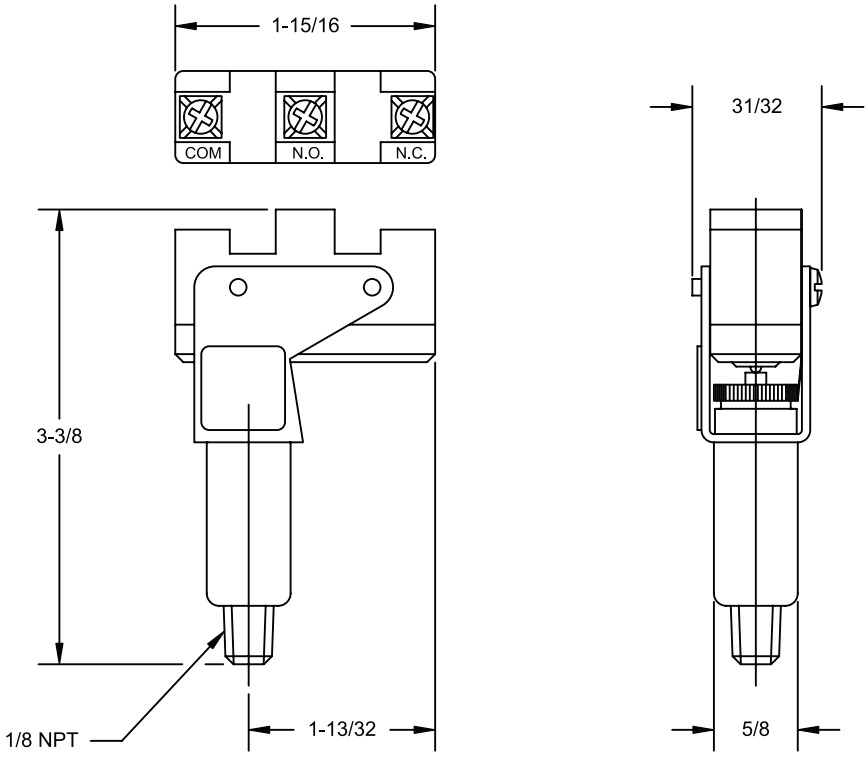
DIMENSIONAL DRAWINGS

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

Type J40, Models 218-230



Type J40, Models 256-274



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 pressure or temperature is acceptable on a limited basis (e.g., start-up, testing) but continuous operation must be restricted to the designated adjustable range. Excessive cycling at maximum pressure or 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. When applicable, 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.
- 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.
- Do not mount unit in ambient temp. exceeding published limits.

LIMITED WARRANTY

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 (Ex-works, Factory, Watertown, Massachusetts. INCOTERMS); provided, however, that this warranty applies only to equipment 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 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.

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 PRODUCT. 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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