# **Programming Instructions for Micronor Programmable Cam Switches**

The Micronor Programmable Cam Switches are designed to be both versatile and easy to operate. These are detailed instructions regarding the actual programming of the switches. Should you have any questions or concerns, our support engineers would be glad to assist you.

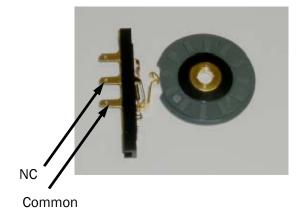
Initial planning is required for cams to be programmed to function as desired. Due to the design of the cam, switches can not be disengaged for more than 180°. If the system requires that the switch does not make contact for more than 180°, the normally closed contact must be wired.

As in Example A, a system might require that the connection for a switch be made from  $0^{\circ}$  to  $30^{\circ}$  and there be no connection from  $31^{\circ}$  to  $359^{\circ}$ . To accomplish this, the switch must be wired in the normally closed position.

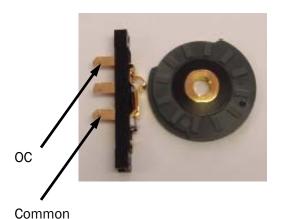
As in Example B, a system that requires a connection for 315°, the normally open contact must be wired so that a connection is made when the switch is engaged, and no connection is made when the switch is disengaged.

The following instructions may be used to program the start and stop times of the switch.

#### Example A

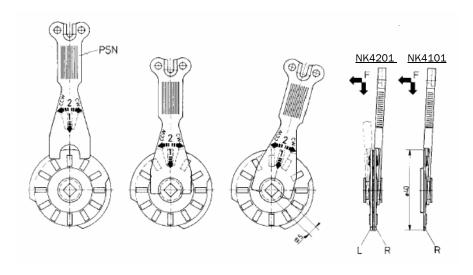


#### Example B



# Programming Using the PSN Key for NK4201 (Double Cam) and NK 4101 (Single Cam)

**Step 1** Insert the key into unit, as shown in the figure, with the numbered side away from the cam and the notched side towards the cam.



**Step 2** While gently applying pressure against the cam with the key; rotate the cam to the desired position.



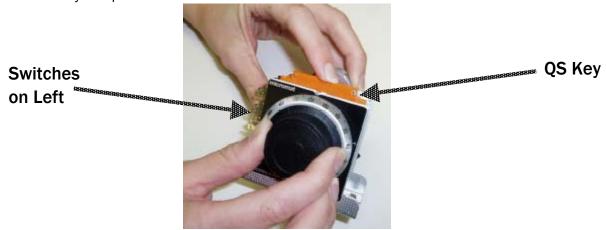
- **Step 3** For double cams (NK 4201), adjust the other side of the cam by flipping over the key and repeating steps 1 and 2 on the other side of the cam.
- **Step 4** Test the unit to confirm that the switches engage and disengage at the appropriate positions.

## Programming Cams using the QS Key for NK 4201

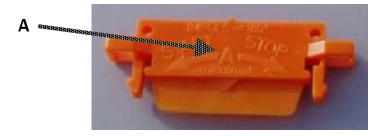
To program your unit, it is first necessary to determine if the switches are on the left or right side of the unit. To do this, hold the unit with the knob towards you and the label text upright. If the switches are on the left side of the unit, use the <u>Left Side Switch Method</u>. If the switches are on the right side of the unit, use the Right Side Switch Method.

#### **Left Side Switch Method**

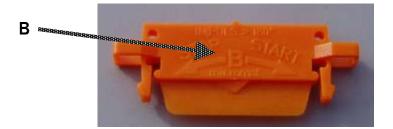
**Step 1** Insert the blade of the QS Key between the two discs of the NK 4201 cam. Snap the key firmly into place.



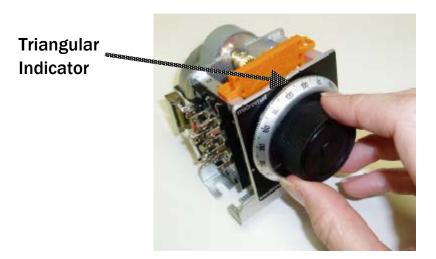
• For impulses less than 180°, have side A of the key face the knob.



• For impulses greater than 180°, have side B of the key face the knob.



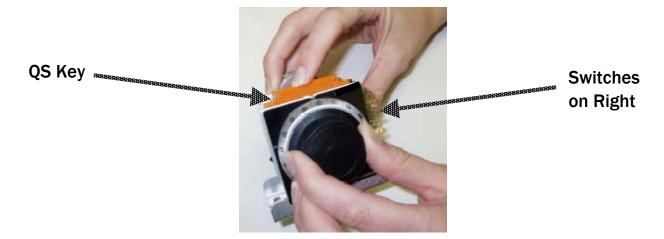
Step 2 Turn the knob in the direction of the START arrow. Make one complete turn and continue turning until the triangular indicator at the top of the face plate of the knob is even with the chosen value for the start of the impulse.



- Step 3 Turn the knob in the direction of the STOP arrow. Make one complete turn and continue turning until the triangular indicator at the top of the face plate of the knob is even with the chosen value for the end of the impulse.
- **Step 4** Test the unit to confirm that the switch engages and disengages at the selected positions.

### **Right Side Switch Method**

Step 1 Insert the blade of the QS Key between the two discs of the NK 4201 cam. Snap the key firmly into place.



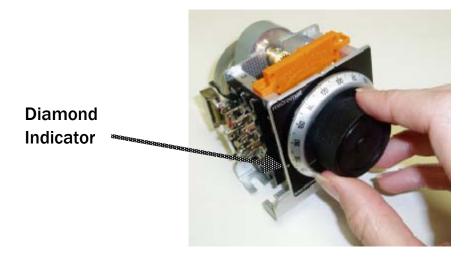
• For impulses less than 180°, have side A of the key face the knob.



• For impulses greater than 180°, have side B of the key face the knob.



Step 2 Turn the knob in the direction of the START arrow. Make one complete turn and continue turning until the diamond-shaped indicator on the left side of the face plate of the knob is even with the chosen value for the start of the impulse.



- Step 3 Turn the knob in the direction of the STOP arrow. Make one complete turn and continue turning until the diamond-shaped indicator on the left side of the face plate of the knob is even with the chosen value for the end of the impulse.
- Step 4 Test the unit to confirm that the switch engages and disengages at the selected positions.