Mark•Eye™ SETUP INSTRUCTIONS

Optimized for the Detection of Registration Marks on Translucent or Transparent Web Materials

**Web color/background is Lighter than the mark**  (See Figure A)

Position the detection zone of the sensor between the registration marks and press the “LIGHTER THAN MARK” button to initiate the AUTOSET™ routine.

The green LED AUTOSET™ indicator will rapidly blink until the proper setting is achieved. The red LED output indicator and output transistors will turn “OFF”. When the mark passes through the detection zone, the red LED output indicator and output transistors will turn “ON” for the duration of time that the mark is in view.

**NOTE:** Detection of a Dark colored mark on a light colored background is impossible if the light source cannot penetrate through the light colored background. If this condition occurs during a light colored background AUTOSET™ routine, both the red and green LEDs will flash twice.

**Web color/background is Darker than the mark**  (See Figure B)

Position the detection zone of the sensor between the registration marks and press the “DARKER THAN MARK” button to initiate the AUTOSET™ routine.

The green LED AUTOSET™ indicator will rapidly blink until the proper setting is achieved. The red LED output indicator and output transistors will turn “OFF”. When the mark passes through the detection zone, the red LED output indicator and output transistors will turn “ON” for the duration of time that the mark is in view.

**Inverting the Output**

Depress both buttons for 3 seconds.

**Pulse Stretcher**

The Markeye sensor can be programmed to provide a 15-millisecond pulse stretcher timing function. To determine if the pulse stretcher is enabled, during initial power-up the AUTOSET™ LED will rapidly flash twice, verifying that the pulse stretcher is enabled.

**Enabling or Disabling the Pulse Stretcher**

**To toggle the status of the pulse stretcher to the opposite state:**

1. Remove power from the sensor.
2. Depress and hold both buttons simultaneously and apply power.
3. After applying power, note that the AUTOSET™ LED will flash; release both buttons.
4. Depress the “LIGHTER THAN MARK” to toggle the pulse stretcher to the opposite state.
5. Remove power from the sensor.
6. Whenever power is applied, the pulse stretcher will be enabled and the AUTOSET™ LED will flash twice. The pulse stretcher can be disabled when these steps are repeated.

**NOTE:** The factory’s default setting for the pulse stretcher is the disabled state.
**Sensor Selection Guide**

- **Model**
  - MEWL: White LED, 5-conductor cable
  - MEWLC: White LED, 5-pin micro connector on a 6" pigtail

- **Cable Selection Guide (5 Wire)**
  - Micro Cable (M12) Description
    - GSEC-2MU: 6.5 ft. (2.0m) Low Cost, Unshielded
    - GSEC-5MU: 16 ft. (5.0m) Low Cost, Unshielded
    - GSEC-6: 6 ft. (1.8m) Shielded Cable
    - GSEC-15: 15 ft. (4.6m) Shielded Cable
    - GPSEC-15: 15 ft. (4.6m) Shielded Cable

**Specifications**

- **Supply Voltage**
  - 10 to 30 VDC
  - Polarity Protected

- **Current Requirements**
  - 45 milliamps (exclusive of load)

- **Output Transistors**
  - (1) NPN and (1) PNP output transistors
  - Sensor outputs can sink or source up to 150 milliamps (current limit)
  - All outputs are continuously short-circuit protected

- **Remote AUTOSET™ Input**
  - Opto isolated momentary sinking input (10 milliamps)

- **Response Time**
  - Light state response = 100 microseconds
  - Dark state response = 100 microseconds

- **LED Light Source**
  - Pulse modulated high intensity white LED

- **Pushbutton Control**
  - One pushbutton set-up
  - Automatic set-up routines based on web opacity
  - Simultaneously pushing both buttons inverts the output
  - On power-up, simultaneously pushing both buttons enables the program mode, allowing the pulse stretcher to be enabled or disabled

- **Hysteresis**
  - Minimal hysteresis promotes detection of low contrast registration marks

- **Light Immunity**
  - Responds to sensor’s pulse modulated light source … immune to most ambient light

- **Indicators**
  - Green AUTOSET™ LED flashes when AUTOSET™ routine is activated and stays illuminated when AUTOSET™ is completed
  - Red Output LED illuminates when sensor's output transistors are “ON”
  - On power-up, the AUTOSET™ LED flashes twice when the pulse stretcher is enabled

- **Ambient Temperature**
  - -40°C to 70°C (-40°F to 158°F)

- **Rugged Construction**
  - Chemical resistance to harsh cleaners, such as detergents, alcohols, and ketones
  - Waterproof ratings: NEMA 4 and IP66
  - Conforms to heavy industry grade CE and UL requirements

- **Selectable Pulse Stretcher**
  - Provides a minimum of 10 milliseconds output duration

**DIMENSIONS**

![Mark·Eye™ Diagram](image)

**Check·Line® – Precision Quality Control Instruments**

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