

Installation Instructions

873M Programming Cable

IMPORTANT: SAVE THESE INSTRUCTIONS FOR FUTURE USE.

Discrete Sensor Instructions: Adjusting Set Points

The 873M provides five modes of operation for detecting a target object in discrete mode.

- **Window Mode, N.O.:** Two set points are taught in defined sensing range creating a sensing window. Once a target object passes through the window, output triggers on.
- **Window Mode, N.C.:** Two set points are taught in the defined sensing range creating a sensing window. Output is initially ON. Once a target object passes through the window, output triggers off.
- **One set point, N.O.:** One set point is taught within a defined sensing range of the sensor with the output off. When a target passes between the sensor and the taught set point, the output triggers and turns on.
- **One set point, N.C.:** One set point is taught within a defined sensing range of the sensor while the output is on. When a target passes between the sensor and the taught set point, output triggers and turns off.
- **Object Presence Mode:** Also known as resetting to factory defaults settings. Once the sensor is taught, all set points are removed and the sensor returns to the factory default specified range depending on the catalog number. Any object within a specified sensing range (50...300 mm or 70...800mm) will be detected.

Window Mode, N.O.

1. Place the target at the desired near-set point.
2. Connect to 0V DC (-) using the white wire, or press A1 on the optional programming cable.
3. Set the target to at the desired far-set point.
4. Connect to 10...30V DC (+) using the white wire, or press A2 on the optional programming cable.

Window Mode, N.C.

1. Place the target at the desired near-set point.
2. Connect to 10...30V DC (+) using the white wire, or press A2 on the optional programming cable.
3. Set the target to the desired far-set point.
4. Connect to 0V DC (-) using the white wire, or press A1 on the optional programming cable.

One Set Point, N.O

1. Place target at the desired set point.
2. Connect to 10...30V DC (+) using the white wire, or press A2 on the optional programming cable.
3. Cover sensor head with your hand or remove all objects from the sensing field.
4. Connect to 0V DC (-) using the white wire, or press A1 on the optional programming cable.

One Set Point, N.C

1. Place target at the desired set point.
2. Connect to 0V DC (-) using the white wire, or press A1 on the optional programming cable.
3. Cover sensor head with your hand or remove all objects from the sensing field.
4. Connect to 10...30V DC (+) using the white wire, or press A2 on the optional programming cable.

Object Presence Mode (Restore Factory Defaults)

1. Cover sensor head with your hand or remove all objects from the sensing field.
2. Connect to 0V DC (-) using the white wire, or press A1 on the optional programming cable.
3. Connect to 10...30V DC (+) using the white wire, or press A2 on the optional programming cable.

Discrete Sensor LED Indicators

Operating Mode	Red LED	Yellow LED	Green LED
Teach Mode			
Target detected	One flash	Continuous flash	Off
No target detected	Flashes	Off	
Target marginal (invalid teach)			
Standard Mode			
Target present	Off	On	On
Target not present		Off	

Analog Sensor Instructions: Teaching Set Point Limits

- The analog output mode returns a 4...20 mA or 0...10V DC signal proportional to the measured value.
- The upper and lower adjustment range can be scaled to distance-fixed window.
- The sensor is taught using an easy four-step remote teach process or an optional programming cable.
- Two output functions: rising and falling ramp.

Rising Ramp: current or voltage values rise as the distance increases between the target and the sensor.

Follow the steps below in the order they appear.

1. Place the target at the lower (near) set point limit.
2. Connect to 0V DC [-] using the white wire, or press A1 on the optional programming cable.
3. Place the target at the upper (far) set point limit.
4. Connect to 10...30V DC [+] using the white wire, or press A2 on the optional programming cable.

Falling Ramp: current or voltage values fall as the distance increases between the target and the sensor.

Follow the steps below in the order they appear.

1. Place the target at the lower (far) set point limit.
2. Connect to 10...30V DC [+] using the white wire, or press A2 on the optional programming cable.
3. Place the target at the upper (near) set point limit.
4. Connect to 0V DC [-] using the white wire, or press A1 on the optional programming cable.

Analog Sensor LED Indicators

Operating Mode	Red LED	Yellow LED	Green LED
Teach Mode			
Target Detected	One flash	Continuous flash	Off
No Target Detected	Flashes	Off	
Target Marginal (invalid teach)			
Standard Mode			
Target present	Off	On	On
Target not present		Off	

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10000300616 Ver 00
August 2012