



**Model Number**

**SU10/40a/49/116**

Signal transformer

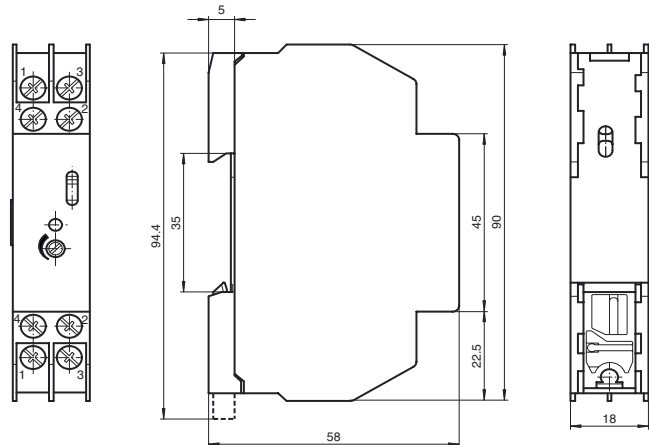
**Features**

- 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

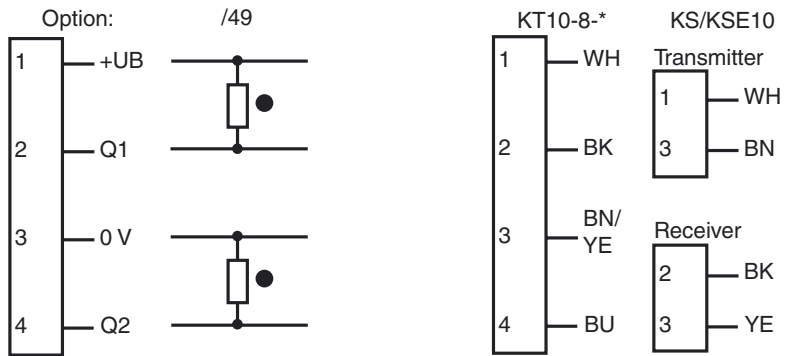
**Description**

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**

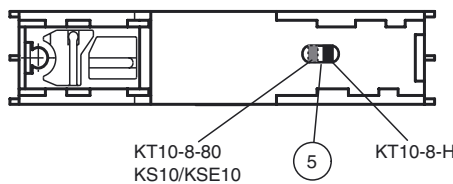
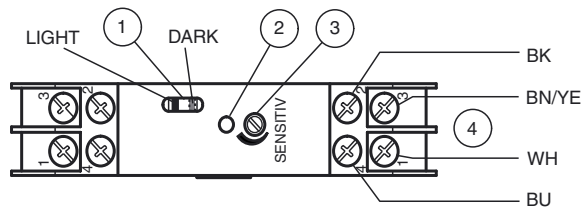


**Electrical connection**



○ = Light on  
● = Dark on

**Indicators/operating means**



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

Release date: 2010-06-22 08:35 Date of issue: 2010-06-30 419750\_ENG.xml

Subject to modifications without notice

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776-4411  
fa-info@pepperl-fuchs.com

Copyright Pepperl+Fuchs  
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**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

**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.