

the photoelectric specialist

MINI-BEAM[®] SM312W and SM312DBZ

Self-contained DC-operated Wide-angle Diffuse Mode Proximity Sensors



- Compact, modulated, self-contained infrared wide-angle diffuse proximity mode sensors for 10-30V dc operation
- SM312W wide angle (divergent) diffuse mode sensor, 125 mm (5 in) range; Ideal for close-range sensing of transparent or translucent objects, or objects with small profile
- SM312DBZ: wide-angle diffuse mode sensor, 300 mm (12 in) range
- Both models have clear acrylic opto-element covers to meet FDA food-processing application requirements
- Switch-selectable for light operate or dark operate
- Includes Banner's exclusive AID™ alignment system*
- · Highly-repeatable 1 millisecond response
- Both sourcing and sinking outputs (150 mA max. each); continuous overload and short-circuit protected
- Rugged, epoxy-encapsulated construction: meets NEMA standards 1, 2, 3, 3S, 4, 4X, 6, 12 and 13; IEC IP67



*US patent number 4356393 Infrared, 880 nm MINI-BEAM Diffuse Mode Models Output Supply **Excess Gain** Beam Pattern Models Cable* Voltage Type Range Performance based on 90% reflectance white test card SM312DBZ SM312DB 15 mm 0.6 in C E S S 10 mm 0.4 in 100 5 mm 0.2 in SM312DBZ 300 mm 2 m (6.5') Bipolar 0 10-30V dc 5 mm 0.2 in NPN/PNP SM312DBZQD 4-Pin Euro QD (12") G 10 mm 0.4 in A 15 mm 0.6 in N NIIII 75 mm 3.0 in 150 mm 225 mm 300 mm 375 mm 6.0 in 9.0 in 12.0 in 15.0 in 1 mm .04 in 10 mm .40 in 100 mm 4.0 in 1000 m 40 in DISTANCE DISTANCE SM312W SM312V 22.5 mm 0.9 in Diffuse Mo C E S S 100 15.0 mm 0.6 in 7.5 mm 0.3 in SM312W 130 mm 2 m (6.5') **Bipolar** 0 ٥ 10-30V dc SM312WQD 4-Pin Euro QD NPN/PNP 7.5 mm 03 in (5") G A I N **IN**III 15.0 mm 0.6 in 22.5 mm 0.9 in 25 mm 1.0 in . 100 mm 4 in 1000 m 40 in 50 mm 75 mm 2.0 in 3.0 in 100 mm 4.0 in 125 mm 5.0 in 1 mm 04 in .4 in DISTANCE DISTANCE

*NOTES:

i) 9 m (30') cables are available by adding suffix "W/30" to the model number of any cabled sensor (e.g., SM312DBZ W/30).

ii) A 150 mm (6") long pigtail cable with attached QD connector is available by adding suffix "QDP" to the model number of any MINI-BEAM sensor (e.g., SM312DBZQDP). See page 5 for more information.

- iii) A model with a QD connector requires an accessory mating cable. See page 6 for more information.
- iv) May be ordered with 0.3 millisecond on/off response by adding suffix "MHS" to the model numbers (e.g., SM312DBZMHS). This modification reduces sensing range (and excess gain).