PA 10 A/B - USER MANUAL
Photoelectric Amplifier Series
1-channel manual photoelectric amplifier

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. 3,2 VA
Output: relay	1 open / 1 closed, 250 V ac / 3 A, 120 V ac / 5 A
Output: transistor	40 mA / 30 V dc

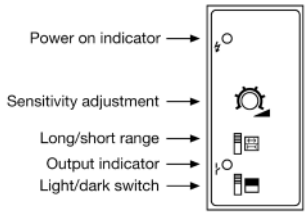
Environmental Data	
Temperature, operation	-10 to +50 ºC
Sealing class	IP 40
Approvals	CE UL CSA

Applicable Remote Sensors & Sensing Ranges

Remote Sensor Series	PA 10 A	PA 10 B		
	101	100	110	120
	Sensing Range			
Long range mode	11 m	15 m	35 m	60 m
Short range mode	3 m	5 m	12 m	20 m

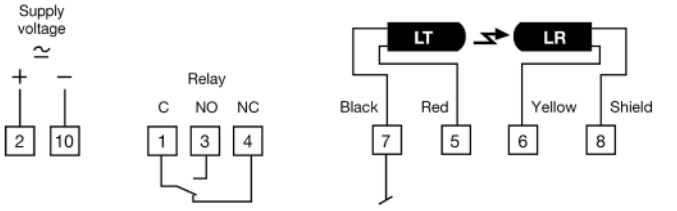
Illustration

PA 10 A/B

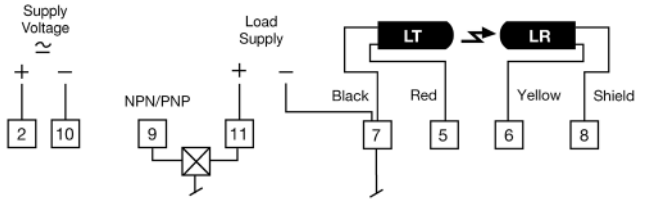


Connection

Wiring Diagrams



Relay output – PA 10 A/B 51X



Transistor output – PA 10 A/B 61X

Connection Steps

1	Check the power supply and output of the amplifier type.
2	Make sure power is off. Connect wires to the 11-pin socket according to wiring diagram.
3	Plug-in the amplifier into the 11-pin socket. Turn power on.
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 30% of maximum range, in order to ease sensitivity adjustment at shorter ranges.

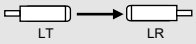
Long range	
Short range	

Output Mode Selection

The output mode can be selected via the light/dark switch. Refer to Output Logic table for reference.

Light Operated	Enables the output to be inactive when there is an object present.	
Dark Operated	Enables the output to be active when there is an object present.	

Output Logic

Detection (thru beam)	Output mode	Relay Output	Transistor Output NPN	Transistor Output PNP	Output indicator
Object present 	Dark		Closed	Open	On
	Light		Open	Closed	Off
Object absent 	Dark		Open	Closed	Off
	Light		Closed	Open	On

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.

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.

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Made in Denmark

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.

V 1.0 Part Number: 0666220620
Mach 2019 edition