





# Photoelectric Sensors



Photoelectric CP18 Series 18mm Diameter Style



## Diffused Mode

SENSING RANGE		100mm			
REFERENCE TARGET		203 x 254mm white test card			
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
ADDITIONAL DATA		See pages 608-612			

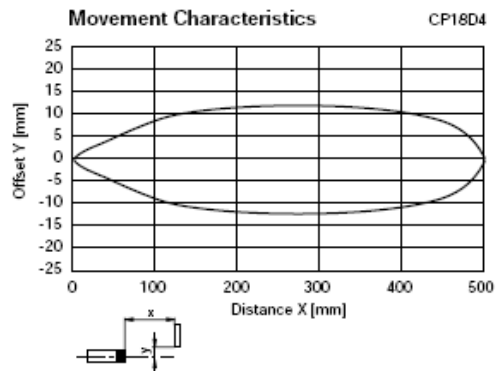
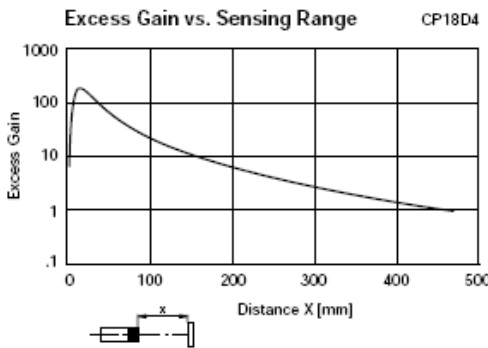
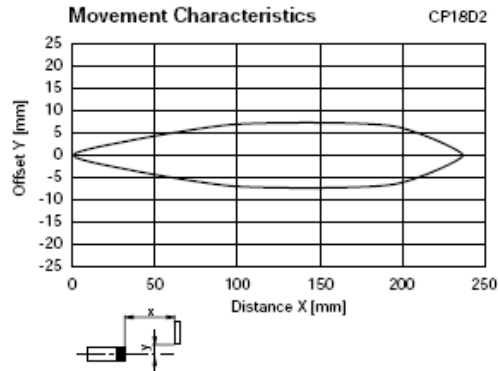
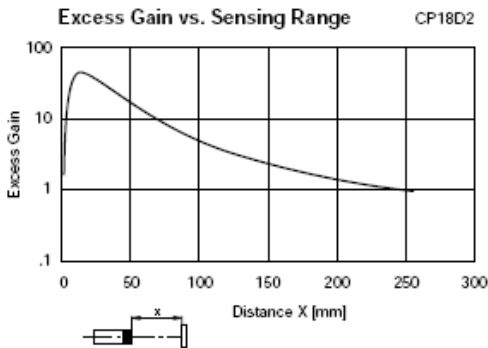
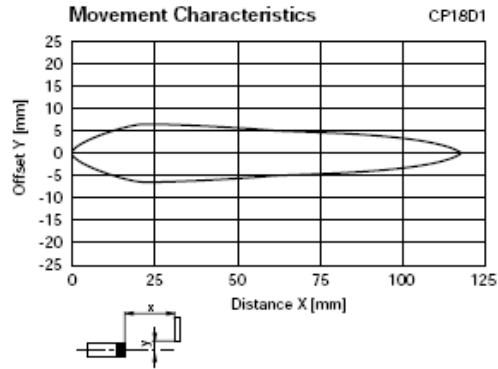
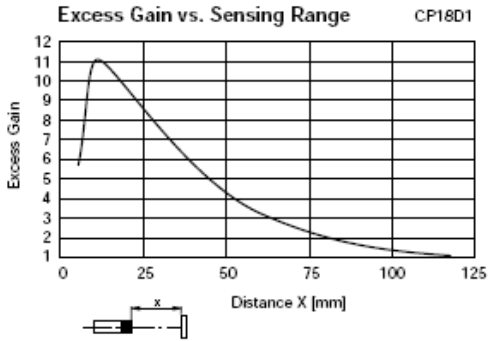
SENSING RANGE		200mm			
REFERENCE TARGET		203 x 254mm white test card			
ELECTRICAL CONNECTION		 2-meter cable, PVC covered 3-conductor, #22AWG		 Quick disconnect type V1 (DC) or V124 (AC)	
OPERATING MODE		Light on	Dark on	Light on	Dark on
MODEL NUMBER(S)	DC (PNP)	CP18D2DPL2	CP18D2DPD2	CP18D2DPLC	CP18D2DPDC
	DC (NPN)	CP18D2DNL2	CP18D2DND2	CP18D2DNLC	CP18D2DNDC
	AC/DC	CP18D2BAL2	CP18D2BAD2	CP18D2BALC	CP18D2BADC
ADDITIONAL DATA		See pages 608-612			

SENSING RANGE		400mm			
REFERENCE TARGET		203 x 254mm white test card			
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	CP18D4DNDC
	AC/DC	CP18D4BAL2	CP18D4BAD2	CP18D4BALC	CP18D4BADC
ADDITIONAL DATA		See pages 608-612			



## Diffused Mode

### Sensing Characteristics






Photoelectric CP18 Series 18mm Diameter Style

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## Series Specifications

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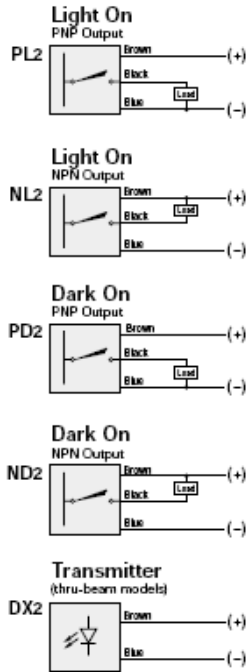
CP18 Series Specifications	DC Models	AC/DC Models
OUTPUT TYPE	Transistor (open collector)	Thyristor
SUPPLY VOLTAGE	10-30VDC	20-260VAC or 12-260VDC
LOAD CURRENT	150mA max.	300mA max.
LEAKAGE CURRENT	≤10μA	≤1mA
VOLTAGE DROP	≤1VDC	≤5V
SHORT CIRCUIT AND OVERLOAD PROTECTION	Yes	No
REVERSE POLARITY PROTECTION	Yes	No
LED(s)	Yes (1)	Yes (1)
CURRENT CONSUMPTION	≤20mA	≤4mA
RESPONSE TIME	≤1ms	≤10ms
READINESS DELAY	100ms	100ms
SWITCHING FREQUENCY	500Hz	50Hz
ELECTROMAGNETIC COMPATIBILITY COMPLIANCE	NEMA ICS5-2000 See page 6	NEMA ICS5-2000 See page 6
PROTECTION (IEC)	IP67	IP67
LIGHT SOURCE	Infrared LED	Infrared LED
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
  General Purpose	Yes	Yes

## Wiring Diagrams

### DC



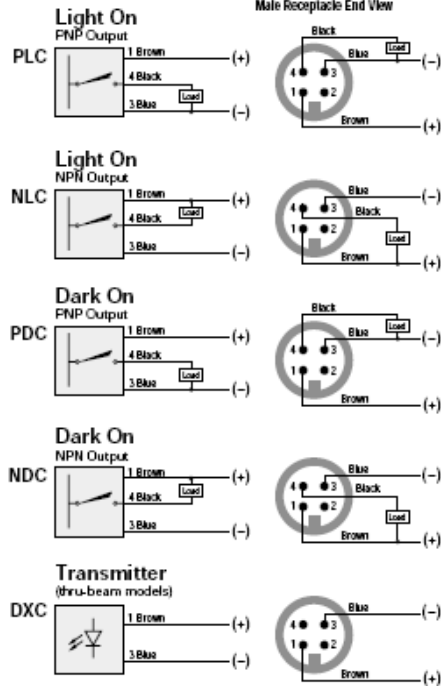
#### Cable Connection



#### Quick Disconnect

Note: Wiring diagrams show quick disconnect pin numbers.

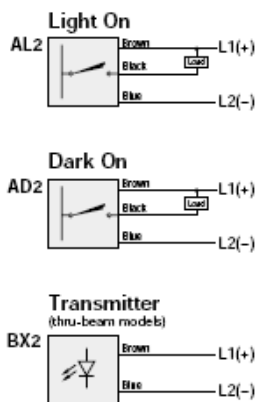
#### V1 Type



### AC/DC



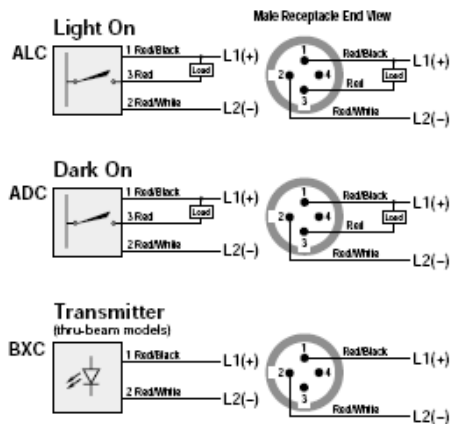
#### Cable Connection



#### Quick Disconnect

Note: Wiring diagrams show quick disconnect pin numbers.

#### V124 Type

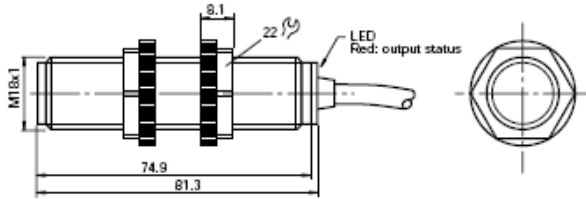


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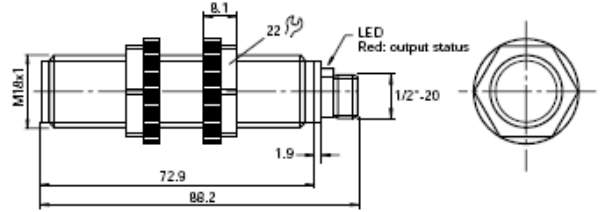
## Dimensions (mm)

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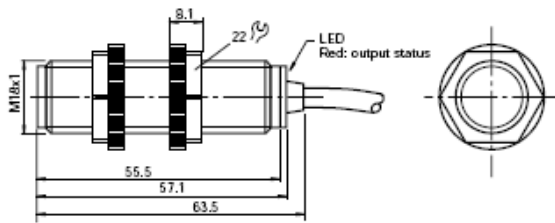
CP18...BAL2  
CP18...BAD2



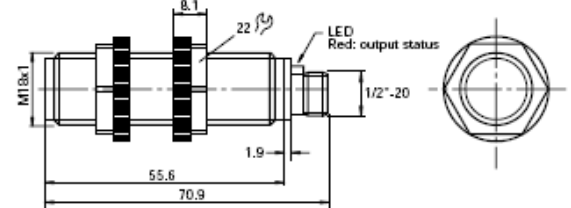
CP18...BALC  
CP18...BADC



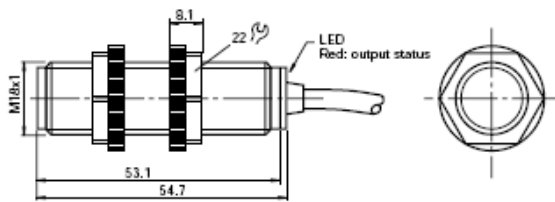
CP18PDPL2  
CP18PDNL2  
CP18PDPD2  
CP18PDND2



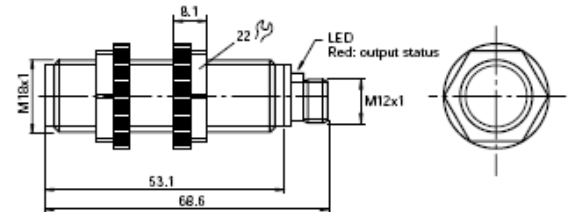
CP18PDPLC  
CP18PDNLC  
CP18PDPDC  
CP18PDNDC



CP18D ...DPL2    CP18LDPL2    CP18RDPL2    CP18EDX2  
CP18D...DNL2    CP18LDNL2    CP18RDNL2    CP18EBX2  
CP18D...DPD2    CP18LDPD2    CP18RDPD2  
CP18D...DND2    CP18LDND2    CP18RDND2

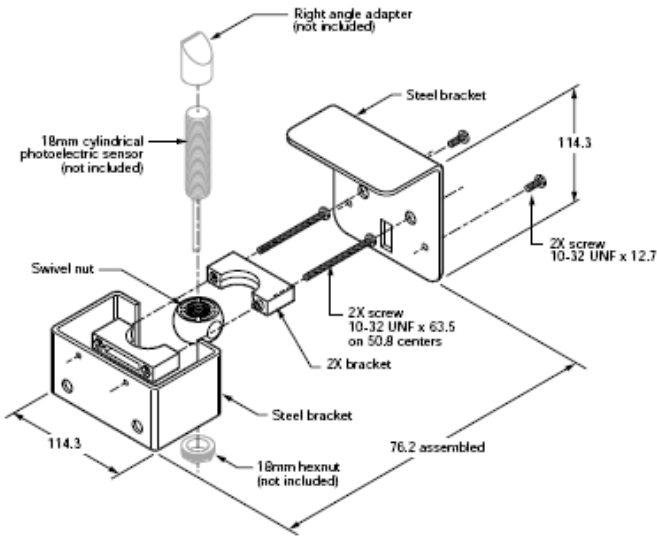


CP18D ...DPLC    CP18LDPLC    CP18RDPLC    CP18EDXC  
CP18D...DNLC    CP18LDNLC    CP18RDNLC    CP18EBXC  
CP18D...DPDC    CP18LDPDC    CP18RDPDC  
CP18D...DNDC    CP18LDNDC    CP18RDNDC

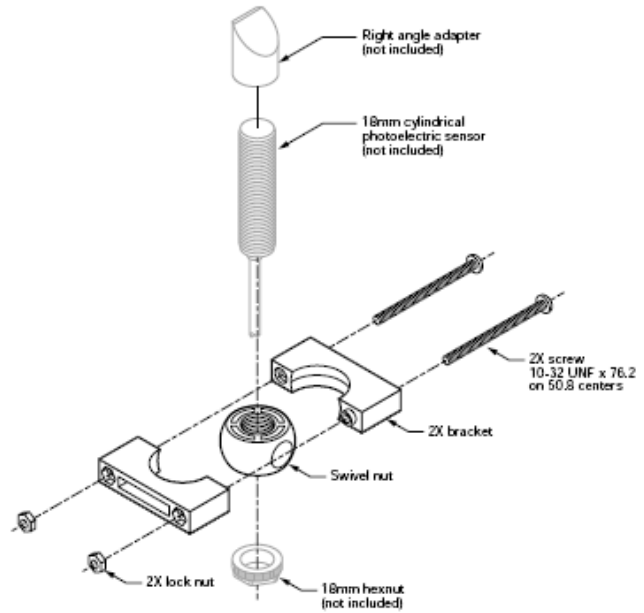


## Accessories

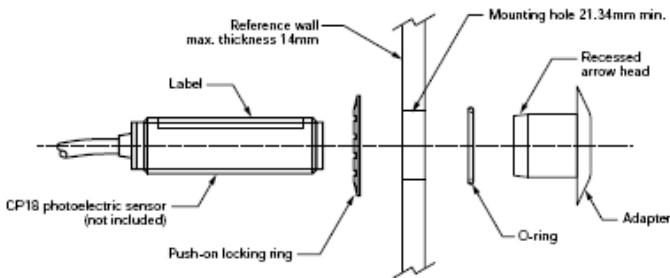
### Swivel Bracket Assembly Model CPZ18B02BK



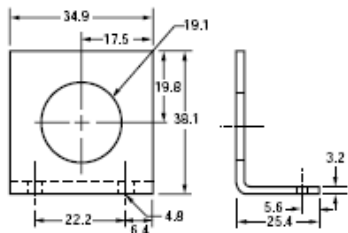
### Swivel Bracket Model CPZ18B03



### Flush Mount/Quick Assembly Bracket Model CPZ18B01



### Right Angle Mounting Bracket Model AB18



### Screw On Right Angle Adapters



Model No.	Description
CPZ18RAW	for non-polarized retro-reflective and thru-beam
CPZ18RAO	for diffused
CPZ18RAP	for polarized retro-reflective

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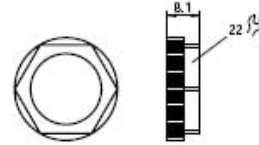
## Accessories

Photoelectric CP18 Series 18mm Diameter Style

Aperture Hood Model CPZ18A01  
for Precise Sensing *(sold individually)*



Mounting Nut Model CPZ18BKNTS  
*(sold in pairs)*



M18-1/2"NPT Conduit Adapter



See pages  
769-828 for  
cordsets



See pages 829-840  
additional accessories  
for photoelectric sensors