Reflex Sensor with Background Suppression





LASER

- High switching frequency
- Laser light
- Low current consumption < 15 mA
- Miniature design

Range80 mmAdjustable Range1880 mmSwitching Hysteresis< 10 %Light SourceLaser (red)Wavelength655 nmService Life (T = +25 °C)100000 hLaser Class (EN 60825-1)1Max. Ambient Light10000 LuxLight Spot Diametersee Table 1Electrical DataUSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)< 15 mASwitching Frequency1900 HzResponse Time263 µsTemperature Drift< 5 %		
Adjustable Range1880 mmSwitching Hysteresis<10 %Light SourceLaser (red)Wavelength655 nmService Life (T = +25 °C)100000 hLaser Class (EN 60825-1)1Max. Ambient Light10000 LuxLight Spot Diametersee Table 1Electrical DataSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)<15 mASwitching Frequency1900 HzResponse Time263 µsTemperature Drift<5 %Temperature Range-4060 °CSwitching Output Voltage Drop<2,5 VPNP Switching Output Voltage Drop<2,5 VPNP Switching Output Voltage DropyesQverload ProtectionyesProtection ClassIIIFDA Accession Number1120743-000Mechanical DataSetting MethodPotentiometerHousing MaterialPlasticFull EncapsulationyesDegree of ProtectionIP67Connection Diagram No.101Connection Diagram No.101Connection Equipment No.2	Optical Data	
Switching Hysteresis< 10 %Light SourceLaser (red)Wavelength655 nmService Life (T = +25 °C)100000 hLaser Class (EN 60825-1)1Max. Ambient Light10000 LuxLight Spot Diametersee Table 1Electrical DataSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Range	80 mm
Light SourceLaser (red)Light SourceLaser (red)Wavelength655 nmService Life (T = +25 °C)100000 hLaser Class (EN 60825-1)1Max. Ambient Light10000 LuxLight Spot Diametersee Table 1Electrical DataElectrical DataSwitching Frequency1900 HzResponse Time263 µsTemperature Drift<5 %	Adjustable Range	1880 mm
Wavelength655 nmService Life (T = +25 °C)100000 hLaser Class (EN 60825-1)1Max. Ambient Light10000 LuxLight Spot Diametersee Table 1Electrical Data30 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Switching Hysteresis	< 10 %
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Electrical DataSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Max. Ambient Light	10000 Lux
Supply Voltage1030 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Light Spot Diameter	see Table 1
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Response Time263 µsTemperature Drift< 5 %	Current Consumption (Ub = 24 V)	< 15 mA
Temperature Drift< 5 %Temperature Range-4060 °CSwitching Output Voltage Drop< 2,5 V	Switching Frequency	1900 Hz
Temperature Range-4060 °CSwitching Output Voltage Drop< 2,5 V	Response Time	263 <i>µ</i> s
Switching Output Voltage Drop< 2,5 VPNP Switching Output/Switching Current100 mAShort Circuit ProtectionyesReverse Polarity ProtectionyesOverload ProtectionyesProtection ClassIIIFDA Accession Number1120743-000Mechanical DataVerload ProtectionSetting MethodPotentiometerHousing MaterialPlasticFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinCable Length200 mmPNP NO/NC antivalentConnection Diagram No.101Control Panel No.K4Suitable Connection Equipment No.2	Temperature Drift	< 5 %
PNP Switching Output/Switching Current100 mAShort Circuit ProtectionyesReverse Polarity ProtectionyesOverload ProtectionyesProtection ClassIIIFDA Accession Number1120743-000Mechanical DataPotentiometerSetting MethodPotentiometerHousing MaterialPlasticFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinCable Length200 mmPNP NO/NC antivalent€Connection Diagram No.101Control Panel No.€Suitable Connection Equipment No.2	Temperature Range	-4060 °C
Short Circuit ProtectionyesReverse Polarity ProtectionyesOverload ProtectionyesProtection ClassIIIFDA Accession Number1120743-000Mechanical DataSetting MethodPotentiometerHousing MaterialPlasticFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinCable Length200 mmPNP NO/NC antivalentConnection Diagram No.101Control Panel No.Suitable Connection Equipment No.2	Switching Output Voltage Drop	< 2,5 V
Reverse Polarity ProtectionyesOverload ProtectionyesProtection ClassIIIFDA Accession Number1120743-000Mechanical Data1120743-000Setting MethodPotentiometerHousing MaterialPlasticFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinCable Length200 mmPNP NO/NC antivalent101Connection Diagram No.101Control Panel No.2	PNP Switching Output/Switching Current	100 mA
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Degree of Protection IP67 Connection M12 × 1; 4-pin Cable Length 200 mm PNP NO/NC antivalent Image: Connection Diagram No. Control Panel No. Image: Connection Equipment No. Suitable Connection Equipment No. 2	Housing Material	Plastic
Connection M12 × 1; 4-pin Cable Length 200 mm PNP NO/NC antivalent Image: Connection Diagram No. Control Panel No. Image: Connection Equipment No. Suitable Connection Equipment No. 2	Full Encapsulation	yes
Cable Length 200 mm PNP NO/NC antivalent Connection Diagram No. Control Panel No. K4 Suitable Connection Equipment No. 2	Degree of Protection	IP67
PNP NO/NC antivalent Image: Connection Diagram No. Control Panel No. K4 Suitable Connection Equipment No. 2	Connection	M12 × 1; 4-pin
Connection Diagram No. 101 Control Panel No. K4 Suitable Connection Equipment No. 2	Cable Length	200 mm
Control Panel No. K4 Suitable Connection Equipment No. 2	PNP NO/NC antivalent	
Control Panel No. K4 Suitable Connection Equipment No. 2	Connection Diagram No.	101
Suitable Connection Equipment No. 2		K4
	Suitable Connection Equipment No.	
		400

* Temperature range with permanently installed cable, bending radius: > 20 mm

These sensors detect distance by measuring angles. They are particularly good at recognizing objects in front of any background. The color, shape and surface characteristics of the object have practically no influence on sensor switching performance.



Complementary Products PNP-NPN Converter BG7V1P-N-2M

Photoelectronic Sensors







Ctrl. Panel

K4

05 = Switching Distance Adjuster

30 = Switching Status/Contamination Warning



Table 1

Detection Range	40 mm	80 mm
Light Spot Diameter	1,5 mm	1 mm

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission



dSr = Switching Distance Change

grey 18 % remission

