

Description

- Operation mode and max sensing range:
Thru beam: 0-70 m
Diffuse proximity: 0-4 m
- 10 – 30 V dc and 24 V ac supply voltage
- Manual sensitivity adjustment
- Sensor LED-drive
- Automatic sensor test
- Adjustable on/off time delay
- 1 relay or 1 transistor output
- Switch selectable light or dark function
- Switch selectable long or short range
- Test input
- Power, output, alarm, signal level and master/slave address indicators
- Alarm output
- Removable connectors
- DIN rail mounting



The PAB 10 is a 1-channel photoelectric amplifier, which is to be used in conjunction with a set of remote transmitter LT and receiver LR from the series 100, 110 and 120.

This amplifier series offers manual sensitivity adjustment via an integral potentiometer located on the front panel of the amplifier. Output can be selected from either a relay or transistor output, with an adjustable 0-10 sec on/off time delay. Light or dark function and long or short range are switch selectable.


The amplifier can be connected together with up to 9 amplifiers, from the PAB series, to form a modular master/slave system. The amplifiers are connected via a rail bus connector positioned on the DIN rail. The bus

connection enables the channels of all the amplifiers to be multiplexed, which ensures that optical cross talk between channels is prevented. The bus connection enables communication between the amplifiers, which allows a common output from the amplifiers and a common power supply to the amplifiers in the bus connection.

The amplifier offers a test input, which is used for either disabling or enabling the transmitting power temporarily for test purposes. The amplifier includes an alarm output, which is used to indicate if the signal level is insufficient or if a sensor is faulty. The sensor LED drive powers the optional monitor LEDs available on the remote sensors – output (LT) and power (LR).

Technical Data			
Supply voltage		10 – 30 V dc or 24 V ac	
Voltage tolerance	ac	+/- 10 %	
Current consumption		Max. 1,7 W	
Output	Relay	250 V ac / 3 A, 120 V ac / 5A	
	Transistor	30 V dc / 100 mA	
Power on indicator		Green LED	
Output indicator		Yellow LED	
Signal level indicator		Green LED	
Alarm indicator		Red / yellow LED	
LR sensor failure indicator		Yellow LED	
LT sensor failure indicator		Red LED	
Master/slave address indicator		Green / orange LED	
Sensor monitor LED drive		Green monitor LED on receiver indicates 'Power ON' Yellow monitor LED on the transmitter indicates 'PAB output activated'	
Hysteresis		Approx. 35 %	
Operation frequency	Relay	Short range	21 Hz
		Long range	12 Hz
	Transistor	Short range	42 Hz
		Long range	17 Hz
Response time t_{ON} / t_{OFF}	Relay	Short range	27 ms / 20 ms
		Long range	45 ms / 38 ms
	Transistor	Short range	12 ms / 12 ms
		Long range	30 ms / 30 ms
Delay t_{ON} / t_{OFF}		0 – 10 sec, adjustable	
Housing material		Polyamide	

Environmental Data

Temperature, operation	- 10 to +50 °C
Temperature, storage	- 40 to +80 °C
Sealing class	IP 40
Approvals	CE 

Available Types

Model	Connection	Supply Voltage	10 – 30 V dc / 24 V ac
		Output	Order Reference
PAB 10 On/Off delay	Screw terminals	1 individual relay	PAB 10 A 009
		1 individual NPN	PAB 10 A 109
		1 individual PNP	PAB 10 A 209

Note: Remote sensors and bus rail connector to be ordered separately.

Applicable Remote Sensors and Ranges

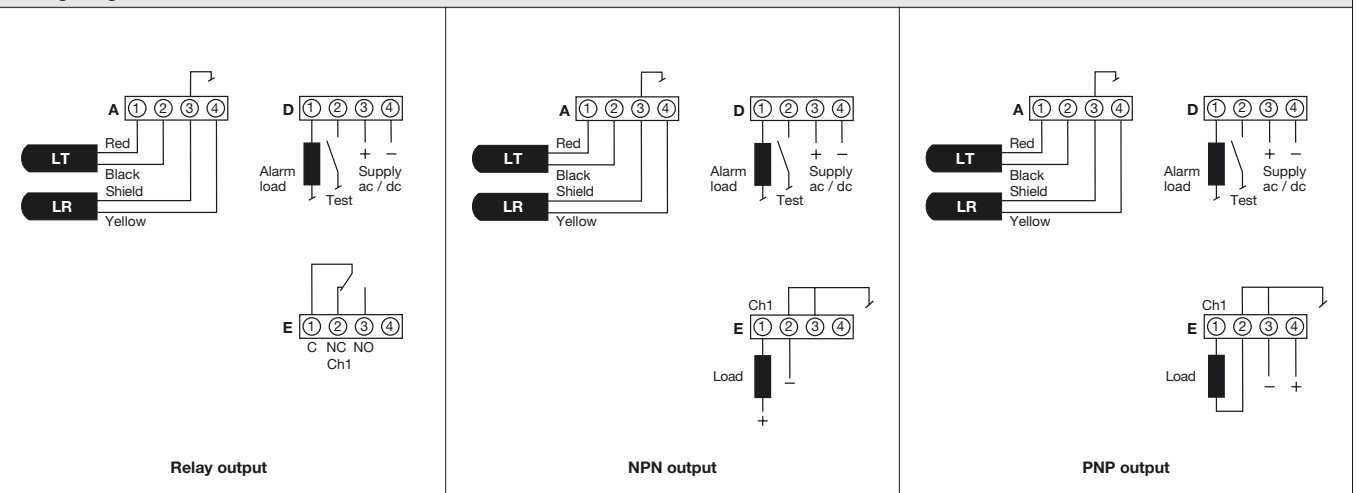
Series	Mode	Thru Beam		Diffuse Proximity	
		Short range	Long range	Short range	Long range
100	Single	6 m	18 m	0,5 m	1,1 m
	Bus Modular	4 m	12 m	0,4 m	0,8 m
110	Single	13 m	40 m	0,9 m	2 m
	Bus Modular	9 m	27 m	0,7 m	1,7 m
120	Single	23 m	70 m	1,7 m	4 m
	Bus Modular	16 m	47 m	1,2 m	2,6 m

Response Times in Bus Connection

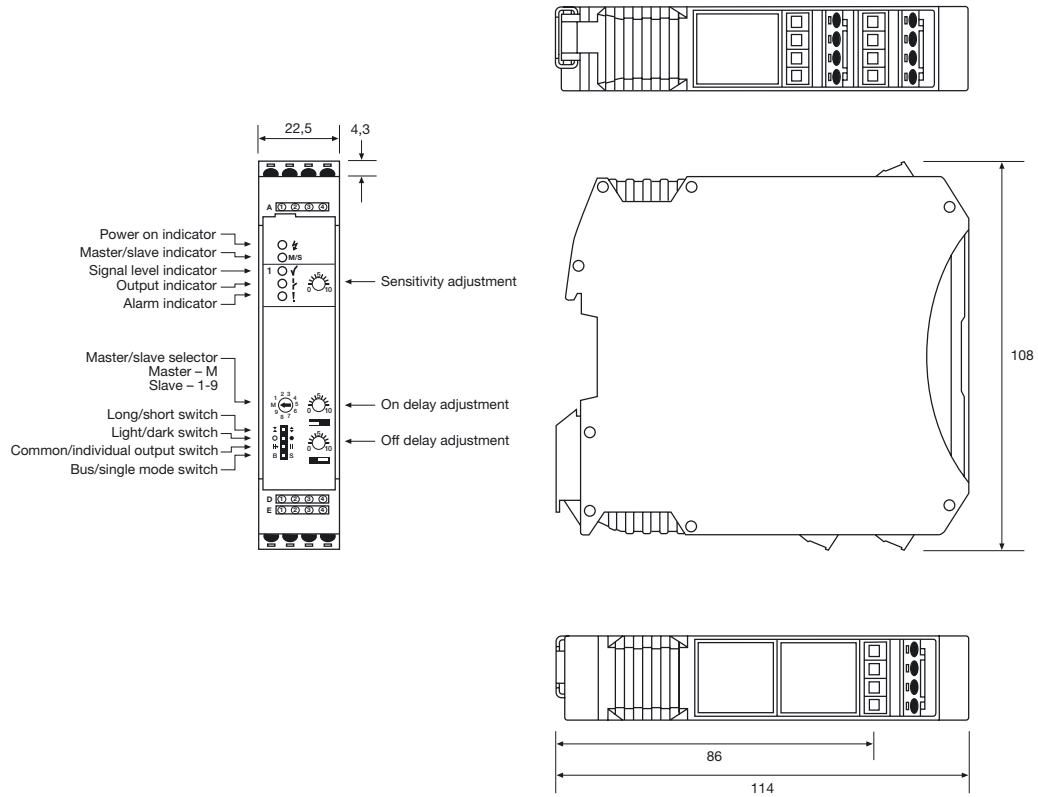
		Relay		Transistor	
		Short range	Long range	Short range	Long range
Response time	t _{ON}	6 ms x (N + 1) + 15 ms	15 ms x (N + 1) + 15 ms	6 ms x (N + 1)	15 ms x (N + 1)
	t _{OFF}	6 ms x (N + 1) + 8 ms	15 ms x (N + 1) + 8 ms	6 ms x (N + 1)	15 ms x (N + 1)
Operation frequency		83 Hz / (N + 2,9)	33 Hz / (N + 1,8)	83 Hz / (N + 1)	33 Hz / (N + 1)

Note: "N" is equal to the total number of channels connected in the bus connection.

Wiring Diagrams



Dimensions and Descriptions



(Units in mm)

Telco reserves the right to change specifications without notice.