

Technical Data and Specifications

Foreground/Background Suppression Models

Description	Specification
Input voltage	10–30 Vdc
Ripple	2 Vpp max.
Outputs	PNP, NO or NC; 30 Vdc max.
Output current	100 mA max. (short-circuit protected)
Output saturation voltage	< 2V max.
Response time	1 ms
Switching frequency	500 Hz
Indicator LEDs	For E75-PPA: Output LED (red), stability LED (green) For E75-PP1: Output LED (yellow), stability LED (green)
Gain adjustment	For E75-PPA: Adjustment screw (except for E75-PPA010P) For E75-PP1: Six-turn adjustment pot with numerical indicator
Operating temperature	–25° to 55°C (–13° to 131°F)
Storage temperature	–25° to 70°C (–13° to 158°F)
Electrical protection	Class 2
Sensing distance	Varies by model, see model selection table on Page V8-T5-37
Beam type	All models except E75-PPA010P-M12: Infrared LED 880 nm E75-PPA010P-M12: Red LED
Vibration	Amplitude: 0.5 mm Frequency: 10–55 Hz for every axis (EN60068-2-6)
Shock resistance	Half sine, 30 g _n , 11 ms, 3 axes
Housing material	ABS
Lens material	PMMA
Enclosure ratings	For E75-PPA_: IP65 For E75-PP1_: IP67
Connections	M12 4-pin micro-connector
Weight	40g max.

Distance Sensing Models—Long Range

Description	For E75-DST4_ (Long-Range Distance Sensor) Specification
Input voltage	16–28 Vdc
Ripple	2 Vpp max.
Current consumption (Output current excluded)	120 mA max.
Outputs	Analog, 0–10V 2 PNP outputs 30 Vdc max.
Output switching mode	Light operate (output on when target present)
Output current	100 mA max. (short-circuit protected)
Output saturation voltage	< 2V max.
Response time	12 ms
Switching frequency	42 Hz
Indicator LEDs	2 output LEDs (yellow) Power/alarm LED (green)
Distance adjustment	Dual buttons
Warm-up	15 min
Operating temperature	0° to 50°C (32° to 122°F)
Storage temperature	–20° to 70°C (–4° to 158°F)
Measurement range	0.3–4.0m (1.0–13.1 ft)
Linearity	< 1% (24 Vdc, 25°C, with 90% white target)
Repeatability	± 4 mm
Hysteresis	20 mm
Temperature drift	< 1 mm per °C
Beam type	Red laser (665 nm), Class 2 EN 60825-1 (1994) A1 (2002) A2 (2001)
Vibration	Amplitude: 0.5 mm Frequency: 10–55 Hz for every axis (EN60068-2-6)
Shock resistance	Half sine, 30 g _n , 11 ms, 3 axes
Material of construction	ABS
Lens material	PMMA
Enclosure ratings	IP67
Connections	M12 5-pin micro-connector
Weight	92g max.

Color Sensing Models

Description	Specification
Input voltage	10–30 Vdc
Ripple	2V max.
Current consumption (Output current excluded)	60 mA max.
Outputs	3 PNP outputs 30 Vdc max. (short-circuit protected)
Output switching mode	100 mA max.
Output saturation voltage	< 2V
Response time	650 μ s
Switching frequency	770 Hz
Indicator LEDs	4-digit display (green), Output LED (yellow), 3 status LEDs (green)
Sensing adjustment	SET, SEL buttons
Operating temperature	–10° to 55°C (14° to 131°F)
Storage temperature	–20° to 70°C (–4° to 158°F)
Protection	Class 2
Sensing distance	20 mm (0.79 in)
Beam spot dimension	Ø 4 mm
Beam type	White LED (400–700 nm)
Vibration	Amplitude: 0.5 mm Frequency: 10–55 Hz for every axis (EN60068-2-6)
Shock resistance	Half sine, 30 g _n , 11 ms, 3 axes
Material of construction	ABS thermoplastic
Lens material	Glass window and lens
Mechanical protection	IP67
Connections	M12 8-pin micro-connector

Contrast Sensing Models

Description	Specification
Input voltage	10–30 Vdc
Ripple	2V max.
Current consumption (Output current excluded)	25 mA max.
Outputs	PNP or NPN by model, NO and NC, 30 Vcc max. (short-circuit protected)
Output current	100 mA max.
Output saturation voltage	< 2V
Response time	185 μ s
Switching frequency	2.7 kHz
Indicator LEDs	Output LED (yellow) Ready/error LED (green/red)
Data retention	EEPROM non-volatile memory
Operating mode	Light operate on NO output Dark operate on NC output
Operating temperature	–10° to 55°C (14° to 131°F)
Storage temperature	–20° to 70°C (–4° to 158°F)
Operating distance	10 mm \pm 2 mm
Beam type	White LED (400–700 nm)
Vibration	Amplitude: 0.5 mm Frequency: 10–55 Hz for every axis (EN60068-2-6)
Shock resistance	Half sine, 30 g _n , 11 ms, 3 axes
Material of construction	PBT
Lens material	PMMA plastic
Enclosure ratings	IP67
Connections	M12 4-pin micro-connector cable
Weight	25g max.

Luminescence Sensing Models

Description	Specification
Input voltage	10–30 Vdc
Ripple	2V max.
Current consumption (Output current excluded)	25 mA max.
Outputs	PNP or NPN by model, NO and NC, 30 Vcc max. (short-circuit protected)
Output current	100 mA max.
Output saturation voltage	< 2V
Response time	1.1 ms
Switching frequency	445 Hz
Indicator LEDs	Output LED (yellow) Relay/error LED (green/red)
Data retention	EEPROM non-volatile memory
Operating mode	Light operate on NO output Dark operate on NC output
Operating temperature	–10° to 55°C (14° to 131°F)
Storage temperature	–10° to 70°C (–4° to 158°F)
Sensing distance	8–20 mm (best signal at 10 mm)
Beam type	White LED (400–700 nm)
Vibration	Amplitude: 0.5 mm Frequency: 10–55 Hz for every axis (EN60068-2-6)
Shock resistance	Half sine, 30 g _n , 11 ms, 3 axes
Material of construction	PBT
Lens material	PMMA plastic
Enclosure ratings	IP67
Connections	M12 4-pin micro-connector cable
Weight	25g max.