

Description

- Operation mode and max sensing range:
Thru-beam: 0-47 m
Diffuse proximity: 0-2,6 m
- 24 V ac/dc or 90-240 V ac supply voltage
- Manual sensitivity adjustment
- Sensor LED-drive
- Automatic sensor test
- Adjustable on/off time delay
- 3 relay or 3 transistor outputs
- Switch selectable light or dark function
- Switch selectable long or short range
- Test input
- Power, output, alarm, signal level and master/slave indicators
- Alarm output
- DIN rail mounting with bus function



The PAB 30 is a 3-channel, multiplexed, photoelectric amplifier, which is to be used in conjunction with 3 sets of remote transmitters LT and receivers LR from the series 100, 110 and 120. The 3 channels operate independently of each other with their own set of remote transmitter and receiver. The multiplexing function ensures that optical cross talk between channels is prevented.

This amplifier series offers manual sensitivity adjustment, for each individual channel, via an integral potentiometer located on the front panel of the amplifier. The series offers a choice between 3 individual relay or 3 individual transistor outputs, with an adjustable 0-10 sec on/off time delay. Light or dark function and long or short range are switch selectable.


The amplifiers from the PAB 30 A series can be connected together with up to 9 amplifiers from the PAB series via a bus rail connector positioned

on the DIN rail, to form a modular master/slave system with up to a total of 30 channels. The bus connection enables communication between the amplifiers, which allows the channels of all the amplifiers to be multiplexed ensuring that optical cross talk between channels is prevented and allows a common output from the amplifier modules. Both the PAB 30 A and PAB 30 S can share power supply via the bus connection (except 90-240 V ac types).

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		90-240 V ac	
Voltage tolerance		ac	+/- 10 %			
Current consumption			Max. 2,6 W			
Output		Relay	250 V ac / 3 A, 120 V ac / 5A			
		Transistor	30 V dc / 100 mA			
Alarm output		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 receiver failure indicator			Yellow LED			
LT transmitter failure indicator			Red LED			
Master/slave indicator		PAB 30 A	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	14 Hz		
			Long range	7 Hz		
		Transistor	Short range	21 Hz		
			Long range	8 Hz		
Response time t _{ON} / t _{OFF}		Relay	Short range	39 ms / 32 ms		
			Long range	75 ms / 68 ms		
		Transistor	Short range	24 ms / 24 ms		
			Long range	60 ms / 60 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	Time Delay	Supply Voltage	10-30 V dc / 24 V ac	90-240 V ac
			Output	Order Reference	
PAB 30 A	Removable screw terminals	On/Off delay	3 individual relays	PAB 30 A 009 ¹²	PAB 30 A 008 ²
			3 individual NPN	PAB 30 A 109 ¹²	PAB 30 A 108 ²
			3 individual PNP	PAB 30 A 209 ¹²	PAB 30 A 208 ²
PAB 30 S			3 individual relays	PAB 30 S 009 ¹	PAB 30 S 008
			3 individual NPN	PAB 30 S 109 ¹	PAB 30 S 108
			3 individual PNP	PAB 30 S 209 ¹	PAB 30 S 208

Note: 1. Amplifiers marked ¹ can share power supply via bus connection.
 2. Amplifiers marked ² can form modular master/slave via bus connection.
 3. Remote sensors and bus rail connector to be ordered separately.

Applicable Remote Sensors and Ranges

Series	Thru-beam		Diffuse Proximity	
	Short range	Long range	Short range	Long range
100	4 m	12 m	0,4 m	0,8 m
110	9 m	27 m	0,7 m	1,7 m
120	16 m	47 m	1,2 m	2,6 m

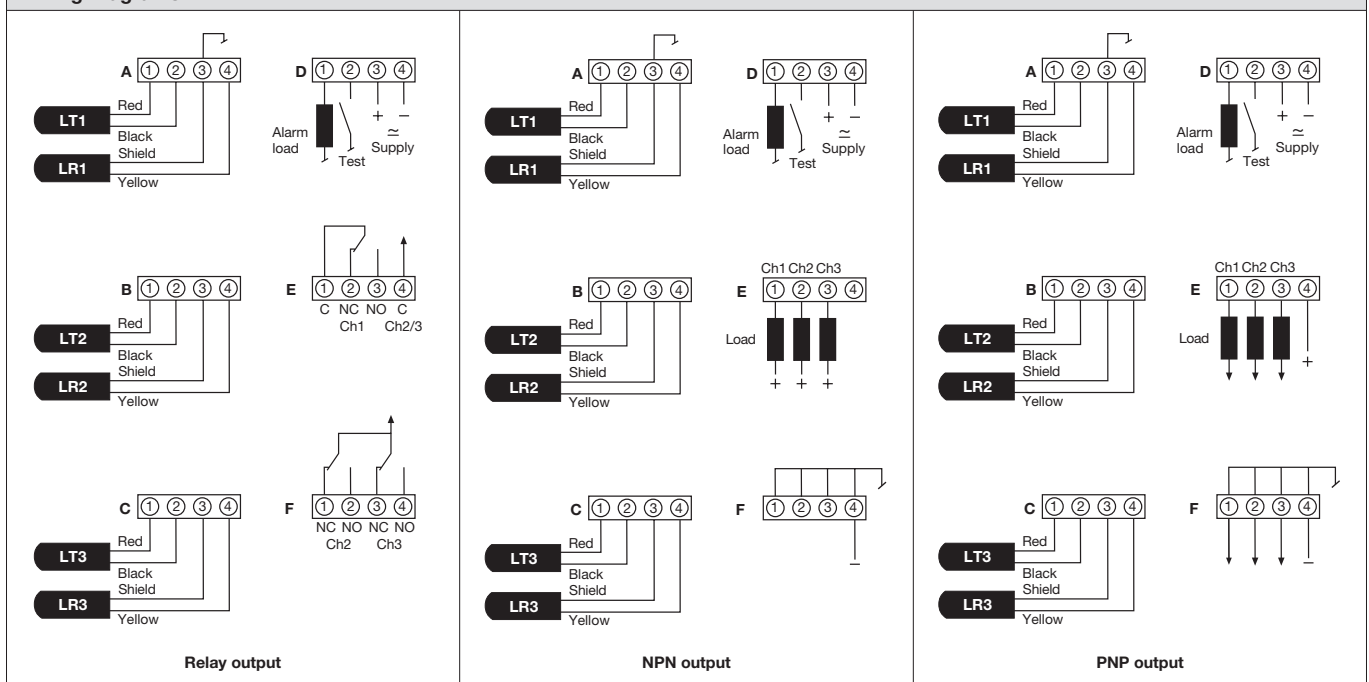
Response Times in Bus Connection

PAB 30 A

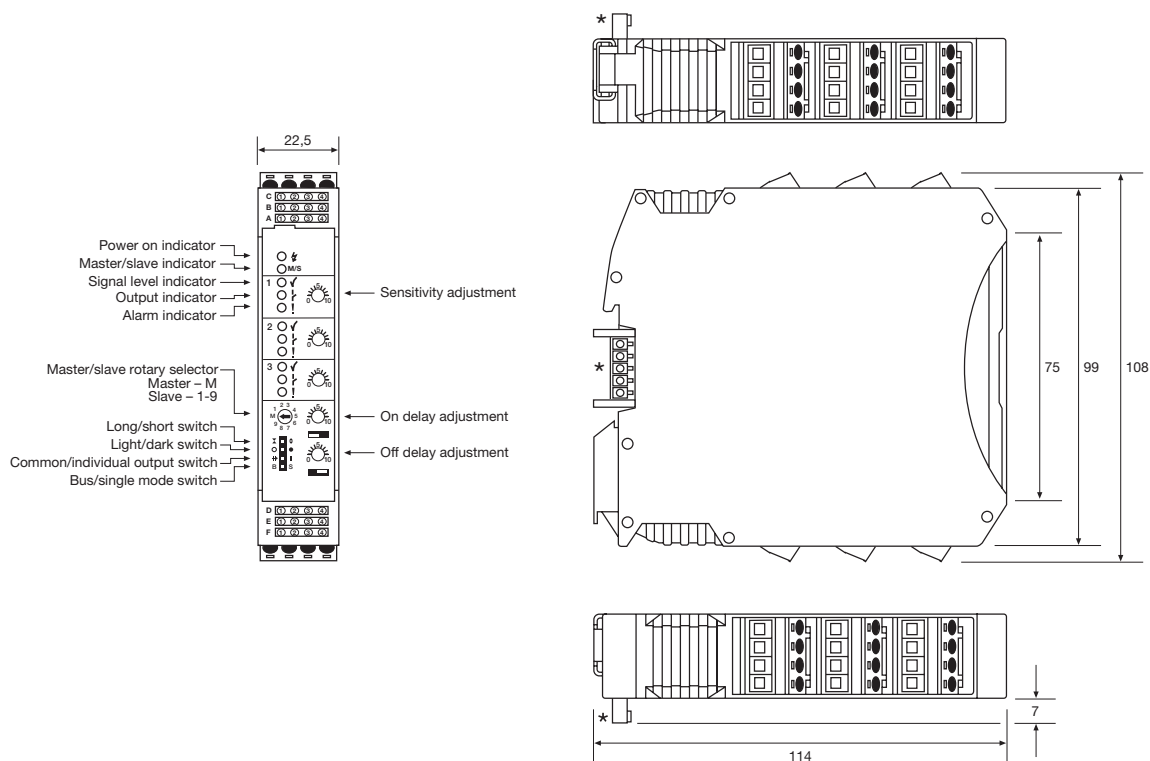
		Relay		Transistor	
		Short range	Long range	Short range	Long range
		$6 \text{ ms} \times (N + 1) + 15 \text{ ms}$	$15 \text{ ms} \times (N + 1) + 15 \text{ ms}$	$6 \text{ ms} \times (N + 1)$	$15 \text{ ms} \times (N + 1)$
Response time	t_{ON}	$6 \text{ ms} \times (N + 1) + 8 \text{ ms}$	$15 \text{ ms} \times (N + 1) + 8 \text{ ms}$	$6 \text{ ms} \times (N + 1)$	$15 \text{ ms} \times (N + 1)$
	t_{OFF}				
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

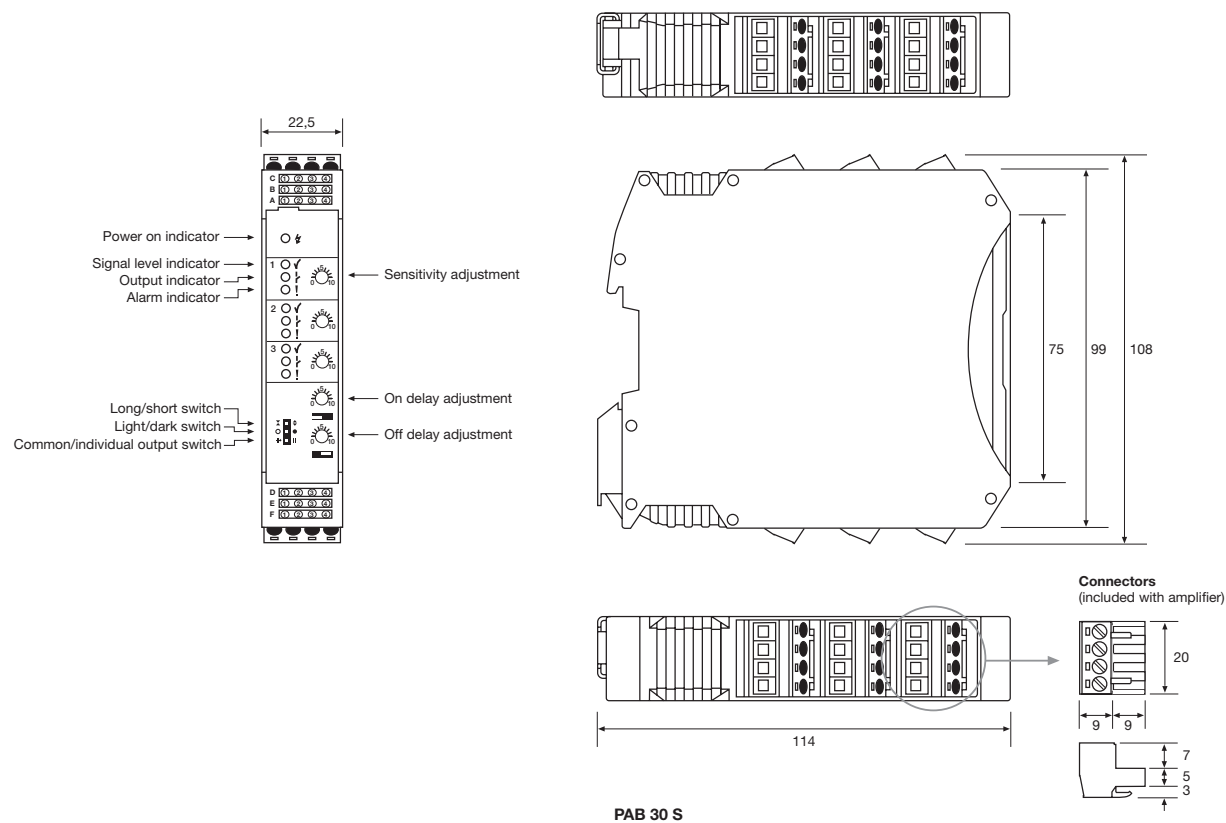


Dimensions and Descriptions



PAB 30 A

★ Shown with Bus Rail Connector 22,5 connected in position (to be ordered separately).



PAB 30 S

(Units in mm)

Telco reserves the right to change specifications without notice.