



CP18 Series 18mm Diameter Cylindrical Sensors

- Unique, one-piece polycarbonate lens/housing
- Cost-effective
- Quick-disconnect receptacle or cable versions
- DC and AC/DC models

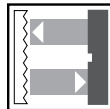


Diffused Mode

See pages 618-619

Sensing Ranges: 100mm, 200mm, 400mm

Output: NPN, PNP, thyristor



Retro-Reflective Mode

See page 620

Sensing Ranges: 1.5m, 4m

Output: NPN, PNP, thyristor



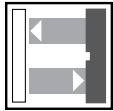
Thru-Beam Mode

See page 621

Sensing Ranges: 30m



Output: NPN, PNP, thyristor



Photoelectric Sensors





Diffused Mode

Photoelectric CP18 Series 18mm Diameter

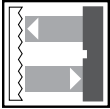
SENSING RANGE		100mm			
ELECTRICAL CONNECTION		 2-meter cable, PVC covered, 3-conductor, #22AWG		 Quick disconnect type V1 (DC) or V124 (AC)	
OPERATING MODE		Light on	Dark on	Light on	Dark on
MODEL NUMBER(S)	DC (PNP)	CP18D1DPL2	CP18D1DPD2	CP18D1DPLC	CP18D1DPDC
	DC (NPN)	CP18D1DNL2	CP18D1DND2	CP18D1DNLC	CP18D1DNDC
	AC/DC	CP18D1BAL2	CP18D1BAD2	CP18D1BALC	CP18D1BADC
LIGHT SOURCE		Infrared LED			
ADDITIONAL DATA		See pages 622-626			

SENSING RANGE		200mm			
ELECTRICAL CONNECTION		 2-meter cable, PVC covered, 3-conductor, #22AWG		 Quick disconnect type V1 (DC) or V124 (AC)	
OPERATING MODE		Light on	Dark on	Light on	Dark on
MODEL NUMBER(S)	DC (PNP)	CP18D2DPL2	CP18D2DPD2	CP18D2DPLC	CP18D2DPDC
	DC (NPN)	CP18D2DNL2	CP18D2DND2	CP18D2DNLC	-
	AC/DC	CP18D2BAL2	CP18D2BAD2	CP18D2BALC	CP18D2BADC
LIGHT SOURCE		Infrared LED			
ADDITIONAL DATA		See pages 622-626			



SENSING RANGE		400mm			
ELECTRICAL CONNECTION		 2-meter cable, PVC covered, 3-conductor, #22AWG		 Quick disconnect type V1 (DC) or V124 (AC)	
OPERATING MODE		Light on	Dark on	Light on	Dark on
MODEL NUMBER(S)	DC (PNP)	CP18D4DPL2	CP18D4DPD2	CP18D4DPLC	CP18D4DPDC
	DC (NPN)	CP18D4DNL2	CP18D4DND2	CP18D4DNLC	-
	AC/DC	CP18D4BAL2	CP18D4BAD2	CP18D4BALC	CP18D4BADC
LIGHT SOURCE		Infrared LED			
ADDITIONAL DATA		See pages 622-626			



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Photoelectric CP18 Series 18mm Diameter

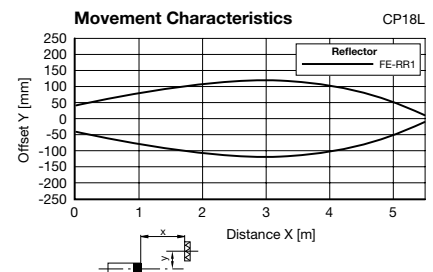
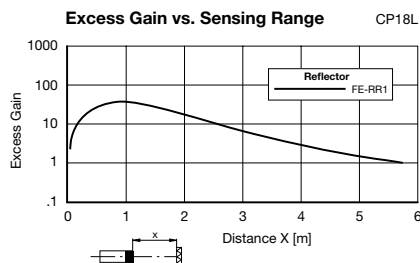
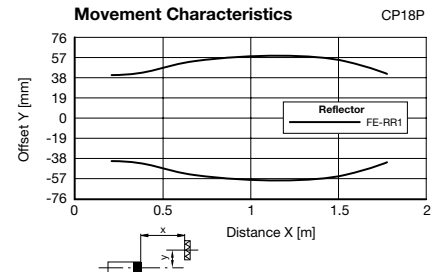
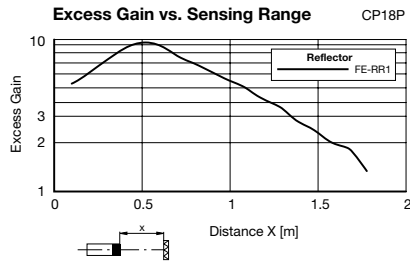


Retro-Reflective Mode

SENSING RANGE		1.5m			
POLARIZED FILTER		No			
ELECTRICAL CONNECTION		 2-meter cable, PVC covered, 3-conductor, #22AWG		 Quick disconnect type V1 (DC) or V124 (AC)	
OPERATING MODE		Light on	Dark on	Light on	Dark on
MODEL NUMBER(S)	DC (PNP)	CP18PDPL2	CP18PDPD2	CP18PDPLC	CP18PDPDC
	DC (NPN)	CP18PDNL2	CP18PDND2	CP18PDNLC	CP18PDNDC
	AC/DC	-	-	-	-
LIGHT SOURCE		Visible red LED			
ADDITIONAL DATA		<i>See pages 622-626</i>			



SENSING RANGE		4m			
POLARIZED FILTER		No			
ELECTRICAL CONNECTION		 2-meter cable, PVC covered, 3-conductor, #22AWG		 Quick disconnect type V1 (DC) or V124 (AC)	
OPERATING MODE		Light on	Dark on	Light on	Dark on
MODEL NUMBER(S)	DC (PNP)	CP18LDPL2	CP18LDPD2	CP18LDPLC	CP18LDPDC
	DC (NPN)	CP18LDNL2	CP18LDND2	CP18LDNLC	CP18LDNDC
	AC/DC	CP18LBAL2	CP18LBAD2	CP18LBALC	CP18LBADC
LIGHT SOURCE		Infrared LED			
ADDITIONAL DATA		<i>See pages 622-626</i>			

Sensing Characteristics

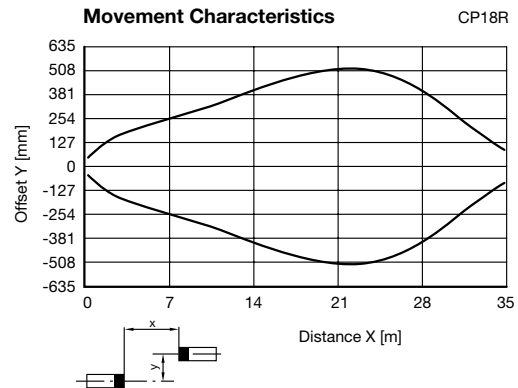
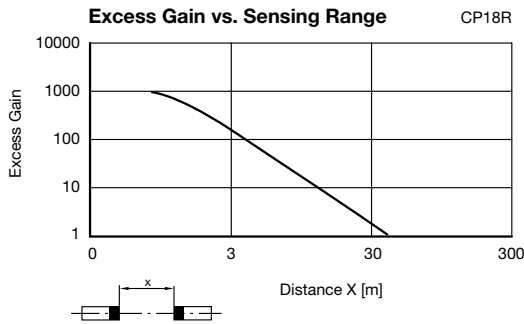




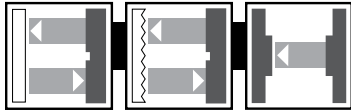
Thru-Beam Mode

SENSING RANGE		30m			
ELECTRICAL CONNECTION		 2-meter cable, PVC covered, 3-conductor, #22AWG		 Quick disconnect type V1 (DC) or V124 (AC)	
OPERATING MODE		Light on	Dark on	Light on	Dark on
RECEIVER MODEL NUMBER(S)	DC (PNP)	CP18RDPL2	CP18RDPD2	CP18RDPLC	CP18RDPDC
	DC (NPN)	CP18RDNL2	CP18RDND2	CP18RDNLC	CP18RDNDNC
	AC/DC	CP18RBAL2	CP18RBAD2	CP18RBALC	CP18RBADC
TRANSMITTER MODEL NUMBER(S)		DC		CP18EDXC (use with DC receivers)	
		AC/DC		CP18EBXC (use with AC/DC receivers)	
LIGHT SOURCE		Infrared LED			
ADDITIONAL DATA		See pages 622-626			

Sensing Characteristics





Photoelectric Sensors



Series Specifications

Photoelectric CP18 Series 18mm Diameter

CP18 Specifications	DC Models	AC/DC Models
OUTPUT TYPE	Transistor (open collector)	Thyristor
SUPPLY VOLTAGE	10-30VDC	20-260VAC or 12-260VDC
LOAD CURRENT	150mA max.	300mA max.
LEAKAGE CURRENT	≤10μA	≤1mA
VOLTAGE DROP	≤1VDC	≤5V
SHORT CIRCUIT AND OVERLOAD PROTECTION	Yes	No
REVERSE POLARITY PROTECTION	Yes	No
LED(s)	Yes (1)*	Yes (1)*
CURRENT CONSUMPTION	≤20mA	≤4mA
RESPONSE TIME	≤1ms	≤10ms
READINESS DELAY	100ms	100ms
SWITCHING FREQUENCY	500Hz	50Hz
PROTECTION (IEC)	IP67	IP67
TEMPERATURE RANGE		
<i>WORKING</i>	-22°F to +140°F	-22°F to +140°F
<i>STORAGE</i>	-67°F to +185°F	-67°F to +185°F
HOUSING MATERIAL	Polycarbonate	Polycarbonate
<i>LENS</i>	Polycarbonate	Polycarbonate
APPROVALS		
  General Purpose	Yes	Yes

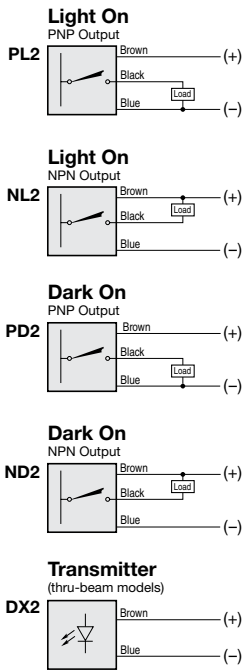
*See dimensional drawings for LED functions.

Wiring Diagrams

DC



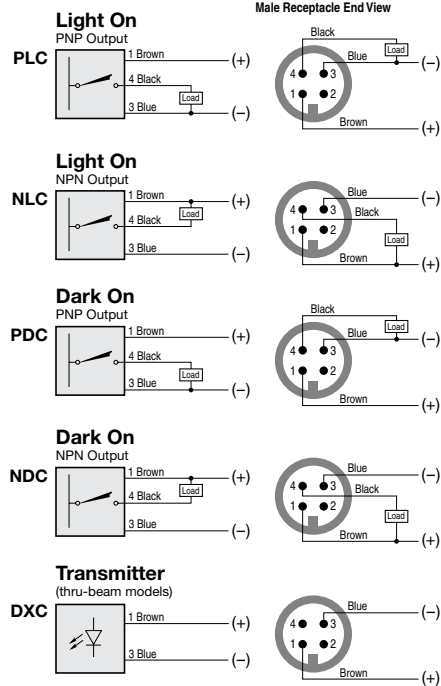
Cable Connection



Quick Disconnect

Note: Wiring diagrams show quick disconnect pin numbers.

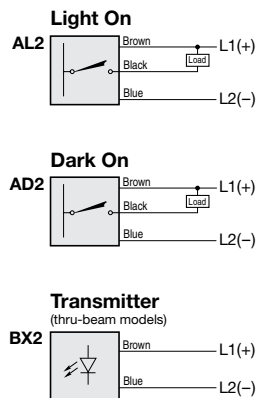
V1 Type



AC/DC



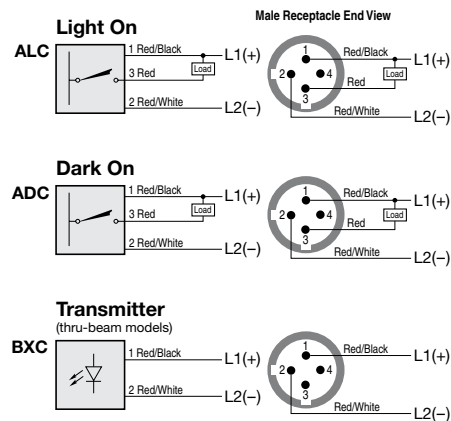
Cable Connection



Quick Disconnect

Note: Wiring diagrams show quick disconnect pin numbers.

V124 Type

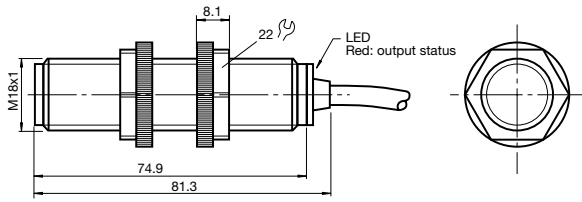


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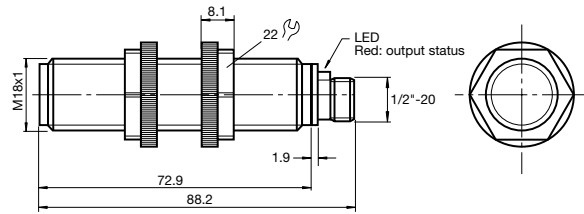
Dimensions (mm)

Photoelectric CP18 Series 18mm Diameter

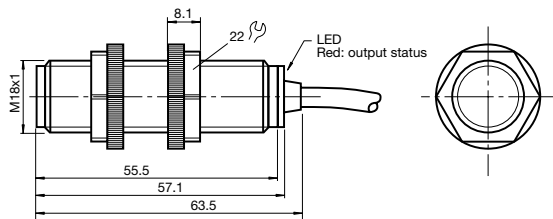
CP18...BAL2
CP18...BAD2



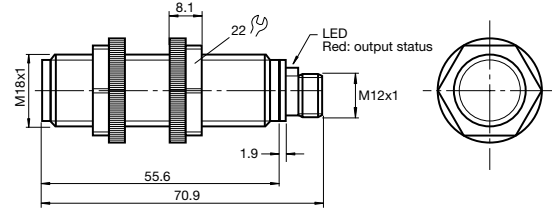
CP18...BALC
CP18...BADC



CP18PDPL2
CP18PDNL2
CP18PPD2
CP18PDND2



CP18PDPLC
CP18PDNLC
CP18PPDC
CP18PDNDC

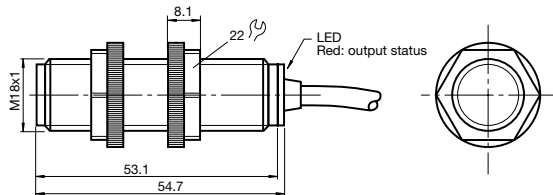


CP18D ...DPL2
CP18D ...DNL2
CP18D ...DPD2
CP18D ...DND2

CP18LDPL2
CP18LDNL2
CP18LDPD2
CP18LDND2

CP18RDPL2
CP18RDNL2
CP18RDPD2
CP18RDND2

CP18EDX2
CP18EBX2



CP18D ...DPLC
CP18D ...DNLC
CP18D ...DPDC
CP18D ...DNDC

CP18LDPLC
CP18LDNLC
CP18LDPDC
CP18LDNDC

CP18RDPLC
CP18RDNLC
CP18RDPDC
CP18RDNDC

CP18EDXC
CP18EBXC

