

## M18 Photoelectric Sensors

### Metal / Plastic Barrel

Through Beam  
Retroreflective / Diffused  
**Reflective**



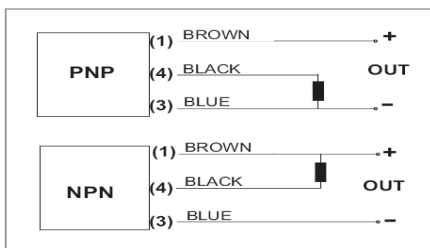
	Fixed Sensing	Fixed Sensing	Adjustable Sensing	Adjustable Sensing	Fixed Sensing
PNP – Normally Open (light on)	PES18C32FPC	PES18C32FMC	PES18C32APC	PES18C32AMC	PES18C32FPM12
PNP – Normally Closed (light off)	PES18C33FPC	PES18C33FMC	PES18C33APC	PES18C33AMC	PES18C33FPM12
PNP – NO / NC (2 outputs)	PES18C38FPC	PES18C38FMC	-	-	PES18C38FPM12
NPN – Normally Open (light on)	PES18C22FPC	PES18C22FMC	PES18C22APC	PES18C22AMC	PES18C22FPM12
NPN – Normally Closed (light off)	PES18C23FPC	PES18C23FMC	PES18C23APC	PES18C23AMC	PES18C23FPM12
NPN – NO / NC (2 outputs)	PES18C28FPC	PES18C28FMC	-	-	PES18C28FPM12
AC Normally Open (light on)	-	-	-	-	-
AC Normally Closed (light off)	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

#### Mating cables / connectors

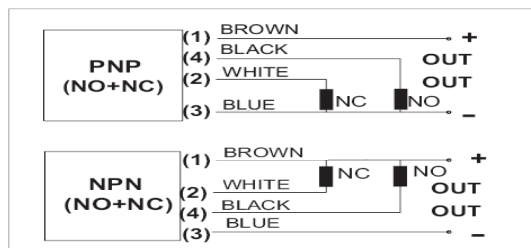
Form	M18 Plastic	M18 Metal	M18 Plastic	M18 Metal	M18 Plastic
Nominal Sensing Distance (Sn)	3000mm*	3000mm*	2 to 3000mm*	2 to 3000mm*	3000mm*
Housing Material	Plastic	Metal	Plastic	Metal	Plastic
Termination Type	2.0 Meter Cable	2.0 Meter Cable	2.0 Meter Cable	2.0 Meter Cable	M12 Connector
Min / Max Supply Voltage	10 to 30Vdc	10 to 30Vdc	10 to 30Vdc	10 to 30Vdc	10 to 30Vdc
Max. Load Current (Ir)	250mA	250mA	250mA	250mA	250mA
Max ripple factor (Vr)	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%
Voltage Drop (Ud)	≤ 2V @ 250mA	≤ 2V @ 250mA	≤ 2V @ 250mA	≤ 2V @ 250mA	≤ 2V @ 250mA
Power Consumption (Io)	<25mA				-
Switching Frequency (Hz)	150 Hz	150 Hz	150 Hz	150 Hz	150 Hz
Body Material (Plastic / Metal)	ABS / Nickel Plated Brass				
Emission	Pulsed IR 880nm				
Short Circuit Protection	Yes				
Reversed Polarity Protection	Yes				
Operating Temperature	-10 to +50 C (-25 ~ 70C Storage)				
IP Rating	IP65				
Lens Material	PMMA				

\* with 80mm diameter reflector (25550085) – otherwise, 2000mm maximum sensing distance

#### 3 Wire DC Wiring Diagram



#### 4 Wire DC Wiring Diagram

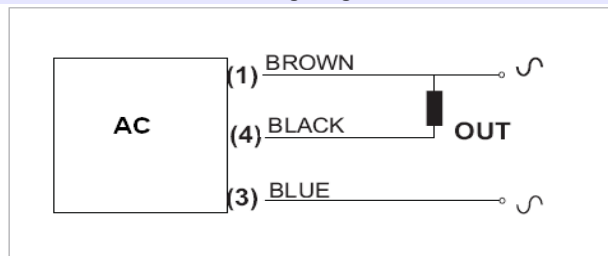




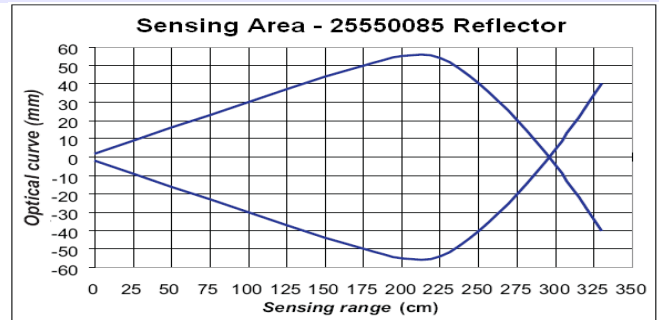
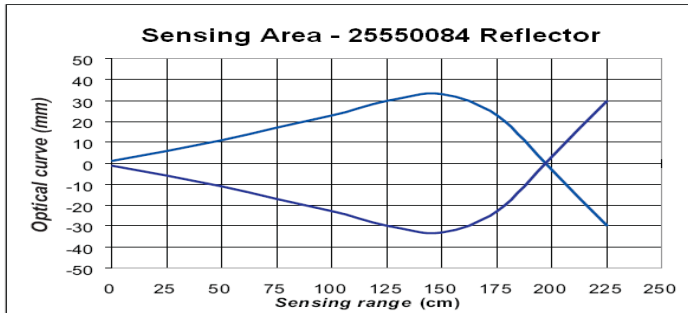
	Fixed Sensing	Adjustable Sensing	Fixed Sensing	Adjustable Sensing	Fixed Sensing	Adjustable Sensing	Adjustable Sensing
PNP - NO	PES18C32FMM12	PES18C32AMM12	-	-	-	-	-
PNP - NC	PES18C33FMM12	PES18C33AMM12	-	-	-	-	-
PNP - NO/NC	PES18C38FMM12	-	-	-	-	-	-
NPN - NO	PES18C22FMM12	PES18C22AMM12	-	-	-	-	-
NPN - NC	PES18C23FMM12	PES18C23AMM12	-	-	-	-	-
NPN - NO/NC	PES18C28FMM12	-	-	-	-	-	-
AC - NO	-	-	PES18R62FPC	PES18R62APC	PES18R62FPM12	PES18R62AMM12	PES18R62AMC
AC - NC	-	-	PES18R63FPC	PES18R63APC	PES18R63FPM12	PES18R63AMM12	PES18R63AMC
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
Mates							
Form	M18 Metal	M18 Metal	M18 Plastic	M18 Plastic	M18 Plastic	M18 Metal	M18 Metal
Sn	3000mm*	2 to 3000mm*	3000mm*	2 to 3000mm*	3000mm*	2 to 3000mm*	2 to 3000mm*
Housing	Metal	Metal	Plastic	Plastic	Plastic	Metal	Metal
Termination	2.0 Meter Cable	2.0 Meter Cable	2.0 Meter Cable	2.0 Meter Cable	M12 Connector	M12 Connector	2.0 Meter Cable
Supply Vdc	10 to 30Vdc	10 to 30Vdc	20 to 230Vac	20 to 230Vac	20 to 230Vac	20 to 230Vac	20 to 230Vac
Max Load	250mA	250mA	250mA	250mA	250mA	250mA	250mA
Max ripple	≤ 10%	≤ 10%	-	-	-	-	-
Ud ≤ 2V @ 250mA	≤ 2V @ 250mA	≤ 2V @ 250mA	<3V	<3V	<3V	<3V	<3V
Io	<25mA	<25mA	<4mA	<4mA	<4mA	<4mA	<4mA
Hz	150 Hz	150 Hz	25 Hz	25 Hz	25 Hz	25 Hz	25 Hz
Body Material	ABS / Nickel Plated Brass						
Emission	Pulsed IR 880nm						
Short Protection	Yes	Yes	-	-	-	-	-
Revs Polrty	Yes	Yes	-	-	-	-	-
Op Temp	-10 to +50 C (-25 ~ 70C Storage)						
IP Rating	IP65						
Lens Material	PMMA						

\* with 80mm diameter reflector (25550085) – otherwise, 2000mm maximum sensing distance

### AC Wiring Diagram



## Optical Diagram



Metal Body			Plastic Body		
<p><b>Fixed Sensing</b></p> <p>Sensor Face View      Cable Output View      90 Degree View</p>			<p><b>Fixed Sensing</b></p> <p>Sensor Face View      Cable Output View      90 Degree View</p>		
<p><b>Adjustable Sensing</b></p> <p>Sensor Face View      Cable Output View</p>			<p><b>Adjustable Sensing</b></p> <p>Sensor Face View      M12 Connector Output View</p>		
<p><b>Fixed Sensing</b></p> <p>Sensor Face View      M12 Connector Output View</p>			<p><b>Fixed Sensing</b></p> <p>Sensor Face View      M12 Connector Output View</p>		
<p><b>Adjustable Sensing</b></p> <p>Sensor Face View      M12 Connector Output View</p>			<p><b>Adjustable Sensing</b></p> <p>Sensor Face View      M12 Connector Output View</p>		