Model Number

SU10/40a/49/116

Signal transformer

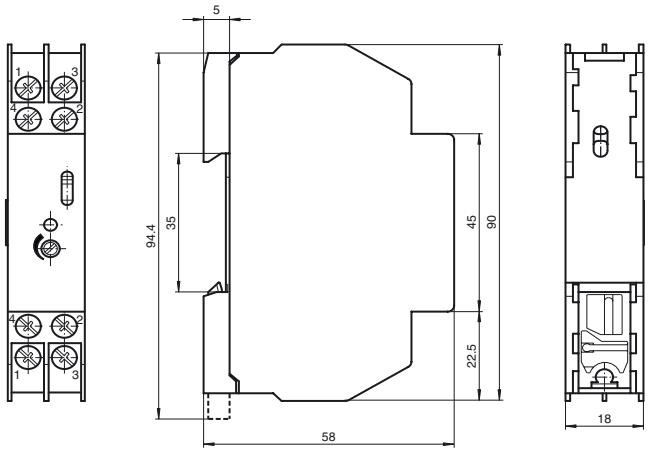
Features

- Signal converter for M4 cylindrical housing of the KT10 series
- Light/dark switch
- Sensitivity adjuster
- Pre-fault indication
- Alignable housing
- Screw or snap mounting on mounting rail

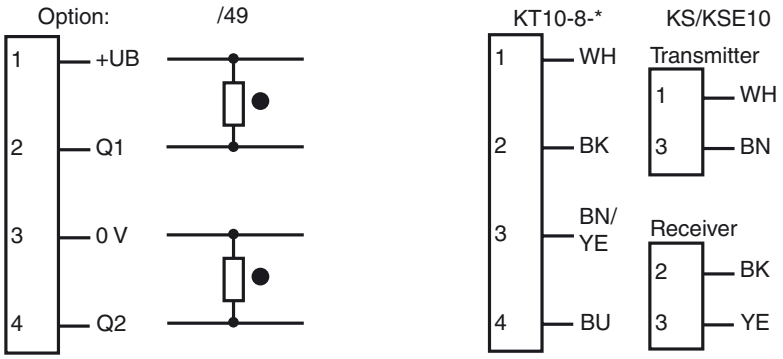
Description

The SU10 is a signal converter for miniature fiber-like sensors of the KT10 series.
The SU10 series features the usage of 3 different types of miniature sensors: Diffusive mode sensor KT10-8-80, Diffusive mode with real background suppression (BGS) sensor KT10-8-H and through beam sensor KS/KSE10.

Dimensions

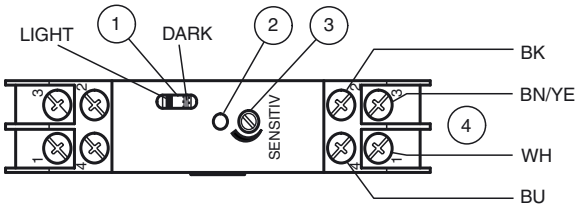


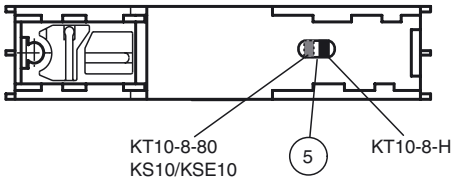
Electrical connection



○ = Light on
● = Dark on

Indicators/operating means





1	Light/Dark switch
2	Display LED yellow/green
3	Sensitivity adjuster
4	Connection Sensor
5	Changeover switsch sensor type

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Technical data

General specifications		
Approvals		CE
Indicators/operating means		
Function display		Yellow LED: excess gain equals 1 LED green: excess gain equals 3
Controls		sensitivity adjustment
Controls		Light/dark switch
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC
Ripple		10 %
No-load supply current	I_0	40 mA
Output		
Switching type		light/dark switching
Signal output		1 NPN, 1 PNP synchronized-switching, short-circuit proof, reverse polarity protected
Switching voltage		30 V DC
Switching current		200 mA
Switching frequency	f	70 Hz
Response time		5 ms
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Storage temperature		-20 ... 75 °C (-4 ... 167 °F)
Mechanical specifications		
Protection degree		IP40
Connection		screw terminals
Material		
Housing		PVC
Installation		DIN rail
Mass		50 g
Compliance with standards and directives		
Directive conformity		
EMC Directive 2004/108/EC		IEC / EN 60947-5-2
Standard conformity		
Shock and impact resistance		IEC / EN 60068. half-sine, 50 g in each X, Y and Z directions
Vibration resistance		IEC / EN 60068-2-6. Sinus. 10 -150 Hz, 5 g in each X, Y and Z directions

Note:

Operation with KT10-8-80 diffusive sensor energetic:

Intended use:
The reflex light scanner contains the light transmitter and receiver in a single housing. The light from the transmitter which is reflected back from the object is evaluated by the receiver. The detection range depends on the object colour. With dark or very small objects the detection range reduces.

Mounting instructions:
For the operation of the SU10 in combination with the KT10-8-80, the changeover switch on the bottom side of the SU10 must be on position: KT10

Adjustment:
Adjust the sensor on the background. If the yellow LED turns on, the detection range needs to be reduced with the sensitivity adjuster until the yellow LED turns off.

Operation with KT10-8-H miniature diffusive sensor with real background suppression (BGS):

Intended use:
The transmitter and receiver are located in the same housing for direct target detection with background suppression. Suppression of objects outside the detection range is achieved by arranging the angle between the transmitter and receiver (2 receiver elements).
Objects are detected independently of the structure and colour of the surface.

Mounting instructions:
For the operation of the SU10 in combination with the KT10-8-H, the changeover switch on the bottom side of the SU10 must be on position: KT10-H

Adjustment:
Turn the sensor sensitivity to maximum with the sensitivity adjuster. The sensing range is defined through the geometric position of the lenses within the sensor.

Accessories

KT10-8-H-8
Diffuse mode sensor with background suppression

KT10-8-80
Diffuse mode sensor

KS/KSE10
Thru-beam sensor

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Operation with KS/KSE10 thru-beam sensor:

Intended use:
A thru-beam sensor arrangement consists of a transmitter and receiver in separate housings.
The light of the transmitter is received by the receiver, which is installed opposite to the transmitter on a common optical axis.
The receiver evaluates if the lightpath of transmitter and receiver is interrupted by an object.
The switching behaviour is significantly dependent on object size and object opacity.

Mounting instructions:
For the operation of the SU10 in combination with the KS/KSE10, the changeover switch on the bottom side of the SU10 must be on position: KT10

Adjustment:
By reducing the sensitivity at the sensitivity adjuster, smaller and semi opaque object may be more reliable detectable.

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