



\*U.S. Patent 4965548

## OMNI-BEAM Features

- Sensor heads feature Banner's D.A.T.A.™ (Display And Trouble Alert) indicator system\* which warns of an impending sensing problem before a failure occurs
- 10-element LED array displays sensing contrast and received signal strength and warns of a sensing problem due to any of the following causes:
  - Severe condensation or moisture
  - High temperature
  - Low supply voltage
  - Output overload (dc operation)
  - Too much sensing gain
  - Not enough sensing gain
  - Low optical contrast
- Separate indicators for target sensed and output energized
- Sensor heads are field-programmable for the following response parameters:
  - Sensing hysteresis
  - Signal strength indicator scale factor
  - Light or dark operate of the load output
  - Normally open or closed alarm output
- Choose power blocks for high-voltage ac or low-voltage (10 to 30V) dc operation
- Sensor head and power block plug (and bolt) together quickly and easily
- Optional plug-in output timing modules may be added at any time

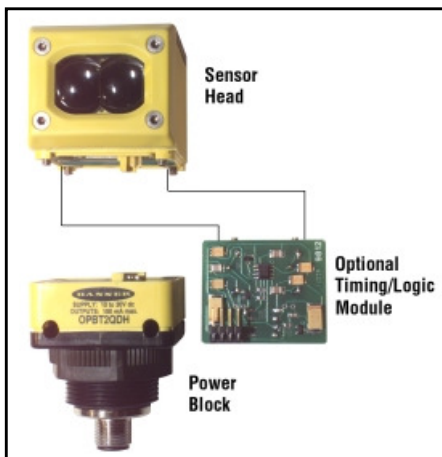


Figure 1. OMNI-BEAM sensor head and power block bolt and plug together quickly and easily; an optional timing logic module may be added at any time.

## OMNI-BEAM Overview

### Modular Design

OMNI-BEAM is a modular self-contained sensor. It is made up of a sensor head and a power block; an optional plug-in timing logic module may be added easily. The three modular components, sold separately, simply plug and bolt together — without interwiring — to create a complete self-contained photoelectric sensor tailored to a particular application's exact sensing requirements.

The sensor lenses and modular components are all field-replaceable. OMNI-BEAM's modular design makes change-out of any component quick and easy.



### **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.

# OMNI-BEAM Sensor Heads



Figure 3. OMNI-BEAM power blocks provide the input and output circuitry for OMNI-BEAM sensor heads. Select models for either ac or dc power.

### Power Blocks

The power block determines the sensor operating voltage and also the sensor output switch configuration. Models are available with a built-in 2 m (6.5') or 9 m (30') cable, or with either Mini-style or Euro-style quick-disconnect ("QD") plug-in cable fittings. Emitter power blocks have no output circuitry.

## OMNI-BEAM Power Blocks

Models	Cable	Supply Voltage	Output Type
<b>DC Voltage (see data sheet p/n 03532 packed with the power block)</b>			
OPBT2 OPBT2QD OPBT2QDH	2 m (6.5') 4-Pin Mini QD 4-Pin Euro QD	10-30V dc	Bi-Modal™ NPN/PNP Two outputs: Load and Alarm
OPBTE OPBTEQD OPBTEQDH	2 m (6.5') 4-Pin Mini QD 4-Pin Euro QD		No output: for powering emitter only sensor heads
<b>AC Voltage (see data sheet p/n 03531 packed with the power block)</b>			
OPBA2 OPBA2QD	2 m (6.5') 5-Pin Mini QD	105-130V ac	SPST solid-state ac relay Two outputs: Load and Alarm
OPBB2 OPBB2QD	2 m (6.5') 5-Pin Mini QD	210-250V ac	
OPBAE OPBAEQD	2 m (6.5') 5-Pin Mini QD	105-130V ac	No output: for powering emitter only sensor heads
OPBBE OPBBEQD	2 m (6.5') 5-Pin Mini QD	210-250V ac	

NOTE: 9 m (30') cables are available by adding the suffix "w/30" to the model number of any cabled power block (for example, OPBT2 w/30).

### Optional Timing Logic Modules

Timing logic may be added at any time, using one of three timing delay and pulse logic modules. Installation is simple and quick; the logic modules simply slide into the sensor head (see Figure 4). Program them for timing functions and ranges via four DIP switches; each module includes easily accessible 15-turn clutched potentiometers for accurate timing adjustments.

## OMNI-BEAM Timing Logic Modules (see data sheet p/n 03533 packed with the module)

Models	Type	Logic Function	Timing Ranges
OLM5	Delay Timer Logic Module	ON-DELAY or OFF-DELAY or ON/OFF DELAY	<b>ON-Delay:</b> 0.01 to 1 sec, 0.15 to 15 sec, or none <b>OFF-Delay:</b> 0.01 to 1 sec, 0.15 to 15 sec, or none
OLM8	Pulse Timer Logic Module	ONE-SHOT pulse timer or DELAYED ONE-SHOT logic timer	<b>Delay:</b> 0.01 to 1 sec, 0.15 to 15 sec, or none <b>Pulse:</b> 0.01 to 1 sec, 0.15 to 15 sec
OLM8M1	Pulse Timer Logic Module	ONE-SHOT pulse timer or DELAYED ONE-SHOT logic timer	<b>Delay:</b> 0.002 to 0.1 sec, 0.03 to 1.5 sec, or none <b>Pulse:</b> 0.002 to 0.1 sec, 0.03 to 1.5 sec



Figure 4. OMNI-BEAM optional timing logic modules