

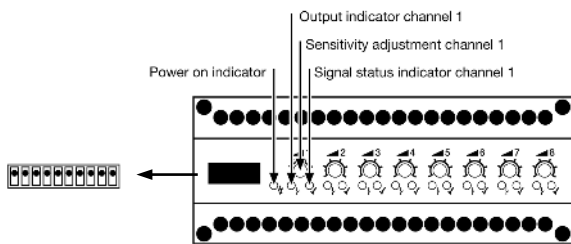
Product Data

| Electrical Data | |
|--------------------|---|
| Supply voltage | 24 V dc, 24 V ac, 115 V ac or 230 V ac |
| Voltage tolerance | +/- 15% |
| Power consumption | Max. 6,5 VA |
| Output: relay | 1 open / 1 closed, 250 V ac / 3 A, 120 V ac / 5 A |
| Output: transistor | 40 mA / 30 V dc |

| Environmental Data | |
|------------------------|---------------|
| Temperature, operation | -10 to +50 °C |
| Sealing class | IP 30 |
| Approvals | CE, UL, SPS |

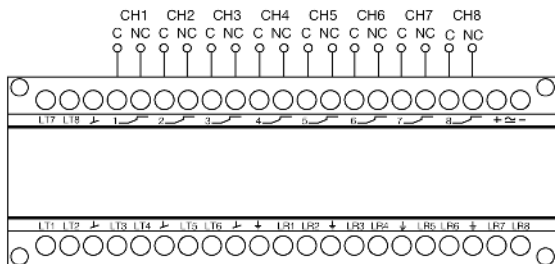
| Remote Sensor Series | MPA 81 A | | | | MPA 81 C | |
|----------------------|---------------|------|------|-----|----------|------|
| | 100 | 110 | 120 | 100 | 110 | 120 |
| | Sensing Range | | | | | |
| Long range | 8 m | 18 m | 35 m | 4 m | 9 m | 18 m |
| Short range | 4 m | 9 m | 18 m | 2 m | 5 m | 9 m |

Illustration

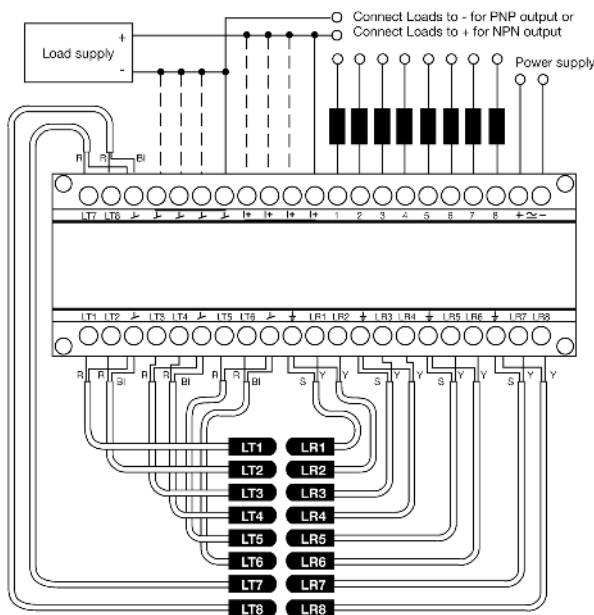


Connection

Wiring Diagram



MPA 81 A/C 50X
8 individual relay outputs



MPA 81 A/C 60X
8 individual transistor outputs

| Wire Code | |
|-----------|--------|
| R | Red |
| BI | Black |
| Y | Yellow |
| S | Shield |

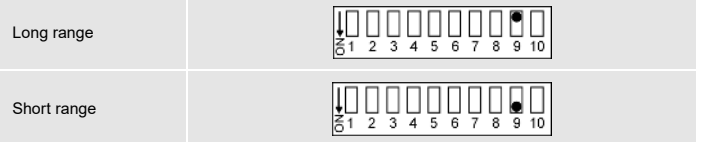
Connection Steps

- 1 Check the power supply and output of the amplifier type.
- 2 Make sure power is off. Connect all wires according to wiring diagram.
- 3 Turn power on after checking wiring is correct.
- 4 When the amplifier is operating, the green LED (power-on) is on.

Adjustments

Long/Short Range Selection

Long range mode Enables the system to operate at 100% (maximum range). Short range mode Enables the system to operate at 50% of maximum range, in order to ease sensitivity adjustment at shorter ranges. Long/short range is selected for all channels.



Output Mode Selection

The output mode can be individually selected, for each channel, via the dip switches.

| | | |
|----------------|--|--|
| Light Operated | Enables the channel output to be inactive (red output LED is off) when there is an object present in the detection area. (Thru beam) | |
| Dark Operated | Enables the channel output to be active (red output LED is on) when there is an object present in the detection area. (Thru beam) | |

Sensitivity Adjustment

Maximum sensitivity can be used for most applications and is advised for applications with contaminated environments e.g. dirt, water and dust. Increase the sensitivity to maximum by turning the potentiometer to full clockwise position. Repeat the procedure for each channel.

Sensitivity adjustment may be required in applications where objects to be detected are small or translucent. Proceed with the following steps:

- 1 Adjust the sensitivity to maximum by turning the potentiometer to full clockwise position.
 - 2 Check there is no object present interrupting the beam and the sensor pair is correctly aligned and within their specified sensing range.
 - 3 Select target object with smallest dimensions and most translucent surface.
 - 4 Place target object between remote transmitter and receiver sensors. If the output status changes, adjustment is not required. If the output status has not changed proceed to step 5.
 - 5 Decrease the sensitivity by turning the potentiometer counter clockwise until the output changes.
 - 6 Remove target object. Observe the output status has changed.
 - 7 Repeat the procedure for each channel.
- If the signal level is low, the green LED (signal status) will go off. In general, it is recommended to increase the sensitivity till the LED goes on and to check the following:
- Alignment of sensors
 - Transmitter and receiver sensors are within sensing range
 - Sensor heads are not excessively contaminated

Time Delay Adjustment

The on delay enables output signal to only activate if an object in the detection area is present for the adjusted time period. (In Dark operated mode)

The off delay enables output signal to remain activated for the adjusted time period. The time delay is adjustable between 0 - 10 sec.

| | |
|-----------|--|
| On delay | Increase or decrease on delay by turning potentiometer clockwise or counter clockwise respectively. |
| Off delay | Increase or decrease off delay by turning potentiometer clockwise or counter clockwise respectively. |



Warning
 This device is not to be used for Personnel Protection in Machine Guarding Safety applications. This device does not include the self-checking redundant circuitry necessary to allow its use in personnel machine guarding stand-alone safety applications.