

# MICRO SWITCH™ BAF/DTF Series

## High Capacity Enclosed Switches



### DESCRIPTION

MICRO SWITCH BAF1 high capacity enclosed switches offer elastomer boot on sealed actuator versions that protects the actuating mechanism and the internal basic switch from contaminants. There is a seal gasket between the cover plate and the enclosures on all versions. The cover plate is removed for ease of wiring and switch replacement without demounting the switch. The actuator position is designated “right” or “left,” when looking at the nameplate.

### FEATURES

- Up to 20 ampere capacity
- Cast aluminum housing with three-hole mounting
- Right or left-handed (sealed or unsealed) actuators
- Cover seal, captive cover screws
- Momentary or maintained contact
- UL recognized, file #E12252
- CSA certified, file #LR41372
- Sealed to NEMA 1, 3, 4 and 13 requirements
- Grounding screw

### POTENTIAL APPLICATIONS

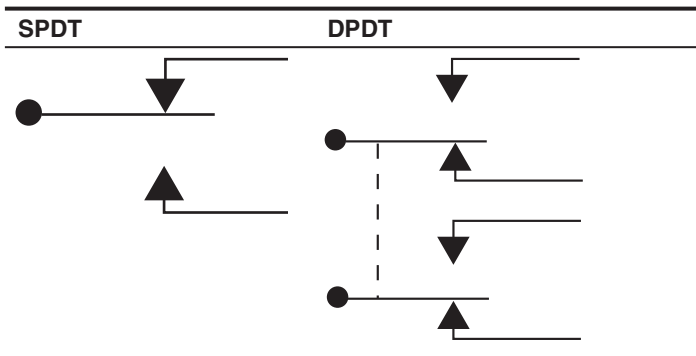
- Packaging equipment
- Special machinery
- Agricultural machinery
- Conveyors
- Overhead cranes and hoists

# MICRO SWITCH™ BAF/DTF Series

## SPECIFICATIONS

Characteristic	Parameter
Description	High capacity enclosed switch
Actuators	<ul style="list-style-type: none"> <li>• Straight plunger (with boot seal)</li> <li>• Top roller plunger (without boot seal)</li> <li>• Flexible rod (with boot seal)</li> <li>• Manually operated (with boot seal)</li> <li>• Roller arm, adjustable (with boot seal)</li> <li>• One-way roller lever (with boot seal)</li> <li>• NMaintained contact (reset) plunger (with boot seal)=</li> </ul>
Conduit	1/2 in-14 NPT
Switching options	1NO/1NC SPDT maintained 1NO/1NC SPDT snap-action 2NO/2NC DPDT snap-action
Sealing	NEMA 1, 3, 4 and 13
Operating temperature	-32 °C to 71 °C [-25 °F to 160 °F] (standard)
Housing material	Zinc die-cast
Approvals	UL, CSA



## SWITCHING



## ELECTRICAL RATINGS


Rating Code	Electrical rating
<b>B</b>	UL/CSA Rating: 10 A, 125 Vac or 250 Vac 0.3 A, 125 Vdc; 0.15 A, 250 Vdc
<b>D</b>	UL/CSA Rating: 20 A, 125 Vac, 250 Vac or 480 Vac 1 HP, 125 Vac; 2 HP, 250 Vac 1/2 A, 125 Vdc; 1/4 A, 250 Vdc Lamp load, 10 A, 125 Vac

# High Capacity Enclosed Switches

	Straight Plunger		Maintained Contact Straight Plunger (Reset) Switch
<b>Description</b>			
<b>Pretravel</b>	2,39 mm [0.094 in]	3,59 mm [0.141 in]	2,39 mm [0.094 in]
<b>Different. travel</b>	0,26 mm [0.010 in]	1,53 mm [0.060 in]	–
<b>Overtravel</b>	5,56 mm [0.219 in]	3,96 mm [0.156 in]	4,45 mm [0.219 in]
<b>Operating force</b>	11,2 N [2.5 lb]	11,2 N [2.5 lb]	7,79 N [1.75 lb]
<b>Operating position</b>	53,19 mm ±0,76 mm [2.094 in ±0.030 in]	52,07 mm ±1,0 mm [2.05 in ±0.040 in]	–




Actuator Position	Electric Rating	Seal boot	Switching	Options			
Right	D	Yes	SPDT		<b>BAF1-2RN-RH</b>		
Left	D	Yes	SPDT		<b>BAF1-2RN-LH</b>		
Right	B	Yes	DPDT			<b>DTF2-2RN-RH</b>	
Left	B	Yes	DPDT			<b>DTF2-2RN-LH</b>	
Right	D	Yes	Maintained SPDT	with boot seal on both top and bottom plungers			<b>BAF1-3RNX1</b>

# MICRO SWITCH™ BAF/DTF Series

Roller Plunger				
Description				
	Pretravel	2,39 mm [0.094 in]	3,18 mm [0.125 in]	
Different. travel	0,25 mm [0.010 in]	1,53 mm [0.060 in]	0,19 mm [0.0075 in]	1,53 mm [0.060 in]
Overtravel	3,96 mm [0.156 in]	3,18 mm [0.125 in]	4,75 mm [0.187 in]	3,18 mm [0.125 in]
Operating force	11,1 N [2.5 lb]		35,6 N [8 lb]	
Operating position	64,69 mm [2.547 in]	63,88 mm [2.515 in]	64,69 mm [2.547 in]	63,88 mm [2.515 in]


Actuator Position	Electric Rating	Seal boot	Switching	Options				
Right	D	No	SPDT	field adjustable 360° horizontally	<b>BAF1-2RQ9-RH</b>			
Left	D	No	SPDT	field adjustable 360° horizontally	<b>BAF1-2RQ9-LH</b>			
Right	D	No	DPDT	field adjustable 360° horizontally		<b>DTF2-2RQ9-RH</b>		
Left	D	No	DPDT	field adjustable 360° horizontally		<b>DTF2-2RQ9-LH</b>		
Right	D	No	SPDT	has o-ring actuator seal; field adjustable 360° horizontally			<b>BAF1-2RQN8-RH</b>	
Left	D	No	SPDT	has o-ring actuator seal; field adjustable 360° horizontally			<b>BAF1-2RQN8-LH</b>	
Right	D	No	DPDT	has o-ring actuator seal; field adjustable 360° horizontally				<b>DTF2-2RQN8-RH</b>
Left	D	No	DPDT	has o-ring actuator seal; field adjustable 360° horizontally				<b>DTF2-2RQN8-LH</b>

# High Capacity Enclosed Switches

	Roller Lever	One-Way Roller Lever	Flexible Rod
<b>Description</b>			
<b>Pretravel</b>	5,56 mm [0.219 in]	7,93 mm [0.312 in]	5,56 mm [0.219 in]
<b>Different. travel</b>	0,51 mm [0.020 in]	3,05 mm [0.120 in]	0,51 mm [0.020 in]
<b>Overtravel</b>	6,35 mm [0.250 in]	5,56 mm [0.219 in]	6,35 mm [0.250 in]
<b>Operating force</b>	8,90 N [2 lb]	11,1 N [2.5 lb]	8,90 N [2 lb]
<b>Operating position</b>	–	–	–

Actuator Position	Electric Rating	Seal boot	Switching	Options			
Right	D	Yes	SPDT	field adjustable 360° horizontally and 225° vertically	<b>BAF1-2RN2-RH</b>		
Left	D	Yes	SPDT	field adjustable 360° horizontally and 225° vertically	<b>BAF1-2RN2-LH</b>		
Right	D	Yes	DPDT	field adjustable 360° horizontally and 225° vertically		<b>DTF2-2RN2-RH</b>	
Left	D	Yes	DPDT	field adjustable 360° horizontally and 225° vertically		<b>DTF2-2RN2-LH</b>	
Right	D	Yes	SPDT	field adjustable 360° horizontally and 180° vertically			<b>BAF1-2RN28-RH</b>
Left	D	Yes	SPDT	field adjustable 360° horizontally and 180° vertically			<b>BAF1-2RN28-LH</b>
Right	D	Yes	SPDT	operates from any direction, except direct pull			<b>BAF1-2RN18-RH</b>
Left	D	Yes	SPDT	operates from any direction, except direct pull			<b>BAF1-2RN18-LH</b>

# MICRO SWITCH™ BAF/DTF Series

	Manually Actuated Palm Button	Roller Arm Adjustable (Reset) Switch	Coil Wobble (Reset) Switch
<b>Description</b>			
<b>Pretravel</b>	–	5,56 mm [0.219 in]	15°
<b>Different. travel</b>	–	–	–
<b>Overtravel</b>	–	6,35 mm [0.25 in]	–
<b>Operating force</b>	8,90 N [2 lb]	6,67 N [1.5 lb]	–
<b>Operating position</b>	–	60,71 mm [2.390 in]	–

Actuator Position	Electric Rating	Seal boot	Switching	Options		
Right	D	Yes	SPDT	field adjustable 360° horizontally and 180° vertically	<b>BAF1-2RN4-RH</b>	
Left	D	Yes	SPDT	field adjustable 360° horizontally and 180° vertically	<b>BAF1-2RN4-LH</b>	
Right	D	Yes	Maintained SPDT	with boot seals on roller arm and plunger		<b>BAF1-3RNX2-RH</b>
Left	D	Yes	Maintained SPDT	with boot seals on roller arm and plunger		<b>BAF1-3RNX2-LH</b>
Right	D	Yes	Maintained SPDT	with boot seals on wobble and plunger		<b>BAF1-3CN18X1</b>

# High Capacity Enclosed Switches

## DIMENSIONS

Figure 1. Pin Plunger: BAF1/DTF1-2RN-XX (left-hand version shown)

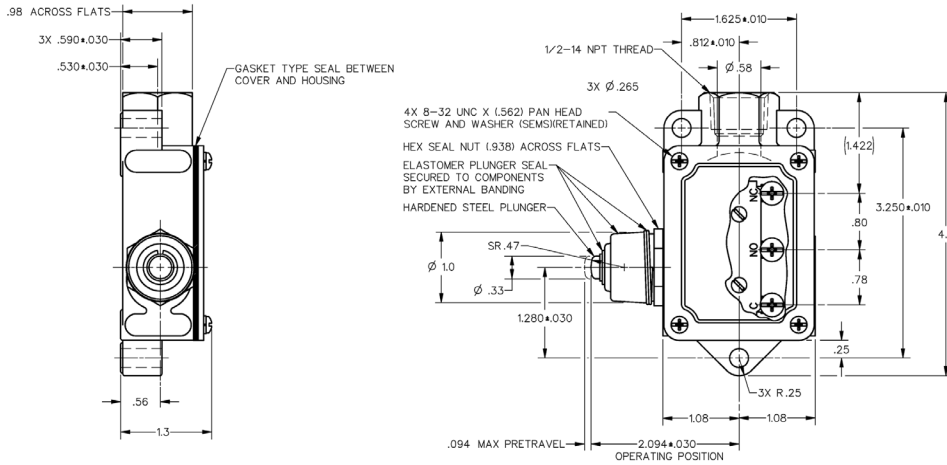


Figure 2. Roller Plunger: BAF1/DTF1-2RQ9-XX (left-hand version shown)

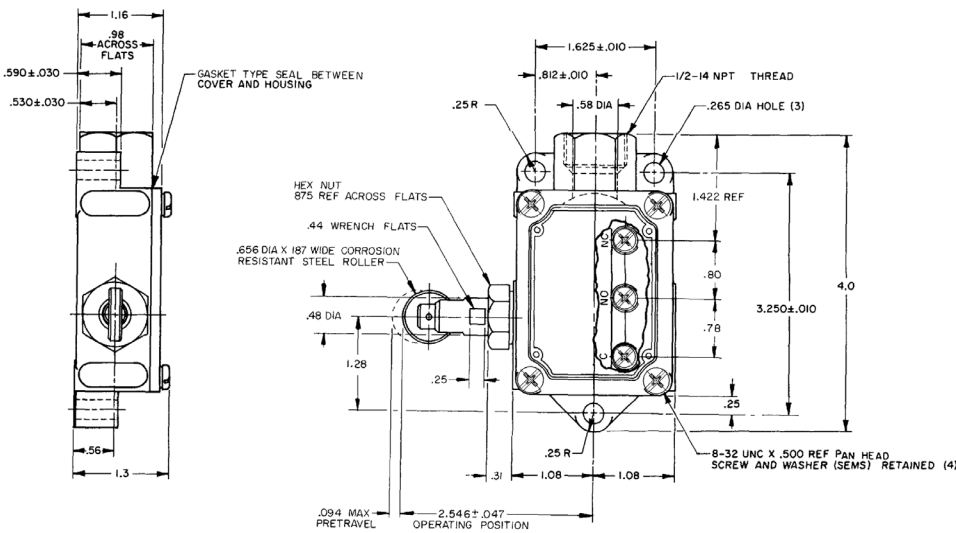
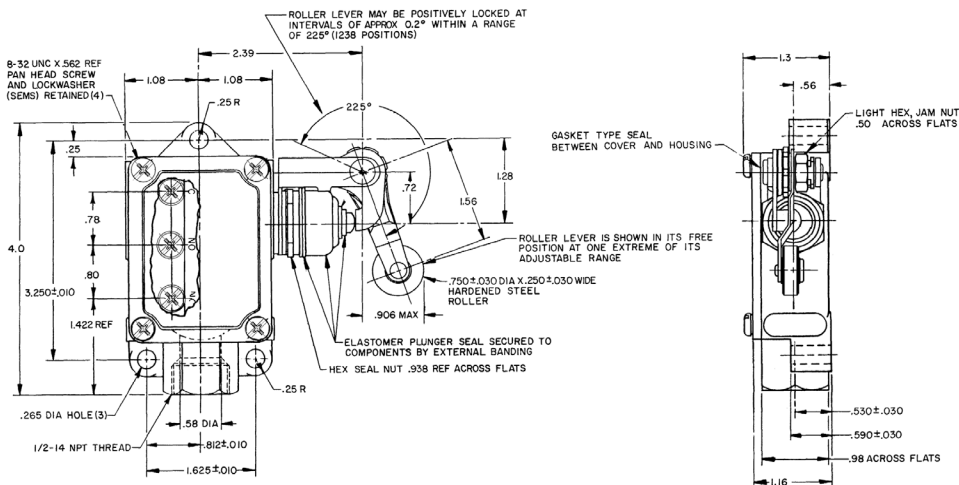


Figure 3. Roller lever: BAF1/DTF1-2RN2-XX (left-hand version shown)



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Figure 4. Maintained Contact Straight Plunger (Reset): BAF1-3RNX1

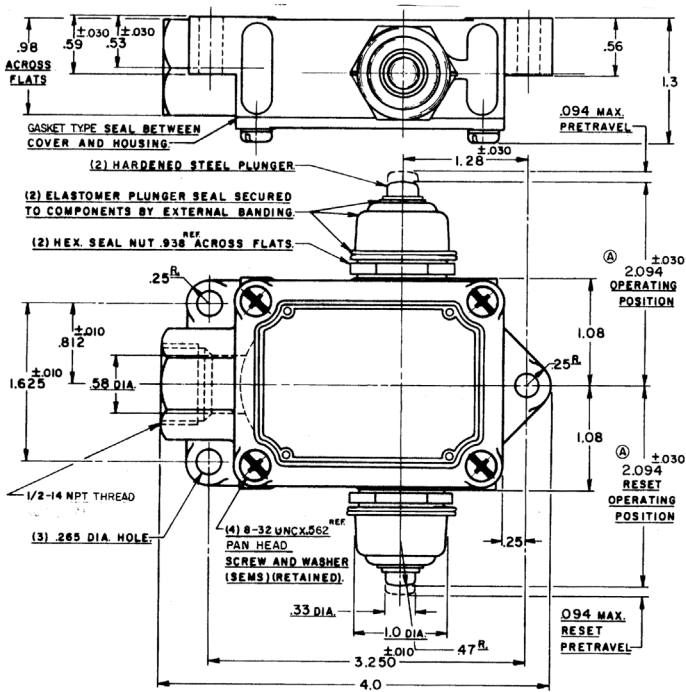


Figure 5. Roller plunger: BAF1/DTF1-2RQN8-XX (left-hand version shown)

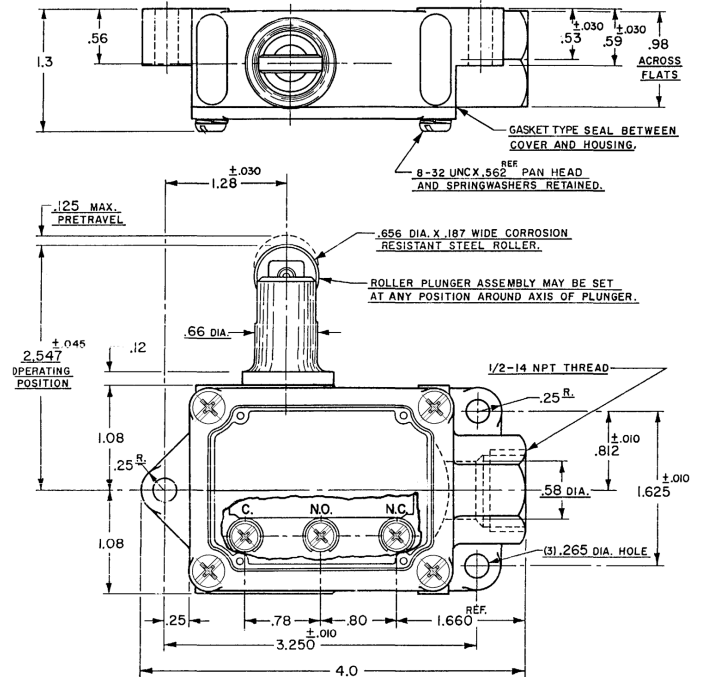


Figure 6. Flexible rod: BAF1/DTF1-2RN18-XX (left-hand version shown)

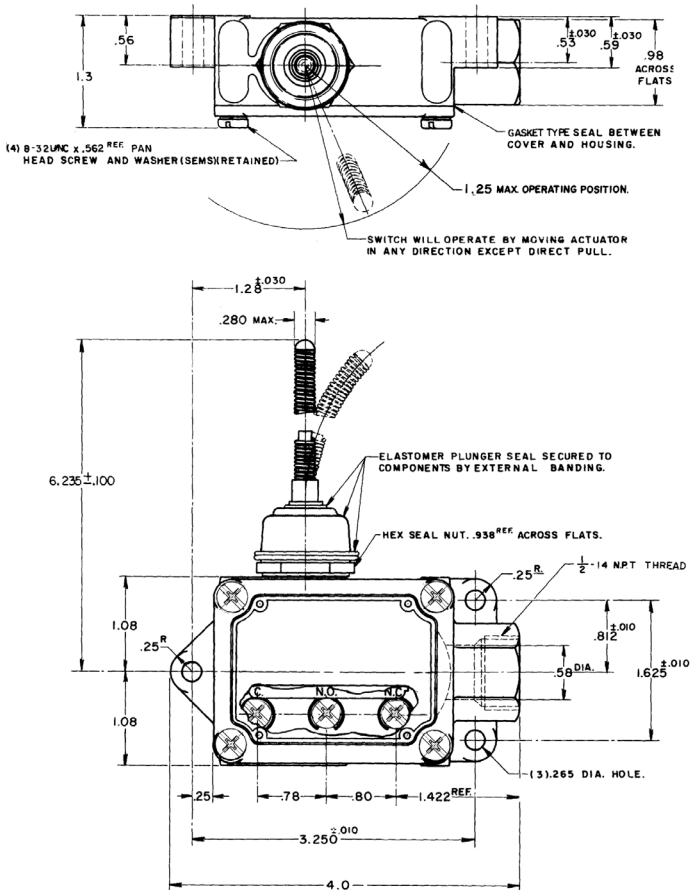
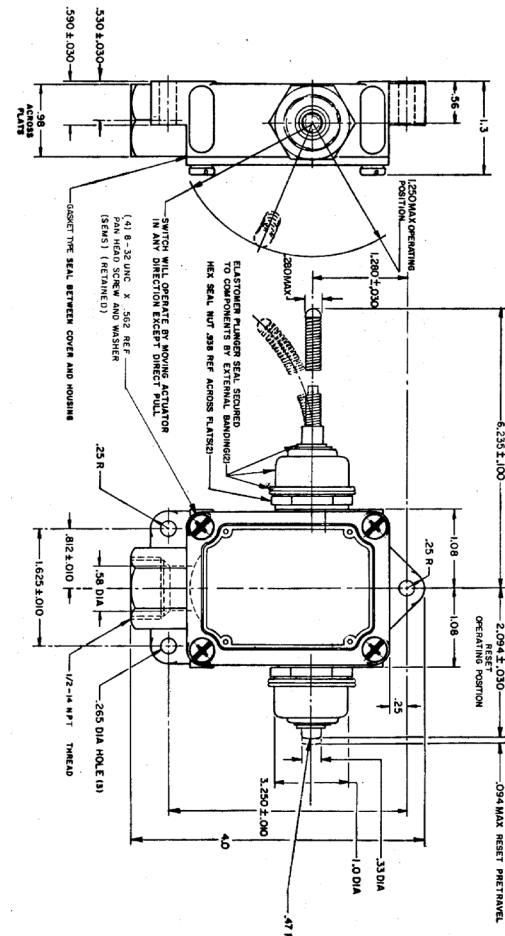


Figure 7. Coil Wobble (Reset) Switch: BAF1/DTF1-3CN18X1-XX (left-hand version shown)





# High Capacity Enclosed Switches

Figure 8. One-way roller lever: BAF1/DTF1-2RN28-XX (left-hand version shown)

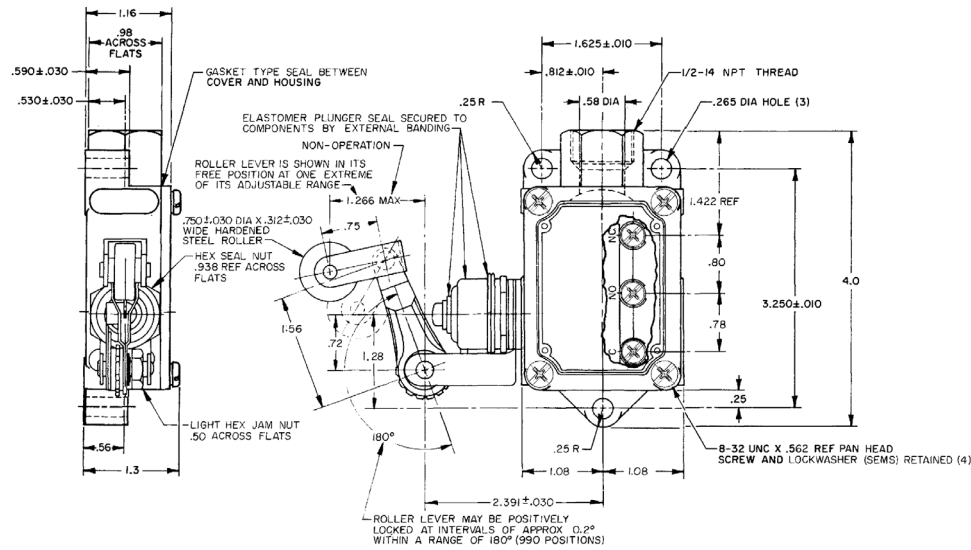


Figure 9. Manually Actuated Palm Button: BAF1/DTF1-2RN4-XX (left-hand version shown)

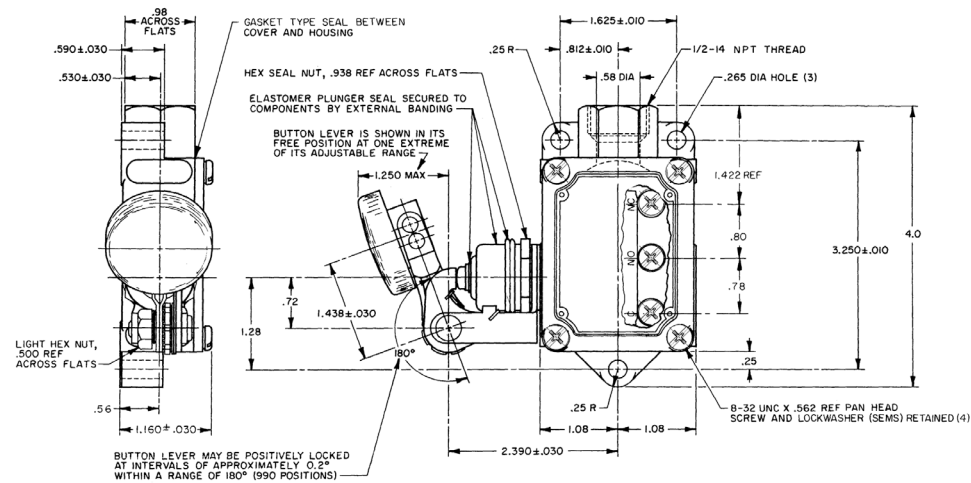
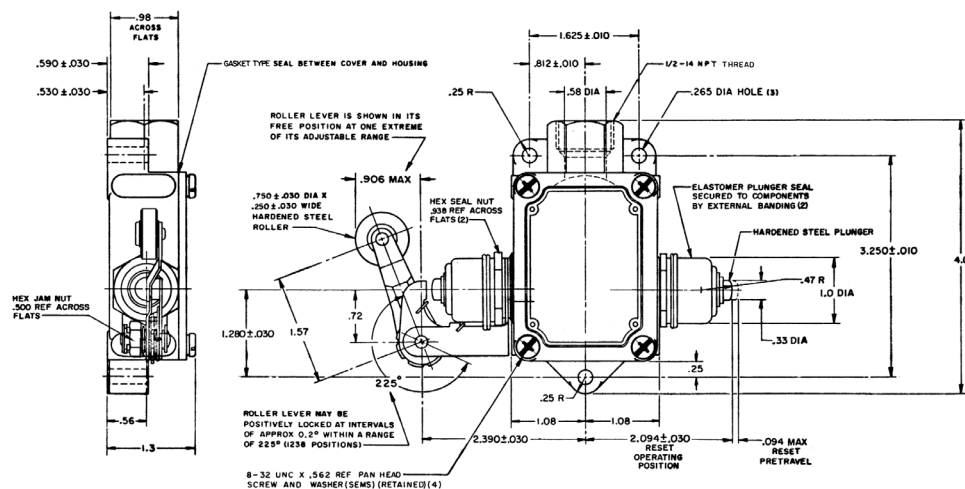


Figure 10. Roller Arm Adjustable (Reset) Switch: BAF1/DTF1-3RN2-XX (left-hand version shown)



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## PRODUCT NOMENCLATURE

<b>BA</b>	<b>F1</b>	—	<b>2</b>	<b>R</b>	<b>N</b>		
Switch Type	Enclosure Type		Contact Gap	Contact	Plunger Type	Actuator Modifications	Additional Modifications
<b>BA</b> Series Enclosed Basic Switch SPDT, 20 A	<b>F1</b> 3-hole, side mount, die-cast zinc		<b>2</b> 0.020 in <b>3C</b> 0.036 in <sup>1</sup>	<b>R</b> Standard	<b>N</b> Seal boot	Pin plunger <b>X1</b> Maintained contact with reset plunger <sup>1</sup> <b>2</b> Adjustable roller lever <b>4</b> Manual, palm button <b>18</b> Coil spring wobble stick <b>28</b> One-way roller lever	<b>LH</b> Plunger located to the left <sup>2</sup> <b>RH</b> Plunger located to the right <sup>2</sup>

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- The information presented in this datasheet is for reference only. **DO NOT USE** this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

### **WARNING**

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