

# AG4 Safety Laser Scanner



## A single device for stationary and mobile safeguarding applications

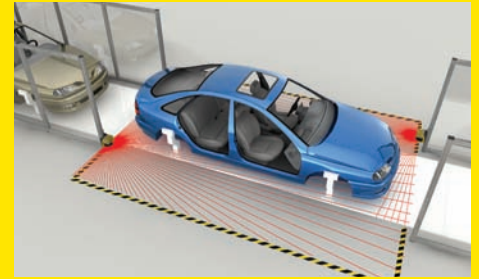
The Banner AG4 is a two-dimensional optical measuring safety laser scanner that emits pulses of infrared light to locate and measure the position of objects in its field of view. A single unit that works on the principle of diffuse reflection (i.e., reflected light), the AG4 is an excellent choice for irregularly shaped safeguarding in applications where a standard two- or three-piece safety light screen will not work.

- ▶ Two-dimensional laser scanner effectively protects personnel, as well as stationary and mobile systems within a user designated area.
- ▶ Persons or objects entering the protection field will be detected and a protective (safety) stop signal will be generated.
- ▶ The highly flexible protective and warning fields can be set to match the shape of the work area.
- ▶ Compact design, simple installation and easy-to-use software provide efficient integration into work zones.
- ▶ Two solid-state OSSD safety outputs (250 mA) and two solid-state auxiliary outputs (100 mA).
- ▶ Low power consumption (420 mA @ 24V dc) and a very forgiving supply range (24V dc +20%/-30%) require fewer or smaller power supplies, reducing power consumption.
- ▶ Five LED diagnostic display presents system status and diagnostics of devices without connecting to a PC.
- ▶ Rugged, die-cast aluminum housing withstands the rigor of factory floors.
- ▶ System meets all requirements for Type 3 per IEC 61496-1/-2 Category 3 PLd per EN ISO 13849-1, and Safety Integrity Level (SIL) 2 per IEC 61508.

## Dependable and Flexible Safeguarding



Two-Zone Monitoring



Access Monitoring



Collision Avoidance

## Fully Configurable Safeguarding

- ▶ Eight individually defined protective and warning field pairs using a PC
- ▶ Protection field resolution is from 30 to 150 mm with ranges up to 4 m
- ▶ Warning field up to 15 m with a resolution of 150 mm
- ▶ 0.36° lateral resolution and detects objects in a zone up to 190°
- ▶ Configurable response time from 80 to 640 milliseconds
- ▶ RS-232 and RS-422 PC interface connection
- ▶ 24V dc supply voltage

[www.bannerengineering.com](http://www.bannerengineering.com)

**1.888.373.6767**

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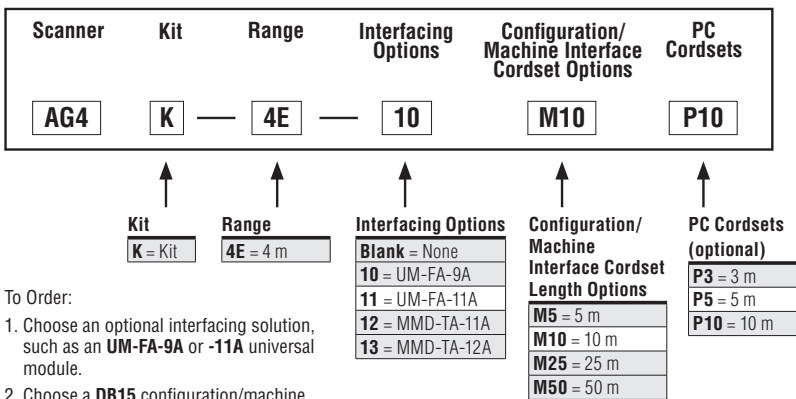
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# AG4-4E Safety Laser Scanner, 24V dc

| Model  | Range                     |                          | Safety Output | Aux. Output | Scanning Angle | Response Time              | Data Sheet  |
|--------|---------------------------|--------------------------|---------------|-------------|----------------|----------------------------|---|
|        | Protective Fields         | Warning Fields           |               |             |                |                            |   |
| AG4-4E | 30 mm Resolution = 1.6 m  | 150 mm Resolution = 15 m | 2 PNP<br>OSSD | 2 PNP       | 190°           | 80 ms adjustable to 640 ms | AG4 Soft Manual<br>144923<br>Product Manual<br>144924 |
|        | 40 mm Resolution = 2.20 m |                          |               |             |                |                            |   |
|        | 50 mm Resolution = 2.80 m |                          |               |             |                |                            |   |
|        | 70 mm Resolution = 4.0 m  |                          |               |             |                |                            |   |
|        | 150 mm Resolution = 4.0 m |                          |               |             |                |                            |   |

## Kit Model Key



To Order:

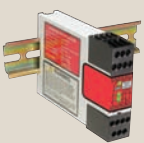


1. Choose an optional interfacing solution, such as an **UM-FA-9A** or **-11A** universal module.
2. Choose a **DB15** configuration/machine interface cordset, such as **AG4-CPD15...**
3. Choose an optional PC communication cordset, such as **AG4-PCD9...**

See AG4-4E manuals (p/n 144923 & 144924) or [www.bannerengineering.com](http://www.bannerengineering.com) for complete information and a current listing of accessories.

## Dimensions



## Interfacing Products

|                                   | Models  | Description  | Data Sheet |
|-----------------------------------|---|--|------------|
| Interface Modules and Controllers | <br>UM-FA-9A (3 NO)<br>UM-FA-11A (2 NO/1 NC) | <ul style="list-style-type: none"> <li>• Universal modules monitor both contact-based and PNP solid-state input devices.</li> <li>• Convenient plug-in terminal blocks on a 22.5 mm DIN-rail mountable housing.</li> </ul>   | 141249     |
|                                   | <br>SC22-3-S...<br>SC22-3E-S...              | <ul style="list-style-type: none"> <li>• One controller provides configurable monitoring of multiple safety devices.</li> <li>• 22 input terminals can monitor both contact-based and PNP solid-state input devices.</li> <li>• 3 pairs of independent solid-state safety outputs can be used with selectable one- or two-channel external device monitoring.</li> <li>• Ten configurable non-safety status outputs track inputs, outputs, lockout, I/O status and other functions</li> <li>• SC22-3 modules use 24V dc.</li> <li>• 10/100 Base TX Ethernet communication option using EtherNet/IP and Modbus TCP protocols (SC22-3E models).</li> </ul> | 133487     |
| Muting Modules                    | <br>MMD-TA-12B<br>MMD-TA-11B                 | <ul style="list-style-type: none"> <li>• Muting Module temporarily inhibits a safety light screen so materials can safely pass through the screen without stopping the machinery.</li> <li>• Module uses redundant microcontroller-based logic.</li> </ul>   | 116390     |

NC = Normally closed, NO = Normally open

## Accessories

### Cordsets



DB15 Configuration/Machine Interface

| Length | Model Number |
|--------|--------------|
| 5 m    | AG4-CPD15-5  |
| 10 m   | AG4-CPD15-10 |
| 25 m   | AG4-CPD15-25 |
| 50 m   | AG4-CPD15-50 |



DB9 PC Communication

| Length | Model Number |
|--------|--------------|
| 3 m    | AG4-PCD9-3   |
| 5 m    | AG4-PCD9-5   |
| 10 m   | AG4-PCD9-10  |

### Bracket



Swivel

AG4-MBK1

Banner Engineering Corp.

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