



10 Series

Pressure switch

United Electric Controls is
ISO 9001:2015 certified



Table of Contents

Specifications		page 3
Models		page 3
Options		page 4
Dimensional drawings		page 5
Certifications		page 7

Use the following pages to determine the best switch for your applications, then build your part number.

Building a Part Number

EXAMPLE: **10 B 11 M201**

Series Designation

10 Designation for 10 Series product line

Electrical Termination Type

- A** 0.11" push-on terminals. Mating terminals supplied
- B** 0.25" push-on terminals
- C** Enclosure Type 4; 1/2" NPT (male) conduit connection; 20" leads
- D** Enclosure Type 4; 20" leads
- E** Enclosure Type 4; 1/2" NPT (female) conduit connection; 5' cable
- F** IP65 4 terminal male DIN 43650 Form A connector
Mating female connector not supplied
- G** Enclosure Type 4; 5' cable

Range

10, 11, 12, 13, 14, 15, 16 page 3

Options: Select any of available options for your switch

Options page 4

Specifications

Electrical Rating

Electrical Rating
5A @ 250 VAC
Electrical Information*
5A inductive (75% power factor) @ 125 VAC, 1/4 HP
5A resistive @ 125 VAC
3A inductive @ 30 VDC
5A resistive @ 30 VDC
0.25A inductive @ 125 VDC
0.5A resistive @ 125 VDC
Gold flashing over silver contacts for loads down to 5mA @ 6 VDC, 2mA @ 12 VDC and 1mA @ 24 VDC

*Electrical Information values are based upon testing and/or experience. Electrical Information values are not UL rated, listed or stated on nameplates unless indicated. Consult UE for further information.

Ambient Temperature Limits	0 to 160 °F (-18 to 71 °C) with Buna-N construction; 0 to 180 °F (-18 to 82 °C) with Viton® construction; setpoint shifts less than 1% of range for a 50 °F (10 °C) ambient temperature change. Unit will operate down to -40 °F (-40 °C) but with reduced repeatability
Maximum Media Temperature	200 °F (93 °C) with Buna-N sensor; 250 °F (121 °C) with Viton sensor
Shock	Setpoint repeats after 50 G, 10 millisecond duration
Vibration	Setpoint repeats after 10 G, 5-500 CPS
Enclosure	Aluminum
Enclosure Classification	Termination Types C, D, E, and G: Enclosure Type 4. Termination Type F: IP65. Types A & B: Not applicable
Setpoint Repeatability	Models 10-12: ±1% of full scale range; Models 13-16: ±1.5% of full scale range
Switch Output	One SPDT
Weight	Type A: 5 oz.; Type B: 6 oz.; Type C: 6.5 oz.; Type D: 6 oz.; Type E: 12 oz.; Type F: 6.5 oz.; Type G: 12 oz.
Electrical connection	7 electrical terminations; Refer to "Building a Part Number"
Pressure Connection	Models 10-12: 1/8" NPT (male); Models 13-16: 1/4" NPT (male); and other connections available (see Options list)
Mounting	Via pressure connection. Surface mounting bracket kit available for field installation. (see Options list)

Models

Pressure								Process Connection			
Adjustable Setpoint		Deadband		Over Range*		Proof**		Wetted Material	Thread NPT (M)	Sensor Style***	Model
(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)				
4 to 50	0,3 to 3,4	1 to 6	68,9 mbar to 0,4 bar	1000	68,9	3000	206,8	Buna-N; Brass	1/8	D	10
10 to 150	0,7 to 10,3	2 to 10	0,1 to 0,7	1500	103,4	3000	206,8	Buna-N; Brass	1/8	D	11
30 to 600	2,1 to 41,4	8 to 60	0,6 to 4,1	2500	172,4	3000	206,8	Buna-N; Brass	1/8	D	12
100 to 1500	6,9 to 103,4	20 to 220	1,4 to 15,2	8000	551,6	10,000	689,5	Stainless steel; Buna-N; Brass	1/4	P	13
180 to 3000	12,4 to 206,8	50 to 400	3,4 to 27,6	8000	551,6	10,000	689,5	Stainless steel; Buna-N; Brass	1/4	P	14
400 to 4700	27,6 to 324,1	100 to 600	6,9 to 41,4	8000	551,6	10,000	689,5	Stainless steel; Buna-N; Brass	1/4	P	15
4000 to 7500	275,8 to 517,1	400 to 950	27,6 to 65,5	10,000	689,5	12,000	827,4	Stainless steel; Buna-N; Brass	1/4	P	16

***Over Range Pressure:** The maximum pressure that may be applied continuously without causing damage and maintaining setpoint repeatability

****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).

***D = diaphragm, P = piston

Options

Option	Description	Models													
		A10-A12	A13-A16	B10-B12	B13-B16	C10-C12	C13-C16	D10-D12	D13-D16	E10-E12	E13-E16	F10-F12	F13-F16	G10-G12	G13-G16
M201 ^[1]	Factory set one switch	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M277	Range in kPa or MPa, factory selected	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M278	Range in kg/cm ²	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M405	Intrinsic safety compliance for European Union per ATEX standards	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M406	Intrinsic safety compliance for Eurasian Economic Union per EAC standards	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M430	Cover lock	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M438	EN 10204 type 2.1 Declaration of Material Compliance	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M439	EN 10204 type 3.1 Declaration of Material Compliance with specific Material Certifications	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M444	Paper ID Tag	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M446	Stainless steel tag	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M449 ^[2]	Mounting bracket	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M511	1/4" NPT(M) 316 stainless steel	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M512	1/4" NPT(M) brass	•		•		•		•		•		•		•	
M540 ^[3]	Viton diaphragm and/or O-ring. Standard pressure connection.	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M550 ^{[4][5]}	O ₂ service cleaning	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M925	7/16-20 UNF-2A, SAE male brass with Buna O-ring	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M929	G1/2 straight pipe thread	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Accessories															
62169-26 ^[6]	Mounting bracket kit	•	•	•	•	•	•	•	•	•	•	•	•	•	•
L040	4' leadwire/cable					•	•	•	•						
L060	6' leadwire/cable					•	•	•	•	•	•			•	•
L080	8' leadwire/cable					•	•	•	•	•	•			•	•
L100	10' leadwire/cable					•	•	•	•	•	•			•	•
L120	12' leadwire/cable					•	•	•	•	•	•			•	•

• Available

[1] Factory setpoint requires the setpoint, units, and rise or fall setting to be specified at the time of order. Selection of switch options may require additional information, consult UE.

[2] Same as accessory 62169-26.

[3] O-ring changes to Viton, diaphragm material may change to Viton or Teflon®, and pressure connection may change to 316 stainless steel depending on model. Deadband and low end of range may increase; ambient temperature limits may be affected. Consult UE.

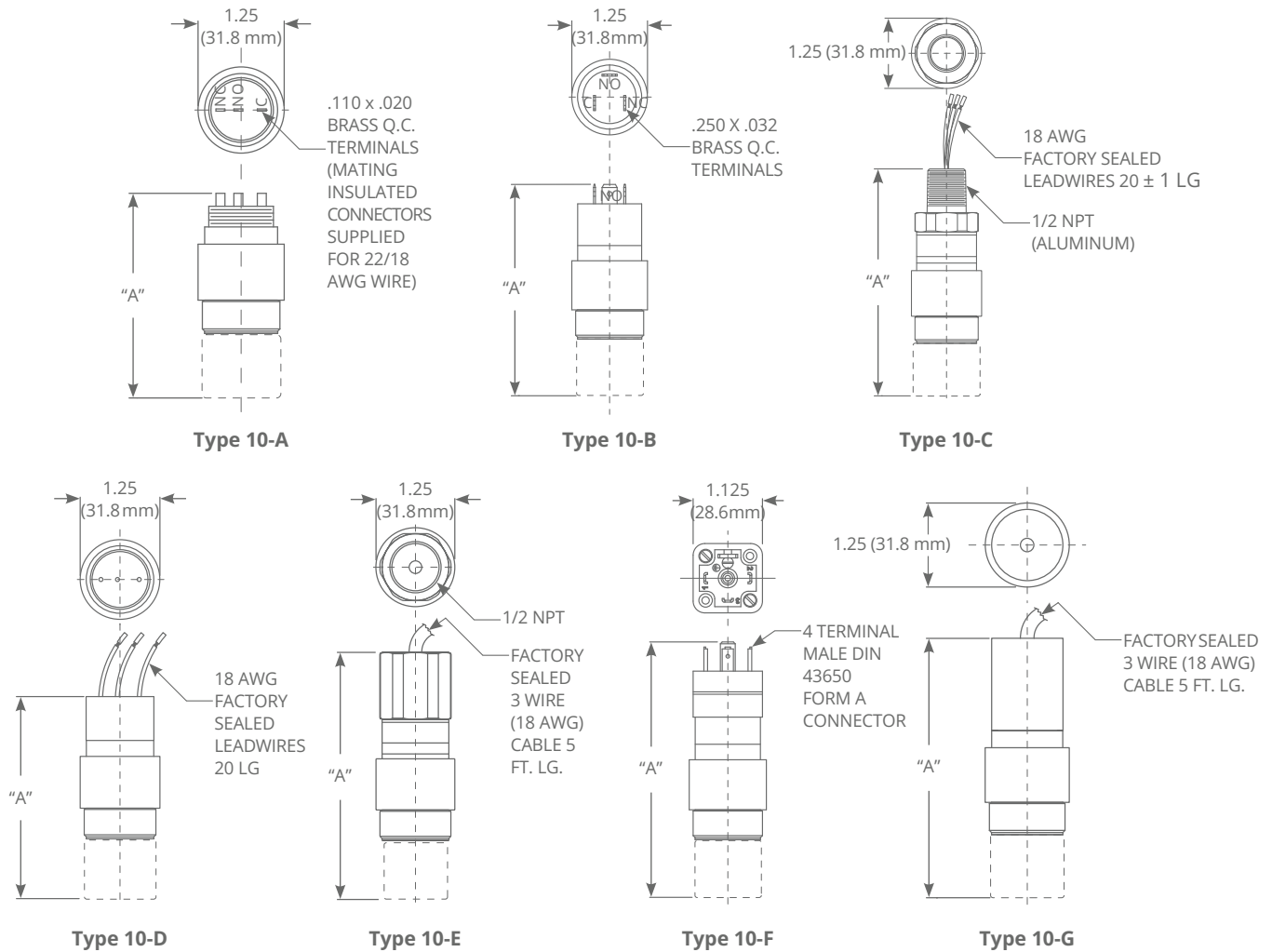
[4] O-ring changes to Viton, diaphragm material may change to Viton or Teflon, and pressure connection may change to 316 stainless steel depending on model. Deadband and low end of range may increase; ambient temperature limits may be affected. Consult UE.

[5] O₂ (see option M550) cleaning in accordance with ASTM G93, verification type 1, tests 1-3.

[6] If purchasing with a 10 Series, use option M449.

Dimensional Drawings

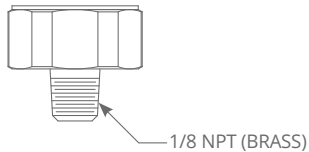
Dimensions are for reference only. Drawings for all models may be found at www.ueonline.com



Dimension "A"			
Models	Inches	mm	NPT (M)
A10-12	3.00	76.2	1/8
A13-16	3.31	84.1	1/4
B10-12	3.50	88.9	1/8
B13-16	3.81	96.8	1/4
C10-12	4.06	103.1	1/8
C13-16	4.38	111.3	1/4
D10-12	3.19	81.0	1/8
D13-16	3.50	88.9	1/4
E10-12	3.94	100.1	1/8
E13-16	4.25	108.0	1/4
F10-12	4.13	104.9	1/8
F13-16	4.44	112.8	1/4
G10-12	3.88	98.6	1/8
G13-16	4.19	106.4	1/4

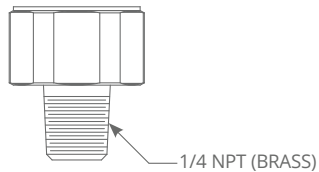
Pressure Connection Details

Sensor Style D*

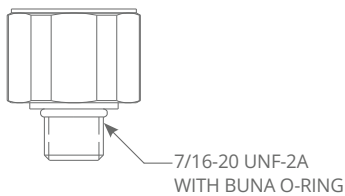


Model 10-12

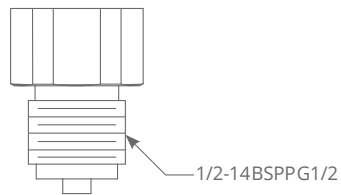
Sensor Style P*



Model 13-16



Option M925



Option M929

*D = diaphragm, P = piston

Certifications

	Region	Agency	Classification
	United States and Canada	UL	UL Recognized E42272 Type 4 Enclosure* ANSI/UL 508; CSA-C22.2 No. 14
	Europe	ATEX	For intrinsic safety certification only, must order option M405: DEMKO 11 ATEX 1105261X II 1 G Ex ia IIC T6 Ga -50 ≤ Ta ≤ +60 °C Compliant to Pressure Equipment Directive (PED) (2014/68/EU) Compliant to Low Voltage Directive (LVD) (2014/35/EU)
	International	IECEx	For intrinsic safety certification only, must order option M405: IECEx UL 14.0075X Ex ia IIC T6 Ga -50 ≤ Ta ≤ +60 °C

*Excludes models with electrical termination types A, B, and F

Regional Certifications

	Region	Option	Classification
	China	M408	Ex ia IIC T6 Ga -50 ≤ Ta ≤ +60 °C
	India	M405	Ex ia IIC T6 Ga -50 ≤ Ta ≤ +60 °C
	United Kingdom	M462	II 1 G Ex ia IIC T6 Ga -50 ≤ Ta ≤ +60 °C
	Eurasian Economic Union (EAC)	M406	0Ex ia IIC T6 Ga X -50 ≤ Ta ≤ +60 °C
	United Arab Emirates (ECAS)	M463	Ex ia IIC T6 Ga -50 ≤ Ta ≤ +60 °C
	Taiwan		ITRI available through Taiwan channel partner. Consult United Electric.

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