



PHOTOELECTRIC DETECTOR

Smart Line™ series

HARD-WIRED MODELS

ADVANCED MODELS

SL-200QDM : 60m / 200ft.
SL-350QDM : 100m/ 350ft.
SL-650QDM : 200m/ 650ft.

STANDARD MODELS

SL-200QDP : 60m / 200ft.
SL-350QDP : 100m/ 350ft.
SL-650QDP : 200m/ 650ft.

BASIC MODELS

SL-200QN : 60m / 200ft.
SL-350QN : 100m/ 350ft.
SL-650QN : 200m/ 650ft.

BATTERY OPERATED MODELS

STANDARD MODEL

SL-350QFR : 100m / 350ft.

BASIC MODEL

SL-350QNR : 100m / 350ft.

Anyone can LOCK ON,

Automatically LOCK ON.

The IR transmitter and receiver must be perfectly aligned in order to achieve optimal operation of photo-electric detector. However, a lot of patience, time and effort is required to ensure that the receiver is receiving the maximum amount of light possible from the transmitter. Optex has the solution New SL series is designed to lighten your workload with achieving perfect alignment.

SNIPER VIEWFINDER™

X2 MAGNIFICATION LENS

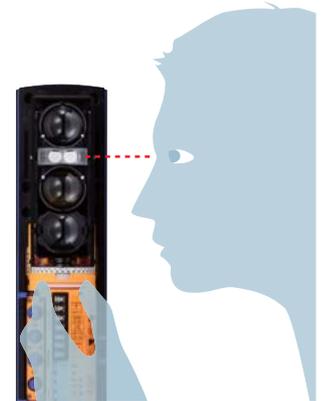
The new telescope lens has a high level of visibility for optical alignment work. Even over long distances, a perfect installation and stable performance can be achieved in a short period.



Conventional model



X2 magnification lens



BEAM ALIGNMENT UNIT : BAU-4 (option)

The BAU-4 beam alignmet unit automatically and accurately adjust the optical axis. This allows peak performance and gives one technician the ability to install the 200 m (650 ft.) Smart Line detector by himself.

THE world first
AUTOMATIC
BEAM ALIGNMENT



LED INDICATOR AND SOUND ASSIST

SL-QDM: TRANSMITTER AND RECEIVER

SL-QDP: RECEIVER only

The alignment level indicators have 5 LEDs, each LED represents the level of alignment, ranging from poor to excellent. The optical alignment level can also be checked by sound.



TRANSMITTER



RECEIVER

UPPER/LOWER BEAM SELECTION BUTTON

SL-QDM/SL-QDP only: TRANSMITTER AND RECEIVER

Optical alignment can be done without using a beam blocking plate since the SL has upper/lower beam selection button which enables to turn on and off the upper and lower beam alternately.





SHUT OUT ANY TROUBLES

WIDE & BEAM UNITED APPEARANCE

60m (200ft.) range models, SL-200QN/SL-200QDP/SL-200QDM with a wide beam pitch is now available. It dramatically reduces false alarm caused by birds and falling leaves. Moreover, it is also important that the housing design of both long and short beams are united.



IP65 WATER/DUST PROTECTION

Rubber packing is used for all conceivable points where water or dust may penetrate, such as wiring holes, wire ports and the outer openings on chassis.



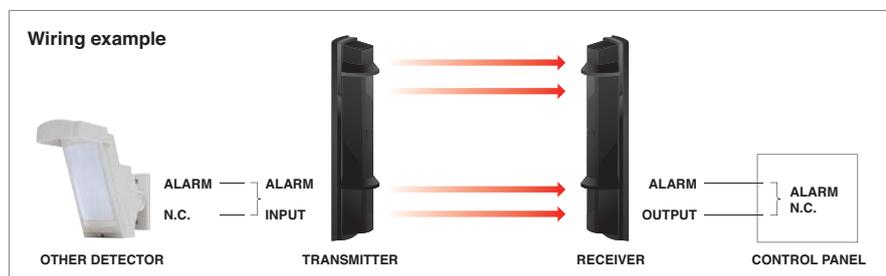
ANTI-CLOUDED POLY CARBONATE COVER

Front cover is not clouded by ultraviolet ray during a long term. Therefore it will maintain the transparency of IR beams.



RE-TRANSMISSION FUNCTION (SL-QDM only)

While the alarm input terminal of the transmitter receive the signal from other detectors the transmission of the beam is stopped and the receiver outputs on alarm signal to the control panel. The advantage of this method is elimination of wiring from detector or switch, back to the control panel.

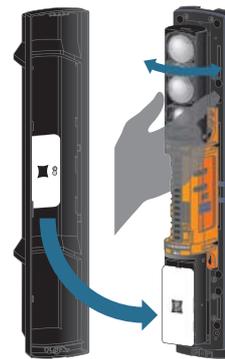


SLIM BODY & LIGHT WEIGHT

20% reduction of the body size and 15% reduction of the weight come together in the SL series.

BEAM BLOCKING PLATE

The plate can firmly be fixed on the lens unit without fear to be blown off by wind. The plates can be stored in the back of the front cover.



ANTI FROST DESIGN (Hood design)

The hoods are positioned on both the upper beam and the lower beam to secure a high and stable beam power by preventing frost from attaching to the front cover.

VIVID INTERIOR COLOR

Easy-to-see vivid interior color for optical alignment.

ALIGNMENT DIAL

The alignment no longer requires a screwdriver. All you need is touch with your fingers for precise adjustment.

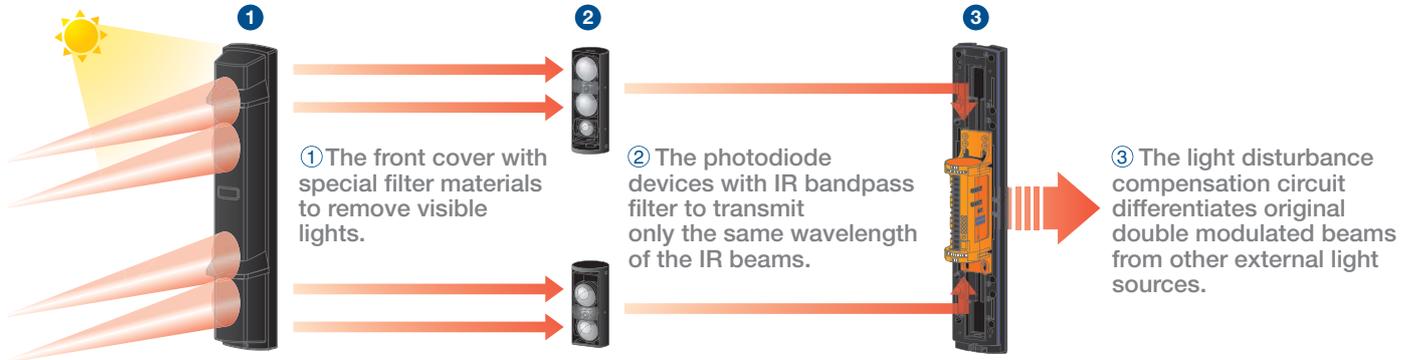
QUAD BEAM WITH ASPHERICAL LENSES

The high-grade aspherical lens create more sharply defined and precise active infrared beams.

ENVIRONMENT RESISTANCE

SUNSHINE PROTECTION TECHNOLOGY (SL-QDM/SL-QDP only)

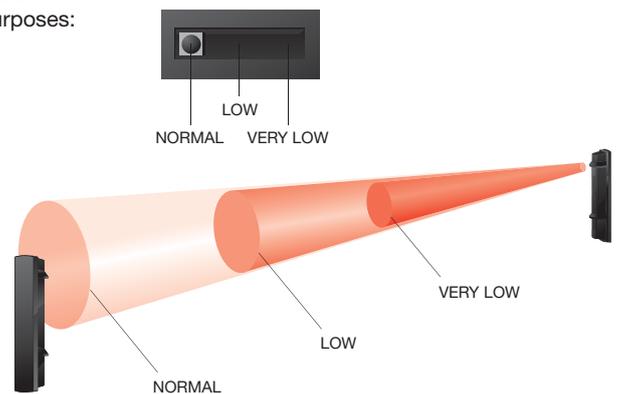
The sunshine protect technology has a triple layer construction to give better performance against external light sources (e.g.:The sun, mercury-vapor lamps, and fluorescent lights).



BEAM POWER CONTROL SELECTOR (SL-QDM/SL-QDP only)

The beam power control selector allows you to manually adjust beam power from NORMAL to LOW or VERY LOW. This function is effective for the following purposes:

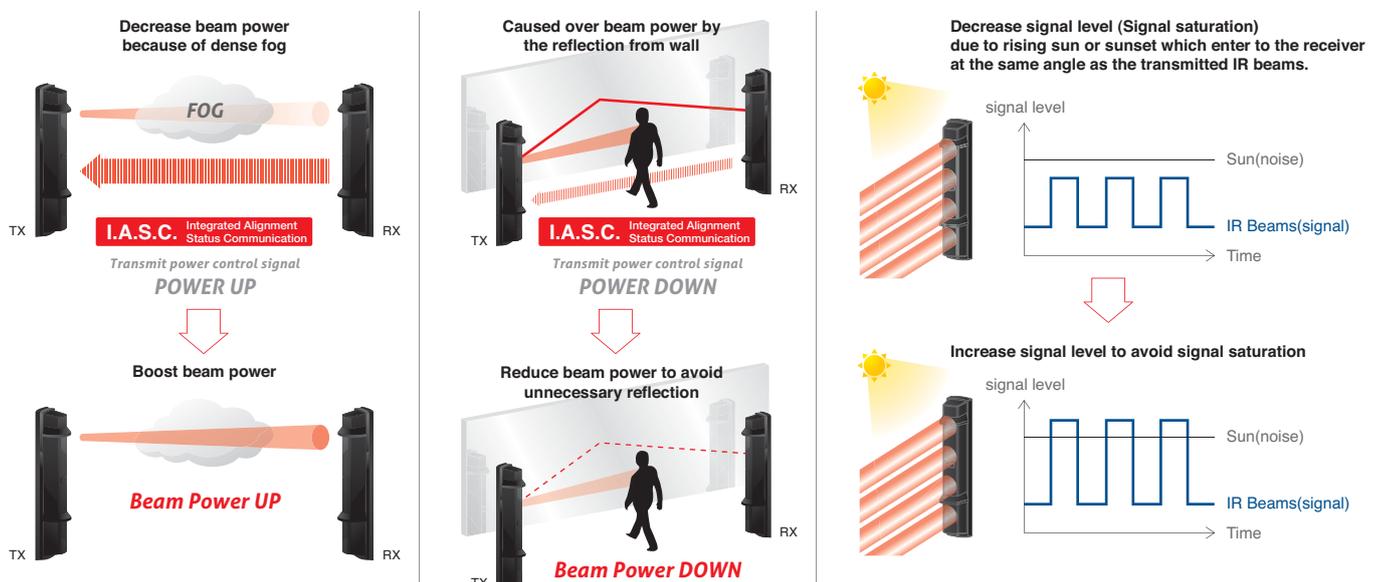
- For countermeasure against crosstalk due to reflection of wall or floor by reducing beam power.
- For countermeasure against interference due to unstable S/N (signal / noise) ratio when using multiple photo beams for long distance or beam stacking applications.
- To reduce beam power when using the detector for a distance shorter than the rated distance.
- To search the peak value when making optical alignment to support perfect alignment.



A.T.P.C.-AUTOMATIC TRANSMIT POWER CONTROL (SL-QDM only)

Patent pending

Automatically controls, adjusts and optimizes the power of the beam and maintains optimal performance. It decreases false and missed alarms caused by fog, frost, cross talk, signal saturation.



SELECTION GUIDE

| | HARD-WIRED MODELS | | | BATTERY OPERATED MODELS | | |
|---|--|--|---|--|--|--|
| | ADVANCED | STANDARD | BASIC | STANDARD | BASIC | SOLAR BATTERY |
| <p>++ Most appropriate</p> <p>+ Appropriate</p> | SL-200QDM SL-350QDM SL-650QDM  | SL-200QDP SL-350QDP SL-650QDP  | SL-200QN SL-350QN SL-650QN  | SL-350QFR  | SL-350QNR  | SBU-4+ SL-QDM series  |
| LIGHT DISTURBANCE  (Expected impact :False alarm) | ++ | + | | | | ++ |
| REFLECTION  (Expected impact :Missed alarm) | ++ | + | | | | ++ |
| INTERFERENCE  (Expected impact :Missed alarm) | ++ | + | | + | | ++ |
| FOG  (Expected impact :False alarm) | + | | | | | + |
| LIGHTNING  (Expected impact :Unit damage) | + | + | + | ++ | ++ | ++ |
| FROST  (Expected impact :False alarm) | ++ | + | + | | | |
| RE-TRANSMISSION FUNCTION  | + | | | | | + |
| LED INDICATOR AND SOUND ASSIST  | ++ | + | | | | ++ |
| WIRELESS (BATTERY OPERATED)  | | | | ++ | ++ | + |

HARD-WIRED MODELS

ADVANCED MODEL

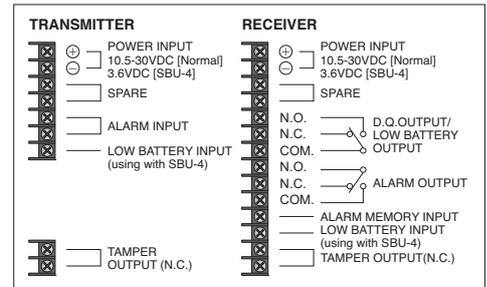
SL-200QDM/350QDM/650QDM

FEATURES

- HIGH POWER QUAD BEAM
- DOUBLE MODULATION
- BEAM POWER CONTROL SELECTOR
- A.T.P.C.-AUTOMATIC TRANSMIT POWER CONTROL
- I.A.S.C.- INTEGRATED ALIGNMENT STATUS COMMUNICATION
- UPPER/LOWER BEAM SELECTION BUTTON
- BEAM POWER CONTROL SELECTOR
- SOLAR BATTERY UNIT (OPTION : SBU-4)

Specifications

| Model | SL-200QDM | SL-350QDM | SL-650QDM |
|-------------------------|---|-------------|-------------|
| Detection range | 60m/200ft. | 100m/350ft. | 200m/650ft. |
| Beam frequencies | 4ch selectable | | |
| Current consumption | Normal 26mA/Max. 60mA | | |
| Ambient temperature | -35°C - +60°C (-30°F - 140°F) | | |
| Water protection | IP65 | | |
| Dimensions H x W x D | 448 (17.6) x 79 (3.1) x 96 (3.8) mm(inch) | | |
| Weight | 2500 g(88.2oz) | | |



STANDARD MODEL

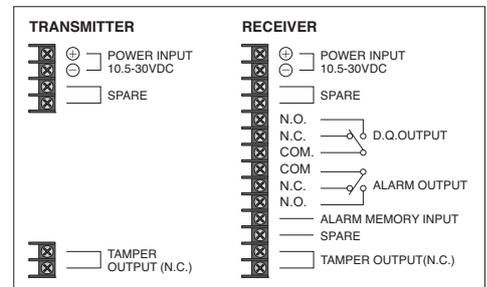
SL-200QDP/350QDP/650QDP

FEATURES

- HIGH POWER QUAD BEAM
- DOUBLE MODULATION
- UPPER/LOWER BEAM SELECTION BUTTON
- BEAM POWER CONTROL SELECTOR

Specifications

| Model | SL-200QDP | SL-350QDP | SL-650QDP |
|-------------------------|---|-------------|-------------|
| Detection range | 60m/200ft. | 100m/350ft. | 200m/650ft. |
| Beam frequencies | 4ch selectable | | |
| Current consumption | Normal 17mA/Max. 24mA | | |
| Ambient temperature | -35°C - +60°C (-30°F - 140°F) | | |
| Water protection | IP65 | | |
| Dimensions H x W x D | 448 (17.6) x 79 (3.1) x 96 (3.8) mm(inch) | | |
| Weight | 2400g(84.6oz) | | |



BASIC MODEL

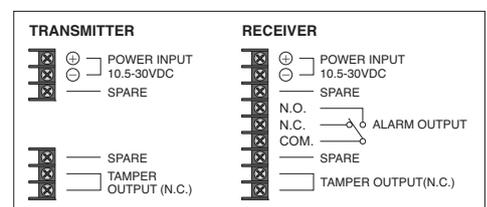
SL-200QN/350QN/650QN

FEATURES

- HIGH POWER QUAD BEAM
- SMART DESIGN - Slim body
- Vivid interior color

Specifications

| Model | SL-200QN | SL-350QN | SL-650QN |
|-------------------------|---|-------------|-------------|
| Detection range | 60m/200ft. | 100m/350ft. | 200m/650ft. |
| Beam frequencies | - | | |
| Current consumption | 38-40mA | | |
| Operating temperature | -25°C - +60°C (-13°F - 140°F) | | |
| Water protection | IP65 | | |
| Dimensions H x W x D | 448 (17.6) x 79 (3.1) x 96 (3.8) mm(inch) | | |
| Weight | 2400g(84.6oz) | | |



HARD-WIRED MODELS

ADVANCED MODEL

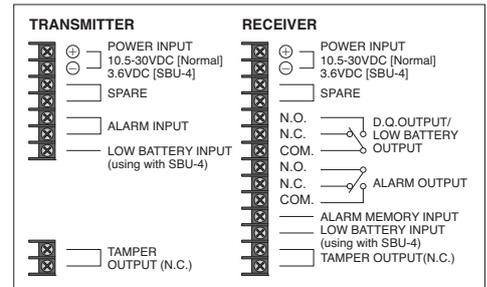
SL-200QDM/350QDM/650QDM

FEATURES

- HIGH POWER QUAD BEAM
- DOUBLE MODULATION
- BEAM POWER CONTROL SELECTOR
- A.T.P.C.-AUTOMATIC TRANSMIT POWER CONTROL
- I.A.S.C.- INTEGRATED ALIGNMENT STATUS COMMUNICATION
- UPPER/LOWER BEAM SELECTION BUTTON
- BEAM POWER CONTROL SELECTOR
- SOLAR BATTERY UNIT (OPTION : SBU-4)

Specifications

| Model | SL-200QDM | SL-350QDM | SL-650QDM |
|-------------------------|---|-------------|-------------|
| Detection range | 60m/200ft. | 100m/350ft. | 200m/650ft. |
| Beam frequencies | 4ch selectable | | |
| Current consumption | Normal 26mA/Max. 60mA | | |
| Ambient temperature | -35°C - +60°C (-30°F - 140°F) | | |
| Water protection | IP65 | | |
| Dimensions H x W x D | 448 (17.6) x 79 (3.1) x 96 (3.8) mm(inch) | | |
| Weight | 2500 g(88.2oz) | | |



STANDARD MODEL

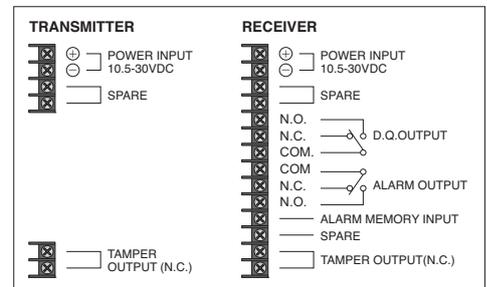
SL-200QDP/350QDP/650QDP

FEATURES

- HIGH POWER QUAD BEAM
- DOUBLE MODULATION
- UPPER/LOWER BEAM SELECTION BUTTON
- BEAM POWER CONTROL SELECTOR

Specifications

| Model | SL-200QDP | SL-350QDP | SL-650QDP |
|-------------------------|---|-------------|-------------|
| Detection range | 60m/200ft. | 100m/350ft. | 200m/650ft. |
| Beam frequencies | 4ch selectable | | |
| Current consumption | Normal 17mA/Max. 24mA | | |
| Ambient temperature | -35°C - +60°C (-30°F - 140°F) | | |
| Water protection | IP65 | | |
| Dimensions H x W x D | 448 (17.6) x 79 (3.1) x 96 (3.8) mm(inch) | | |
| Weight | 2400g(84.6oz) | | |



BASIC MODEL

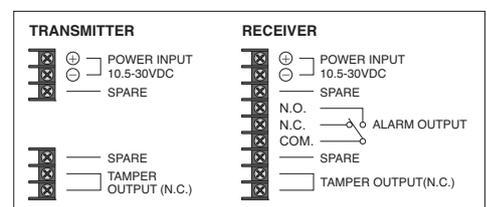
SL-200QN/350QN/650QN

FEATURES

- HIGH POWER QUAD BEAM
- SMART DESIGN - Slim body
- Vivid interior color

Specifications

| Model | SL-200QN | SL-350QN | SL-650QN |
|-------------------------|---|-------------|-------------|
| Detection range | 60m/200ft. | 100m/350ft. | 200m/650ft. |
| Beam frequencies | - | | |
| Current consumption | 38-40mA | | |
| Operating temperature | -25°C - +60°C (-13°F - 140°F) | | |
| Water protection | IP65 | | |
| Dimensions H x W x D | 448 (17.6) x 79 (3.1) x 96 (3.8) mm(inch) | | |
| Weight | 2400g(84.6oz) | | |



VARIOUS OPTIONS

Anti Bird Cap ABC-4

for all models

Prevents birds and small animals from sitting on the detector. Protects the front of the detector from excessive rain and snow.



Back Cover BC-4

for all models

Conceal the back side of a pole mounted detector.



Pole Side Cover PSC-4

for all models

Conceal the gap between two pole mounted detectors in back to back.

Patent pending



Conduit Bracket CBR-4

for all models

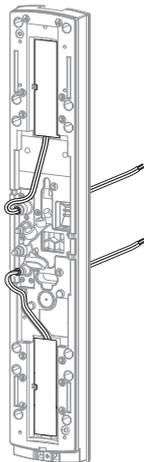


Heating Unit HU-3

for Hard-wired models



| | |
|---------------|--------------------------|
| Power input | 24VAC/DC |
| Current draw | 420mA(max.) (Per 1 unit) |
| Thermo switch | 60°C (140°F) |



Solar Battery Unit SBU-4

for SL-QDM only

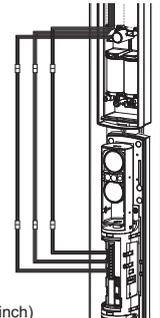
Supplies power by high efficiency solar battery. Li-ion rechargeable battery and Anti-Bird Needles are included.



Extension Cable with Connector EC-4

for SL-QFR/QNR only

Extension cables between the back box and the main unit when installing in a beam tower beam tower.

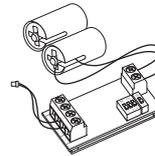


Cable length: 500 mm (19.7 inch)

Battery Common Unit BCU-4

for SL-QFR/QNR AX-TFR only

Share power source and low battery signals between the main unit and the wireless transmitter.



| | | |
|-----------------------|--------------------------------|-----------------------------------|
| Input voltage | 3.2 - 4.0 VDC | |
| Current draw | Normal | Approx. 5 µA at 3.6 VDC (no load) |
| Output voltage | Normal | Approx. 2.3 - 3.6 VDC |
| | Low battery | Approx. 2.0 - 2.6 VDC |
| Output current | 100 mA (max.) | |
| Operating temperature | -20°C - +60°C (-40°F - +140°F) | |
| Operating humidity | 95% (max.) | |

Beam Alignment Unit BAU-4

for all models

Align optical axis automatically. (SL-QDP/QN/QFR/QNR: applicable only to receiver only)

Patent pending



SHORT RANGE MODELS



AX-100TFR/200TFR



BATTERY OPERATED PHOTOELECTRIC DETECTOR

AX-100TFR : Detection range 30m / 100ft.
AX-200TFR : Detection range 60m / 200ft.



AX-70TN/130TN/200TN

SHORT RANGE PHOTOELECTRIC DETECTOR

AX-70TN : Detection range 20m / 70ft.
AX-130TN : Detection range 40m / 130ft.
AX-200TN : Detection range 60m / 200ft.

AX-100TF/200TF

4ch. BEAM FREQUENCIES SELECTABLE MODELS

AX-100TF : Detection range 30m / 100ft.
AX-200TF : Detection range 60m / 200ft.



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