Black Max Infrared Light Curtains use unique sensing circuitry and diversely redundant microprocessor logic electronics to meet or exceed all OSHA and ANSI construction requirements for control reliability and to provide unmatched operational performance. The design of the Black Max also solves many nuisance and safety problems not addressed directly by ANSI and OSHA that are common to many infrared light curtains on the market.

Crosstalk Detection: Each Black Max light curtain can differentiate “crosstalk” light pulses from sources other than its transmitter, including other light curtain transmitters located on nearby machines. Most infrared light curtains can’t do this, and can be unsafely “fooled” into not providing a stop signal when their own transmitter light pulses are blocked if crosstalk can occur. Black Max receiver units provide a stop signal and light their “Bus Status” indicator light if crosstalk interference occurs.

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A Superior Design

Black Max Infrared Light Curtains

INK SYSTEMS designs, develops and manufactures electronic controls, monitors and safety devices for the metal stamping and fabrication industry. We are an engineering company committed to providing practical solutions to our customers’ needs for automation, productivity, quality, safety and shop floor information storage and retrieval. Our product line is flexible enough to provide a specific control or monitoring function or to provide integrated systems for your presses. LINK supplies products and systems to both the retrofit and OEM markets. We also provide engineering consultation, installation and repair services for our systems. Our control products provide the latest reliable technology to increase safety and productivity and reduce set-up time. Our light curtain safety devices protect against hazards while allowing accessibility and visibility for the operator. Our monitoring systems can help prevent machine and tooling damage and reduce production of scrap parts.
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Black Max Infrared Light Curtains

By Bird Systems

FLOOR MOUNTS MIRRORS ACCESSORIES

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Safeguarding Considerations

Remote Extensions

Black Max remote extensions are housed in separate enclosures from the main Black Max units. They can be used to create "L" shaped or other sensing field shapes when combined with main transmitter and receiver units. Remote segments are extremely helpful when the safety distance requirements place the primary sensing field out so as to allow a person to stand between the light and the hazard. The remote section will detect a person standing inside the sensing field.

Remote segments are on 3" beam centers and are not to be used as your primary sensing field.

APPLICATIONS

Perimeter Guarding of Robot

Straight Side Press with Remote Segments

Never use a Black Max on a machine controlled by a PLC without first consulting Link Systems to determine whether the Black Max should be used and how it should be connected to the control.

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Remote Extensions

Link Systems’ Black Max remote segment models are housed in separate enclosures from the main Black Max units. They can be used to create a “L” shaped or other sensing field shapes when combined with main transmitter and receiver units. Remote segments are extremely helpful when the safety distance requirements place the primary sensing field out so as to allow a person to stand between the light and the hazard. The remote section will detect that person standing inside the primary sensing field and how it should be connected to the control. Never use a Black Max on a machine controlled by a PLC without first consulting Link Systems to request in evaluating your machine tool as to compliance with control requirements. Link Systems can provide control systems for past revolution mechanical power presses and mechanical press brakes, and interface systems for many hydraulic presses and press brakes that meet OSHA and ANSI requirements for the use of the Link Lite Black Max as a safeguarding device.

APPLICATIIONS

PERIMER GUARDING OF ROBOT

PERIMETER GUARDING OF ROBOT

(straight side press with remote segments)

STRAIGHT SIDE PRESS WITH REMOTE SEGMENTS

NEVER USE A BLACK MAX ON A MACHINE CONTROLLED BY A PLC WITHOUT FIRST CONSULTING LINK SYSTEMS TO REQUEST IN EVALUATING YOUR MACHINE TOOL AS TO COMPLIANCE WITH CONTROL REQUIREMENTS. LINK SYSTEMS CAN PROVIDE CONTROL SYSTEMS FOR PAST REVOLUTION MECHANICAL POWER PRESSES AND MECHANICAL PRESS BRAKES, AND INTERFACE SYSTEMS FOR MANY HYDRAULIC PRESSES AND PRESS BRAKES THAT MEET OSHA AND ANSI REQUIREMENTS FOR THE USE OF THE LINK LITE BLACK MAX AS A SAFEGUARDING DEVICE.

APPLICATIONS

- Minimizes nuisance shutdowns due to ambient light, strobe lights and weld flashes
- Maintains work area visibility
- Easy to install and align
- Allows easy access to scrap removal and die change events
- Helps comply with OSHA regulations
- Provides flexibility by offering variable and fixed blanking as standard
- Quick response combined with small M.O.S. allows for close mounting of the light
- Single failure or fault will cause the system to send a signal to the press control to stop the machine
- Remote segments can be used to detect a person standing inside the primary sensing field

FEATURES

- Scanning range up to 100 ft.
- 2 box-optics / compact design
- Minimum object sensitivity of .95" for standard range units (50’)
- Minimum object sensitivity of 1.25" for long range units (100’)
- Response time of less than 20 milliseconds
- Automatic floating (floating) is standard
- Automatic fixed blanking is standard
- Channels automatically unblank when not blocked
- Individual channel LED’s indicate state of each channel through front lens
- Clearly labeled “Blanking Covers” provided for fixed blanking
- Diverse redundant microprocessor logic design
- Phototransistors with ambient light rejection circuitry
- Meets or exceeds OSHA and ANSI construction requirements for presence sensing devices
- Available in heights from 18” to 48” on 6” increments
- Optional extension models for horizontal or supplemental guarding available
- Perimeter guarding applications available from 36” to 72” in 12” increments
- Light source of infrared emitting diodes
- Heavy duty extruded aluminum housing
- 3/4″ beam spacing
- Self-checking circuitry
- Selectable power levels

BENEFITS

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Safeguarding Considerations

A light curtain performs the simple function of a light activated switch that can be used to provide a signal to whether an object or person is in the sensing field. It cannot, by itself, provide personnel safety enhancement. See OSHA, ANSI and Link Lite Black Max manual for application, installation, adjustment and use requirements. No light curtain will protect personnel from abnormal hazardous machine action(s) caused by failure, wear or misadjustment of electrical, mechanical, hydraulic or pneumatic components of the machine upon which it is installed. Proper preventive maintenance is necessary to enhance the protection that light curtains provide.

Remote Extensions

Black Max remote segments are housed in separate enclosures from the main Black Max units. They can be used to create “L” shaped or other sensing field shapes when combined with main transmitter and receiver units. Remote segments are extremely helpful when the safety distance requirements place the primary sensing field out so as to allow a person to stand between the light and the hazard. The remote section will detect that person standing inside the sensing field.

The remote sensors are on 3” beam centers and are not to be used as your primary sensing field.

FEATURES

- Scanning range up to 100 ft.
- 2 box-optics / compact design
- Minimum object sensitivity of .95” for standard range units (50’)
- Minimum object sensitivity of 1.25” for long range units (100’)
- Response time of less than 20 milliseconds
- Response time (floating) is standard
- Automatic fixed blanking is standard
- Channels automatically unblank when not blocked
- Individual channel red LED’s indicate state of each channel through front lens
- Clearly labeled “Blanking Covers” provided for fixed blanking
- Diverse redundant microprocessor logic design
- Photo-termination with ambient light rejection circuitry
- Meets or exceeds OSHA and ANSI construction requirements for presence sensing devices
- Available in heights from 18” to 48” on 6” increments
- Optional extension models for horizontal or supplemental guarding available
- Perimeter guarding applications available from 36” to 72” in 12” increments
- Vari-blank and fixed blanking as standard
- Response time of less than 20 milliseconds
- Minimum object sensitivity of 1.25”
- Minimum object sensitivity of .95”
- 2 box system / compact design
- Scanning range up to 100 ft.
- Perimeter guarding of robot
- Straight side press with remote segment applications
- Remote segments can be used to create a safety zone around the system to send a signal to the preset control to stop the machine.
- Remote segments can be used to detect a person standing inside the primary sensing field.
- Motion detect required to provide personnel safety enhancement.
- High lead-in and mechanical design to reduce multiple failures. Vari-blank and fixed blanking as standard.
- Perimeter guarding applications available from 36” to 72” in 12” increments
- Easy to install and align
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- Perimeter guarding applications available from 36” to 72” in 12” increments
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- Vari-blank (floating) is standard
- Provides flexibility by offering variable and fixed blanking as standard
- Quick response time combined with small M.O.S. allows for close mounting of the light
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- Remote segments can be used to detect a person standing inside the primary sensing field.

APPLICATIONS

- Press brake using VAR-BANK
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BENEFITS

- Minimizes nuisance shutdowns due to ambient light, drobble lights and weld flashes
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SPECIFICATIONS

- Link Systems’ engineers and representatives will provide assistance upon request in evaluating your machine tool as to compliance with control requirements. Link Systems can provide control systems for part revolution mechanical power presses and mechanical press brakes, and interface systems for many hydraulic presses and press brakes that meet OSHA and ANSI requirements for the use of the Link Lite Black Max as a safeguarding device.

- Perimeter applications available in sizes of 36” to 72” in 12” increments on 1-1/2” beam centers in scan distances of 100 feet.
- Remote extensions for horizontal guarding are available in sizes from 6” to 51” in 3” increments on 3” beam centers in scan distances of 50 or 100 feet.

Please contact your local Link representative or contact Link directly for your remote segment applications.
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