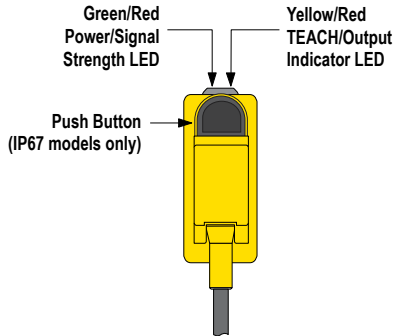




**NOTE:**

- Exposure to direct sunlight can affect the sensor’s ability to accurately compensate for changes in temperature.
- If the sensor is measuring across a temperature gradient, the compensation will be less effective.
- The temperature warmup drift upon power-up is less than 7% of the sensing distance. After 5 minutes, the apparent switchpoint will be within 0.6% of the actual position. After 25 minutes, the sensing position will be stable.

**Sensor Programming**



Two TEACH methods may be used to program the sensor:

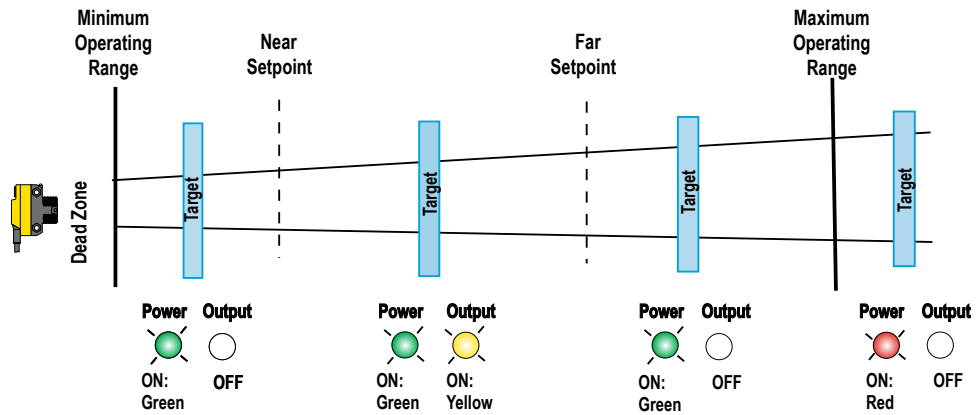
- Teach individual minimum and maximum limits, or
- Use Auto-Window feature to center a sensing window around the taught position

The sensor may be programmed either via its push button, or via a remote switch. Remote programming also may be used to disable the push button, preventing unauthorized personnel from adjusting the programming settings. To access this feature, connect the white wire of the sensor to 0V dc, with a remote programming switch between the sensor and the voltage.

**Figure 3. Sensor Features**

Programming is accomplished by following the sequence of input pulses (see programming procedures starting on page 4). The duration of each pulse (corresponding to a push button “click”), and the period between multiple pulses, are defined as “T”:

$$0.04 \text{ seconds} < T < 0.8 \text{ seconds}$$



**Figure 4. TEACH Interface**

**Status Indicators**

Power ON/OFF LED	Indicates	Output/Teach LED	Indicates
OFF	Power is OFF	OFF	Target is outside window limits (normally open operation).
ON Red	Target is weak or outside sensing range.	Yellow	Target is within window limits (normally open operation).

Power ON/OFF LED	Indicates	Output/Teach LED	Indicates
ON Green	Sensor is operating normally, good target.	ON Red (solid)	In Teach Mode, waiting for first limit.
		ON Red (flashing)	In Teach Mode, waiting for second limit.

### Teaching Minimum and Maximum Limits

#### General Notes on Programming

- The sensor will return to RUN mode if the first TEACH condition is not registered within 120 seconds.
- After the first limit is taught, the sensor will remain in PROGRAM mode until the TEACH sequence is finished.
- To exit PROGRAM mode without saving any changes, press and hold the programming push button > 2 seconds (before teaching the second limit). The sensor will revert to the last saved limits.

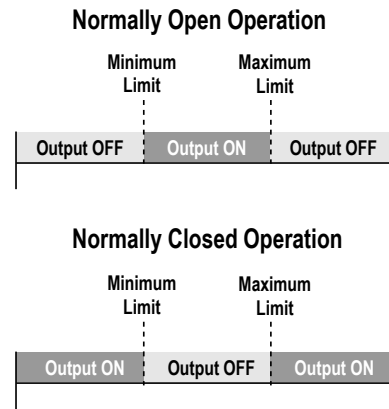







Figure 5. Teaching independent minimum and maximum limits

	Procedure		Result
	Push Button $0.04 \text{ seconds} \leq \text{"Click"} \leq 0.8 \text{ seconds}$	Remote Line $0.04 \text{ sec} < T < 0.8 \text{ sec}$	
<b>Program- ming Mode</b>	<ul style="list-style-type: none"> <li>• Press and hold push button</li> </ul> 	<ul style="list-style-type: none"> <li>• No action required; sensor is ready for 1st limit teach</li> </ul>	<b>Output LED:</b> ON Red <b>Power LED:</b> ON Green (good signal) or ON Red (no signal)
<b>Teach First Limit</b>	<ul style="list-style-type: none"> <li>• Position the target for the first limit</li> </ul>	<ul style="list-style-type: none"> <li>• Position the target for the first limit</li> </ul>	<b>Power LED:</b> Must be ON Green
	<ul style="list-style-type: none"> <li>• "Click" the push button</li> </ul> 	<ul style="list-style-type: none"> <li>• Single-pulse the remote line</li> </ul> 	<b>Teach Accepted</b> <b>Output LED:</b> Flashing Red <b>Teach Unacceptable</b> <b>Output LED:</b> ON Red
<b>Teach Sec- ond Limit</b>	<ul style="list-style-type: none"> <li>• Position the target for the second limit</li> </ul>	<ul style="list-style-type: none"> <li>• Position the target for the second limit</li> </ul>	<b>Power LED:</b> Must be ON Green
	<ul style="list-style-type: none"> <li>• "Click" the push button</li> </ul> 	<ul style="list-style-type: none"> <li>• Single-pulse the remote line</li> </ul> 	<b>Teach Accepted</b> <b>Output LED:</b> Yellow or OFF <b>Teach Unacceptable</b> <b>Output LED:</b> Flashing Red