

## PA18 and PH18 - specifications

PA18 and PH18			Diffuse reflective			Retro-reflective		Through-beam	
			Background suppression	WS	Standard	Standard	With Polarization filter	Receiver	Emitter
Cable 2 m	NPN	Axial	PA18CAB20NASA	PA18CAD04NASA	PA18CAD10NASA	PA18CAR65NASA	PA18CAP50NASA	PA18CAT20NASA	PA18CAT20
		Radial	-	-	PA18CRD08NASA	PA18CRR50NASA	PA18CRP40NASA	PA18CRT16NASA	PA18CRT16
		Square	PH18CNB20NASA	-	PH18CND10NASA	PH18CNR65NASA	PH18CNP50NASA	PH18CNT20NASA	PH18CNT20
	PNP	Axial	PA18CAB20PASA	PA18CAD04PAWS	PA18CAD10PASA	PA18CAR65PASA	PA18CAP50PASA	PA18CAT20PASA	PA18CAT20
		Radial	-	-	PA18CRD08PASA	PA18CRR50PASA	PA18CRP40PASA	PA18CRT16PASA	PA18CRT16
		Square	PH18CNB20PASA	-	PH18CND10PASA	PH18CNR65PASA	PH18CNP50PASA	PH18CNT20PASA	PH18CNT20
Plug M12	NPN	Axial	PA18CAB20NAM1SA	PA18CAD04NAM1WS	PA18CAD10NAM1SA	PA18CAR65NAM1SA	PA18CAP50NAM1SA	PA18CAT20NAM1SA	PA18CAT20M1
		Radial	-	-	PA18CRD08NAM1SA	PA18CRR50NAM1SA	PA18CRP40NAM1SA	PA18CRT16NAM1SA	PA18CRT16M1
		Square	PH18CNB20NAM1SA	-	PH18CND10NAM1SA	PH18CNR65NAM1SA	PH18CNP50NAM1SA	PH18CNT20NAM1SA	PH18CNT20M1
	PNP	Axial	PA18CAB20PAM1SA	PA18CAD04PAM1WS	PA18CAD10PAM1SA	PA18CAR65PAM1SA	PA18CAP50PAM1SA	PA18CAT20PAM1SA	PA18CAT20M1
		Radial	-	-	PA18CRD08PAM1SA	PA18CRR50PAM1SA	PA18CRP40PAM1SA	PA18CRT16PAM1SA	PA18CRT16M1
		Square	PH18CNB20PAM1SA	-	PH18CND10PAM1SA	PH18CNR65PAM1SA	PH18CNP50PAM1SA	PH18CNT20PAM1SA	PH18CNT20M1
Pigtail M12	NPN	Square	PH18CNB20NATT1SA	-	PH18CND10NATT1SA	PH18CNR65NATT1SA	PH18CNP50NATT1SA	PH18CNT20NATT1SA	PH18CNT20T1
	PNP	Square	PH18CNB20PATT1SA	-	PH18CND10PATT1SA	PH18CNR65PATT1SA	PH18CNP50PATT1SA	PH18CNT20PATT1SA	PH18CNT20T1
Rated operating distance ( $S_n$ )			Axial 0.2 m Square 0.2 m	Axial 0.4 m	Axial 1.0 m Radial 0.8 m Square 1.0 m	Axial 6.5 m Radial 5.0 m Square 6.5 m	Axial 5.0 m Radial 4.0 m Square 5.0 m	Axial 20 m Radial 16 m Square 20 m	
Blind Zone			PA: 10 mm PH: 8 mm	0 mm @ $S_n$ max	2 mm @ $S_n$ max	50 mm @ $S_n$ max		0 mm	-
Hysteresis (H)			≤ 10%		≤ 20%			-	
Rated operational voltage			10 to 30 V DC, Ripple included						
No load supply current ( $I_o$ )			≤ 20 mA @ $U_{max}$ ≤ 40 mA @ $U_{min}$	≤ 15 mA @ 24 V DC	≤ 25 mA @ 24 V DC			≤ 15 mA @ 24 V DC	≤ 25 mA @ 24 V DC
Output			NPN or PNP						-
Output function			N.O. and N.C.						-
Output current ( $I_o$ )			≤ 100 mA (max. load capacity 100 nF)						-
Minimum operational current			≤ 0,5 mA						-
Off-State current ( $I_i$ )			≤ 100 μA						-
Voltage drop ( $U_d$ )			≤ 2.0 V DC @ 100 mA						-
Sensor protection			Shortcircuit (A), reverse polarity (B) and transients (C)						B + C
Response time			≤ 1.0 ms						-
Power on delay ( $t_r$ )			≤ 100 ms				≤ 200 ms		
Led indications			Output ON (Yellow LED), Signal stability and Power ON (Green LED)						Power ON
Sensitivity control			Adjustable by potentiometer						
Degree of protection			IP67 and IP69K						
Ambient temperature			Operating: -25 to +60°C (-13 to +140°F), Storage: -40 to +70°C (-40 to +158°F)						
Ambient light			≤ 30.000 Lux, incandescent lamp						
CE marking			According to EN 60947-5-2						
Approvals			cULus (UL508) Supply class 2						
Installation category			III (IEC60664/60664A; 60947-1)						
Pollution degree			3(IEC60664/60664A; 60947-1)						
Vibration			10 to 150 Hz; 1.0 mm/15G pr. axis (IEC 60068-2-6)						
Shock			30g / 11 ms. 3 positive and 3 negative pr. axis (IEC 60068-2-6)						
Emitting light source			Red LED		Infrared LED	Red LED	-	Infrared LED	
Material			Body: ABS grey; Front material: PMMA red						
Cable			PVC, grey, 2 m, 4 (2) x 0.25mm <sup>2</sup> , Ø=4.5 mm						( ) = Emitter
Connector			4-pin M12						
Dimensions			PA18: M18 x 43.3 mm, PH18: 10.8 x 20 x 30 mm						
Weight incl. packaging			PA18: Cable 85 g, Plug 25 g; PH18: Cable 85 g, Plug 25 g, Pigtail 40 g						