ST-D.O.T.™

ST-DOT-120
Opto Amplifier
Installation guide

For use with:

R15 / M15 receivers and T15 Photo transmitter

- **Up to 15m sensing range with standard M/R sensors**
- **DIN rail mounting**
- **Terminal block wiring**
- **Relay changeover contact rated 8A/250VAC**
- **Sync input for side by side install**

SPEED TECH A/S

INTRODUCTION AND WIRING

Introduction:

ST-DOT-120 is an opto-electronic amplifier module for DIN-rail mounting for use with DOT transmitters and receivers.

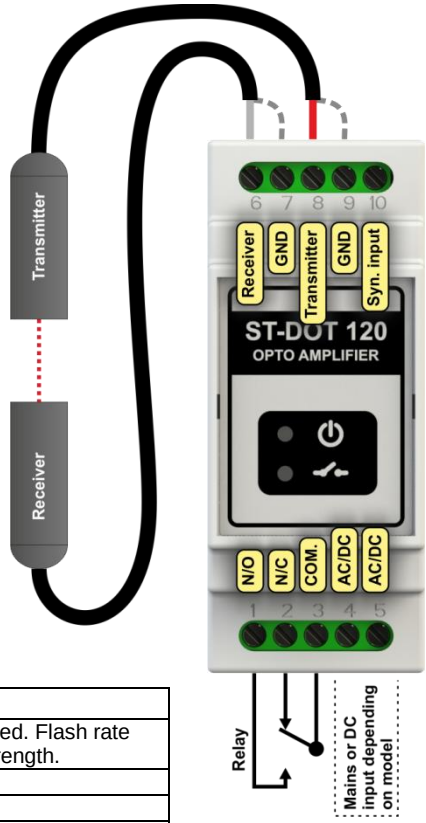
It is a single channel amplifier with relay output made for a variety of supply voltages. It is quick and easy to install. Just connect power, transmitter, receiver and output and it is ready to operate.
When transmitter and receiver do see each other the relay will be standing N.O. When the light is interrupted the relay will switch to N.C.

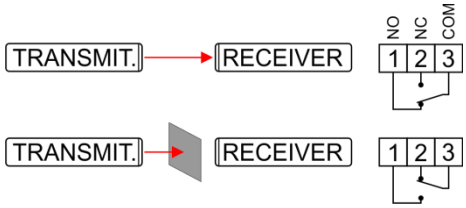
Wiring:

Install receiver closest to the ST-DOT 120. (White wire)

Avoid running any wires close/in parallel to any motor power cables i.e. the output from a frequency inverter drive.
Always use M15 type receiver when using with frequency inverter

Avoid installing the receiver in direct sunlight.





Status Led's:

⏻ - Status:	- Relay:	Description:
Green Solid	Green Flash	Beam not interrupted. Flash rate indicated signal strength.
Green Solid	Red Solid	Beam interrupted
Red Solid	Red Solid	Test signal active
Red Flash	Red Flash	Receiver connection fault

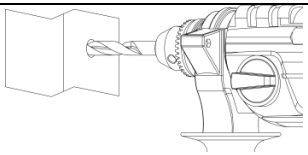
ALIGNMENT AND INSTALLATION

Alignment of photocells

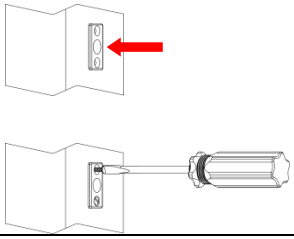
During installation make sure that the transmitter and receiver are **horizontally** aligned as illustrated below. The photocells can work with a slight offset (depending on the distance in-between) but this is not recommended as the sensitivity is affected.

The LED - Relay State will flash green when signal is OK and red if not OK. The green led will flash faster the more signal there is present.

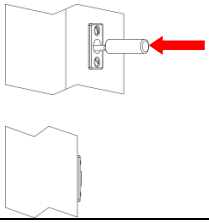
Installation of photocells



Drill a Ø13mm hole.



Install the photocell bracket and fasten it bracket with two screws



Install the Photocell in the bracket so that it is flush with the wall

Installing side by side – (Sync function)

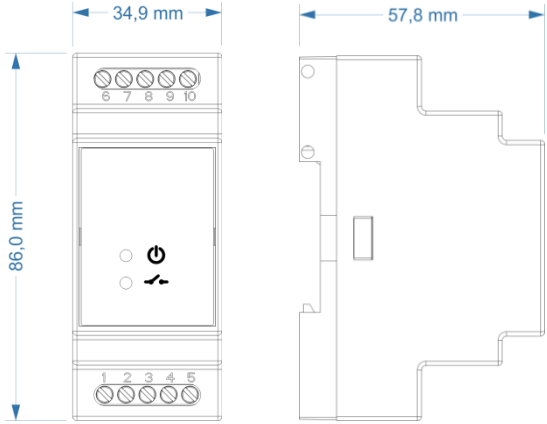
If you install 2 set close to each other cross talk may occur. This can be solved by using the SYNC input terminal 10.Connect the transmitter signal (terminal 8) from the master to the slave SYNC input and connect a link between 0V on the two DOT 120 modules (terminal 9).

TECHNICAL DATA

Troubleshooting:

- In case the photocells does not work as intended during day check if the receiver is exposed to direct sunlight.
  If this is the case try swapping the transceiver and receiver.

Mechanical dimensions:



Technical data:

Supply Voltages, - see order no below. Other voltages on order.	230VAC (+/- 10%), 110VAC, 24VAC or 24VDC.	
Consumption	AC-versions 1.5 VA, DC versions max. 70 mA.	
Sensing range with DOT T15 and R15 / M15 sensors	0-15 m, automatic gain control.	
Wiring	Terminal blocks.	
Operation mode	Light activated, - see function below.	
Output	Relay changeover contact rated 8A/250VAC.	
Response time	25 ms	
Switching frequency	Max. 10 Hz.	
Indicators	⏻ - Status	- Relay State
	Green = OK / Red = Test active	Green = Beam not broken (N.O.) Green Flashing = Signal Strength Red = Beam broken (N.C.)
	Red flash	Red flash = Connection Error
Operating temperature	-20 - +50ºC	
Housing, dimensions and weight	Grey polycarbonate IP50, 35x86x58 mm	