

Figure 1. Features; wiring chamber shown with sensor cover removed

Overview

Most adjustments are made to the sensor via switches accessible under the sensor's gasketed cover. For **Q85VR3..** models, the light/dark operate selection is made via the hookup. For other models, the selection is made via a switch (see Figure 1).

Light operate (L.O.): the sensor's outputs are energized when the sensor sees its own modulated light source (after any ON-delay). **Dark operate (D.O.):** the outputs are energized when the sensor does not see its modulated light source (after any ON-delay).

Sensor sensitivity is set at the single-turn Sensitivity Adjustment potentiometer.


Timing Logic Selection (T9 Models)

The output timing logic function (on sensor models with "T9" model number suffix) is selected at the Timing Logic selection switches, according to the table below. The output timing logic delays are set at the single-turn Time Adjustment potentiometer. When the timing function involves more than one time (as in ON- and OFF-delay, ON-delayed one-shot, and ON-delayed limit timer functions), the potentiometer sets both times to the same value, between 0.1 and 5 seconds.

Logic Function	Switch		
	SW1	SW2	SW3
Both ON- and OFF-delays	0	0	0
ON-delay only	0	0	1
OFF-delay only	0	1	0
No delay	0	1	1
ON-delayed one-shot	1	0	0
ON-delayed limit timer	1	0	1
One-shot	1	1	0
Limit timer	1	1	1

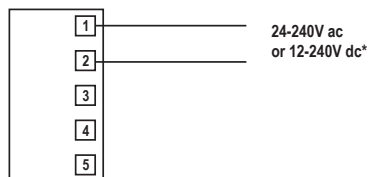
Q85 Sensors

Q85VR3 Model Specifications

Supply Voltage and Current	24 to 240V ac, 50/60 Hz or 12 to 240V dc (2 watts maximum)
Supply Protection Circuitry	Protected against transient voltages. DC hookup is without regard to polarity.
Output Configuration	Q85VR3.. models - SPDT e/m relay, ON/OFF output Q85VR3..-T9 models - SPDT e/m relay, selectable timer
Output Rating	Maximum switching power (resistive load): 90W, 750 VA Maximum switching voltage (resistive load): 250V ac or 30V dc Maximum switching current (resistive load): 3A Minimum voltage and current: 5V dc, 10 mA Mechanical life: 50,000,000 operations Electrical life at full resistive load: 100,000 operations
Output Protection Circuitry	Protected against false pulse on power up.
Output Response Time	Closure time (no time logic in use): 20 milliseconds max. Release time (no time logic in use): 20 milliseconds max. Maximum switching speed: 25 operations per second
Repeatability	All sensing modes (no time logic in use): 1 millisecond
Adjustments	Single-turn Sensitivity control potentiometer, accessible beneath the ABS wiring chamber cover. Timing logic (for "T9" models) is configured via DIP switch. Pulse length and delay are set by a single-turn potentiometer (under the wiring chamber cover). The adjustable time range for both functions is 0.1 to 5 seconds; both functions are automatically set to the same value.
Indicators	Exclusive Alignment Indicating Device system (AID™) lights a red LED indicator whenever the sensor sees its own modulated light, and pulses at a rate proportional to the strength of the light signal. Yellow indicator lights whenever the sensor's output is energized.
Construction	Yellow ABS housing, acrylic lenses, and steel-plated hardware. Maximum wire size (for connection to wiring terminals) is #14 AWG.
Environmental Rating	Meets NEMA standards 1, 2, 3, 3S, 4, 4X, 6, 6P, 12, and 13; IEC IP67
Operating Conditions	Temperature: -25° to +55°C (-13° to +131°F) Max. Relative Humidity: 90% at 50°C (non-condensing)
Vibration and Mechanical Shock	Meets Mil. Std. 202F requirements. Method 201A (Vibration: frequency 10 to 55 Hz max., double-amplitude 0.06", max. acceleration 10G) Method 213B conditions H & I (Shock: 75G with unit operating; 100G for non-operation)
Application Notes	Install transient suppressor (MOV) across contacts switching inductive loads.
Certifications	

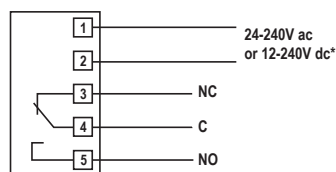
Q85VR3 Model Hookups

Q853E Emitter



*NOTE: Connection of dc power is without regard to polarity

Other Q85VR3 Models



*NOTE: Connection of dc power is without regard to polarity