Laser type

Scanning Laser Range Finder

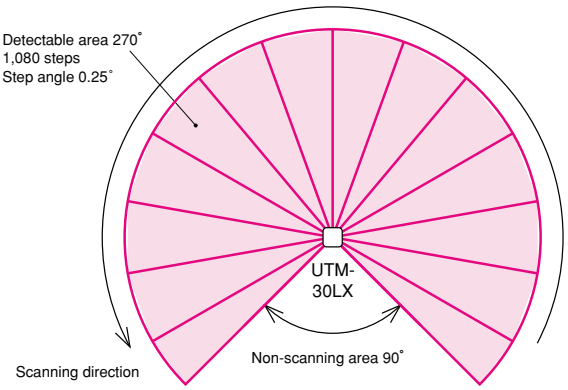
UTM-30LX FDA approval

Long distance scanning 30m!

UTM-30LX is a 2-dimensional laser sensor for measuring the distance to the objects.

- Wide range scanning, 30m and 270˚.
- Available for outdoor use because of 100,000lux for ambient illuminance and IP64 for protective structure.
- High-speed response, 25msec.
- 12VDC.

System structure



Note) The above figure shows the detectable area for white Kent sheet (500mm×500mm). Max.detection ditance is 30m. Detection distance may vary with size and object.

Specifications

Kinds	Data output type (serial type)
Model No.	UTM-30LX
Power source	12VDC ±10%
Current consumption	700mA or less (rush current approx.1A)
Light source	Semiconductor laser diode λ=905nm (FDA approval, Laser safety class 1)
Detectable object	500×500mm white sheet or more
Scanning range	0.1 to 30m
Scanning accuracy	0.1 to 10m: ±30mm, 10 to 30m: ±50mm*
Scanning angle	270˚
Resolution	1mm
Angular Resolution	Step angle: approx.0.25˚ (360˚ /1,440 steps)
Beam diameter	Approx. ϕ400mm (at 30m)
Scanning time	25msec/scan
Interface	USB2.0 (Full Speed)
Communicating specifications	Exclusive command (SCIP Ver.2.0)
Output	OUTPUT 1 pce, synchronous output
Indication lamps	Power lamp (green): Lights up when normal operation, Operation lamp (red): Lights up when normal operation
Connection	Power and synchronous output: cable 2m, USB:2m cable with type A plug
Ambient illuminance note)	Halogen/mercury lamp: 10,000lux or less, incandescent lamp: 6,000lux or less
Ambient temperature	-10 to +50℃ (-25 to +75℃ when stored)
Ambient humidity	85%RH or less, not icing, not condensing

Insulation resistance	10MΩ 500VDC megger
Vibration resistance	Double amplitude 1.5mm, 10 to 55Hz, each 2 hour in X, Y and Z directions
Impact resistance	196m/s², each 3 time in X, Y and Z directions
Protective structure	IP64 (IEC standard)
Life	5 years (motor life, vary depending on use conditions)
Noise	25dB or less (at 300mm)
Case materials	Polycarbonate
Weight	Approx.370g (including cable)

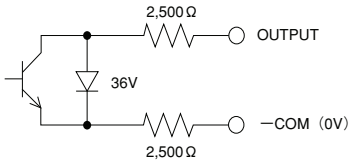
*It may reduce the accuracy when receing strong light like sunlight etc. directly.

Note This sensor is not a safety device/tool.

Note This sensor is not for use in military applications.

■ Connection

Output circuit



Wiring table

● **Cable 1 power and output**

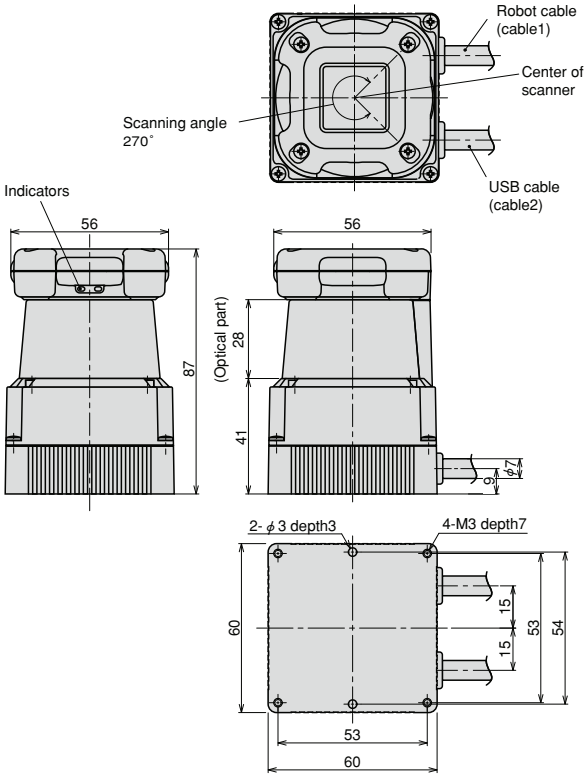
Cable colors	Signals
Brown	+VIN (12VDC)
Blue	-VIN (0V)*
Green	Synchronous output
White	COM (0V)*

*Power and output (0V) are not connected inside.

Note I/O direction is on the basis of UTM-30LX.

● **Cable2 USB Type A(4 pins)**

■ External dimension

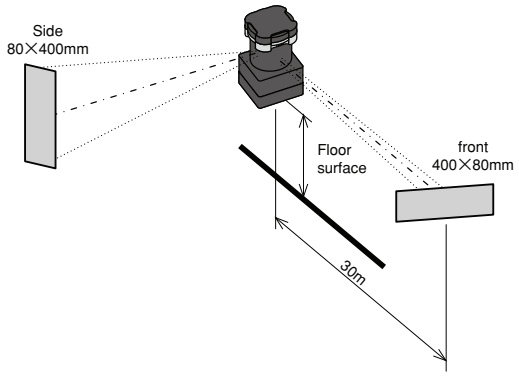


■ Caution for installation

(1) When installation, don't close light-projection/reception window or interrupt area.

(2) Don't make a wiring with high-voltage line or load line because of avoiding noise or surge induction.

(3) Install it 200mm or more away from floor. If 200mm or less, install it 1° upward. Spread of sensor beam is φ400mm (Reference value) at 30m.



■ Supplement

- Scanning direction is counterclockwise from topview.
- About USB driver

  It is connected as software COM port through CDC (Communication Device Class). It can be handled as well as COM port from applicatoin program of host. But this doesn't provide plug & play function.
- This sensor has higher radiation value because of high speed processing and so please install it with radiation plate at the bottom. (Recommend: aluminum plate with 200×200×2) because radiation is found on the bottom cover.
- It may make a false detection in case of close installation.

  In case that, make filtering processing of data.