

## Q85 Sensors

Compact Photoelectric Sensors with Universal Voltage and Wiring Chamber

### Features



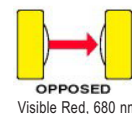
- Economical photoelectric sensors in NEMA-6P (IEC IP67) ABS housing
- Signal (AID™ System) and Output indicator LEDs
- Wiring chamber with two conduit entrances
- Available in three electrical configurations:

**Q85VR3 Models:** 24 to 240V ac or 12 to 240V dc supply voltage, 3 amp electromechanical output relay

**Q85BW13 Models:** 24 to 240V ac or 12 to 240V dc supply voltage, SPST 0.3 amp isolated solid-state output switch, light/dark operate switch

**Q85BB62 Models:** 10 to 48V dc supply voltage, bipolar solid-state outputs (one NPN sinking and one PNP sourcing), low-saturation hookup option for TTL compatibility, light/dark operate switch

- “T9” model suffix indicates selectable output timing (8 options, configured via DIP switch; see page 3)



### Opposed Mode Emitter (E) and Receiver (R) Models

| Models      | Range         | Supply Voltage               | Output Type                 | Output Timing | Excess Gain | Beam Pattern                  |
|-------------|---------------|------------------------------|-----------------------------|---------------|-------------|-------------------------------|
| Q853E       | 23 m<br>(75') | 12 – 240V dc<br>24 – 240V ac | —                           | —             |             | <p>Effective Beam: 9.6 mm</p> |
| Q85VR3R     |               |                              | SPDT E/m<br>Relay           | No            |             |                               |
| Q85VR3R-T9  |               |                              |                             | Yes           |             |                               |
| Q85BW13R    |               |                              | SPST Solid-<br>state Switch | No            |             |                               |
| Q85BW13R-T9 |               |                              |                             | Yes           |             |                               |
| Q8562E      |               | 10 – 48V dc                  | —                           | —             |             |                               |
| Q85BB62R    |               |                              | Bipolar<br>NPN/PNP          | No            |             |                               |
| Q85BB62R-T9 |               |                              |                             | Yes           |             |                               |

See page 2 for more models



#### WARNING . . . Not To Be Used for Personnel Protection

Never use these products as sensing devices for personnel protection. Doing so could lead to serious injury or death.

These sensors do NOT include the self-checking redundant circuitry necessary to allow their use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition. Consult your current Banner Safety Products catalog for safety products which meet OSHA, ANSI and IEC standards for personnel protection.



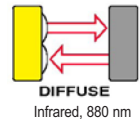
# Q85 Sensors



## Polarized Retroreflective Mode Models

| Models       | Range*                      | Supply Voltage               | Output Type             | Output Timing | Excess Gain | Beam Pattern |
|--------------|-----------------------------|------------------------------|-------------------------|---------------|-------------|--------------|
| Q85VR3LP     | 80 mm – 4.6 m<br>(3" – 15') | 12 – 240V dc<br>24 – 240V ac | SPDT E/m Relay          | No            |             |              |
| Q85VR3LP-T9  |                             |                              |                         | Yes           |             |              |
| Q85BW13LP    |                             |                              | SPST Solid-state Switch | No            |             |              |
| Q85BW13LP-T9 |                             |                              |                         | Yes           |             |              |
| Q85BB62LP    |                             | 10 – 48V dc                  | Bipolar NPN/PNP         | No            |             |              |
| Q85BB62LP-T9 |                             |                              |                         | Yes           |             |              |

\*NOTE: Retroreflective range is specified using one model BRT-3 retroreflector (3" diameter). Actual sensing range may be more or less than specified, depending upon the efficiency and reflective area of the retroreflector(s) used.



## Diffuse Mode Models

| Models       | Range        | Supply Voltage               | Output Type             | Output Timing | Excess Gain                                          | Beam Pattern |
|--------------|--------------|------------------------------|-------------------------|---------------|------------------------------------------------------|--------------|
|              |              |                              |                         |               | Performance based on 90% reflectance white test card |              |
| Short Range  |              |                              |                         |               |                                                      |              |
| Q85VR3D      | 250 mm (10") | 12 – 240V dc<br>24 – 240V ac | SPDT E/m Relay          | No            |                                                      |              |
| Q85VR3D-T9   |              |                              |                         | Yes           |                                                      |              |
| Q85BW13D     |              |                              | SPST Solid-state Switch | No            |                                                      |              |
| Q85BW13D-T9  |              |                              |                         | Yes           |                                                      |              |
| Q85BB62D     |              | 10 – 48V dc                  | Bipolar NPN/PNP         | No            |                                                      |              |
| Q85BB62D-T9  |              |                              |                         | Yes           |                                                      |              |
| Long Range   |              |                              |                         |               |                                                      |              |
| Q85VR3DL     | 1 m (40")    | 12 – 240V dc<br>24 – 240V ac | SPDT E/m Relay          | No            |                                                      |              |
| Q85VR3DL-T9  |              |                              |                         | Yes           |                                                      |              |
| Q85BW13DL    |              |                              | SPST Solid-state Switch | No            |                                                      |              |
| Q85BW13DL-T9 |              |                              |                         | Yes           |                                                      |              |
| Q85BB62DL    |              | 10 – 48V dc                  | Bipolar NPN/PNP         | No            |                                                      |              |
| Q85BB62DL-T9 |              |                              |                         | Yes           |                                                      |              |