

*Bulletin 803 Style A Shown with Cover Removed, with (3) 25 Ampere and (3) 10 Ampere Contacts*

**TABLE OF CONTENTS**

Description	Page	Description	Page
<b>Product Overview</b> .....	13-2	<b>Rotating Cam Limit Switches</b>	
<b>Technical Data</b>		Style A – Type 1 and 4 & 13 .....	13-6
Technical Terms .....	13-3	Style B – Type 1 and 4 & 13 .....	13-6
Theory of Operation .....	13-3	Style E – Type 13 .....	13-7
Ambient Temperature Range .....	13-3	Style EF – Type 13 .....	13-7
Adjusting Dwell and Timing .....	13-4	Style F – Type 1 & 13 .....	13-8
Shaft Extensions .....	13-4	Style P – Type 1 .....	13-8
Contacts .....	13-4	<b>Modifications</b> .....	13-9
Contact Wiring Configurations .....	13-4	<b>Cam Selection</b> .....	13-10
<b>Ordering Information</b>		<b>Factory Options</b>	
How to Order .....	13-5	Factory Set Cams .....	13-12
Catalog Number Explanation .....	13-5	<b>Dimensions</b> .....	13-13

**Reference Information**

UL and CSA Numbers page 13-12.

Conversion Factors Catalog page Important-2. Enclosure information Catalog page Important-8.

# Rotating Cam Limit Switches

## Product Overview

### Description

Bulletin 803 Rotating Cam Limit Switches are heavy duty control circuit devices used with machinery having a repetitive cycle of operation where motion is correlated to shaft rotation. These devices initiate contact actuation at various positions during shaft rotation. Bulletin 803 Rotating Cam Limit Switches are designed for long life and heavy duty operation.

The switch operates equally well rotating in either direction, and when mounted in any plane. Bulletin 803 devices are offered in six different styles to meet a wide range of applications. All styles make use of cams mounted on a shaft. As the shaft rotates, the cams actuate the contacts. Many options and modifications are available for most applications.

### Style A and B — Internal Adjustment



#### Style A

- 25 Amp. N.C. double break contact
- 2 to 12 independent cam operators
- 150 RPM maximum shaft speed
- Type 1 and 4 & 13 enclosures
- Cam duration: min. 14°, max. 346°
- Left shaft extension standard

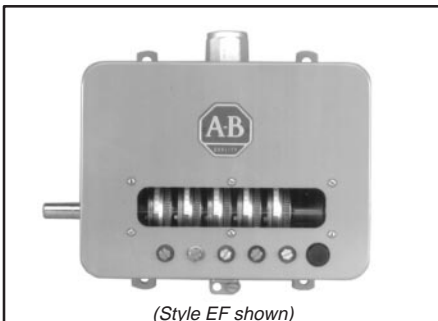
### Applications

- Assembly and Packing Machines
- Steel Forming / Heavy Metals
- Injection Molding Machines
- Punch Presses
- Waterway Gate / Lock Operations

#### Style B

- 10 Amp. snap action 1 N.O. - 1 N.C.
- 2 to 12 independent cam operators
- 150 RPM maximum shaft speed
- Type 1 and 4 & 13 enclosures
- Cam duration: min. 14°, max. 346°
- Left shaft extension standard

### Style E and EF — External Timing, Internal Dwell Adjustment



#### Style E

- 25 Amp. N.C. double break contact
- 2 to 12 independent cam operators
- 150 RPM maximum shaft speed
- Type 13 enclosure
- Cam duration: min. 15°, max. 360°
- Left shaft extension standard
- External timing adjustment screw located at bottom of enclosure (not shown)

#### Style EF

- 25 Amp. N.C. double break contact
- 2 to 12 independent cam operators
- 150 RPM maximum shaft speed
- Type 13 enclosure
- Cam duration: min. 15°, max. 360°
- Left shaft extension standard
- External timing adjustment screw located in front cover of enclosure

### Style F — External Timing and Dwell Adjustment



#### Style F

- 10 Amp. snap action 1 N.O. - 1 N.C.
- 2 to 12 independent cam operators
- 150 RPM maximum shaft speed
- Type 1 & 13 enclosure
- Cam duration: min. 12°, max. 348°
- Left shaft extension standard
- External screwdriver adjustment of timing and dwell while machine is in motion

### Style P — High Speed, Low Cost Internal Adjustment



#### Style P

- 25 Amp. N.C. double break contact
- 2 to 12 independent cam operators
- 400 RPM maximum shaft speed
- Type 1 enclosure
- Cam duration: min. 11°, max. 349°
- Available with cams or without cams
- Right shaft extension standard

**Ambient Temperature Range**

Temperatures below 32°F (0°C) are based on the absence of freezing moisture, water, or other fluids that may solidify and impede contact operation of the control. Temperature ranges are as follows: Operating: -22°F to 150°F (-30°C to 66°C) Storage: -22°F to 200°F (-30°C to 93°C)

**Technical Terms**

**Lobe** – high position of cam segments. The lobe pushes against the cam-roller assembly to activate the circuit.

**Valley** – low position of cam segments. The valley passes by the cam-roller assembly without activating the circuit.

**Keyway** – slot in shaft used to connect driven shaft to the machine. Keyway also references 0°, Top Dead Center (TDC).

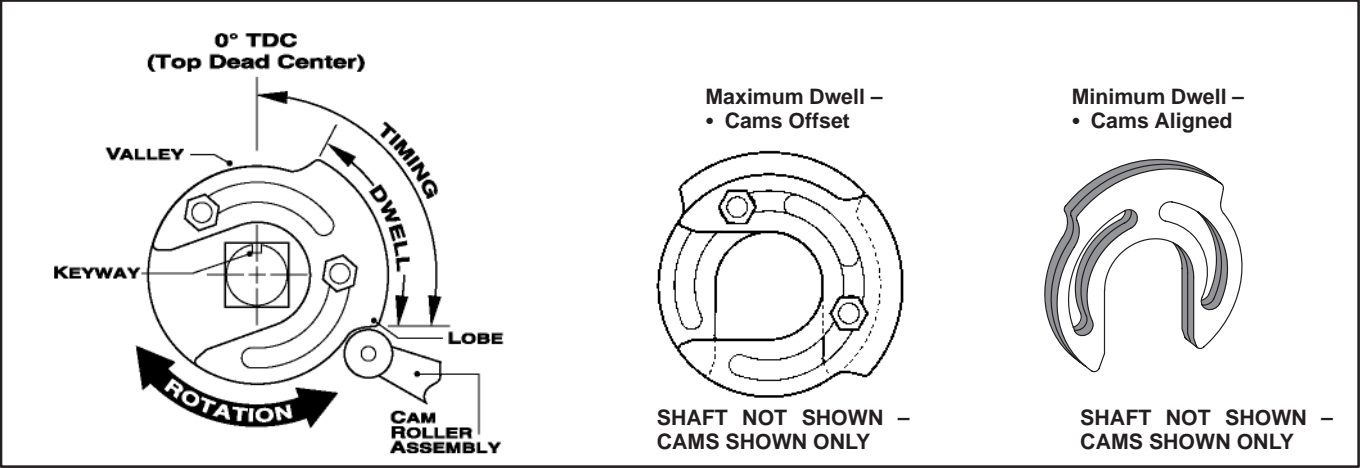
**Timing** – when the cam activates the circuit. Timing is determined by the position of the cam on the shaft (in reference to keyway/TDC). For example, when a cam is positioned at a 90° angle, the circuit will activate when the cam is 90° from TDC.

**Dwell Time** – amount of time cam lobe activates the circuit. Dwell is determined by the size of the cam lobes and positioning of the cam segments.

**Maximum Dwell Time** – when lobes of both cam segments are offset to the maximum angle.

**Minimum Dwell Time** – when lobes of both cam segments are aligned.

**Figure 1**  
 Graphics to Illustrate Technical Terms



**Theory of Operation**

Bulletin 803 Rotating Cam Limit Switches have the same basic mechanical structure, including the following:

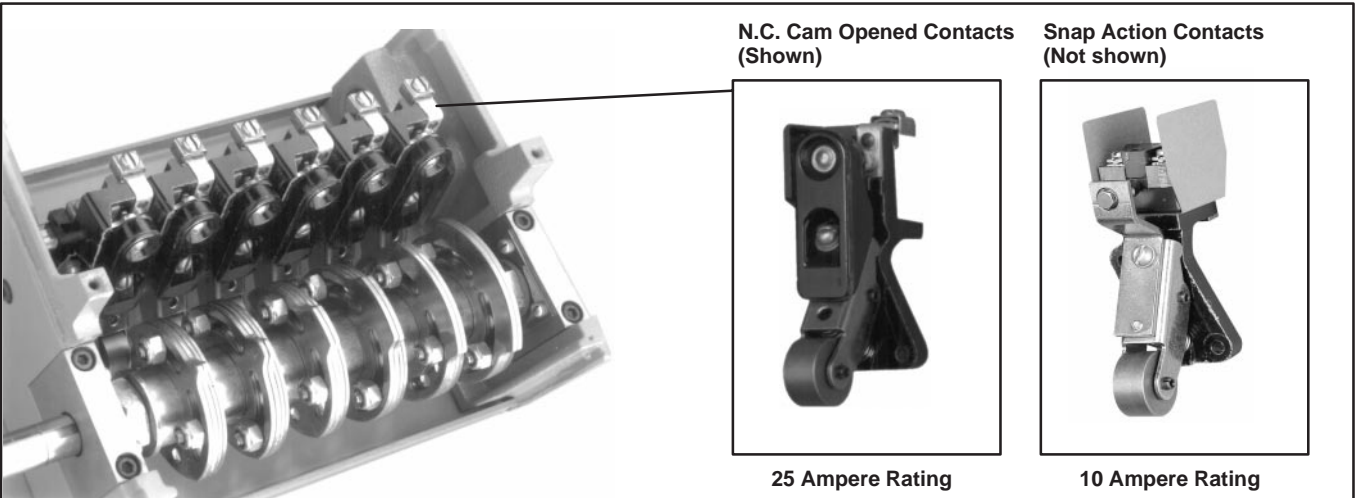
- 2–12 circuits with cam opened contact assembly or snap action contact block assembly
- spring-loaded cam-roller assembly mounted to the contact base

- 2–12 cam assemblies with two adjustable cam segments per cam
- rotating shaft

See Figure 2. As the shaft rotates on the shaft, the cam lobes push against the cam-roller assembly activating the circuit, the cam valley passes by the cam-roller assembly returning the contact to its nor-

mal state. The position of the cam on the shaft (timing) determines when the circuit will activate within the 360° rotation cycle. The size of the lobe and the positioning of the cam segments determine how long the circuit will be activated (dwell). Setting timing and dwell for each circuit determines machine operation.

**Figure 2**  
 Basic Mechanical Structure



# Rotating Cam Limit Switches

## Technical Data

### Adjusting Dwell and Timing

#### Internal Adjustments

**Styles A, B and P** have internal dwell and timing adjustments. **Styles E and EF** have internal dwell adjustments. Internal timing and dwell adjustments must be made when the device is not moving. To make adjustments, remove cover, loosen cam bolts, and rotate cams to the required operating position. Bulletin 803 devices have angular degree scales on the cam mounting plate or on the shaft for ease of setting. When cams are set in position, tighten cam bolts and install the cover.

#### External Adjustments

**Style F** has external dwell and timing adjustments. Both adjustments can be made with a screwdriver while the device is in motion. **Styles E and EF** have external

timing adjustment. Timing adjustments can be made with a screwdriver while the device is in motion.

#### Shaft Extensions

Shaft extension is defined as seen from the front of the device. Left shaft extension is standard for **Style A, B, E, EF and F**. Right shaft extension is standard for **Style P**. Non-standard left, right and double shaft extensions can be ordered as Modifications. See page 13-9.

#### Contacts

##### 25 Ampere Normally Closed Contacts

Normally closed cam opened double break contacts are rated at 25A continu-

ous current. When using normally closed contacts, the cam lobe engages the cam-roller to open the normally closed contact.

##### 10 Ampere Snap Action Contacts

Single pole double throw (1 N.O. - 1 N.C.) snap action contacts are rated for 10A continuous current. Snap action contacts have NEMA rating designation A600. When using snap action contacts, the cam lobe engages the cam-roller causing the contacts to snap over. The normally closed contact opens and the normally open contact closes.

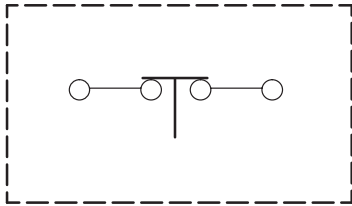
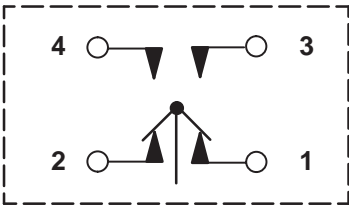
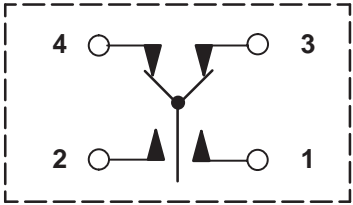
### Normally Closed Contact Ratings

Maximum AC Contact Ratings					Maximum DC Contact Ratings		
Maximum AC Voltage 60 or 50 Hertz	Amperes		Continuous Carrying Current	Voltamperes		Voltage Range	Amperes
	Make	Break		Make	Break		
120	150	15	25	18000	1800	115-125	2.5
240	75	7.5	25	18000	1800		
480	37.5	3.75	25	18000	1800		
600	30	3	25	18000	1800	230-250	1.0

### Snap Action Contact Ratings—NEMA A600

Maximum AC Contact Ratings				Maximum DC Contact Ratings	
Maximum AC Voltage 60 or 50 Hertz	Amperes		Continuous Carrying Current	Voltage Range	Amperes
	Make	Break			
120	60	6.0	10	115-125	0.4
240	30	3.0	10	230-250	0.2
480	15	1.5	10	550-600	0.1
600	12	1.2	10	—	—

### Contact Wiring Configurations

<p><b>N.C. Style A and P Devices 25 Ampere Rating</b></p>  <p>When cam roller rides onto lobe – contacts open</p>	<p><b>1 N.O. - 1 N.C. Style B Snap Action Devices and Styles A, E, EF and P (Modified) 10 Ampere Rating</b></p>  <p>When cam roller rides onto lobe – contacts 1 &amp; 2 open contacts 3 &amp; 4 close</p>	<p><b>1 N.O. - 1 N.C. Style F Snap Action Devices 10 Ampere Rating</b></p>  <p>When cam roller rides onto lobe – contacts 1 &amp; 2 close contacts 3 &amp; 4 open</p>
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**Ordering Bulletin 803 Rotating Cam Limit Switches**

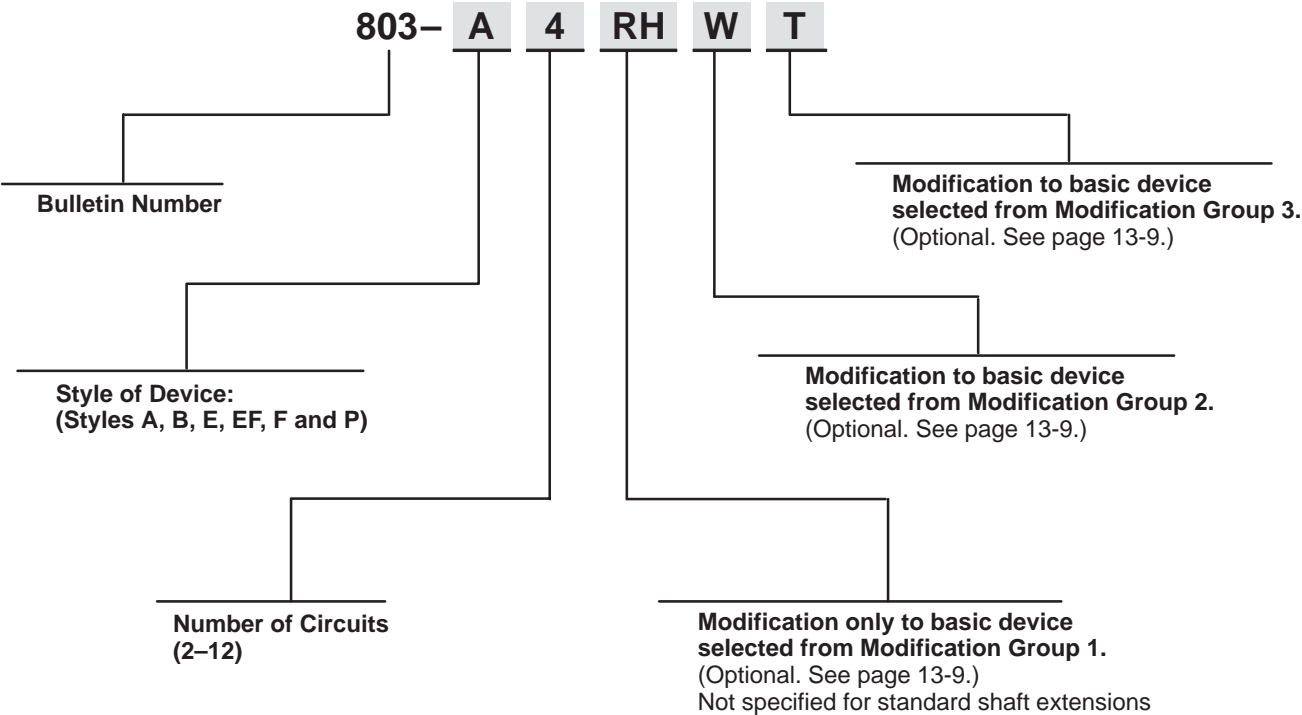
When ordering a Bulletin 803 Rotating Cam Limit Switch with cams, **two catalog numbers must be specified** (excluding **Style F**) on the same order item. The **first catalog number** is used to order the basic device, including the number of circuits needed and any modifications. The **second catalog number** is a Cam Code used to specify the type of cams needed for the application.

**How to Order**

- Step 1: Basic Device —**  
 Select a catalog number for the basic device. . . . . See pages 13-6 thru 13-8.
- Step 2: Modifications —**  
 If required, add the appropriate modification suffix code(s) to the catalog number of the basic device. . . . . See page 13-9.
- Step 3: Cam Code —**  
 Specify the cam code. . . . . See pages 13-10 and 13-11.
- Step 4: Factory Options —**  
 Factory set cams. . . . . See page 13-12.

**Catalog Number Explanation**

**Note:** Catalog numbers must not include blank spaces.



**Typical shaft torque per cam for Bulletin 803 Styles A, B, E, EF, F and P.**

- .5 inch pounds with cam roller in valley.
- 7 inch pounds when cam roller rides up cam ramp.
- 3 inch pounds when cam roller rides on lobe.

# Rotating Cam Limit Switches

Style A and B – Type 1 and 4 & 13



Style A  
Type 1



Style B  
Type 1

### Style A — N.C. Cam Opened Contacts<sup>①</sup>

Number of Circuits	Type 1 Enclosure		Type 4 & 13 Enclosure	
	Catalog Number	*	Catalog Number	*
2	803-A2		803-A24	
3	803-A3		803-A34	
4	803-A4		803-A44	
5	803-A5		803-A54	
6	803-A6		803-A64	
7	803-A7		803-A74	
8	803-A8		803-A84	
9	803-A9		803-A94	
10	803-A10		803-A104	
11	803-A11		803-A114	
12	803-A12		803-A124	

### Style B — 1 N.O. - 1 N.C. Snap Action Contacts

Number of Circuits	Type 1 Enclosure		Type 4 & 13 Enclosure	
	Catalog Number	*	Catalog Number	*
2	803-B2		803-B24	
3	803-B3		803-B34	
4	803-B4		803-B44	
5	803-B5		803-B54	
6	803-B6		803-B64	
7	803-B7		803-B74	
8	803-B8		803-B84	
9	803-B9		803-B94	
10	803-B10		803-B104	
11	803-B11		803-B114	
12	803-B12		803-B124	

① 1 N.O. - 1 N.C. snap action contacts are optional. See Cam Selection, page 13-10.



Style EF  
 Type 13

**Style E — N.C. Cam Opened Contacts<sup>①</sup>**

Number of Circuits	Type 13 Enclosure (External Timing Adjustment at Bottom)	
	Catalog Number	*
2	803-E2	
3	803-E3	
4	803-E4	
5	803-E5	
6	803-E6	
7	803-E7	
8	803-E8	
9	803-E9	
10	803-E10	
11	803-E11	
12	803-E12	

**Style EF — N.C. Cam Opened Contacts<sup>①</sup>**

Number of Circuits	Type 13 Enclosure (External Timing Adjustment in Front Cover)	
	Catalog Number	*
2	803-EF2	
3	803-EF3	
4	803-EF4	
5	803-EF5	
6	803-EF6	
7	803-EF7	
8	803-EF8	
9	803-EF9	
10	803-EF10	
11	803-EF11	
12	803-EF12	

① 1 N.O. - 1 N.C. snap action contacts are optional. See Cam Selection, page 13-10.



# Rotating Cam Limit Switches

Style F – Type 1 & 13 / Style P – Type 1



Style F  
Type 1 & 13



Style P  
Type 1

### Style F — 1 N.O. - 1 N.C. Snap Action Contacts

Number of Circuits	Type 1 & 13 Enclosure (Externally Adjustable While in Motion)	
	Catalog Number	*
2	803-F212	
3	803-F312	
4	803-F412	
5	803-F512	
6	803-F612	
7	803-F712	
8	803-F812	
9	803-F912	
10	803-F1012	
11	803-F1112	
12	803-F1212	

Note: Cams included. Minimum dwell of 12° duration to maximum dwell of 348°

### Style P — N.C. Cam Opened Contacts

Number of Circuits	Type 1 Enclosure			
	Operator With Cams ①		Operator Less Cams ②	
	Catalog Number	*	Catalog Number	*
2	803-P2		803-PL2	
3	803-P3		803-PL3	
4	803-P4		803-PL4	
5	803-P5		803-PL5	
6	803-P6		803-PL6	
7	803-P7		803-PL7	
8	803-P8		803-PL8	
10	803-P10		803-PL10	
12	803-P12		803-PL12	

① See Cam Selection, page 13-10.

② Cams may be ordered separately as Cam Kits (mounting hardware included). See “Cams for Style P” table on page 13-11.



### Ordering Modifications

Modifications are ordered by adding the appropriate modification suffix code to the catalog number of the basic device. Modifications are listed in three groups, Modification Group 1, 2 and 3. Suffix codes should be added to the catalog number in the order they are presented. For example, if your device requires a modification from Group 1 and 2, list the suffix code from Group 1 first.

### Modification Group 1

#### Single Shaft Extension

Description	Extension Type	Suffix Code	*
Left shaft extension is standard for <b>Styles A, B, E, EF</b> and <b>F</b> . Right shaft extension is standard on <b>Style P</b> . For a non-standard shaft extension, select required shaft extension from table and add the suffix code to the catalog number.	Right Hand Extension	RH	
	Left Hand Extension	LH	

#### Double Shaft Extension

Extension Type	Suffix Code	*		
		Type 1 Style A, B, & P	Type 4 & 13 Style A, B, E & EF	Type 1 & 13 Style F
Double Shaft Extension	X			

### Modification Group 2

#### External Adjustment Sprocket – Factory Modification Only

Description	Suffix Code	*
An external adjustment sprocket is available for factory modification only for <b>Style A, B and P</b> switches that have chain drive sprockets. This provides a means of changing the relative position between the driving mechanism and the shaft. While the device is stopped, pull out the knurled knob to disengage the spline, allowing the cam shaft to be turned in 5° increments. The external adjustment sprocket is for a 0.38" (9.53 mm) No. 35 chain. Sprocket has 48 teeth with a pitch diameter of 5.73" (145.64 mm).	W	

#### Speed Reducer

Description	Gear Ratio	Suffix Code	*
Speed reducers with various gear ratios are available for all device styles. Select required gear ratio from table provided and add the suffix code to the catalog number. To order a speed reducer with a gear ratio not listed, add the letters "RY" and desired gear ratio. For example, the complete suffix code for a 75 to 1 gear ratio is <b>RY75TO1</b> .	20:1	R	
	40:1	RA	
	60:1	RB	
	80:1	RC	
	100:1	RD	
	120:1	RE	
	150:1	RF	
	Customer Provided	RY ---TO -	

### Modification Group 3

#### Internally Adjustable Cams

Description	Substitution	Suffix Code	*
Internally adjustable cams are available for use with <b>Style F</b> only. Internally adjustable cams can be adjusted only when the shaft on the limit switch is stopped. To substitute a selected number of internally adjustable cams, add the letter "P" and the number of cams to be substituted. To substitute internally adjustable cams for all cams in the device, add the letter "T". As standard, substituted cams are mounted starting at the opposite end of the standard driven shaft extension.	Substitute a select number of cams	P__ (Code must include the letter "P", and the number of cams)	
	Substitute all cams	T	

# Rotating Cam Limit Switches

## Cam Selection

### Ordering Cams

Bulletin 803 devices require a complete catalog number for the Rotating Cam Limit Switch, and a separate cam code for the required cams. As shown in the Example Cam Code listed below, the cam code is used to identify style, shaft extension and cam code designators.

For example, refer to the Cam Code Designator Table entitled “**Cams for Style A**” on page 13-11. If you select **Cam Code Designator 1**, the cam will open a normally closed contact for 24 to 29° and close the contact for 331 to 336° (depending on the minimum/maximum dwell time setting).

cams. See Example Cam Code on this page. Specify a Cam Code for each cam position. If no cam is required, place an “X” in that position. When ordering a device with double shaft extension for **Styles A, B, E and EF**, the cam sequence starts from the left. When ordering double shaft extension for **Style P**, cam sequence starts from the right.

### Specifying Degrees of Rotation

Cam Code Designators specify number of cams required and degrees of rotation for each cam. Degrees of Rotation determines how long (dwell time in degrees) the cam will activate the circuit during the 360° rotation cycle.

### Cam Code Designator Sequence

Cam Code Designators must be entered into the Cam Code in sequence starting from the standard driven shaft extension, left or right. The cam closest to the shaft extension is in the “First Position”, and determines the sequence of the remaining

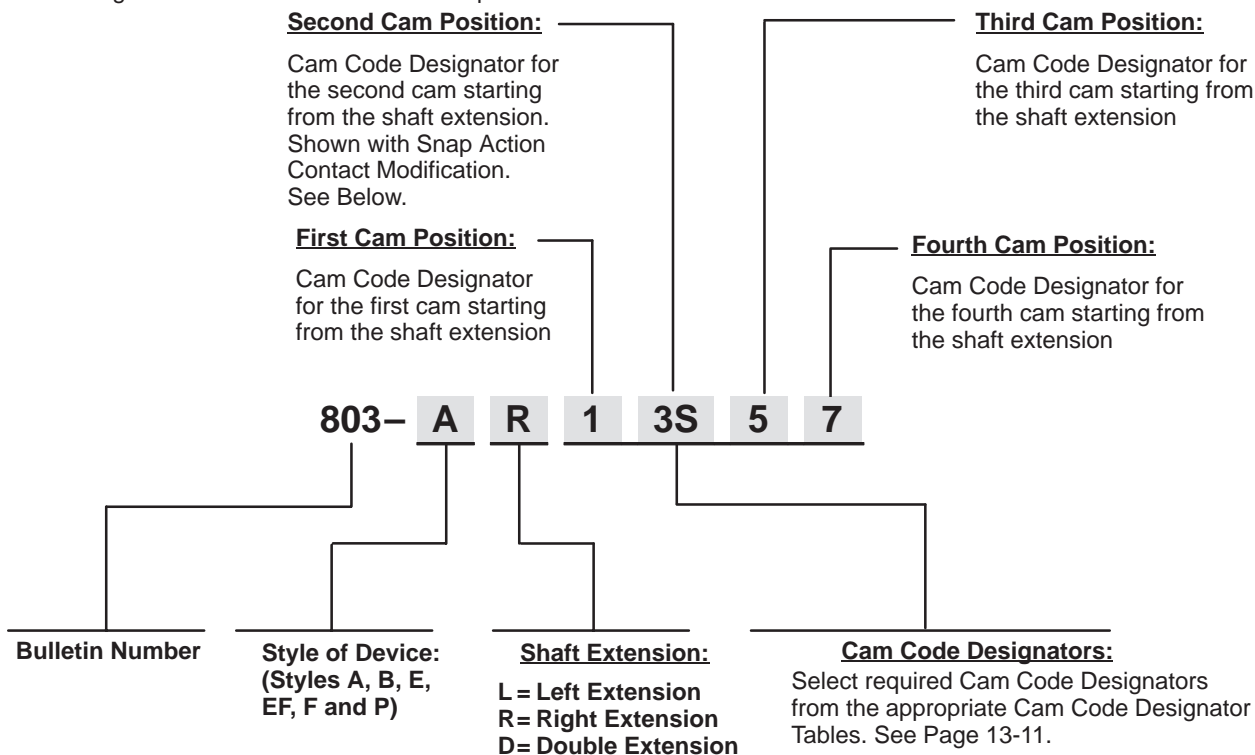
### How to Specify a Cam Code

When specifying a cam code, refer to the Example Cam Code and Cam Code Designator Tables and order as follows:

- Select and specify a code for the Style.
- Select and specify a code for the Shaft Extension.
- Select required Cam Code Designators from the appropriate tables on page 13-11. Enter Cam Code Designators in sequence, starting from the standard driven shaft extension.
- If cam is not required, place an “X” in that position.

### Example Cam Code Designator for a 4 Cam Device

**Note:** Catalog number must not include blank spaces.



### Snap Action Contact Modification

Snap Action contacts are available for **Styles A, E, EF, and P**. Add the letter “S” in the desired position in the cam code. For pricing consult your Master Price List or your nearest Allen-Bradley Sales Office.

Example of factory order entry with cams (not applicable to **Style F**):

Enter Order: **803-Special**  
 In Memo Text Enter: **803-A4**  
**803-AL13S57**

**Cam Code Designator Tables**

Cams for Style A		
Cam Code Designator	Adjustable Degrees of Dwell	
	N.C. Contact Opens	N.C. Contact Remains Closed
1	24-29°	331-336°
2	30-36°	324-330°
3	35-46°	314-325°
4	45-66°	294-315°
5	65-104°	256-295°
6	105-186°	174-255°
7	130-236°	124-230°
8	170-316°	44-190°
9	185-346°	14-175°

Cams for Style B		
Cam Code Designator	Adjustable Degrees of Dwell	
	N.C. Contact Opens, N.O. Contact Closes	N.O. Contact Closes, N.C. Contact Opens
1	24-29°	331-336°
2	30-36°	324-330°
3	35-46°	314-325°
4	45-66°	294-315°
5	65-104°	256-295°
6	105-186°	174-255°
7	130-236°	124-230°
8	170-316°	44-190°
9	185-346°	14-175°

Cams for Style E and F		
Cam Code Designator	Adjustable Degrees of Dwell	Cam Stamping (Reference)
	N.C. Contact Opens	
1	48-53°	(N18)
2	53-58°	(N19)
3	58-68°	(N20)
4	68-88°	(N21)
5	88-128°	(N22)
6	128-208°	(N23)
7	208-360°	(N24)
8 ❶	15-345°	(N25)

Cams for Style P				
Cam Code Designator	Adjustable Degrees of Dwell		Cam Kit ❷	
	N.C. Contact Opens	N.O. Contact Remains Closed	Catalog Number	*
3	27-33°	327-333°	803-NK33	
4	33-39°	321-327°	803-NK34	
5	38-49°	311-322°	803-NK35	
6	48-69°	291-312°	803-NK36	
7	68-109°	251-292°	803-NK37	
8	108-189°	171-252°	803-NK38	
9	148-269°	91-212°	803-NK39	
0	188-349°	11-172°	803-NK40	

- ❶ This is a special cam which can only be used with snap action contact units.
- ❷ Kit includes two cams, and mounting hardware for one circuit.

# Rotating Cam Limit Switches

## Factory Options

### Factory Set Cams

To order factory set cams, specify the information listed below. For pricing consult your Master Price List or your nearest Allen-Bradley Sales Office.

1. Specify cam number, cam code designator, timing and dwell of each cam starting from the standard driven shaft extension.
2. Specify shaft rotation (clockwise or counterclockwise) **facing end of shaft opposite driven end of shaft.**
3. A Degree Specification Table and a Target Table are required. See typical examples below.

### Degrees Specification Table

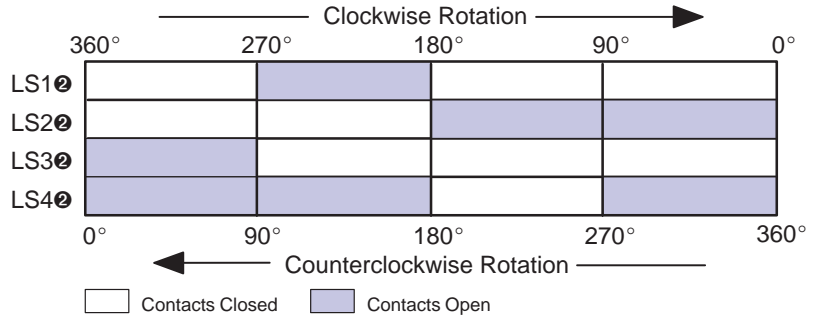
**Clockwise Shaft Rotation: viewed from opposite driven shaft end**

Cam Switch Position ❶	Contacts	
	Degrees Open	Degrees Closed
LS1	180°	270°
LS2	0°	180°
LS3	270°	0°
LS4	180°	90°

❶ Switch and cam position starting from the standard driven shaft extension.

### Target Table

**Clockwise Shaft Rotation: viewed from opposite driven shaft end**



❷ Switch position.

File and Guide Numbers				
Bulletin 803	UL		CSA	
	File Number	Guide Number	File Number	Class
	E14840	NKCR	LR1234	3211-01

# Rotating Cam Limit Switches

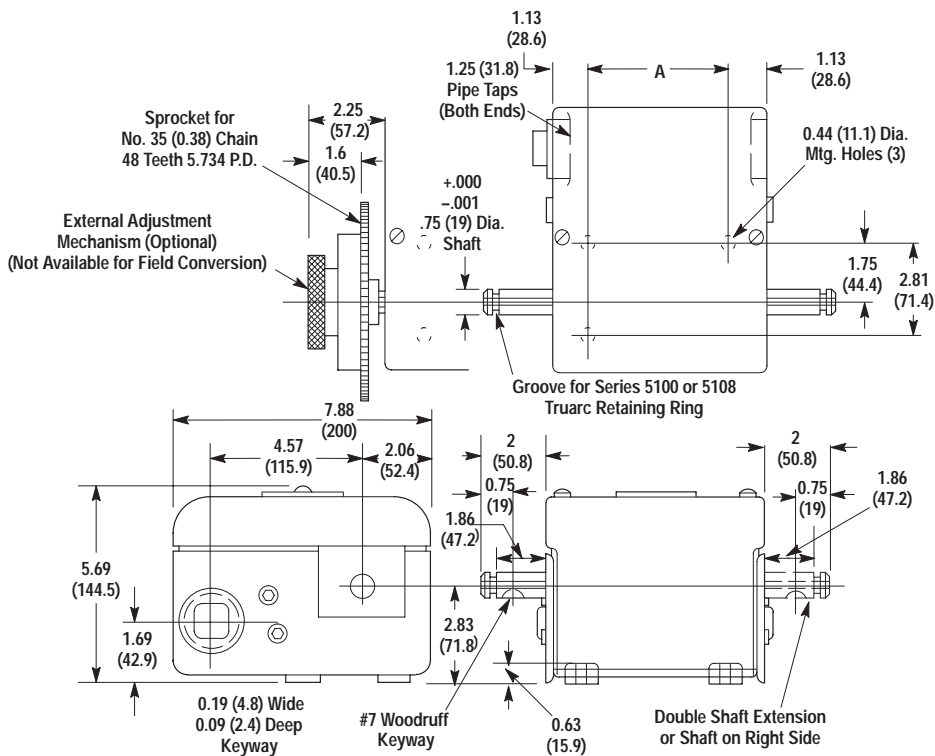
## Dimension Drawings — Listed by Type Enclosure

### Approximate Dimensions and Shipping Weights

Dimensions in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

#### Type 1 General Purpose Enclosures

#### Style A and B



Catalog Number		Number of Circuits	Dimension "A"
Style A	Style B		
803-A2	803-B2	2	4.38
803-A3	803-B3	3	(111.1)
803-A4	803-B4	4	5.69 (144.5)
803-A5	803-B5	5	8.31
803-A6	803-B6	6	(211.1)
803-A7	803-B7	7	12.25
803-A8	803-B8	8	(311.2)
803-A9	803-B9	9	
803-A10	803-B10	10	16.19
803-A11	803-B11	11	(411.2)
803-A12	803-B12	12	

#### Approximate Shipping Weight

Style A		Style B	
Catalog Number	Wt. in lbs. (kg)	Catalog Number	Wt. in lbs. (kg)
803-A2	20 (9.1)	803-B2	22 (10.0)
803-A3	21 (9.5)	803-B3	23 (10.4)
803-A4	22 (10.0)	803-B4	24 (10.9)
803-A5	25 (11.3)	803-B5	27 (12.2)
803-A6	29 (13.2)	803-B6	31 (14.1)
803-A7	33 (15.0)	803-B7	35 (15.9)
803-A8	34 (15.4)	803-B8	36 (16.3)
803-A9	35 (15.9)	803-B9	37 (16.8)
803-A10	40 (18.1)	803-B10	42 (19.1)
803-A11	44 (20.0)	803-B11	46 (20.9)
803-A12	45 (20.4)	803-B12	47 (21.3)

# Rotating Cam Limit Switches

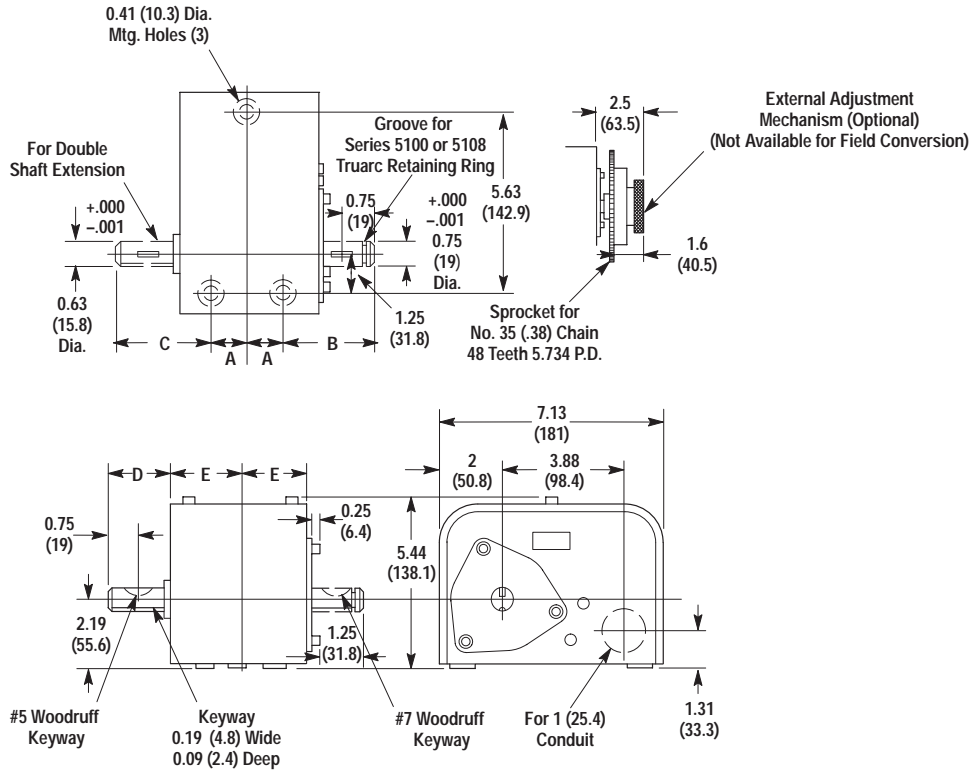
Dimension Drawings — Listed by Type Enclosure

## Approximate Dimensions and Shipping Weights

Dimensions in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

### Type 1 General Purpose Enclosures

#### Style P



Catalog Number Style P		Number of Circuits	Dimensions				
			A	B	C	D	E
803-P2	803-PL2	2	1.13 (28.6)	2.75 (69.8)	2.88 (73)	1.5 (38.1)	2.22 (56.4)
803-P3	803-PL3	3	1.38 (34.9)	3.81 (96.8)	3.94 (100)	1.5 (38.1)	3.53 (89.7)
803-P4	803-PL4	4	1.38 (34.9)	3.81 (96.8)	3.94 (100)	1.5 (38.1)	3.53 (89.7)
803-P5	803-PL5	5	2.69 (68.3)	3.81 (96.8)	3.94 (100)	1.5 (38.1)	4.84 (123)
803-P6	803-PL6	6	2.69 (68.3)	3.81 (96.8)	3.94 (100)	1.5 (38.1)	4.84 (123)
803-P7	803-PL7	7	4 (101.6)	3.81 (96.8)	3.94 (100)	1.5 (38.1)	6.22 (158)
803-P8	803-PL8	8	4 (101.6)	3.81 (96.8)	3.94 (100)	1.5 (38.1)	6.22 (158)
803-P10	803-PL10	10	6.63 (168.3)	3.81 (96.8)	3.94 (100)	1.5 (38.1)	8.77 (222.6)
803-P12	803-PL12	12	6.63 (168.3)	3.81 (96.8)	3.94 (100)	1.5 (38.1)	8.77 (222.6)

#### Approximate Shipping Weight

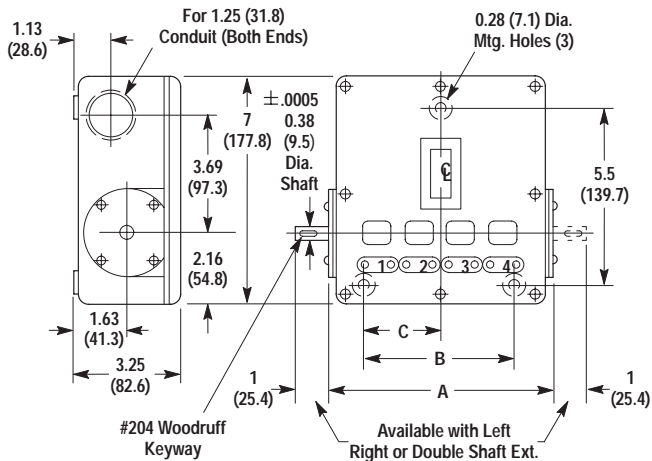
Style P With Cams		Style P Less Cams	
Catalog Number	Wt. in lbs. (kg)	Catalog Number	Wt. in lbs. (kg)
803-P2	15 (6.8)	803-PL2	13 (5.9)
803-P3	17 (7.7)	803-PL3	14 (6.4)
803-P4	18 (8.2)	803-PL4	15 (6.8)
803-P5	21 (9.5)	803-PL5	17 (7.7)
803-P6	24 (10.9)	803-PL6	18 (8.2)
803-P7	27 (12.2)	803-PL7	21 (9.5)
803-P8	30 (13.6)	803-PL8	22 (10.0)
803-P10	36 (16.3)	803-PL10	29 (13.2)
803-P12	42 (19.1)	803-PL12	30 (13.6)

**Approximate Dimensions and Shipping Weights**

Dimensions in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

**Type 1 General Purpose Enclosures and Type 13 Dust-tight Industrial Enclosures**

**Style F**



Catalog Number (Style F)	Number of Circuits	Dimensions			Approx. Shipping Wt. (kg)
		A	B	C	
803-F212	2	7.06	4.81	2.41	11 lbs. (5.0)
803-F312	3	(179.4)	(122.2)	(61.1)	12 lbs. (5.4)
803-F412	4				12 lbs. (5.4)
803-F512	5	12.31	10.06	5.03	13 lbs. (5.9)
803-F612	6	(312.7)	(255.6)	(127.8)	13 lbs. (5.9)
803-F712	7				14 lbs. (6.4)
803-F812	8				14 lbs. (6.4)
803-F912	9	17.56	15.31	7.66	19 lbs. (8.6)
803-F1012	10	(446.1)	(388.9)	(194.5)	19 lbs. (8.6)
803-F1112	11				20 lbs. (9.1)
803-F1212	12				20 lbs. (9.1)

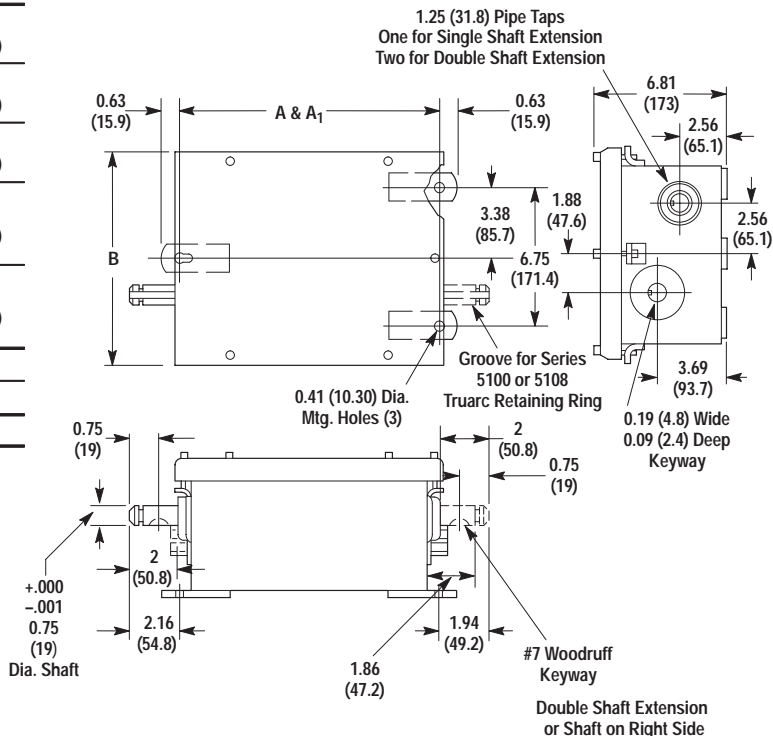
**Type 4 & 13 Watertight, Dust-tight, Oiltight Industrial Enclosures**

**Style A and B**

Catalog Number Type 4 & 13		Number of Circuits	Dimensions	
			A	B
803-A24	803-B24	2	9.5	10.56
803-A34	803-B34	3	(241.3)	(268.3)
803-A44	803-B44	4	10.81	11.88
803-A54	803-B54	5	13.44	14.5
803-A64	803-B64	6	(341.3)	(368.3)
803-A74	803-B74	7	17.38	18.44
803-A84	803-B84	8	(441.3)	(468.3)
803-A94	803-B94	9		
803-A104	803-B104	10	21.31	22.38
803-A114	803-B114	11	(541.3)	(568.3)
803-A124	803-B124	12		
Enclosure		Dimensions		
Type 4 & 13		B		
		10-3/4 (273)		

**Approximate Shipping Weight Type 4 & 13**

Catalog Number		Wt. in lbs. (kg)
803-A24	803-B24	35 (15.9)
803-A34	803-B24	36 (16.3)
803-A44	803-B44	39 (17.7)
803-A54	803-B54	49 (22.2)
803-A64	803-B64	53 (24.0)
803-A74	803-B74	54 (24.5)
803-A84	803-B84	55 (24.9)
803-A94	803-B94	56 (25.4)
803-A104	803-B104	60 (27.2)
803-A114	803-B114	61 (27.7)
803-A124	803-B124	62 (28.1)





# Rotating Cam Limit Switches

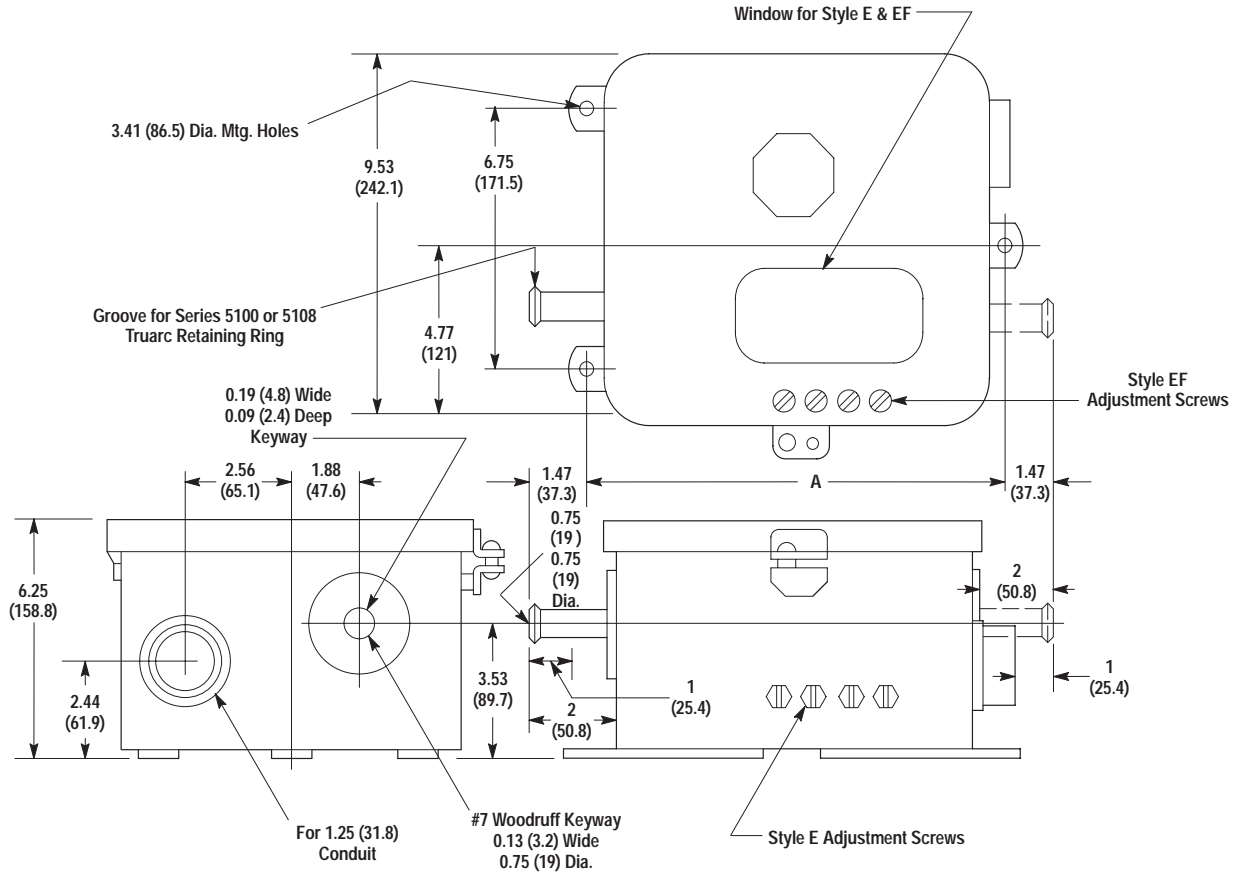
Dimension Drawings — Listed by Type Enclosure

## Approximate Dimensions and Shipping Weights

Dimensions in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

### Type 13 Watertight, Oiltight Industrial Enclosures

#### Style E and EF



Catalog Number Type 13		Number of Circuits	Dimension "A"	Approximate Shipping Weight in lbs. (kg)
803-E2	803-EF2	2		25 (11.3)
803-E3	803-EF3	3	10.19 (274.6)	26 (11.8)
803-E4	803-EF4	4		27 (12.2)
803-E5	803-EF5	5	13.44 (341.3)	31 (14.1)
803-E6	803-EF6	6		32 (14.5)
803-E7	803-EF7	7	17.38 (441.3)	44 (20.0)
803-E8	803-EF8	8		45 (20.4)
803-E9	803-EF9	9		46 (20.9)
803-E10	803-EF10	10	21.31 (541.3)	50 (22.7)
803-E11	803-EF11	11		51 (23.1)
803-E12	803-EF12	12		52 (23.6)