Model Number

UBE6000+U2+SA2

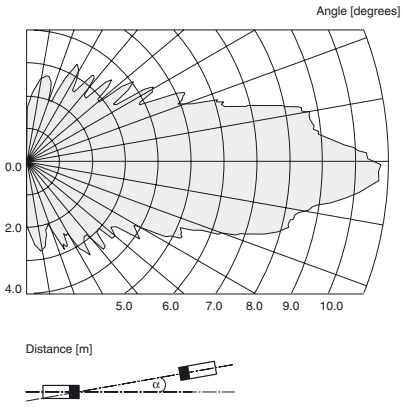
Dual Head System

Features

- **6 m (20 ft.) emitter/receiver separation**
- **Fast, 30 Hz switching frequency**
- **Adjustable receiver sensitivity**
- **Detection of transparent targets**
- **Reliable operation in dusty environments**

Diagrams

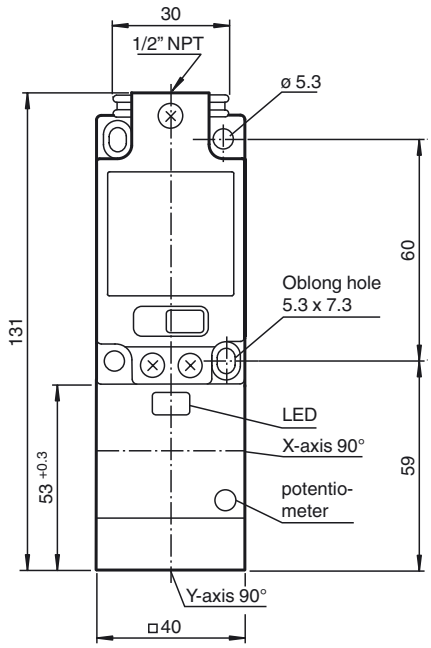
Characteristic response curves



Technical data

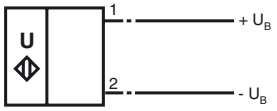
General specifications	
Sensing range	0 ... 6000 mm
Standard target plate	100 mm x 100 mm
Transducer frequency	Emitter: 130 kHz Receiver: N/A
Indicators/operating means	
LED green 1	Emitter: power on
LED green 2	Receiver: power indication
LED yellow	Receiver: switch output
LED red	Receiver: alignment aid
Electrical specifications	
Operating voltage U_B	20 ... 30 V DC
No-load supply current I_0	Emitter: ≤ 75 mA Receiver: ≤ 50 mA
Short-circuit protection	yes, emitter and receiver
Output	
Output type	Receiver: 2 switch outputs PNP, normally open/closed (complementary)
Rated operational current I_e	≤ 200 mA
Voltage drop U_d	Receiver: ≤ 3 V DC
Switching frequency f	30 Hz
Standard conformity	
Standards	EN 60947-5-2
Ambient conditions	
Ambient temperature	-26 ... 70 °C (-14.8 ... 158 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications	
Protection degree	IP65
Connection	terminal housing
Material	
Housing	PBT
Transducer	epoxy resin / silica composite

Dimensions



Electrical Connection

Standard symbol / Connection:
Emitter



Release date: 2012-01-20 14:43 Date of issue: 2012-01-20 092516_eng.xml

Subject to reasonable modifications due to technical advances.
Copyright Pepperl+Fuchs, Printed in Germany

Thru-Beam Ultrasonic

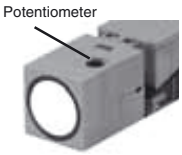
Thru-Beam ultrasonic sensors are commonly used in applications where their photoelectric counterparts fail. Dusty environments, shiny/reflective backgrounds or targets, and variations in target color have no effect on the ultrasonic's accuracy or stability.

Adjustment Procedure

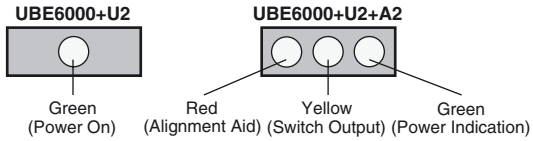
The sensor is calibrated by use of the potentiometer and the LEDs.

Potentiometer

Turn the potentiometer clockwise to reduce the sensitivity.Turn it counterclockwise to increase the sensitivity.



LED Indicators



Green — Indicates power on or off.

Yellow — Indicates the presence or absence of a target. If this LED remains on with no target present, the signal strength between sender and receiver is too weak. To correct this, turn the potentiometer counter-clockwise until the LED turns off.

Red — Denotes strong signal reception.

Red *(flashing)* — Indicates the sensitivity adjustment of a receiver is set **too high**.Turn the potentiometer clockwise to return the LED to a solid state.

The chart below illustrates the LED states for the initial sender/receiver setup, and their corresponding functions (setup is performed with no target present):

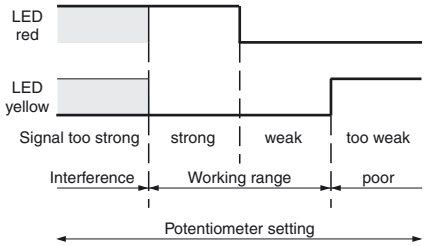
Red LED	**flashing**	**ON**	**OFF**	**OFF**
Yellow LED	**OFF**	**OFF**	**OFF**	**ON**
Status	Receiver potentiometer adjustment too sensitive	Strong transmitter/receiver signal. This LED status is desirable for detection of medium-to-large size targets.	This LED status is desired for detection of small targets.	Receiver sensitivity adjustment (potentiometer) is set too low.
		← Working Range →		

Target Response Curve

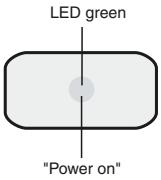
The surface area, shape and density of a target determine where it can be detected. The diagram illustrates the area of detection. The target must lie completely in its specified sensing envelope to ensure accurate detection.

Additional Information

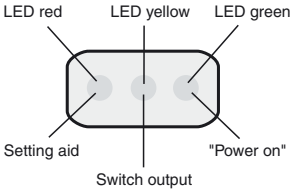
Indicating/operating means



LED-Window

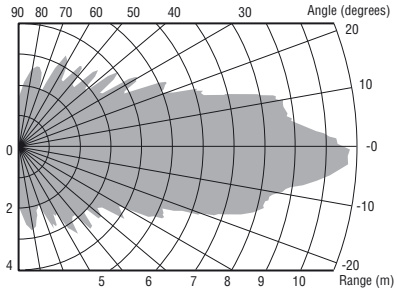


LED-Window-Receiver



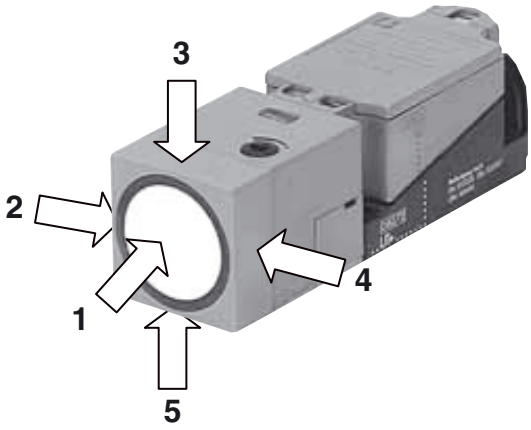
Release date: 2012-01-20 14:43 Date of issue: 2012-01-20 092516_eng.xml

Subject to reasonable modifications due to technical advances. Copyright Pepperl+Fuchs, Printed in Germany
Pepperl+Fuchs Group • Tel.: Germany +49 621 776-0 • USA +1 330 4253555 • Singapore +65 67799091 • Internet http://www.pepperl-fuchs.com



5-Way Positioning of the Sensing Head

To adjust the sensing head to one of its five positions, remove the head and turn it, then reattach to the desired position on the dovetail assembly.



Release date: 2012-01-20 14:43 Date of issue: 2012-01-20 092516_eng.xml

Subject to reasonable modifications due to technical advances. Copyright Pepperl+Fuchs, Printed in Germany