



## Bulletin 800T Watertight/Oiltight Selector Switches

### Product Data

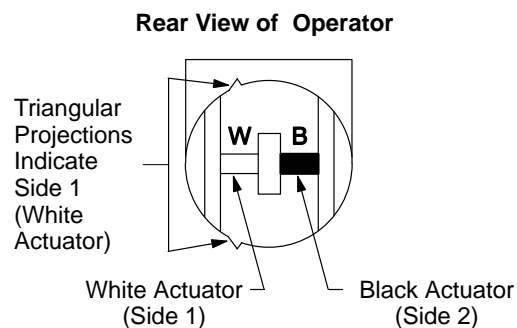
#### Installation

In addition to standard 2, 3, and 4 position circuits, Bulletin 800T selector switches provide a great deal of flexibility in meeting special circuit requirements. This publication will help you select special Bulletin 800T selector switch operators and/or contact blocks that provide a specific contact operating sequence and will also help you select contact blocks in the field when uncataloged configurations are required. This publication applies to Bulletin 800T Series T and 800H Series F selector switches.

#### Selector Switch Basics

Bulletin 800T selector switches are constructed with two actuators behind a rotary cam switch that operate independently to provide various contact sequences. Contact blocks can be stacked one behind the other or side-by-side depending on the actuating sequence desired. The contact blocks stacked on Side 1 (white actuator) and Side 2 (black actuator) are depressed or released independently of each other. See Figure 1 below.

When the operator assembly is viewed from the rear, the triangular projections on the operator housing provide positive indication of Side 1 which is the white actuator location (also noted on device nameplate). This convention is important for proper contact block selection and mounting, as illustrated in the combined contact operation.



**Figure 1**

#### Standard vs Special Forms

This publication supplements the broad selection of the selector switches listed in the Allen-Bradley Industrial Control catalog. Selector switches listed in the catalog are based on the most popular two and three position cam arrangements offering a short yet complete catalog number.

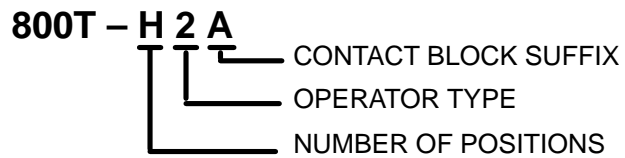
The Industrial Control catalog also lists some special three and four position selector switch contact arrangements. The catalog lists a choice of (9) three-position and (5) four-position cam functions with various operators and contact block arrangements. Catalog numbers are simply assembled for these units by joining the operator prefix with the contact block suffix.

## Standard vs Special Forms (cont'd)

This publication will help you select a greater range of specialized selector switches. A selector switch can be specified to meet your needs by selecting separate operators, cams and contact blocks. The three components can be combined into one simple catalog number. A new easy-to-use “modular” catalog numbering system is used to simplify ordering.

## Traditional vs Modular Catalog Numbers

The traditional catalog numbering system was originally developed to provide compact catalog numbers and is used on all standard catalog listed two-position and three-position selector switches. Refer to the following example:

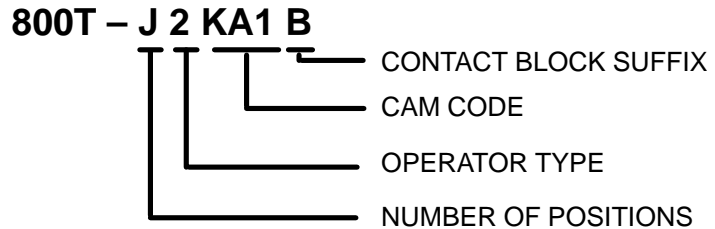


The traditional approach does not provide for cam selection and has limited flexibility in contact block arrangement.

Traditional Contact Block Suffixes				
Standard Two and Three Position Units				
Suffix Letter	White Side		Black Side	
	Qty.	Catalog Number	Qty.	Catalog Number
<b>A</b>	1	800T-XA	–	–
<b>B</b>	1	800T-XA	1	800T-XA
<b>H</b>	2	800T-XA	1	800T-XA
<b>C</b>	2	800T-XA	2	800T-XA
<b>D1</b>	1	800T-D1	–	–
<b>D2</b>	1	800T-D2	–	–

## Traditional vs Modular Catalog Numbers (cont'd)

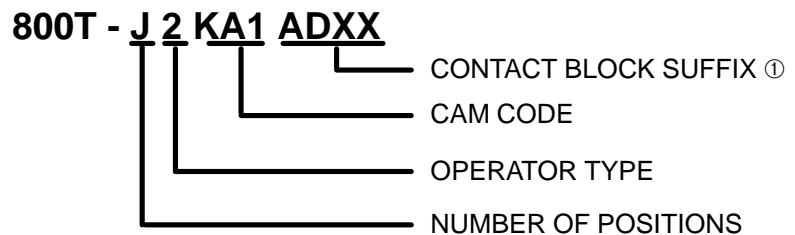
Special three-position and four-position selector switch arrangements listed in the Industrial Control catalog expand on the traditional system to provide cam code selection.



However, they are limited to a restricted set of traditional contact block suffixes as listed in the following example.

Traditional Contact Block Suffixes				
Standard Three and Four Position Units				
Suffix Letter	White Side		Black Side	
	Qty.	Catalog Number	Qty.	Catalog Number
A	1	800T-XA	–	–
B	1	800T-XA	1	800T-XA
H	2	800T-XA	1	800T-XA
C	2	800T-XA	2	800T-XA

Special selector switches in this publication have catalog numbers based on the modular catalog number system. The modular system provides a broad choice of operators and cam codes and complete flexibility in contact block selection. Refer to the following example.



① Refer to Page 6 for details.

This new modular catalog numbering system does not replace the traditional system, since it would require end customers to change existing Bills of Material and drawings for functionally interchangeable units. However, traditional catalog numbered devices have an exact modular equivalent.

For example, Catalog Number 800T-J2A (traditional) is equivalent to Catalog Number 800T-J2KB7AXXX (modular). The Modular Catalog System is used to expand the available selections beyond the capabilities of the Traditional Catalog Number system.

## Description of Contact Blocks

Following is a description of all the different types of contact blocks available:

### Shallow Blocks

- Standard one or two circuit contact blocks for Bulletin 800H and 800T devices
- Available in a variety of single and double circuit contact blocks
- Direct drive bifurcated spanner

### CONTACT RATINGS

Maximum Operational Voltage U <sub>e</sub>	Utilization Category		Rated Operational Currents		
	IEC	NEMA	Volts U <sub>e</sub>	Make →] [←	Break ←] [→
AC 600	AC-15	A600	120-600 72-120 24-72	7200VA 60A 60A	720VA 720VA 10A
DC 600	DC-13	Q600	28-600 24-28 ①	69VA 25A	

① For applications below 24V and 24mA, logic reed or pentafurcated contact blocks are recommended.

### Mini Blocks

- Single Circuit only
- Same electrical ratings as shallow contact block but smaller in size ( $\frac{7}{8}$ " vs.  $1\frac{1}{8}$ " deep). Refer to Shallow Contact Block Ratings table above.

### PentTUFF Blocks

- Same size as shallow contact block
- Direct drive pentafurcated spanner
- Increased contact reliability and reduced contact bounce are ideal for low voltage applications

### CONTACT RATINGS

Maximum Operational Voltage U <sub>e</sub>	Utilization Category		Rated Operational Currents		
	IEC	NEMA	Volts U <sub>e</sub>	Make →] [←	Break ←] [→
AC 300	AC-15	C300	120-300 0-120	1800VA 15A	180VA 1.5A
DC 150	DC-13	R150	24-150 0-24	28VA 1.0A	

## Description of Contact Blocks (cont'd)

### Logic Reed Blocks

- Same size as shallow contact block
- Designed for logic level switching
- Low bounce time typically less than 0.5 millisecond
- Precious-metal-plated reed contacts hermetically sealed in a glass envelope filled with inert gas

#### CONTACT RATINGS

Maximum: 150VAC, 0.15A, 8VA and 30VDC, 0.06A, 1.8VA. Should only be used with resistive loads.

### Sealed Switch Blocks

- Contacts are hermetically sealed in a glass envelope filled with inert gas
- UL Listed for Class I & II, Division 2/Zone 2 Hazardous Locations
- Provide long contact life in contaminated environments

#### CONTACT RATINGS

Maximum Operational Voltage $U_e$	Utilization Category		Rated Operational Currents		
	IEC	NEMA	Volts $U_e$	Make →] [←	Break ←] [→
AC 600	AC-15	B600	120-600 0-120	3600VA 30A	360VA 3A
DC 300	DC-13	P300	24-300 0-24	138VA 5A	

### Stackable Sealed Switch Blocks

- Same features as Sealed Switch Blocks, but stackable up to 8 circuits
- IP2X finger safe design

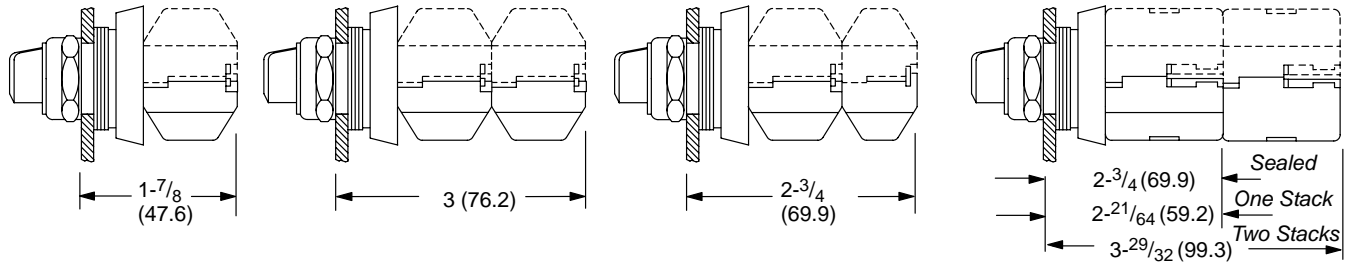
#### CONTACT RATINGS

Maximum continuous current  $I_{th}$  2.5A.

### Contact Block Mounting Depth

Mounting depths for different types of contact blocks are shown below:

NOTE - Dimensions are in inches (millimeters).



ONE SHALLOW, LOGIC REED, or PenTUFF™ BLOCK      TWO SHALLOW, LOGIC REED, or PenTUFF™ BLOCKS STACKED      ONE SHALLOW, LOGIC REED, or PenTUFF™ & ONE MINI BLOCK STACKED      ONE SEALED, ONE STACKABLE, or TWO STACKABLE SEALED SWITCH BLOCKS

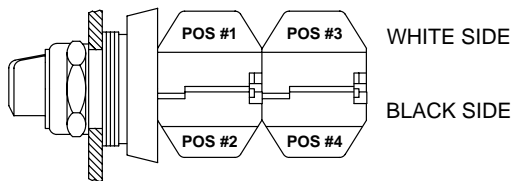
NOTE - Shallow, PenTUFF, Logic Reed, and Stackable Sealed Switch blocks can be stacked two deep maximum and sealed switch mounted one

### Contact Block Catalog Numbers and Suffix Codes

Contacts	Shallow Block		Mini Block		PenTUFF™ (Low Voltage) Block		Logic Reed Block		Stackable Sealed Switch Block		Sealed Switch Block	
	Catalog Number 800T-	Suffix Code ①	Catalog Number 800T-	Suffix Code ①	Catalog Number 800T-	Suffix Code ①	Catalog Number 800T-	Suffix Code ①	Catalog Number 800T-	Suffix Code ①	Catalog Number 800T-	Suffix Code ①
1 N.O.	XD1	D	XD5	K	XD1V	H	XD1R	V	XD1Y	5	XD1P	R
1 N.C.	XD2	E	XD6	L	XD2V	U	XD2R	W	XD2Y	6	XD2P	S
1 N.O.E.M.	XD3	G	—	—	XD3V	I	—	—	—	—	—	—
1 N.C.L.B.	XD4	J	—	—	XD4V	Q	—	—	—	—	—	—
1 N.O. – 1 N.C.	XA	A	—	—	XAV	F	XAR	T	XAY	7	XAP	P
2 N.O.	XA2	M	—	—	—	—	XA2R	Y	XA2Y	8	—	—
2 N.C.	XA4	N	—	—	—	—	XA4R	Z	XA4Y	9	—	—
1 N.C.L.B. – 1 N.O.	XA1	B	—	—	—	—	—	—	—	—	—	—
1 N.C.L.B. – 1 N.C.	XA7	C	—	—	—	—	—	—	—	—	—	—

① Suffix Codes for Modular Catalog Number Contact Block configurations.

### Modular Catalog Number Contact Block Suffix Configuration



SUFFIX:



NOTE - Use Suffix Code "X" to indicate that no block is located in a position.

#### EXAMPLE

800T-J2KC1 With:

800T-XD3 (White Side)

800T-XA (Black Side)

Vacant (White Side)

Vacant (Black Side)

SUFFIX CONFIGURATION CODE: **G**      **A**      **X**      **X**

POS #1 WHITE SIDE      POS #2 BLACK SIDE      POS #3 WHITE SIDE      POS #4 BLACK SIDE

## Selector Switch Selection Steps

Use the following steps to select the components required to meet the needs for your selector switch application:

1. Select the desired operator prefix from Table 1 on Page 9 for 3-position selector switches or Table 3 on Page 11 for 4-position selector switches.
2. Select the Cam Code (Table 2 on Page 9 for 3-position selector switches or Table 4 on Page 11 for 4-position selector switches) that meets your required circuit combination. (If more than one cam provides the desired target table choose the simplest contact configuration from Step 4).
3. Identify the contact blocks that coordinate with the selected cam to achieve the desired target table. Note whether they are located on the white side or black side.
4. Use the following table to reduce the contact blocks to their simplest and most compact form if desired or required:

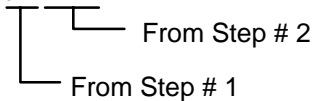
### Contact Block Reduction Rules

(1) 800T-XA replaces (1) 800T-XD1 & (1) 800T-XD2
(1) 800T-XA1 replaces (1) 800T-XD1 & (1) 800T-XD4
(1) 800T-XA7 replaces (1) 800T-XD2 & (1) 800T-XD4
(1) 800T-XA2 replaces (2) 800T-XD1
(1) 800T-XA4 replaces (2) 800T-XD2
(1) 800T-XD5 (Mini) replaces (1) 800T-XD1
(1) 800T-XD6 (Mini) replaces (1) 800T-XD2

5. Order the operator and contact blocks as components.

NOTE - The operator catalog number consists of the operator prefix plus cam code.

**Example:** 800T-J2KA1



Also, be sure to order the contact block(s) by catalog number using the 800T prefix.

**Example:** 800T-XA or 800T-XD1, not XA or XD1 only.

5A. Or order as a complete factory assembled device. The device catalog number consists of the *operator prefix*, the *cam code* and the *contact block configuration* suffix. Refer to Page 3 for details on this suffix.

**Example:** 800T-J2KA1ADXX

## Selector Switch Selection Steps Example

Select a maintained 3-position “Hand-Off-Auto” selector switch with standard knob and three circuits as shown:

X	O	O
O	O	X
X	O	X

1. Select an operator prefix from Table 1 on Page 9.

800T-J2

2. Select a cam and index code from Table 2 on Page 9. Code KC1 or KC7 would be equally effective. Use KC1 for this example.

800T-J2KC1

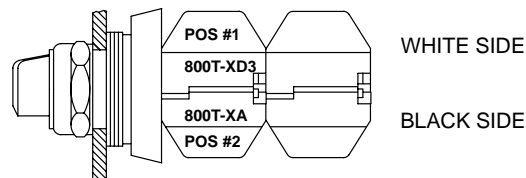
3. Select contact blocks based on the target tables.

X O O = 800T-XD2 (Black)

O O X = 800T-XD1 (Black)

X O X = 800T-XD3 (White)

4. Simplify the Black side by combining the 800T-XD1 and 800T-XD2 into an 800T-XA (see Page 7). The contact block combination would be:



5. Order the operator and contact blocks as components:

800T- J2KC1 – From Steps 1 & 2

800T-XD3 – From Step 4

800T-XA – From Step 4

- 5A. Or order as a factory assembled device:

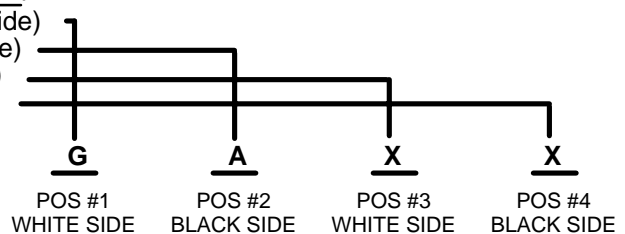
### **800T-J2KC1GAXX:**

800T-XD3 (White Side)

800T-XA (Black Side)

Vacant (White Side)

Vacant (Black Side)



See Page 6 for additional suffix explanation.

### 3-Position Selector Switches

Table 1

3-Position Selector Switch Operators				
Type of Operator ①	Operator Function			Catalog Number ②
<b>Standard</b> Standard Color is Black	Maintained			800T-J2_ _ _
	Spring return from left			800T-J4_ _ _
	Spring return from right			800T-J5_ _ _
	Spring return from left and right			800T-J91_ _ _
<b>Knob Lever</b> Standard Color is Black	Maintained			800T-J17_ _ _
	Spring return from left			800T-J18_ _ _
	Spring return from right			800T-J19_ _ _
	Spring return from left and right			800T-J20_ _ _
<b>Wing Lever</b> Standard Color is Gray ③	Maintained			800T-JG11_ _ _
	Spring return from left			800T-JG15_ _ _
	Spring return from right			800T-JG16_ _ _
	Spring return from left and right			800T-JG141_ _ _
<b>Cylinder Lock</b>	Operator Function			
	Maintained Position	Spring return from left	Spring return from right	Spring return from right and left
<b>Locking Position</b>	<b>Catalog Number ②</b>	<b>Catalog Number ②</b>	<b>Catalog Number ②</b>	<b>Catalog Number ②</b>
Left	800T-J41_ _ _	—	800T-J69_ _ _	—
Center	800T-J42_ _ _	800T-J50_ _ _	800T-J38_ _ _	800T-J631_ _ _
Right	800T-J43_ _ _	800T-J52_ _ _	—	—
All	800T-J44_ _ _	—	—	—
Left and Center	800T-J45_ _ _	—	800T-J73_ _ _	—
Right and Left	800T-J46_ _ _	—	—	—
Right and Center	800T-J47_ _ _	800T-J51_ _ _	—	—

Table 2

3-Position Selector Switch Function																													
A c t u a t o r	Contact Block	Operator Position Viewed from Front X=Contact Closed O=Contact Open																											
		Catalog Number Suffixes	C o n t a c t	Cam and Index Code																				Standard Selector Switch (KB7 Cam Code)					
				KA1			KA7			KC1			KC7			KD7			KE7 ③			KQ1			KQ7				
800T-		↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻	↻		
W h i t e	XD1	A	X	O	O	O	O	X	O	O	X	X	O	O	O	O	X	X	O	O	X	X	O	X	O	X	O	O	
	XD2	B	O	X	O	O	X	O	O	X	O	O	X	O	O	X	O	O	X	X	O	X	O	O	X	O	O	O	X
	XD3	A	X	O	X	X	O	X	X	O	X	X	O	X	X	O	X				X	O	X	X	O	X	X	X	O
	XD4	B	O	X	X	X	X	O	X	X	O	O	X	X	X	X	O	O	X	X	O	X	O	O	X	O	O	X	X
B l a c k	XD1	A	X	O	O	O	O	X	O	O	X	X	O	O	X	O	O	O	O	X	O	O	X	X	O	O	X	O	O
	XD2	B	O	X	O	O	X	O	X	O	O	O	O	X	O	X	O	X	X	O	O	X	O	O	X	O	O	O	X
	XD3	A	X	O	X	X	O	X	O	X	X	X	X	O	X	O	X				X	O	X	X	O	X	X	X	O
	XD4	B	O	X	X	X	X	O	X	X	O	O	X	X	O	X	X	X	X	O	X	X	O	O	X	X	O	X	X

① Consult Factory for Special Coin Slot Operators.  
 ② Catalog Numbers as listed are not complete. Add the desired Cam and Index Code from Table 2.  
 ③ Wing Levers are not suitable for use with "KE7" Cam Code.

### 3-Position Selector Switch Example

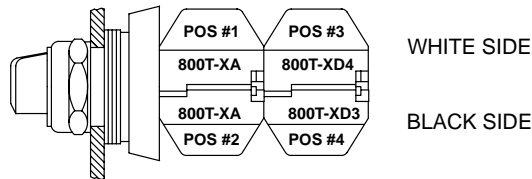
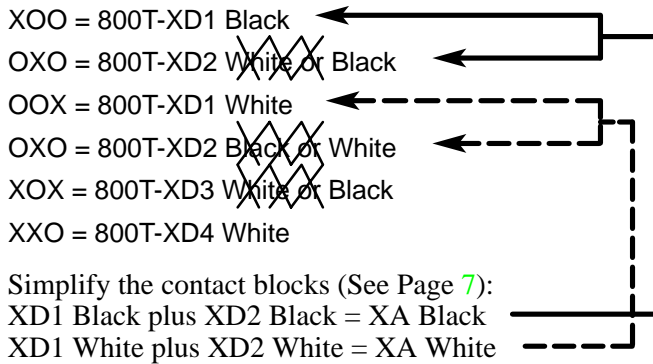
Select a 3-position spring return from left operator with a knob lever with the target table to the right:

X	O	O
O	X	O
O	O	X
O	X	O
X	O	X
X	X	O

1. Select the desired prefix from Table 1.  
800T-J18

2. Select the Cam Code from Table 2.  
KD7

3. Identify the contact blocks:



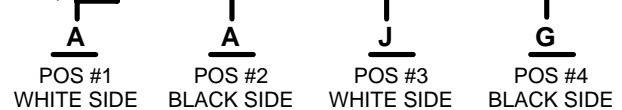
5. Order the operator and contact blocks as components:

- (1) 800T-J18KD7 – From Steps 1 & 2
- (2) 800T-XA – From Step 4
- (1) 800T-XD3 – From Step 4
- (1) 800T-XD4 – From Step 4

5A. Or order as factory assembled device:

#### **800T-J18KD7AAJG:**

- 800T-XA (White Side)
- 800T-XA (Black Side)
- 800T-XD4 (White Side)
- 800T-XD3 (Black Side)



See Page 6 for additional suffix explanation.

## 4-Position Selector Switches

Table 3

4-Position Selector Switch Operators			
Type of Operator ①	Operator Function		Catalog Number ②
<b>Standard</b> Standard Color is Black	Maintained		800T-N2_ _ _
	Spring return from position 1 to position 2		800T-N3_ _ _
	Spring return from position 4 to position 3		800T-N9_ _ _
<b>Knob Lever</b> Standard Color is Black	Maintained		800T-N17_ _ _
	Spring return from position 1 to position 2		800T-N29_ _ _
	Spring return from position 4 to position 3		800T-N30_ _ _
<b>Wing Lever</b> Standard Color is Gray ③	Maintained		800T-NG11_ _ _
	Spring return from position 1 to position 2		800T-NG13_ _ _
	Spring return from position 4 to position 3		800T-NG14_ _ _
<b>Cylinder Lock</b>	Operator Function		
	Maintained Position	Spring return Position 1 to Position 2	Spring return Position 4 to Position 3
Locking Position	Catalog Number ②	Catalog Number ②	Catalog Number ②
1	800T-N31_ _ _	—	800T-N231_ _ _
2	800T-N32_ _ _	800T-N132_ _ _	800T-N232_ _ _
3	800T-N33_ _ _	800T-N133_ _ _	800T-N233_ _ _
4	800T-N34_ _ _	800T-N134_ _ _	—
All	800T-N61_ _ _	800T-N154_ _ _④	800T-N251_ _ _④

① Consult Factory for Special Coin Slot Operators.

② Catalog Numbers as listed are not complete. Add the desired Cam and Index Code from Table 4.

③ Wing Levers are not suitable for use with “KK4” and “KM4” Cam Codes.

④ Key removal in maintained positions only.

Table 4

4-Position Selector Switch Function																						
A c t u a t o r	Contact Block	Operator Position Viewed from Front X=Contact Closed O=Contact Open																				
	Catalog Number Suffixes	C o n t a c t	Cam and Index Code																			
			KF4				KG4				KK4 ①				KM4 ①				KP4			
W h i t e	XD1	A	X	O	O	O	X	X	O	O	O	O	X	X	X	O	O	O	O	X		
	XD2	B	O	X	O	O	O	O	X	O	X	X	O	O	O	X	X	O	O	X		
	XD3	A	X	O	X	X	X	X	O	X									X	O		
	XD4	B	O	X	X	X	O	O	X	X	X	X	O	O	O	X	X	X	X	X		
B l a c k	XD1	A	O	O	O	X	X	O	O	O	X	O	O	X	O	O	O	X	O	X		
	XD2	B	O	O	X	O	O	O	O	X	O	X	X	O	O	X	O	O	X	O		
	XD3	A	X	X	O	X	X	X	X	O									O	X		
	XD4	B	X	X	X	O	O	X	X	X	O	X	X	O	X	X	X	O	X	O		

① Wing Levers are not suitable for use with “KK4” and “KM4” Cam Codes.

## 4-Position Selector Switch Example

Select a 4-position cylinder lock selector switch with spring return from Position 4 to Position 3, key removal in Position 2 only with the target table below:

O	X	X	X
O	X	O	O
O	O	O	X
O	O	X	O
X	O	O	O
X	X	X	O
O	O	O	X

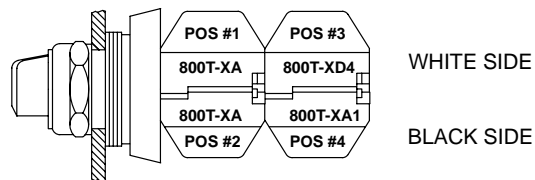
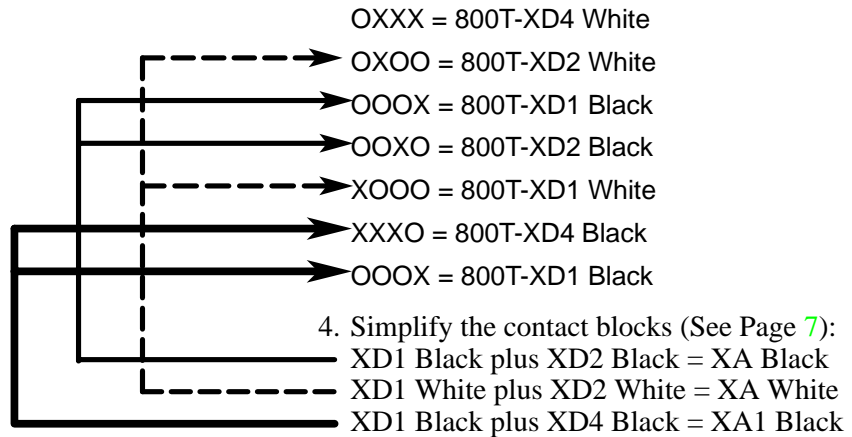
1. Select the desired prefix from Table 3

800T-N232

2. Select the Cam Code from Table 4

KF4 (only KF4 has OOXO)

3. Identify the contact blocks:



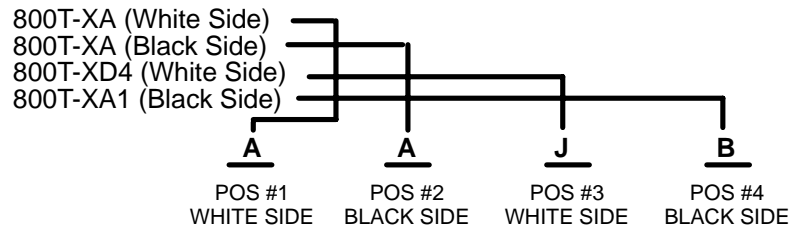
5. Order the operator and contact blocks as components

- (1) 800T-N232KF4 - From Steps 1 & 2
- (2) 800T-XA - From Step 4
- (1) 800T-XD4 - From Step 4
- (1) 800T-XA1 - From Step 4

## 4-Position Selector Switch Example (cont'd)

5A. Or order as factory assembled device.

### **800T-N232KF4AAJB:**



See Page 6 for additional suffix explanation.

## Adding Contacts to Existing Devices

You may want to add a specific circuit to an existing operator/cam assembly. For example, an existing standard operator/cam assembly such as Catalog Number 800T-J2A (standard selector switches use a KB7 cam) may require an XOX circuit. The XOX configuration cannot be accomplished with a single block on this operator (refer to Table 2).

Table 5 shows how the XOX circuit can be obtained. Mount a Catalog Number 800T-XA contact block behind either the white or black actuator and wire the N.C. (designated “B” on the cover) and N.O. (designated “A” on the cover) contacts in parallel. Refer to the Typical Wiring Diagrams on Page 15 for series and parallel diagrams.

Another example is a Catalog Number 800T-J2KE7 operator requiring an OXO circuit. Refer to the “KE7” cam and index code column in Table 5 on Page 14. The OXO circuit can be obtained from by mounting a Catalog Number 800T-XD2 contact block behind the white actuator and a Catalog Number 800T-XD2 contact block behind the black actuator then wiring the two N.C. contacts in series. Table 6 on Page 15 shows the same functionality offerings for 4 position selector switches.

Table 5

3-Position Selector Switch Function ①										
Operator Position Viewed from the Front X = Closed O = Open			Cam and Index Code				Standard Selector Switch (KB 7 Cam Code)			
			KA1		KA7					KC1
			Actuator Color		Actuator Color		Actuator Color		Actuator Color	
			White	Black	White	Black	White	Black	White	Black
			Catalog No. 800T –		Catalog No. 800T –		Catalog No. 800T –		Catalog No. 800T –	
X	O	O	XD1 or XD1	XD3 & XD4 ④ or XD3 & XD4 ④	—	XD2	XD1 or XD1	XD1 or XD1	XD1 or XD1	
X	X	O	XA ⑤ or XA ⑤	XD4 or XD4	XD4 or XD4	—	XD3	XD3 or XD3	XD3 or XD3	
X	O	X	XD3 or XD3	XD3 or XD3	XD3	—	XD3	—	XA ③ or XA ③	
O	O	X	XD3 & XD4 ⑥ or XD3 & XD4 ⑥	XD1 or XD1	XD1 or XD1	—	XD2	XD2 or XD2	XD2 or XD2	
O	X	X	XD4 or XD4	XA ⑦ or XA ⑦	—	XD3	XD4 or XD4	XD4 or XD4	XD4 or XD4	
O	X	O	XD2 or XD2	XD2 or XD2	XD2	—	XD2	—	XD3 & XD4 ② or XD3 & XD4 ②	
			KD7		KE7		KQ1		KQ7	
X	O	O	— or XD1	XD1	—	—	XD3 & XD4 ④	—	XD1	
X	X	O	XD4	—	—	XD2 ⑧	—	XD4	—	XA ⑤
X	O	X	XD3 or XD3	XD1 ③ & XD1 ③	XD1 ③ or XD3	XD1 ③ or XD3	XD1 ③ or XD3	XD1 ③ or XD3		
O	O	X	XD1	—	—	or XD1	—	XD1	—	XD3 & XD4 ⑥
O	X	X	—	XD4	XD2 ⑧	—	—	XA ⑦	—	XD4
O	X	O	XD2 or XD2	XD2 ② & XD2 ②	XD2 ⑧ or XD2	XD2 ⑧ or XD2	XD2 ⑧ or XD2	XD2 ⑧ or XD2		

- ① Circuits shown in series or parallel are customer wired.
- ② Wired in series.
- ③ Wired in parallel.
- ④ Wired in series. Circuit may close momentarily when switching from Position 2 to Position 3.
- ⑤ Wired in parallel. Circuit may open momentarily when switching from Position 1 to Position 2.
- ⑥ Wired in series. Circuit may close momentarily when switching from Position 1 to Position 2.
- ⑦ Wired in parallel. Circuit may open momentarily when switching from Position 2 to Position 3.
- ⑧ Catalog Number 800T-XD4 contact block can be substituted if necessary.
- ⑨ Catalog Number 800T-XD3 contact block can be substituted if necessary.

## Adding Contacts to Existing Devices (cont'd)

Table 6

4-Position Selector Switch Function ①													
Operator Position Viewed from the Front X = Closed O = Open				Cam and Index Code									
				KF4		KG4		KK4		KM4		KP4	
				Actuator Color		Actuator Color		Actuator Color		Actuator Color		Actuator Color	
				White	Black	White	Black	White	Black	White	Black	White	Black
				Catalog No. 800T -		Catalog No. 800T -		Catalog No. 800T -		Catalog No. 800T -		Catalog No. 800T -	
X	O	O	O	XD1	—	—	XD1	XD2 & XD1 ②	XD1	—	—	XD2	
O	X	O	O	XD2	—	XD1 & XD4 ②	XD2 & XD2 ②	—	XD2	XD2	—		
O	O	X	O	—	XD2	XD1	—	XD1 & XD2 ②	—	—	XD4 & XD1 ②		
O	O	O	X	—	XD1	—	XD2	XD1 & XD1 ②	—	XD1	XD1	—	
X	O	O	X	XD3 & XD3 ②	—	XA ③	—	XD1	—	—	XD1 & XD2 ③		
O	X	X	O	XD4 & XD4 ②	—	XD3 & XD4 ②	—	XD2 ⑥	XD2	—	XD4 & XD3 ②		
O	O	X	X	—	XA ⑤	XD4	—	XD1	—	—	—	XD1	
X	X	O	O	XA ④	—	XD1	—	XD2 ⑥	—	XD1 & XD2 ④	—	XD4	
O	X	O	X	XD2 & XD1 ③	XD3 & XD4 ②	XA ⑦ & XA ⑦	—	XA ③	XA ③	—			
X	O	X	O	XD1 & XD2 ③	XD2 & XD1 ③	XA ⑧ & XA ⑧	—	—	—	—	XD3 & XD4 ②		
X	X	X	O	—	XD4	—	XD3	XD2 & XD2 ③	—	XD4	XD4	—	
O	X	X	X	XD4	—	—	XD4	XD1 & XD2 ③	XD4	—	—	XD3	
X	O	X	X	XD3	—	XD4 & XD1 ③	XD1 & XD1 ③	—	—	—	XD3	—	
X	X	O	X	—	XD3	XD3	—	XD2 & XD1 ③	XD1 & XA ④	XD1 & XD4 ③			

① Circuits shown in series or parallel are customer wired.

② Wired in series.

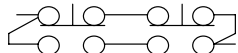
③ Wired in parallel.

④ Wired in parallel. Circuit may open momentarily when switching from Position 1 to Position 2.

⑤ Wired in parallel. Circuit may open momentarily when switching from Position 3 to Position 4.

⑥ Catalog Number 800T-XD4 contact block can be substituted if necessary.

⑦ Wired in series and parallel as illustrated below.

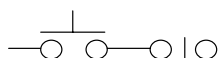


⑧ Wired in series and parallel as illustrated below.

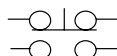


### TYPICAL WIRING DIAGRAMS

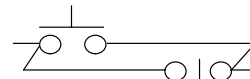
SERIES



or



PARALLEL



or



## Target Tables

Contact configuration is conveniently indicated by means of a target table. Refer to Table 2 on Page 9 and Table 4 on Page 11.

**EXAMPLE:** Operator positions are viewed from the front.

3-Position			4-Position			
X	O	O	X	O	O	O
O	O	X	O	X	O	O

The target table provides the state of the contacts for each given selector switch position. As indicated in the above examples, operator positions are viewed when looking at the selector switch from the front. Each row represents the contacts of a circuit. The “X” means the contacts are closed and the “O” means the contacts are open. The X and O notations are used in the tables to help with the selection of the correct contact blocks in combined circuits to meet functional requirements. Two separate factors determine if the contact is open or closed in a given position.

1. The “shelf” state of a contact either normally open (A contacts) or normally closed (B contacts).
2. The position of the cam under the White (W) or Black (B) actuator in the given switch position. Note in Table 2 on Page 9 the target tables for the standard selector switch (Cam Code “KB7”), plus Cam Codes “KA1”, and “KA7” are the same whether the contact blocks are mounted behind the white actuator or black actuator. Cam Codes “KC1”, “KC7” and “KD7” have all six contact combinations available.

## Special Colors

Each standard and knob lever operator is factory assembled with a white insert. The wing lever operator is standard as gray. Other colors are available if ordered in factory assembled quantities of 10 or more devices. For standard and knob lever operators select a color code letter from the table below. Insert the color code letter after the first letter following the dash in the listed catalog number. Example, 800T-J2KA1 with a green insert would become 800T-JB2KA1.

Code Letter	A	B	C	E
Color	Red	Green	Blue	Yellow

For a red wing lever operator (only available in gray or red), replace the letter “G” with the letter “A”.

To order standard or knob lever operators without color inserts installed, add the letter “X” after the first letter following the dash of the listed catalog number. A special packet containing one of each is included at no extra charge.

## Illuminated Selector Switches

Selection of special illuminated selector switches is similar to selecting special non-illuminated selector switches. However, contact blocks for illuminated devices can only be mounted behind the white actuator. The power module for the lamp on illuminated devices must be mounted behind the black side of the device. Thus, illuminated devices have a 2-digit modular suffix code versus a 4-digit code for non-illuminated devices.

Example: 800T-16JR2KB7**AX**

The suffix codes for the illuminated selector switches listed in the Industrial Control catalog can be modified to achieve special contact arrangements.

## Overlapping Cams

Special devices are available which allow contacts of one circuit to close before the contacts of a second circuit open. These selector switches are not listed in the Industrial Control catalog because of their potential misuse. If your application requires overlapping cams, contact your nearest Allen-Bradley Sales Office.

## Notes

## Notes



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