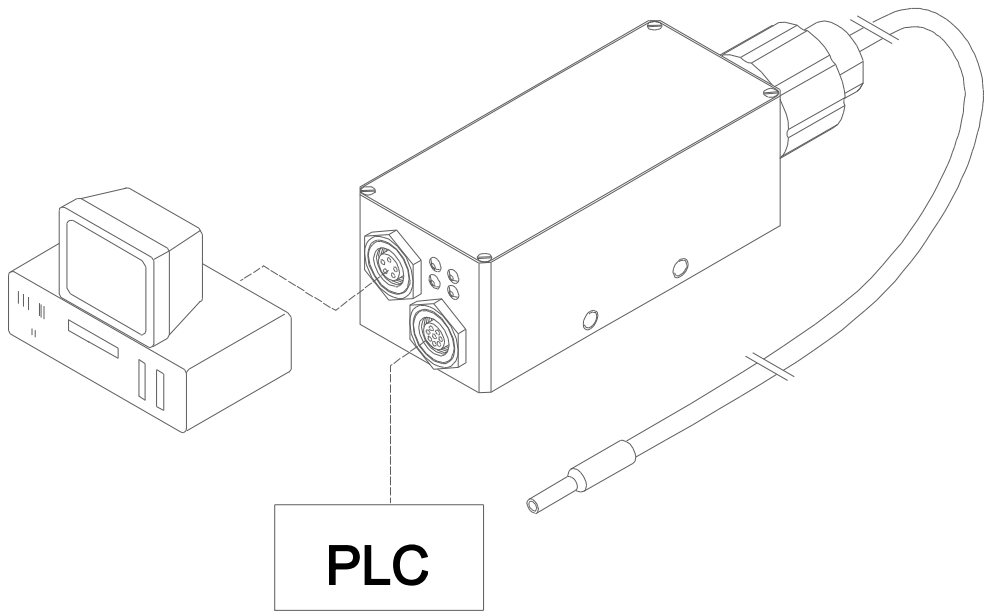
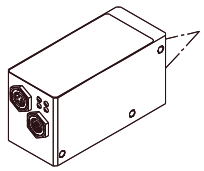
color sensors SI-COLO2 and SI-COLO2-LWL



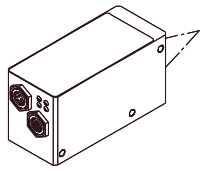
The SI-COLO2 color sensor detects the radiation that is diffusely reflected by the target. The SI-COLO2 color sensor uses a white-light LED with adjustable power as a light source. A triple receiver for the RED, GREEN, and BLUE content of the light reflected from the target is used as a receiver.

The SI-COLO2 color sensor can be "taught" up to 15 colors; 5 different color-detection modes and 3 contrast-detection modes for the respective primary color are available for selection. Color-detection either operates continuously or is started by means of an external SPC trigger signal. The respective detected color either is output as binary code at the 4 digital outputs, or it can be sent directly to the outputs, if only up to 4 colors are to be detected. Simultaneously the detected color code is visualised at the SI-COLO2 housing by means of 4 LEDs.

Through the RS232 interface parameters and measured values can be exchanged between the PC and the SI-COLO2 color sensor. All the parameters for color detection can be stored in the non-volatile EEPROM of the SI-COLO2 color sensor. When parameterization is finished the color sensor continues to operate with the current parameters in "stand alone" mode without a PC.

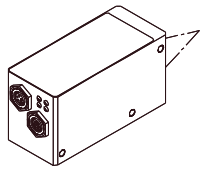
SI-COLO2-20-d0	
Light source	White-light LED, modulated 100 kHz
Target distance	typ. 18 mm … 24 mm
Light spot dimensions	Type d0: ∅ 0.8 mm (typ.) at 20mm distance
Reproducibility	In the x,y color range 1 digit each with 8 bit A/D conversion
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC – 801 … CE
Housing	Aluminium, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms … 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	OUT0 – OUT3, short-circuit protected
Averaging	Over 32768 values max.
Voltage supply	+12VDC … +30VDC, protected against polarity reversal, overload-protected
Switching state display	Visualisation by means of 4 yellow LED
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

SI-COLO2-20-d0-ANA



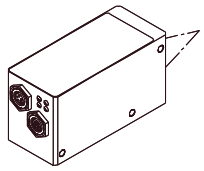
Light source	White-light LED, modulated 100 kHz
Target distance	typ. 18 mm … 24 mm
Light spot dimensions	Type d0: ∅ 0.8 mm (typ.) at 20mm distance
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC – 801 … CE
Housing	Aluminium, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms … 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	3x Analog (0V … +10V)
Averaging	Over 32768 values max.
Voltage supply	+12VDC … +30VDC, protected against polarity reversal, overload-protected
Switching state display	---
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

SI-COLO2-30-... (-d0, -d1, -d2, -d3)



Light source	White-light LED, modulated 100 kHz
Target distance	typ. 25 mm … 55 mm
Light spot dimensions	Different types available: Type d0: ∅ 1.5 mm (typ.) at 30mm distance Type d1: ∅ 2.0 mm (typ.) at 30mm distance Type d2: ∅ 3.0 mm (typ.) at 30 mm distance Type d3: ∅ 4.5 mm (typ.) at 30 mm distance
Reproducibility	In the x,y color range 1 digit each with 8 bit A/D conversion
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC – 801 … CE
Housing	Aluminum, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms … 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	OUT0 – OUT3, short-circuit protected
Averaging	Over 32768 values max.
Voltage supply	+12VDC … +30VDC, protected against polarity reversal, overload-protected
Switching state display	Visualisation by means of 4 yellow LED
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

SI-COLO2-30-d2-ANA

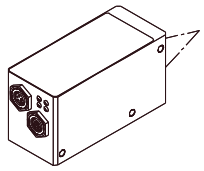


Light source	White-light LED, modulated 100 kHz
Target distance	typ. 25 mm … 55 mm
Light spot dimensions	Type d2: ∅ 3.0 mm (typ.) at 30 mm distance
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC – 801 … CE
Housing	Aluminum, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms … 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	3x Analog (0V … +10V)
Averaging	Over 32768 values max.
Voltage supply	+12VDC … +30VDC, protected against polarity reversal, overload-protected
Switching state display	---
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

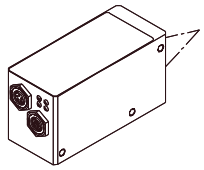
SI-COLO2-30-RING

Light source	4 white-light LED, modulated 100 kHz
Target distance	typ. 25 mm … 55 mm
Reproducibility	In the x,y color range 1 digit each with 8 bit A/D conversion
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC – 801 … CE
Housing	Aluminum, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms … 100 ms
Max. switching current	100 mA, short-circuit proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	OUT0 – OUT3, short-circuit protected
Averaging	Over 32768 values max.
Voltage supply	+12VDC … +30VDC, protected against polarity reversal, overload-protected
Switching state display	Visualisation by means of 4 yellow LED
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

SI-COLO2-50-... (-d1, -d2, -d3)



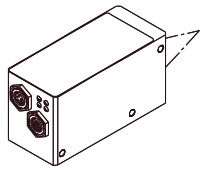
Light source	White-light LED, modulated 100 kHz
Target distance	typ. 30 mm ... 90 mm
Light spot size	Type d1: Ø 3.5 mm (typ.) at 50 mm distance Type d2: Ø 5.5 mm (typ.) at 50 mm distance Type d3: Ø 8.0 mm (typ.) at 50 mm distance
Reproducibility	In the x,y color range 1 digit each with 8 bit A/D conversion
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC - 801 ... CE
Housing	Aluminum, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms ... 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	OUT 0 ... OUT 3, short-circuit protected
Averaging	Over 32768 values max.
Voltage supply	+12VDC ... +30VDC, protected against polarity reversal, overload-protected
Switching state display	Visualisation by means of 4 yellow LED
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

SI-COLO2-50-d2-ANA	
Light source	White-light LED, modulated 100 kHz
Target distance	typ. 30 mm ... 90 mm
Light spot size	Type d2: Ø 5.5 mm (typ.) at 50 mm distance
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC - 801 ... CE
Housing	Aluminum, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms ... 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	3x Analog (0V … +10V)
Averaging	Over 32768 values max.
Voltage supply	+12VDC ... +30VDC, protected against polarity reversal, overload-protected
Switching state display	---
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

SI-COLO2-50-RING

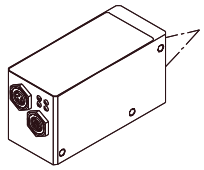
Light source	4 white-light LED, modulated 100 kHz
Target distance	typ. 30 mm ... 90 mm
Reproducibility	In the x,y color range 1 digit each with 8 bit A/D conversion
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC - 801 ... CE
Housing	Aluminum, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms ... 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	OUT 0 ... OUT 3, short-circuit protected
Averaging	Over 32768 values max.
Voltage supply	+12VDC ... +30VDC, protected against polarity reversal, overload-protected
Switching state display	Visualisation by means of 4 yellow LED
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

SI-COLO2-80-... (-d1, -d2, -d3)



Light source	White-light LED, modulated 100 kHz
Target distance	typ. 50 mm ... 150 mm
Light spot size	Type d1: Ø 6.5 mm (typ.) at 80 mm distance Type d2: Ø 9.0 mm (typ.) at 80 mm distance Type d3: Ø 13.0 mm (typ.) at 80 mm distance
Reproducibility	In the x,y color range 1 digit each with 8 bit A/D conversion
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC - 801 ... CE
Housing	Aluminum, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms ... 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	OUT 0 ... OUT 3, short-circuit protected
Averaging	Over 32768 values max.
Voltage supply	+12VDC ... +30VDC, protected against polarity reversal, overload-protected
Switching state display	Visualisation by means of 4 yellow LED
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

SI-COLO2-80-d2-ANA

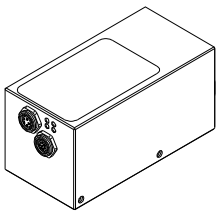


Light source	White-light LED, modulated 100 kHz
Target distance	typ. 50 mm ... 150 mm
Light spot size	Type d2: Ø 9.0 mm (typ.) at 80 mm distance
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC - 801 ... CE
Housing	Aluminum, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms ... 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	3x Analog (0V … +10V)
Averaging	Over 32768 values max.
Voltage supply	+12VDC ... +30VDC, protected against polarity reversal, overload-protected
Switching state display	---
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

SI-COLO2-80-RING

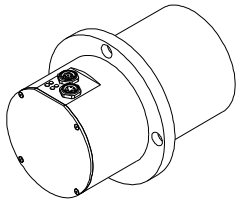
Light source	4 white-light LED, modulated 100 kHz
Target distance	typ. 50 mm ... 150 mm
Reproducibility	In the x,y color range 1 digit each with 8 bit A/D conversion
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC - 801 ... CE
Housing	Aluminum, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms ... 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	OUT 0 ... OUT 3, short-circuit protected
Averaging	Over 32768 values max.
Voltage supply	+12VDC ... +30VDC, protected against polarity reversal, overload-protected
Switching state display	Visualisation by means of 4 yellow LED
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

SI-COLO2-200-... (-d1, -d2)



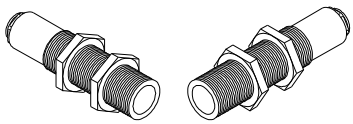
Light source	White-light LED, modulated 100 kHz
Target distance	Type d1: typ. 100 mm … 350 mm Type d2: typ. 100 mm … 400 mm
Light spot size	Type d1: Ø 12 mm (typ.) at 200 mm distance Type d2: Ø 25 mm (typ.) at 200 mm distance
Reproducibility	In the x,y color range 1 digit each with 8 bit A/D conversion
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 160 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC – 801 … CE
Housing	Aluminum, anodized in blue respectively black
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms … 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	OUT 0 … OUT 3, short-circuit protected
Averaging	Over 32768 values max.
Voltage supply	+12VDC … +30VDC, protected against polarity reversal, overload-protected
Switching state display	Visualisation by means of 4 yellow LED
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

SI-COLO2-500-... (-d2, -d3)



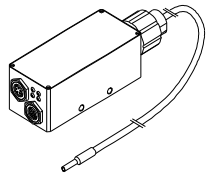
Light source	White-light LED, modulated 100 kHz
Target distance	Type d2: typ. 100 mm … 600 mm Type d3: typ. 50 mm … 800 mm
Light spot size	Type d2: Ø 25 mm (typ.) at 500 mm distance Type d3: Ø 50 mm (typ.) at 500 mm distance
Reproducibility	In the x,y color range 1 digit each with 8 bit A/D conversion
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 160 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC – 801 … CE
Housing	Aluminum, anodized in blue respectively black
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms … 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	OUT 0 … OUT 3, short-circuit protected
Averaging	Over 32768 values max.
Voltage supply	+12VDC … +30VDC, protected against polarity reversal, overload-protected
Switching state display	Visualisation by means of 4 yellow LED
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.

SI-COLO2-M18 color sensor
SI-COLO2-CON1 electronic control unit



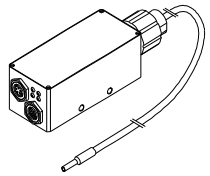
	SI-COLO2-M18-T (transmitter) SI-COLO2-M18-R (receiver)
Light source	White light LED, modulated 100 kHz
Target distance (working range)	With reflected light operation: typ. 20 mm ... 200 mm With transmitted light operation: typ. 100 mm ... 2000 mm
Light spot size	typ. Ø 5 mm at 100 mm distance
Reproducibility	In the x,y color range 1 digit each with 8 bit A/D conversion
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	Up to 5000 Lux
Type of protection	IP 67
Current consumption	typ. 50 mA
Type of connector	SI-COLO2-M18-T: 5-pin flange socket (PC), type Binder Series 712 SI-COLO2-M18-R: 8-pin flange socket (PLC), type Binder Series 712
Housing material	Brass, nickel-plated
Operating temperature range	-20°C … +55°C
Storage temperature range	-20°C … +85°C
EMC test acc. to	IEC - 801 ... CE
	SI-COLO2-CON1 (electronic control unit)
Voltage supply	+12VDC … +30VDC, protected against polarity reversal, overload-protected
Type of protection	IP 64
Current consumption	typ. 180 mA
Max. switching current	100 mA, short-circuit-proof
Interface	RS232, parameterizable under Windows®
Pulse lengthening	Adjustable under Windows® 0 ms … 100 ms
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	OUT 0 ... OUT 3 (DIGITAL, $+U_B$/0V)
Averaging	Over 32768 values max.
Switching state display	Visualisation by means of 4 yellow LED
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.
Type of connector	To the transmitter: 5-pin plug type Binder 712 to the receiver: 8-pin plug type Binder 712 to the PLC: 8-pin flange socket type Binder 712 to the PC: 5-pin flange socket type Binder 712
Housing material	Aluminum, anodized in blue
Operating temperature range	-20°C ... +55°C
Storage temperature range	-20°C ... +85°C
EMC test acc. to	IEC – 801 CE

SI-COLO2-LWL



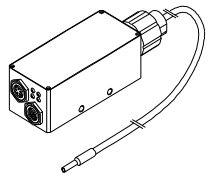
Light source	White-light LED, modulated 100 kHz
Target distance	With optical fiber: typ. 2 mm ... 10 mm With additional reflex optics KL-20: typ. 15 mm ... 40 mm
Light spot dimensions	Depending on the optical fiber used, e.g.: With optical fiber ∅ 2,5mm, 22°: ∅ 3mm - 6mm (at distance 2mm ... 10mm) With optical fiber ∅ 2,5mm, 67°: ∅ 5mm - 15mm (at distance 2mm ... 10mm) With additional reflex optics KL-20: Ø 5 mm (at distance 30 mm)
Reproducibility	In the x,y color range 1 digit each with 8 bit A/D conversion
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC - 801 ... CE
Housing	Aluminum, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms ... 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	OUT0 - OUT3, short-circuit protected
Averaging	Over 32768 values max.
Voltage supply	+12VDC ... +30VDC, protected against polarity reversal, overload-protected
Switching state display	Visualisation by means of 4 yellow LEDs
Color memory capacity	Non-volatile EEPROM with parameter sets for max. 15 colors
Optical fiber	(please cf. catalog LWL series)

SI-COLO2-LWL-ANA



Light source	White-light LED, modulated 100 kHz
Target distance	With optical fiber: typ. 2 mm ... 10 mm With additional reflex optics KL-20: typ. 15 mm ... 40 mm
Light spot dimensions	Depending on the optical fiber used, e.g.: With optical fiber ∅ 2,5mm, 22°: ∅ 3mm - 6mm (at distance 2mm ... 10mm) With optical fiber ∅ 2,5mm, 67°: ∅ 5mm - 15mm (at distance 2mm ... 10mm) With additional reflex optics KL-20: Ø 5 mm (at distance 30 mm)
Receiver	3-color photodiode (red, green, blue)
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Type of protection	IP 64
Current consumption	typ. 120 mA
Interface	RS232, parameterizable under Windows®
Connector type	8-pin flanged socket-outlet (PLC), type Binder series 712 5-pin flanged socket-outlet (PC), type Binder series 712
EMC testing	IEC - 801 ... CE
Housing	Aluminum, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms ... 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	3x analog (0V ... 10V)
Averaging	Over 32768 values max.
Voltage supply	+12VDC ... +30VDC, protected against polarity reversal, overload-protected
Switching state display	---
Color memory capacity	Non-volatile EEPROM with parameter sets for max. 15 colors
Optical fiber	(please cf. catalog LWL series)

SI-COLO2-LWL-ACL



Light source	The measuring object itself serves as a light source
Target distance	With optical fiber: typ. 2 mm ... 10 mm (depends on the measuring object = light source to be measured)
Reproducibility	In the x,y color range 1 digit each with 8 bit A/D conversion
Receiver	3-color photo diode (red, green, blue)
Type of protection	IP 64
Current consumption	typ. 180 mA
Interface	RS232, parameterizable under Windows®
Connector type	to PLC: 8-pin flanged socket-outlet, type Binder series 712 to PC: 5-pin flanged socket-outlet, type Binder series 712
EMC test acc. to	IEC - 801 ... CE
Housing	Aluminum, anodized in blue
Operating temperature range	-20°C to +55°C
Storage temperature range	-20°C to +85°C
Pulse lengthening	Adjustable under Windows® 0 ms ... 100 ms
Max. switching current	100 mA, short-circuit-proof
Switching frequency	Max. 2 kHz with 15 teach-in colors, max. 5 kHz with 1 teach-in color, max. 28 kHz in case of contrast detection
Outputs	OUT0 - OUT3, short-circuit protected
Averaging	Over 32768 values max.
Voltage supply	+12VDC ... +30VDC, protected against polarity reversal, overload-protected
Switching state display	Visualization by means of 4 yellow LEDs
Color memory capacity	Non-volatile EEPROM with parameter sets for 15 colors max.
Optical fiber	(please cf. catalog LWL series)