Product Data

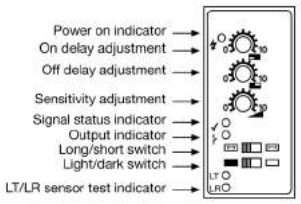
Electrical Data		
Supply voltage	24 V dc, 24 V ac, 115 V ac or 230 V ac	
Voltage tolerance	+/- 15%	
Power consumption	Max. 3.5 VA	
Output: relay	1 open / 1 closed, 250 V ac / 3 A, 120 V ac / 5 A	
Output: transistor	60 mA / 30 V dc	

Environmental Data		
Temperature, operation	-10 to +50 ºC	
Sealing class	IP 40	
Approvals	PA 11 A/B xxxT	PA 11 A/B xxx

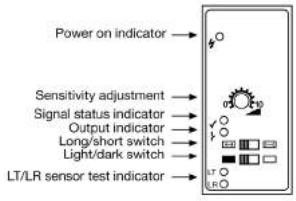
Applicable Remote Sensors & Sensing Ranges			
Remote Sensor Series	100	110	120
	Sensing Range		
Long range mode	18 m	40 m	70 m
Short range mode	6 m	13 m	23 m

Illustration

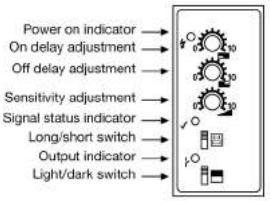
PA 11 A xxxT



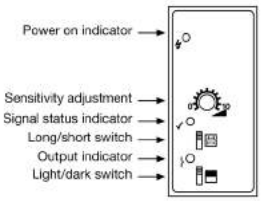
PA 11 B xxxT



PA 11 A xxx

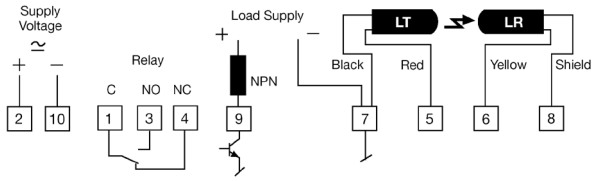


PA 11 B xxx

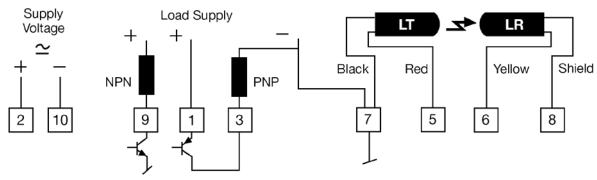


Connection

Wiring Diagrams



Relay/transistor output – PA 11 A/B 30XT



Transistor output – PA 11 A/B 40XT

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.
5	The red LT and LR sensor failure LEDs indicates a sensor failure, which can be due to a shorted connection or a faulty sensor (only PA 11 A/B xxx**T**).

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.

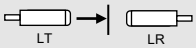
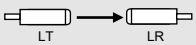
	PA 11 A/B xxxT	PA 11 A/B xxx
Long range		
Short range		

Output Mode Selection

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

		PA 11 A/B xxxT	PA 11 A/B xxx
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	Output indicator
Object present 	Dark		Closed	On
	Light		Open	Off
Object absent 	Dark		Open	Off
	Light		Closed	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 is activated.
6	Remove target object. Observe the output status has changed.
	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 PA 11 A

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.

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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.

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