

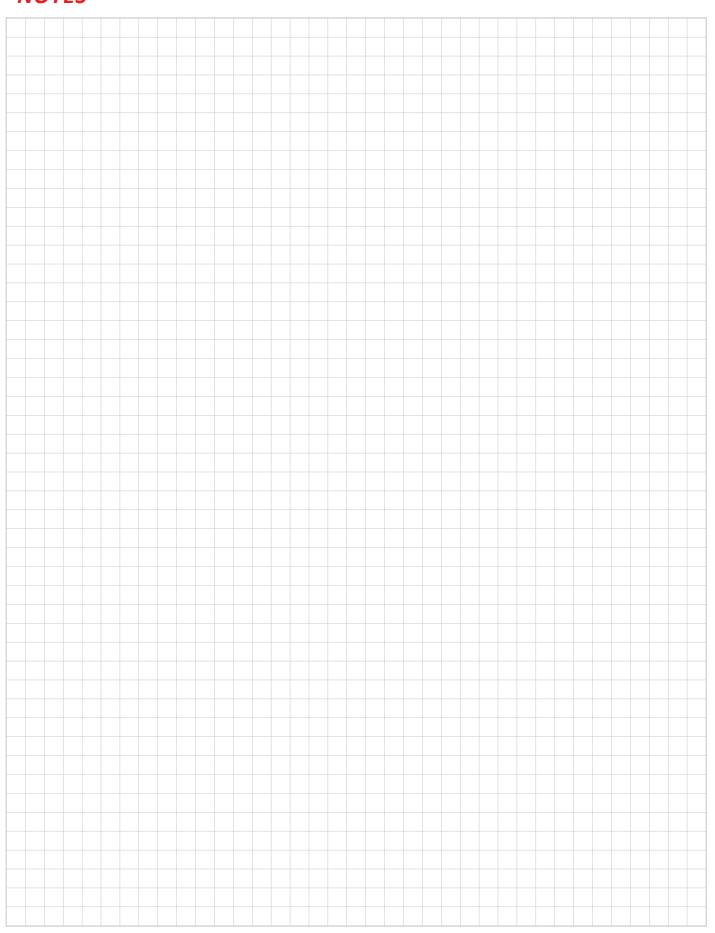


- norm version
- ► fiber optics version





NOTES





COLOR SENSORS 4300

dimensions M34 x 1.5mm

measuring range diffuse light 10 ... 60mm

transmitted light dependent on fiber optics

- √ color and grayscale detection
- √ extremely high switching frequency 30kHz
- √ suitable for industrial use
- ✓ switchable brightness control
- √ temperature-compensated
- √ several TEACH options (button, PLC or PC)
- √ various algorithms can be activated
- √ color diagram display under Windows
- √ fiber optic versions can also be used in explosion-hazardous
 areas

store up to 31 reference colors true color detection











description

ipf color sensors make it possible to distinguish between very similar shades of color with a high level of accuracy. With the devices of this series, we offer a family of color sensors specifically designed for True Color detection ("human color reception") and a high switching frequency.

With the help of pulsed white-light LEDs, a light spot is projected onto the surface that is to be controlled. Part of the light reflected by the measurement object is now directed to a color-sensitive detector element by means of receiving optics. The received light is thereby split according to the 3-color-range method (red, green, blue) as well as by intensity. The devices can be operated both in alternating-light mode with high insensitivity to ambient light as well as in constant-light mode with high scanning frequency (30 kHz) with integrated or external light source.

Illumination can be switched off via the Windows software included in the scope of delivery, thereby making possible the color and brightness inspection of self-luminous objects, such as LEDs, vehicle tail lights, halogen lamps or even fluorescent lamps. Devices with UV light source enable the detection and differentiation of fluorescent colors; the use of polarizing filters or diffuse illumination variants allows highly glossy surfaces to be detected.

Up to 31 colors can be output via the 5 digital outputs.

With the help of the various front ends, operating distances from nearly 0 to 500 mm can be achieved with detection ranges from \emptyset 0.5mm to approx. \emptyset 100mm. The use of fiber optic versions allows scans to be performed in explosion-hazardous areas.

The color sensors are configured via the serial interface (RS232) with converters for USB or Ethernet under Windows®. Up to 31 colors can thereby be taught and stored in the sensor with the option to configure individual evaluation tolerances for each of these colors.

application examples

- monitoring the cover color of installation parts
- color inspection of painted components, imitation leathers, plastics and textiles in car interiors
- ejection of faulty parts based on color markings
- material sorting using color markings
- monitoring the sequence of connector strands
- trigger sensor in the printing industry (print-mark detection)
- detection of the color of inserts in production systems
- color differentiation of glass panes





version	OF340140	OF340180
	diffuse	fiber optics
ensing range	10 60mm	dependent on fiber optics
	M34x1,5 Ø34	Ø52 M18x1 M34x1 32
FECHNICAL DATA	10 60mm	dependent on fiber optics
ensing range		
utput signal	5 x pnp/npn, no/nc	5 x pnp/npn, no/nc
utput signal	5 x pnp/npn, no/nc Ø 20mm at 40 mm distance	5 x pnp/npn, no/nc -
utput signal ght spot size		5 x pnp/npn, no/nc - 24V DC ±10%
utput signal ght spot size perating voltage	Ø 20mm at 40 mm distance	-
utput signal ght spot size perating voltage urrent consumption (w/o load)	Ø 20mm at 40 mm distance 24V DC ±10%	- 24V DC ±10%
utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load)	Ø 20mm at 40 mm distance 24V DC ±10% 320mA	- 24V DC ±10% 320mA
utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA	- 24V DC ±10% 320mA ≤ 100mA
putput signal ght spot size perating voltage urrent consumption (w/o load) putput current (max. load) witching frequency ransmitting element (pulsed)	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz
putput signal ght spot size perating voltage urrent consumption (w/o load) putput current (max. load) witching frequency ransmitting element (pulsed) lisplay (signal)	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED
utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency ransmitting element (pulsed) isplay (signal) etting	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED
utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency ransmitting element (pulsed) isplay (signal) etting hort-circuit protection	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software
putput signal ght spot size perating voltage urrent consumption (w/o load) putput current (max. load) witching frequency ransmitting element (pulsed) lisplay (signal) etting hort-circuit protection everse polarity protection	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software +	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software +
putput signal ght spot size perating voltage urrent consumption (w/o load) putput current (max. load) witching frequency ransmitting element (pulsed) display (signal) etting hort-circuit protection everse polarity protection pulse stretching	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms
putput signal ght spot size perating voltage current consumption (w/o load) putput current (max. load) witching frequency ransmitting element (pulsed) display (signal) etting hort-circuit protection everse polarity protection pulse stretching	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5
putput signal ght spot size perating voltage urrent consumption (w/o load) putput current (max. load) witching frequency ransmitting element (pulsed) lisplay (signal) etting hort-circuit protection everse polarity protection pulse stretching limensions lousing material	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5 aluminum, anodized	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5 aluminum, anodized
utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency ransmitting element (pulsed) iisplay (signal) etting hort-circuit protection everse polarity protection ulse stretching imensions ousing material perating temperature	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5 aluminum, anodized -20 +55°C	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5 aluminum, anodized -20 +55°C
perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency ransmitting element (pulsed) isplay (signal) etting hort-circuit protection everse polarity protection ulse stretching imensions ousing material perating temperature legree of protection (EN 60529)	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5 aluminum, anodized -20 +55°C IP64	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5 aluminum, anodized -20 +55°C IP64
putput signal ght spot size perating voltage urrent consumption (w/o load) putput current (max. load) witching frequency ransmitting element (pulsed) display (signal) etting hort-circuit protection everse polarity protection pulse stretching dimensions dousing material eperating temperature legree of protection (EN 60529) onnection	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5 aluminum, anodized -20 +55°C IP64 PLC: 8-pin flange socket	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5 aluminum, anodized -20 +55°C IP64 PLC: 8-pin flange socket
sensing range putput signal ight spot size perating voltage current consumption (w/o load) putput current (max. load) switching frequency cransmitting element (pulsed) display (signal) setting short-circuit protection reverse polarity protection pulse stretching dimensions mousing material perating temperature degree of protection (EN 60529) connection connection accessories interface	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5 aluminum, anodized -20 +55°C IP64 PLC: 8-pin flange socket 2m PLC cable e.g. VK207B45 RS232	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5 aluminum, anodized -20 +55°C IP64 PLC: 8-pin flange socket 2m PLC cable e.g. VK207B45 RS232
poutput signal ight spot size operating voltage current consumption (w/o load) output current (max. load) switching frequency cransmitting element (pulsed) display (signal) setting short-circuit protection reverse polarity protection oulse stretching dimensions nousing material operating temperature degree of protection (EN 60529) connection connection accessories	Ø 20mm at 40 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5 aluminum, anodized -20 +55°C IP64 PLC: 8-pin flange socket 2m PLC cable e.g. VK207B45	- 24V DC ±10% 320mA ≤ 100mA ≤ 30kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms M34x1.5 aluminum, anodized -20 +55°C IP64 PLC: 8-pin flange socket 2m PLC cable e.g. VK207B45



COLOR SENSORS 4222

dimensions 65 x 65 x 42mm

measuring range diffuse light 10 ... 60mm

transmitted light dependent on fiber optics



store up to 31 reference colors true color detection











description

ipf color sensors make it possible to distinguish between very similar shades of color with a high level of accuracy. With the devices of this series, we offer a family of color sensors specifically designed for True Color detection ("human color reception") and a high switching frequency.

With the help of pulsed white-light LEDs, a light spot is projected onto the surface that is to be controlled. Part of the light reflected by the measurement object is now directed to a color-sensitive detector element by means of receiving optics. The received light is thereby split according to the 3-color-range method (red, green, blue) as well as by intensity. The devices can be operated both in alternating-light mode with high insensitivity to ambient light as well as in constant-light mode with high scanning frequency (30 kHz) with integrated or external light source.

Illumination can be switched off via the Windows software included in the scope of delivery, thereby making possible the color and brightness inspection of self-luminous objects, such as LEDs, vehicle tail lights, halogen lamps or even fluorescent lamps. Devices with UV light source enable the detection and differentiation of fluorescent colors; the use of polarizing filters or diffuse illumination variants allows highly glossy surfaces to be detected.

Up to 31 colors can be output via the 5 digital outputs.

With the help of the various front ends, operating dist

With the help of the various front ends, operating distances from nearly 0 to 500 mm can be achieved with detection ranges from \emptyset 0.5mm to approx. \emptyset 100mm. The use of fiber optic versions allows scans to be performed in explosion-hazardous areas.

The color sensors are configured via the serial interface (RS232) with converters for USB or Ethernet under Windows®. Up to 31 colors can thereby be taught and stored in the sensor with the option to configure individual evaluation tolerances for each of these colors.

application examples

- monitoring the cover color of installation parts
- color inspection of painted components, imitation leathers, plastics and textiles in car interiors
- ejection of faulty parts based on color markings
- material sorting using color markings
- monitoring the sequence of connector strands
- trigger sensor in the printing industry (print-mark detection)
- detection of the color of inserts in production systems
- color differentiation of glass panes





article-no.	OF650140	OF650180
version	diffuse	fiber optics
sensing range	10 60mm	dependent on fiber optics
	Ø34 Ø34 Ø34	MIBX1
	57 59 65	57 59 65
ensing range	10 60mm	dependent on fiber optics
ensing range utput signal	5 x pnp/npn, no/nc	dependent on fiber optics 5 x pnp/npn, no/nc
ensing range utput signal		
ensing range utput signal ght spot size	5 x pnp/npn, no/nc	
ensing range utput signal ght spot size perating voltage	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance	5 x pnp/npn, no/nc -
ensing range utput signal ght spot size perating voltage urrent consumption (w/o load)	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10%	5 x pnp/npn, no/nc - 24V DC ±10%
ensing range utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load)	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA	5 x pnp/npn, no/nc - 24V DC ±10% 320mA
ensing range utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA
ensing range putput signal ight spot size operating voltage current consumption (w/o load) output current (max. load) witching frequency ransmitting element (pulsed)	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED
ensing range putput signal ight spot size operating voltage current consumption (w/o load) putput current (max. load) witching frequency ransmitting element (pulsed)	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz
ensing range utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency ransmitting element (pulsed) isplay (signal) etting	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED
ensing range utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency ransmitting element (pulsed) isplay (signal) etting nort-circuit protection	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software
ensing range output signal ght spot size perating voltage urrent consumption (w/o load) output current (max. load) witching frequency ransmitting element (pulsed) isplay (signal) etting hort-circuit protection everse polarity protection	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software +	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software +
ensing range putput signal ght spot size perating voltage urrent consumption (w/o load) putput current (max. load) witching frequency ransmitting element (pulsed) lisplay (signal) etting hort-circuit protection everse polarity protection pulse stretching	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms
ensing range utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency ransmitting element (pulsed) iisplay (signal) etting hort-circuit protection everse polarity protection ulse stretching imensions	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm
ensing range utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency ransmitting element (pulsed) isplay (signal) etting nort-circuit protection everse polarity protection ulse stretching imensions ousing material	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm aluminum, anodized	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm aluminum, anodized
ensing range utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency ansmitting element (pulsed) splay (signal) etting nort-circuit protection everse polarity protection ulse stretching mensions pusing material perating temperature	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm aluminum, anodized -20 +55°C	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm aluminum, anodized -20 +55°C
ensing range utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency ansmitting element (pulsed) isplay (signal) etting nort-circuit protection everse polarity protection ulse stretching imensions ousing material perating temperature egree of protection (EN 60529)	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm aluminum, anodized -20 +55°C IP54	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm aluminum, anodized -20 +55°C IP54
ensing range utput signal ght spot size perating voltage urrent consumption (w/o load) utput current (max. load) witching frequency ransmitting element (pulsed) isplay (signal) etting hort-circuit protection everse polarity protection ulse stretching imensions ousing material perating temperature egree of protection (EN 60529) onnection	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm aluminum, anodized -20 +55°C IP54 PLC: 8-pin flange socket	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm aluminum, anodized -20 +55°C IP54 PLC: 8-pin flange socket
ensing range putput signal ght spot size perating voltage urrent consumption (w/o load) putput current (max. load) witching frequency ransmitting element (pulsed) lisplay (signal) etting hort-circuit protection everse polarity protection pulse stretching limensions pousing material eperating temperature legree of protection (EN 60529) onnection onnection accessories	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + + 0 100ms 65x65x42mm aluminum, anodized -20 +55°C IP54 PLC: 8-pin flange socket 2m PLC cable e.g. VK207B45	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm aluminum, anodized -20 +55°C IP54 PLC: 8-pin flange socket 2m PLC cable e.g. VK207B45
rechnical data sensing range putput signal sight spot size sperating voltage current consumption (w/o load) soutput current (max. load) switching frequency stransmitting element (pulsed) display (signal) setting short-circuit protection severse polarity protection soulse stretching dimensions shousing material sperating temperature degree of protection (EN 60529) connection connection accessories interface	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm aluminum, anodized -20 +55°C IP54 PLC: 8-pin flange socket 2m PLC cable e.g. VK207B45 RS232	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm aluminum, anodized -20 +55°C IP54 PLC: 8-pin flange socket 2m PLC cable e.g. VK207B45 RS232
ensing range putput signal ght spot size perating voltage urrent consumption (w/o load) putput current (max. load) witching frequency ransmitting element (pulsed) lisplay (signal) etting hort-circuit protection everse polarity protection pulse stretching limensions pousing material eperating temperature legree of protection (EN 60529) onnection onnection accessories	5 x pnp/npn, no/nc Ø 20mm at 200 mm distance 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + + 0 100ms 65x65x42mm aluminum, anodized -20 +55°C IP54 PLC: 8-pin flange socket 2m PLC cable e.g. VK207B45	5 x pnp/npn, no/nc - 24V DC ±10% 320mA ≤ 100mA ≤ 32kHz white light LED 5x yellow LED teach-in: button + input + software + + 0 100ms 65x65x42mm aluminum, anodized -20 +55°C IP54 PLC: 8-pin flange socket 2m PLC cable e.g. VK207B45



connection

PLC connection cable

pin:	wire color	assignment:
1	white	GND (0V)
2	brown	12 30V DC
3	green	input
4	yellow	switching output 0
5	gray	switching output 1
6	pink	switching output 2
7	blue	switching output 3
8	red	switching output 4

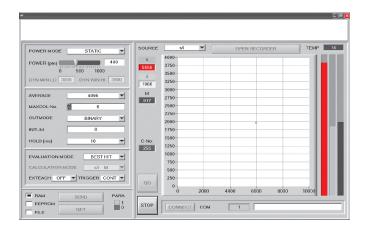
visualization

With the help of 5 yellow LEDs, the number of the detected color is displayed on the housing and simultaneously output as 5-bit binary information at digital outputs 0 to 4.

The Windows user interface simplifies the teach-in process on the sensor and supports the operator when making adjustments to and during the initial setup of the color sensor. Various evaluation processes can easily be selected for the color evaluation.

The color value is displayed in graphical form with the help of a color triangle as well as in the alphanumerical output fields.

The current raw data (red, green, blue) from the color detector are displayed in a bar graph.



connection accessories

PLC connection cable

article no.	description
VK207B41	connection cable 2m, 8-pin, angular
VK207B45	connection cable 2m, 8-pin, straight
VK507B41	connection cable 5m, 8-pin, angular
VK507B45	connection cable 5m, 8-pin, straight
VKA07B45	connection cable 10m, 8-pin, straight
VKB07B41	connection cable 20m, 8-polig, angular
VKBE7B45	connection cable 25m, 8-polig, straight

connection accessories

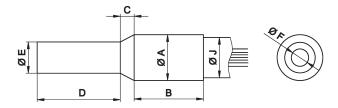
PC connection cable

article no.	description
VK207U40	connection cable 2m, 5-pin, angular
VK207U44	connection cable 2m, 5-pin, straight
VK507U40	connection cable 5m, 5-pin, angular
VK507U44	connection cable 5m, 5-pin, straight





fiber optics versions		
version	fiber optics, dif. reflection sensor	
article-no.	LT060180	
light beam (angle of beam spread)	22°	
version	fiber optics, dif. reflection sensor	fiber optics, dif. reflection sensor
article-no.	LT060181	LT120181
light beam (angle of beam spread)	67°	67°



TECHNICAL DATA

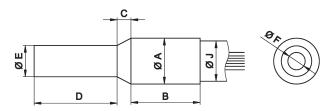
standard lengths	600mm	1200mm
fiber bundle diameter F	1.5mm	1.5mm
material (outer jacket)	silicone-metal sheath	silicone-metal sheath
end sleeve	stainl. steel	stainl. steel
diameter A	6.6mm	6.6mm
dimension B	8mm	8mm
dimension C	2mm	2mm
dimension D	11mm	11mm
diameter E	2.5mm	2.5mm
diameter J	4.4mm	4.4mm
bending radius	4 x dimension J	4 x dimension J





COLOR SENSORS 1200

version	fiber optics, dif. reflection sensor	fiber optics, dif. reflection sensor
article no.	LT060380	LT120380
light beam (angle of beam spread)	22°	22°
version	fiber optics, dif. reflection sensor	fiber optics, dif. reflection sensor
article no.	LT060381	LT120381
light beam (angle of beam spread)	67°	67°



TECHNICAL DATA

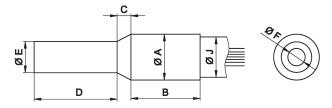
TECHNICAE DATA		
standard lenghths	600mm	1200mm
fiber bundle diameter F	2.5mm	2.5mm
material (outer jacket)	silicon metal sheath	silicon metal sheath
end sleeve	VA	VA
diameter A	6.6mm	6.6mm
dimension B	10mm	10mm
dimensionC	2mm	2mm
dimension D	12mm	12mm
diameter E	4.5mm	4.5mm
diameter J	5.8mm	5.8mm
bending radius	4 x dimenson J	4 x dimension J







version	fiber optics, through-beam sensors	fiber optics, through-beam sensors
article-no.	LS060380	LS120380
light beam (angle of beam spread)	22°	22°
version	fiber optics, through-beam sensors	fiber optics, through-beam sensors
article-no.	LS060381	LS120381
light beam (angle of beam spread)	67°	67°



TECHNICAL DATA

standard lengths	600mm	1200mm
fiber bundle diameter F	2.5mm	2.5mm
material (outer jacket)	silicone-metal sheath	silicone-metal sheath
end sleeve	stainl. steel	stainl. steel
diameter A	6.6mm	6.6mm
dimension B	10mm	10mm
dimension C	2mm	2mm
dimension D	12mm	12mm
diameter E	4.5mm	4.5mm
diameter J	5.8mm	5.8mm
bending radius	4 x dimension J	4 x dimension J

^{*} smallest detectable object



COLOR SENSORS 1200

operating range article no.	60 120mm AL000039	20 30mm AL000042
version	11mm spot	6mm spot
version	11mm spot	onini spot
		()() (±
	ППП	
		40.5
	50	
		$\lceil \rceil \rceil$
	M4 CC	
	34 05	\ \ M4 😌
	21	27.5
	\	14 - 2
	14°	28°
	\	25.5
		\
	V .	V
TECHNICAL DATA		
light spot size	11mm at 80mm distance	6mm at 25mm distance
operating range	60 120mm	20 30mm
material (housing)	aluminum	aluminum
material (optics)	glass, scratch resistant	glass, scratch resistant
comment	for fiber optic through-beam sensors	for fiber optic through-beam sensors
operating range	20 65mm	
article no.	AL000045	
version	4.5mm spot	
	51 →	
		4
	M18X1	
TECHNICAL DATA		
light spot size	4,5mm bei 65mm Abstand	
operating range	20 65mm	
material (housing)	aluminum	
material (optics)	glass, scratch resistant	
comment	for fiber optic through-beam sensors	





operating range	10 250mm	80 150mm
article no.	AL000046	AL000048
TECHNICAL DATA	3mm spot	3mm spot
light spot size	19mm ati 200mm distance	3mm at 120mm distance
operating range	100 250mm	80 150mm
material (housing)	aluminum	aluminum
material (optics)	glass, scratch resistant	glass, scratch resistant
comment	for fiber optic through-beam sensors	for fiber optic through-beam sensors