

J54-22, J54-24, J54-126, J54A-144, J54A-146,
J54S-610, B54-103, B54-109, E54-D20BC,
F54S-D21BC, F54S-D21BS и др.

Реле давления и температуры серии 54. Технические характеристики.



По вопросам продаж и поддержки обращайтесь:

Архангельск (8182)63-90-72
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54 Series

54 Series

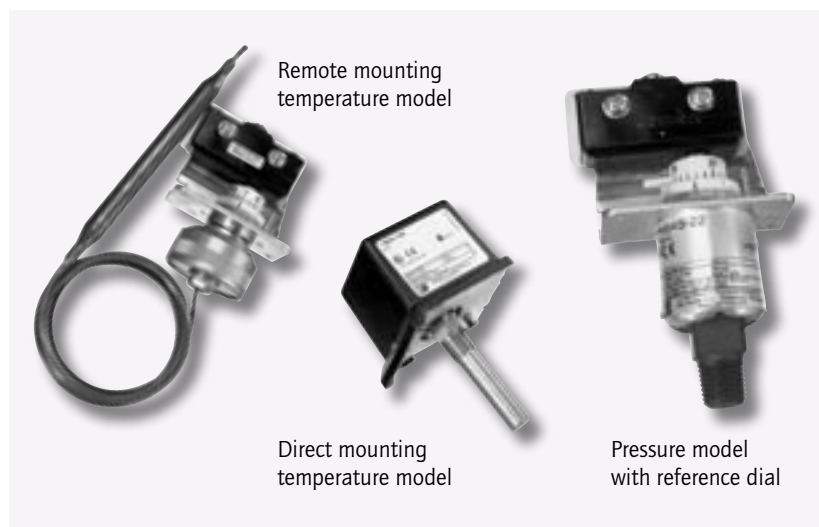
OVERVIEW

The 54 Series offers the OEM a combination of reliable performance and low cost. Available in pressure and temperature versions, with single or dual SPDT outputs and enclosed or open frame (skeleton) construction, the 54 Series family provides design versatility.

The 54 has been field-proven in a wide variety of OEM applications, including medical, laboratory, fire protection and heating equipment.

FEATURES

- Compact size
- Choice of one or two switch outputs
- Reference dial or hex screw-type setting
- Optional 1/2" NPT (male) by 1/8" NPT (female) polysulfone® pressure connection
- Optional external manual reset
- NEMA 1 or open frame (skeleton) versions for OEM applications
- Brass bellows models



SPECIFICATIONS

STORAGE TEMPERATURE	-65 to 160°F (-54 to 71°C)
AMBIENT TEMPERATURE LIMITS	
Pressure Models	Models 126-164, 610-614: -40 to 160°F (-40 to 71°C); Models 22-28: 0 to 160°F (-18 to 71°C)
Temperature Models	-40 to 160°F (-40 to 71°C). Set point typically shifts less than 1% of range for a 50°F (28°C) ambient temperature change.
SHOCK	Set point repeats after 15 G, 10 millisecond duration
VIBRATION ENCLOSURE	Set point repeats after 2.5 G, 5-500 CPS
CLASSIFICATION	Types C54, C54A, B54, F54, E54, J54, J54A, H54: complies with NEMA 1 requirements. Types C54S, B54S, F54S, E54S, J54S, J54AS, H54S: not applicable
SET POINT REPEATABILITY	
Pressure Models	Models 22-28, 126-164: ± 1% of adjustable range; Models 610-614: ± 1.5% of adjustable range
Temperature Models	± 1% of adjustable range
SWITCH OUTPUT	One or two SPDT snap action switch(es); dual switch may be separated up to 100% of range; switches may be wired "normally open" or "normally closed"
ELECTRICAL RATING	15A 125/250/480 VAC resistive. Electrical switches have limited DC capabilities. Consult UE for additional information.
ENCLOSURE MATERIAL	Lexan® black finish for Types J54, J54A, H54, B54, C54, C54A, E54, F54 only
WEIGHT	Approximately 12 oz.
ELECTRICAL CONNECTION	Types J54 & H54, C54, C54A, B54, E54, F54: 7/8" diameter hole; Type J54A: 1-1/16" diameter hole
PRESSURE CONNECTION	Models 22-28: 1/4" NPT (male); 126-164, 610-614: 1/4" NPT (female)
TEMPERATURE ASSEMBLY	Bulb and Capillary: 6 feet copper or 304 stainless steel capillary Immersion Stem: Brass
TEMPERATURE FILL	Non-toxic oil
TEMPERATURE DEADBAND	Typically 1% of range under laboratory conditions (70°F circulating bath at rate of 1/2°F per minute change)

PRESSURE MODEL CHART

Model	Adjustable Set Point Range Low end of range on fall; High end of range on rise		Deadband		Over Range Pressure*		Proof Pressure**	
	psi (unless noted)	bar (unless noted)	psi (unless noted)	bar (unless noted)	psi	bar	psi	bar
J54, J54A, J54S, J54AS, H54, H54S								
Buna N diaphragm and O-Ring with 1/4" NPT (male) aluminum pressure connection; limited to process temperature below 200°F								
22	30" Hg Vac to 0	-1 to 0	1 to 3.5" Hg Vac	33,9 to 118, 5 mbar	0	0	50	3,4
24	3 to 30	0,2 to 2,1	0.4 to 1.3	27,6 to 89,6 mbar	50	3,4	200	13,8
25	10 to 100	0,7 to 6,9	1 to 2.5	68,9 to 172,4 mbar	100	6,9	above set point	above set point
27	30 to 300	2,1 to 20,7	1.3 to 4	89,6 to 275,8 mbar	above set point	above set point	Max 600	Max 41,4
28	50 to 500	3,4 to 34,5	1.5 to 5	103,4 to 344,7 mbar				
Brass bellows with nickel-plated brass 1/4" NPT (female) pressure connection; Model 126 has a zinc-plated steel spring exposed to media								
126	30" Hg Vac to 0	-1 to 0	0.2 to 0.9" Hg	6,8 to 30,5 mbar	3	0,2	5	0,3
137	0 to 80 "wc	0 to 199,1 mbar	1 to 8 "wc	2,5 to 19,9 mbar	3	0,2	5	0,3
144	0 to 20	0 to 1,4	0.1 to 0.5	6,9 to 34,5 mbar	20	1,4	25	1,7
146	0 to 30	0 to 2,1	0.1 to 0.6	6,9 to 41,4 mbar	30	2,1	40	2,8
152†	0 to 50	0 to 3,4	0.1 to 0.7	6,9 to 48,3 mbar	50	3,4	75	5,2
156	0 to 100	0 to 6,9	0.2 to 0.8	13,8 to 55,2 mbar	100	6,9	125	8,6
164	0 to 200	0 to 13,8	0.3 to 2	20,7 to 137,9mbar	200	13,8	200	13,8
J54, J54S								
303 stainless steel piston and Buna N O-Ring with 1/4" NPT (female) pressure connection (not recommended for gas service since drying of the O-Ring can allow bleeding of the medium into the atmosphere)								
610	75 to 1000	5,2 to 68,9	30 to 150	2,1 to 10,3	6000	413,7	10,000	689,5
612	125 to 3000	8,6 to 206,8	40 to 250	2,8 to 17,2	6000	413,7	10,000	689,5
614	700 to 6000	48,3 to 413,7	50 to 400	3,4 to 27,6	6000	413,7	10,000	689,5

TEMPERATURE MODEL CHART

Model	Adjustable Set Point Range		Max. Temperature		Scale*** Division		Stem Size
	°F	°C	°F	°C	°F	°C	NPT x BT (inches)
B54, B54S, C54, C54S, C54A, C54AS , Brass immersion stem							
103	0 to 225	-17.8 to 107.2	250	121.1	10	5	3/8 x 2-1/8
109	200 to 425	93.3 to 218.3	425	218.3	10	5	3/8 x 2-1/8
							OD x Length
E54, F54 , Copper bulb and capillary							
D20BC	-130 to 120	-90 to 48.9	170	76.7	10	5	3/8 x 4-1/2
D21BC	0 to 150	-17.8 to 65.6	200	93.3	5	5	3/8 x 6-7/8
D22BC	50 to 300	10 to 148.9	350	176.7	10	5	3/8 x 4-1/2
D23BC	150 to 650	65.6 to 343.3	700	371.1	25	10	3/8 x 3-5/8
E54, F54 , Stainless steel bulb and capillary							
D20BS†	-130 to 120	-90 to 48.9	170	76.7	10	5	3/8 x 4-1/2
D21BS	0 to 150	-17.8 to 65.6	200	93.3	5	5	3/8 x 6-7/8
D22BS	50 to 300	10 to 148.9	350	176.7	10	5	3/8 x 4-1/2
D23BS	150 to 650	65.6 to 343.3	700	371.1	25	10	3/8 x 3-5/8
E54S, F54S , Copper bulb and capillary							
D21BC	0 to 150	-17.8 to 65.6	200	93.3	5	5	3/8 x 6-7/8
D22BC	50 to 300	10 to 148.9	350	176.7	10	5	3/8 x 4-1/2
D23BC	150 to 650	65.6 to 343.3	700	371.1	25	10	3/8 x 3-5/8
E54S, F54S , Stainless steel bulb and capillary							
D21BS	0 to 150	-17.8 to 65.6	200	93.3	5	5	3/8 x 6-7/8
D22BS	50 to 300	10 to 148.9	350	176.7	10	5	3/8 x 4-1/2
D23BS	150 to 650	65.6 to 343.3	700	371.1	25	10	3/8 x 3-5/8



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

- J54: NEMA 1 enclosure; One SPDT output; internal hex adjustment with no reference dial
- J54A: NEMA 1 enclosure; Two SPDT outputs; internal hex adjustment with no reference dial
- J54S: Skeleton construction; One SPDT output; hex adjustment with no reference dial
- J54AS: Skeleton construction; Two SPDT outputs; hex adjustment with no reference dial
- H54: NEMA 1 enclosure; One SPDT output; internal adjustment with reference dial
- H54S: Skeleton construction; One SPDT output; adjustment with reference dial

DESCRIPTION - PRESSURE MODELS

TEMPERATURE MODELS

- C54: NEMA 1 enclosure; Immersion stem; one SPDT output; internal hex adjustment with no reference dial
- C54A: NEMA 1 enclosure; Immersion stem; two SPDT outputs; internal hex adjustment with no reference dial
- C54S: Skeleton construction; Immersion stem; one SPDT output; hex adjustment with no reference dial
- C54AS: Skeleton construction; Two SPDT outputs; hex adjustment with no reference dial
- B54: NEMA 1 enclosure; Immersion stem; one SPDT output; internal adjustment with reference dial
- B54S: Skeleton construction; Immersion stem; one SPDT output; adjustment with reference dial
- F54: NEMA 1 enclosure; Bulb and capillary; one SPDT output; internal hex adjustment with no reference dial
- F54S: Skeleton construction; Bulb and capillary; one SPDT output; hex adjustment with no reference dial
- E54: NEMA 1 enclosure; Bulb and capillary; one SPDT output; internal adjustment with reference dial
- E54S: Skeleton construction; Bulb and capillary; one SPDT output; adjustment with reference dial

SWITCH OPTIONS*

CODE

DESCRIPTION

- 0500 Close deadband, 5A 125/250 VAC resistive NOT AVAILABLE ON B54, B54S, C54, C54S, C54A, C54AS, E54S, F54, F54S
- 1520 Adjustable deadband, 15A 125/250/277 VAC resistive. Adjustable wheel changes rise setting only. If adjustment of fall setting is required, use primary adjustment. NOT AVAILABLE ON TYPES J54A, J54AS, H54, H54S, PRESSURE MODELS 610-614 & TEMPERATURE VERSIONS
- 1530 External manual reset, 15A 125/250/480 VAC resistive; reset on increasing pressure or temperature only. NOT AVAILABLE ON TYPES J54A, J54S, J54AS, H54S,B54S, C54A, C54AS, C54S, E54S, F54S OR MODELS 610-614
- 2000 20A 125/250 VAC resistive

GENERAL OPTIONS

CODE	DESCRIPTION
M201	Factory set one switch; specify increasing or decreasing pressure or temperature and set point. NOT AVAILABLE ON TYPES J54, J54AS, C54A, C54AS
M202	Factory set two switches; specify increasing or decreasing pressure or temperature and set point. NOT AVAILABLE ON TYPES J54, J54S, H54, H54S, B54, B54S, C54, C54S, E54, E54S, F54, F54S
M270	Calibrated dial in Celsius. NOT AVAILABLE ON PRESSURE VERSIONS AND TYPES B54, B54S, C54, C54S, C54A, C54AS, F54, F54S
M277	Range indicated on nameplate in kPa or MPa. NOT AVAILABLE ON TEMPERATURE VERSIONS
M278	Range indicated on nameplate in kg/cm ² . NOT AVAILABLE ON TEMPERATURE VERSIONS.
M407	CE Compliance to Pressure Equipment directive (category IV). NOT AVAILABLE ON MODELS 22, 126, 137 OR TEMPERATURE VERSIONS
M444	Paper ID tag
M446	Stainless steel ID tag & wire attachment
M540	Viton® construction (deadband and low end range may increase slightly. Consult factory); Wetted parts include Viton® diaphragm and O-Ring plus standard connection material. NOT AVAILABLE MODELS 126-164 OR TEMPERATURE VERSIONS

PRESSURE CONNECTION OPTIONS

M501	Polysulfone® pressure connection 1/2" NPT (male) x 1/8" NPT (female). NOT AVAILABLE MODELS 126-164, 610-614 OR TEMPERATURE VERSIONS
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OPTIONS FOR TEMPERATURE MODELS**UNION CONNECTORS**

Number	Description	Option	Replacement
	<u>Brass</u>		
W027	SD6213-27		1/2" NPT w/ 3/4" bushing
W045	SD6213-45		3/4" NPT
W051	SD6213-51		1/2" NPT
	<u>304 Stainless Steel</u>		
W028	SD6213-28		1/2" NPT w/ 3/4" bushing
W046	SD6213-46		3/4" NPT
W050	SD6213-50		1/2" NPT

THERMOWELLS

For all bulb & capillary switches

	<u>Brass</u>		
W075	SD6225-75		3/4" bushing adapter, 4" BT
W191	SD6225-191		1/2" NPT, 4" BT
W118	SD6225-118		3/4" bushing adapter, 7" BT
W192	SD6225-192		1/2" NPT, 7" BT
	<u>316 Stainless Steel</u>		
W076	SD6225-76		3/4" NPT, 4.5" BT
W193	SD6225-193		1/2" NPT, 4.5" BT
W119	SD6225-119		3/4" NPT, 7.5" BT
W177	SD6225-177		1/2" NPT, 7.5" BT
	<i>For all Immersion stem switches</i>		
W141	SD6225-141		1/2" NPT x 1 9/16" BT, brass
W146	SD6225-146		1/2" NPT x 1 9/16" BT, 316 stainless steel

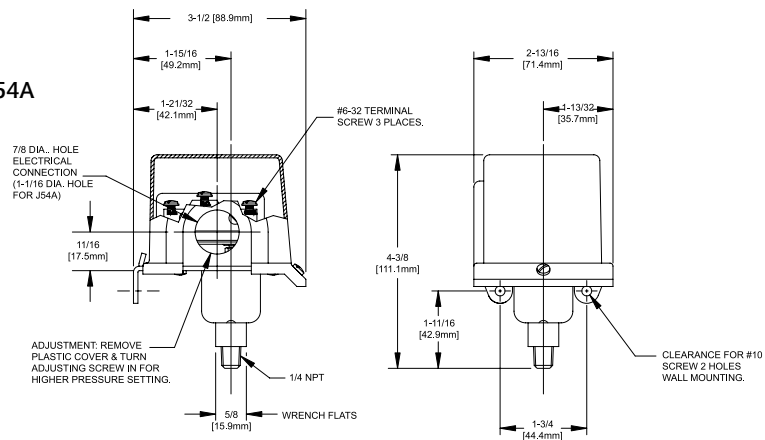
OPTIONAL LENGTHS:

Optional immersion stem lengths to 15" available in brass, with or without 316 st/st thermowell. Consult UE for additional information.
 Optional capillary length to *50' available in copper or 304 st/st. Armor or Teflon® capillary protection available to lengths less than or equal to capillary length. Consult UE for additional information.

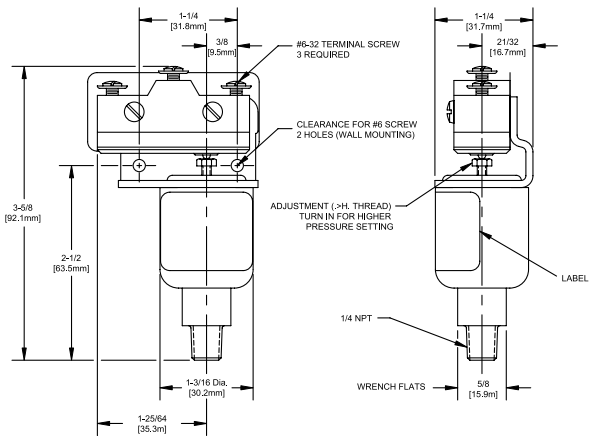
DIMENSIONAL DRAWINGS

Pressure Models

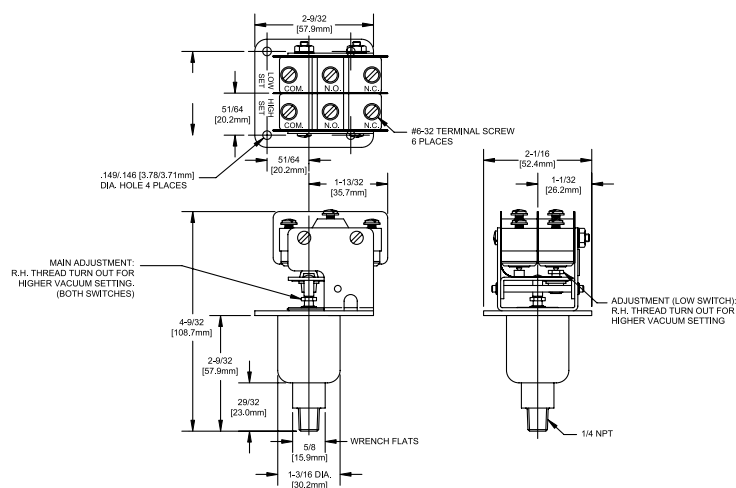
Type H54, J54 and J54A Models 22 - 28



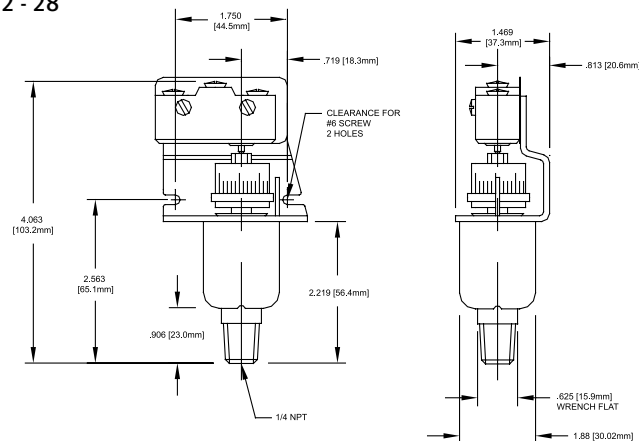
Type J54S, Models 22 - 28



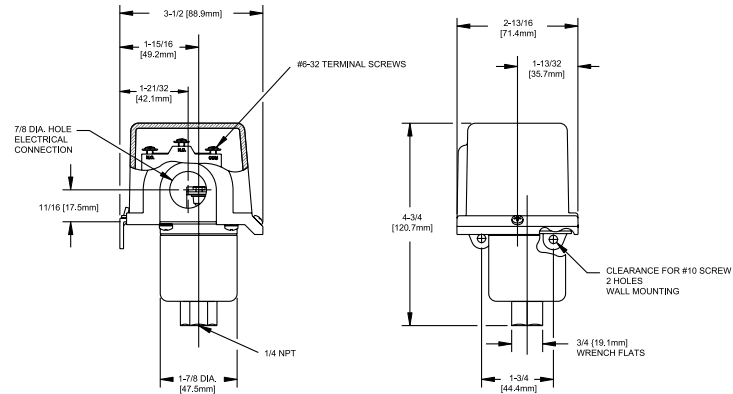
Type J54AS, Models 22 - 28



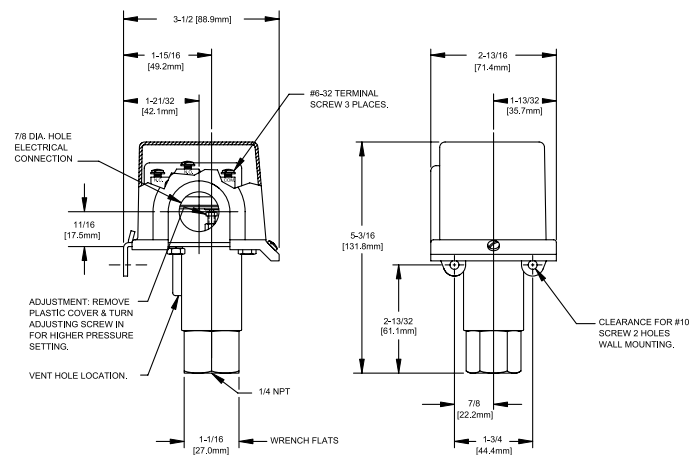
Type H54S, Models 22 - 28



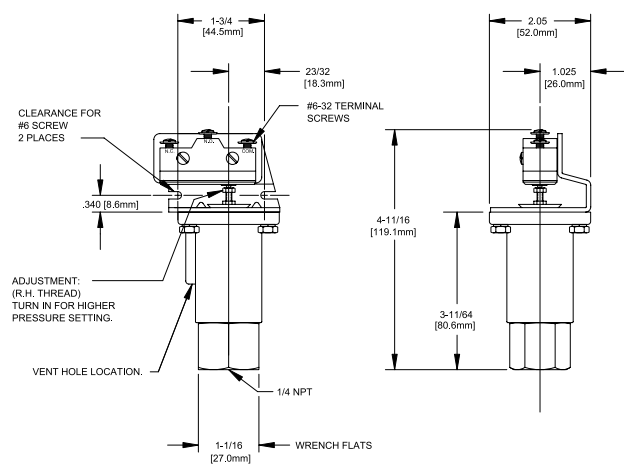
Type H54, J54, and J54A Models 126-164



Type J54 Models 610 - 614



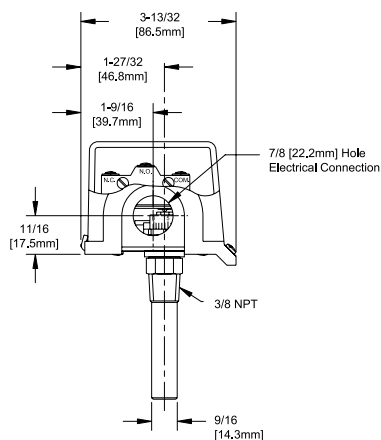
Type J54S Models 610 - 614



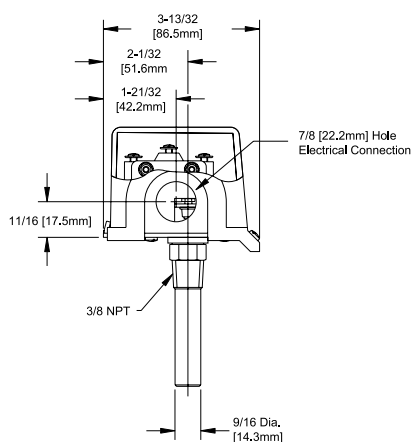
DIMENSIONAL DRAWINGS

Temperature Models

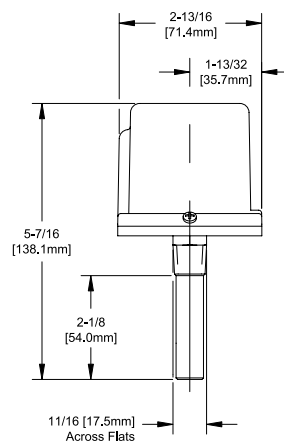
Types B54, C54



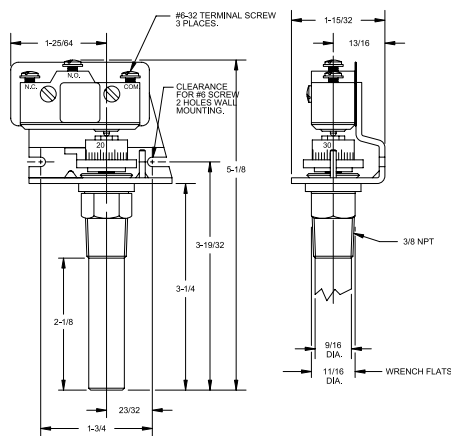
Type C54A



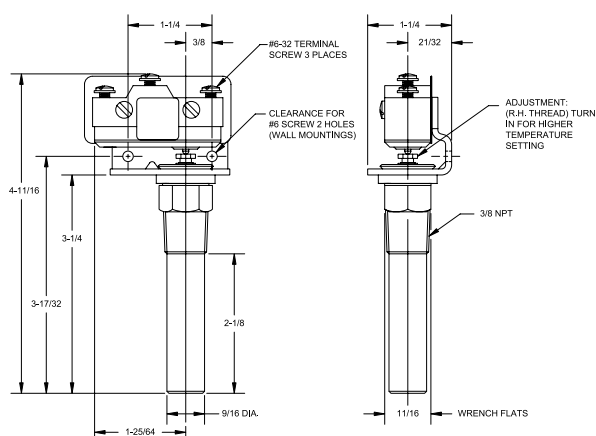
Types B54, C54, C54A



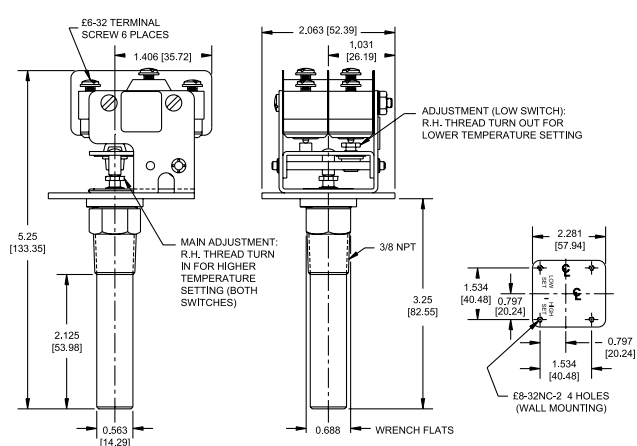
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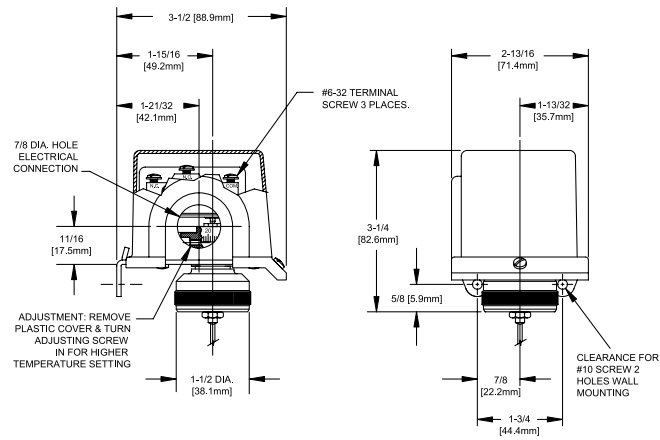
Type C54S



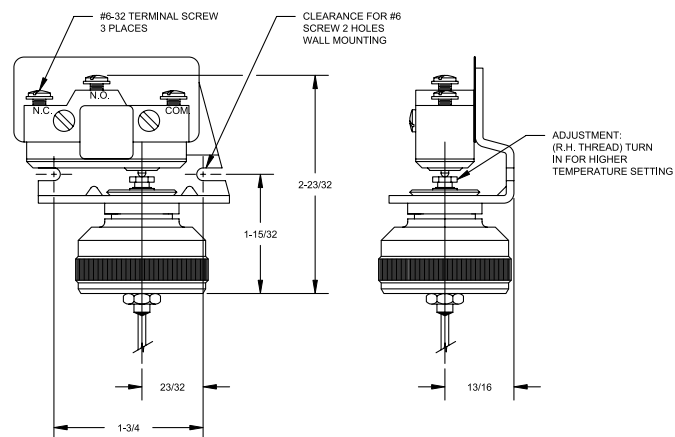
Type C54AS



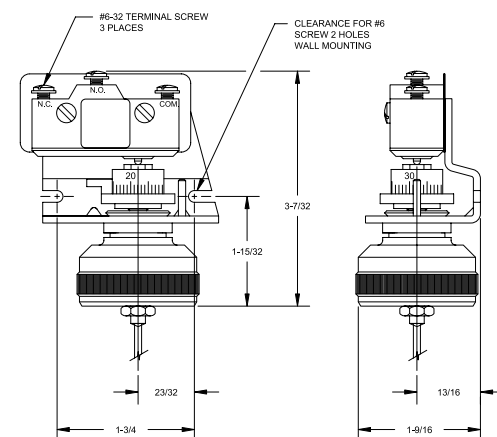
Types E54 and F54



Type F54S



Type E54S



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