

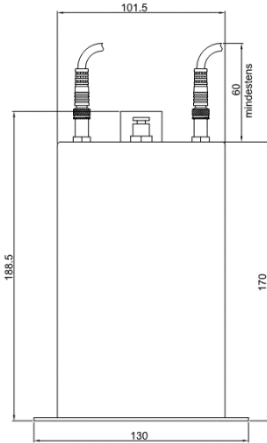
# Datenblatt CIELab Color Checker PR0086

DB PR0086 V2-1 • Ausgabe V2-1 ersetzt Ausgabe V2-0 - Stand 10/2017 - Änderungen vorbehalten

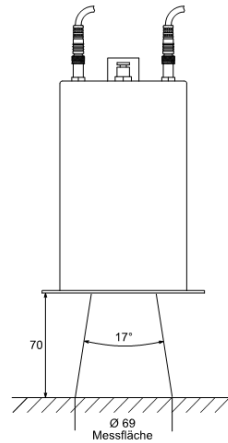
**PR0086-S Artikel-Nr.: 50157**  
**PR0086-S-70 Artikel-Nr.: 50151**  
**PR0086-S-70-15 Artikel-Nr.: 50152**



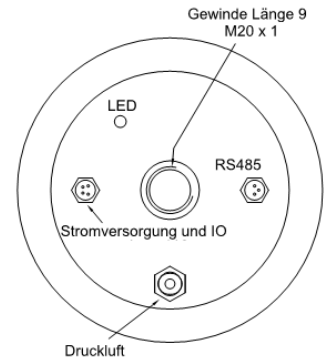
Abmessungen Sensorelektronik



Arbeitsabstand und Messfläche

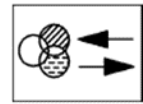


Anschlüsse



## Sicherheits- und Warnhinweise

Diese optoelektronischen Sensoren dürfen nicht in Anwendungen eingesetzt werden, in denen die Sicherheit von Personen von der Gerätefunktion abhängt (kein Sicherheitsbauteil gem. EU-Maschinenrichtlinie). Vor Inbetriebnahme ist die Betriebsanleitung sorgfältig zu lesen. Die Montage oder der Austausch des Moduls darf nur durch ausgebildetes, qualifiziertes Personal erfolgen!



LED-Licht - Nicht in den Strahl Blicken!  
 Freie Gruppe nach IEC 62471-2006-07

Senkrechte Montage

15° Montage

Arbeitsabstand Messfläche

70mm	69mm
100mm	78mm
200mm	109mm
300mm	139mm
400mm	169mm
500mm	200mm

## Technische Daten

Stromversorgung	24VDC ± 10%, 0.1A
Eingang	
Schaltpegel Ein	≥ 15V
Schaltpegel Aus	≤ 5V
Eingangsstrom bei 24V	9mA
Ausgang	PNP, max. 0.2A, Sättigung < 1.6V
Absolute Genauigkeit	~1.6 dE (im Durchschnitt)
Relative Genauigkeit	<±0.5 dE (zwischen den Systemen)
Optimaler Arbeitsabstand	70mm (von der Unterkante)
Messfläche	70mm bei 70mm Arbeitsabstand
Messfrequenz	~10 Hz
Beleuchtung	Integrierte LEDs
Messverfahren	Differenzmessung
Ausgabe	CIELab, Chromaticity
Schnittstelle	RS485, 2 Draht
Temperaturkompensation	10° bis 55° C
Betriebstemperatur	10° bis 60° C
Lagertemperatur	-30° bis 70° C
Betriebsfeuchtigkeit	35% bis 85% relative Feuchtigkeit
Gehäuse	Edelstahl lackiert
Montage	Gewinde M20x1
Schutzklasse	IP 24
Staubschutz	Druckluftanschluss 4mm
Gewicht	ca. 1100 g

## Anschlussbelegung M8 Stecker Stromversorgung und IO

1 Braun	+24 V DC
2 Weiß	Eingang
3 Blau	0 V
4 Schwarz	Ausgang



## Anschlussbelegung M8 Stecker RS485

1 Braun	RS485(-)
3 Blau	0 V
4 Schwarz	RS485(+)



Farben abhängig von der verwendeten Leitung


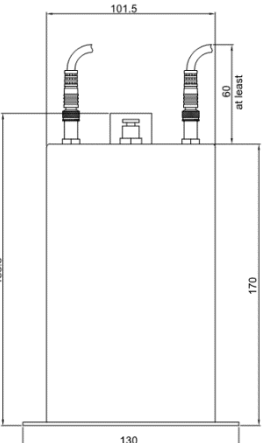
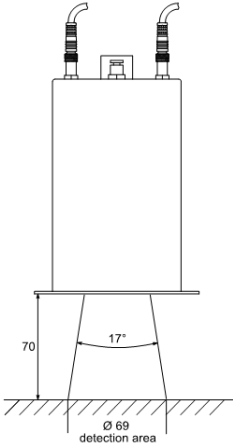
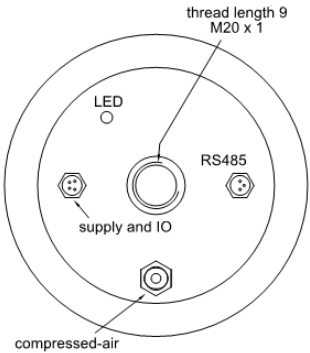
Farben abhängig von der verwendeten Leitung

## LED Anzeige

Status	Beschreibung
Grün	Gerät betriebsbereit
Grün/Rot blinkend	Serielle Kommunikation aktiv

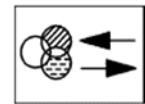
## Data sheet CIELab Color Checker PR0086

DB PR0086 V2-1 • Version V2-1 replaces Version V2-0 - State 10/2017 - Subject to change

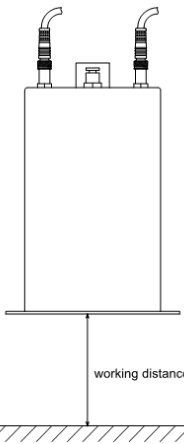
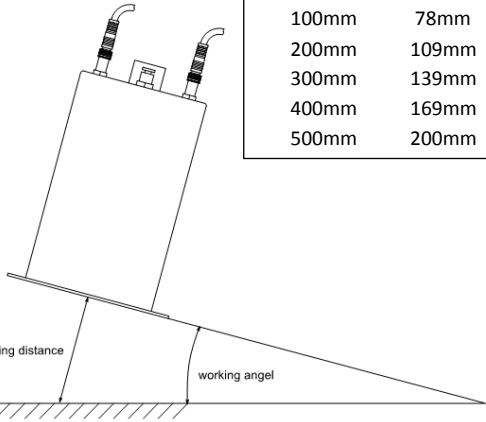


<p><b>PR0086-S</b> Article-No.: 50157  <b>PR0086-S-70</b> Article-No.: 50151  <b>PR0086-S-70-15</b> Article-No.: 50152</p> 	<p><b>Dimension Sensor Electronic</b></p> 	<p><b>Working distance and detection area</b></p> 	<p><b>Connections</b></p> 
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### Safety and warning instructions

These photoelectric sensors may not be used in applications where personal safety depends on proper function of the devices (not safety designed per EU machine guideline). Read these operating instructions carefully before putting the device into service. The module may only be installed or replaced by skilled staff!



LED light - Do not look into the beam!  
Free Group according to IEC 62471-2006-07

<p><b>Right angle mounting</b></p> 	<p><b>15° mounting</b></p> 	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Working distance</th> <th>Detection Area</th> </tr> <tr> <td>70mm</td> <td>69mm</td> </tr> <tr> <td>100mm</td> <td>78mm</td> </tr> <tr> <td>200mm</td> <td>109mm</td> </tr> <tr> <td>300mm</td> <td>139mm</td> </tr> <tr> <td>400mm</td> <td>169mm</td> </tr> <tr> <td>500mm</td> <td>200mm</td> </tr> </table>	Working distance	Detection Area	70mm	69mm	100mm	78mm	200mm	109mm	300mm	139mm	400mm	169mm	500mm	200mm	<p><b>Technical Data</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Power supply</td> <td>24VDC ± 10%, 0.1A</td> </tr> <tr> <td>Input</td> <td></td> </tr> <tr> <td>  Switch level on</td> <td>≥ 15V</td> </tr> <tr> <td>  Switch level off</td> <td>≤ 5V</td> </tr> <tr> <td>Input current at 24V</td> <td>9mA</td> </tr> <tr> <td>Output</td> <td>PNP, 0.2A max., saturation &lt; 1.6V</td> </tr> <tr> <td>Absolute accuracy</td> <td>~1.6 dE (average value)</td> </tr> <tr> <td>Relative accuracy</td> <td>&lt;±0.5 dE (inter instrument)</td> </tr> <tr> <td>Optimum working distance</td> <td>70mm (from the bottom)</td> </tr> <tr> <td>Detection area</td> <td>70mm at 70mm working distance</td> </tr> <tr> <td>Sample rate</td> <td>~10 Hz</td> </tr> <tr> <td>Lighting</td> <td>Integrated LEDs</td> </tr> <tr> <td>Measuring method</td> <td>Differential measurement</td> </tr> <tr> <td>Result</td> <td>CIELab, Chromaticity</td> </tr> <tr> <td>Interface</td> <td>RS485, 2 wire</td> </tr> <tr> <td>Temperature compensation</td> <td>10° bis 55° C</td> </tr> <tr> <td>Operating temperature</td> <td>10° bis 60° C</td> </tr> <tr> <td>Storage temperature</td> <td>-30° bis 70° C</td> </tr> <tr> <td>Operating humidity</td> <td>35% bis 85% relative humidity</td> </tr> <tr> <td>Material</td> <td>Stainless steel, coated</td> </tr> <tr> <td>Mounting</td> <td>Thread M20x1</td> </tr> <tr> <td>Protection</td> <td>IP 24</td> </tr> <tr> <td>Dust protection</td> <td>Compressed-air connector 4mm</td> </tr> <tr> <td>Weight</td> <td>approx. 1100 g</td> </tr> </table>	Power supply	24VDC ± 10%, 0.1A	Input		Switch level on	≥ 15V	Switch level off	≤ 5V	Input current at 24V	9mA	Output	PNP, 0.2A max., saturation < 1.6V	Absolute accuracy	~1.6 dE (average value)	Relative accuracy	<±0.5 dE (inter instrument)	Optimum working distance	70mm (from the bottom)	Detection area	70mm at 70mm working distance	Sample rate	~10 Hz	Lighting	Integrated LEDs	Measuring method	Differential measurement	Result	CIELab, Chromaticity	Interface	RS485, 2 wire	Temperature compensation	10° bis 55° C	Operating temperature	10° bis 60° C	Storage temperature	-30° bis 70° C	Operating humidity	35% bis 85% relative humidity	Material	Stainless steel, coated	Mounting	Thread M20x1	Protection	IP 24	Dust protection	Compressed-air connector 4mm	Weight	approx. 1100 g
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