



Through-Beam LASER BARRIER

Laser Barrier

VLP21/VRH



1500 m

For Extreme Detection

Visible Laser Alignment Pointer

Alarm signal

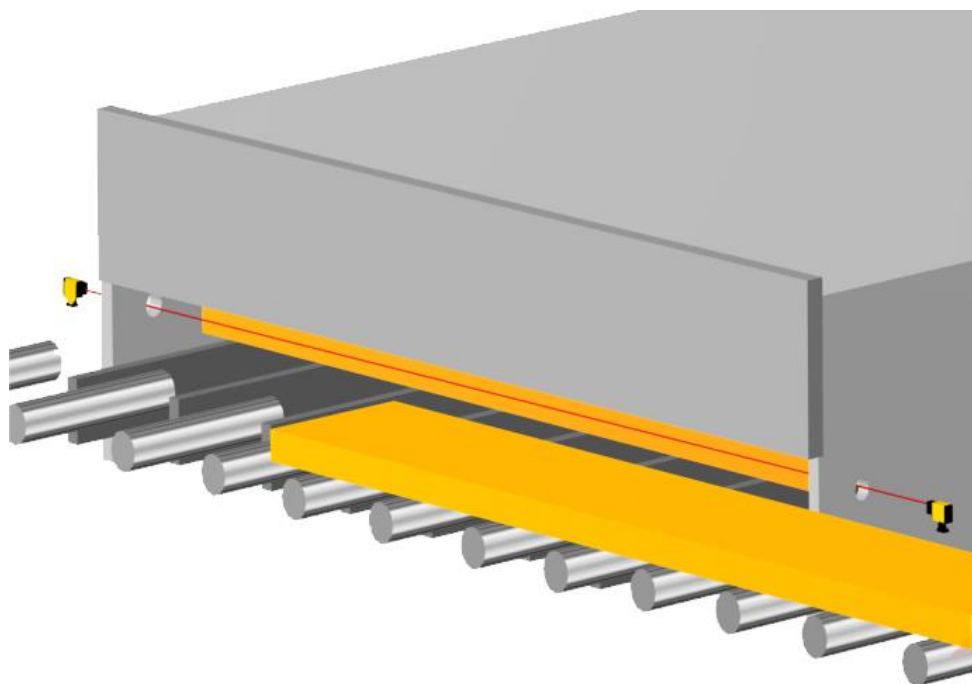
Designed for Harsh Environment



Typical Applications

Slab – bloom detection at the exit of reheating furnace

The Emitter **VLP21** unit emits a high power infrared laser pulse. This pulse is received by a photosensitive diode fitted with an optical filter and whose signal is processed by the incorporated circuitry of the Receiver **VRH**. The output changes state depending on whether the modulated beam is interrupted or not. The modulation of the emission, the particular characteristics of the optical filter and the automatic correction for ambient light make the sensor insensitive to any other source.



Special Features

- Very high power infrared laser pulse.
- Insensitivity to ambient light and radiation from furnaces.
- Pre-failure, alarm output when the lenses are becoming dirty (signal at the limit of detection threshold).
- Air purging and water-cooling.
- Modular construction allowing rapid maintenance.

Commissioning and Alignment

The red laser alignment pointer makes the installation of the optical barrier **VLP21/VRH** simple and rapid. The laser pointer is activated with a push button at the back of the emitter unit **VLP21** and remains on during 10 min. The receiver has a special alignment mode and the LED blinking rate gives an indication of the signal level. These features are used to optimize the receiver alignment.

Technical characteristics

| Reference | | VLP21 |
|---|-----------------------------------|----------|
| Maximum distance between emitter and receiver | | 1500 m |
| Detection margin | Distance emitter - receiver: 5 m | >100 000 |
| | Distance emitter - receiver: 15 m | > 10 000 |
| Maximum product or background temperature | | 2550 °F |



Emitter

| Reference | VLP21 |
|--|---|
| Emission Laser class (IEC 60825-1) | High power laser pulse Class 1M |
| Wavelength | 905 nm |
| Angle of dispersion | Emitter: 1.6° Receiver: 3° |
| Light spot diameter at 15 m | About 400 mm |
| Laser alignment pointer Laser class (IEC 60825-1) | Class 2 - 650 nm On during 10 min after activation with test button |
| Alarm | Low impedance: 0/24 V - 50 mA Short circuit protection 0V when internal temperature is too high or internal failure |
| LED indication | LED 3 colours |

Receiver

| Reference | VRH-S | VRH-R |
|---|---|--|
| Outputs Electrical characteristics | 2 complementary push-pull outputs Low impedance: 0/24 V - 50 mA Short circuit protection | Relay output Single pole change over Switching capacity: 230 V - 2,5 A |
| Alarm | Low impedance: 0/24 V - 50 mA Short circuit protection 0V when received light level is too low, when internal temperature is too high or internal failure | - |
| Response time | 2 ms | Make time: 8 ms, Break time: 4 ms |
| Operation mode - Time delay selection switch | Dark operation: no delay, 50 ms, 100 ms, 200 ms, 500 ms Light operation: no delay, 50 ms, 200 ms, 500 ms Alignment mode | |
| LED indication | LED 3 colours | |

CE

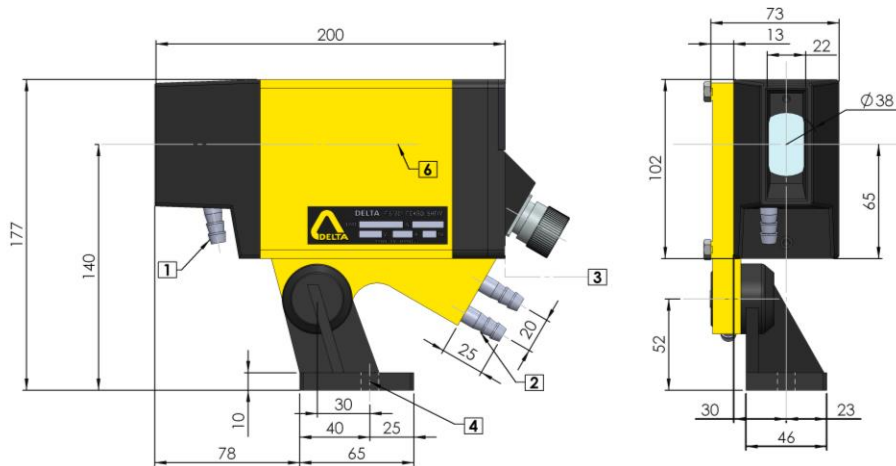
Other data

| | | |
|-----------------------|--|----------------|
| Operating voltage | 220 V (-15%) to 240 V (+10%) - 50 / 60 Hz or 110 V (-15%) to 120 V (+10%) - 50 / 60 Hz or 24 V (±10%) - 50 / 60 Hz | 24 V DC (±20%) |
| Power consumption | 10 VA | 8 W |
| Cable | Connector fitted with silicone cable with protective steel braid Standard length of 2 m (other length: 3, 5 or 8 m) | |
| Weight | 5 kg (Emitter and Receiver) | |
| Protection rating | IP 67 (Cast aluminium case) | |
| Air purging | Protection of the optic with clean air: 50 to 200 g/cm ² , 4 to 16 l/min | |
| Operating temperature | -20 to 70 °C (0 to 160 °F) without cooling. Up to 120 °C (250 °F) with water cooling: industrial quality water at about 25 °C, pressure 1-2 bar and flow 1-5 l/min | |



Dimensions

VLP21/
VRH

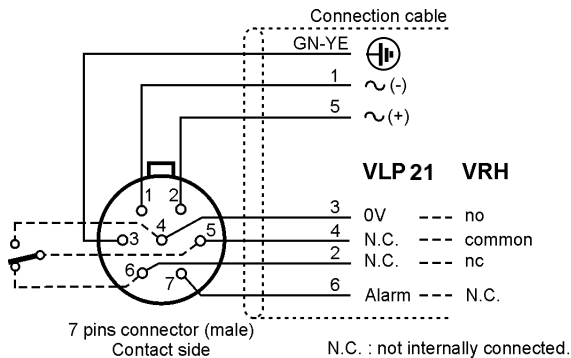


- 1 Air supply \varnothing 10
- 2 Water supplies \varnothing 10
- 3 Connector clearance 90 mm
- 4 Mounting with screw \varnothing 10
- 5 Not used on this model
- 6 Optical axis

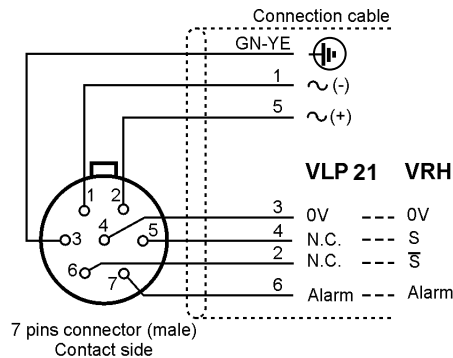


Laser Class 1M
Class 2

Connection

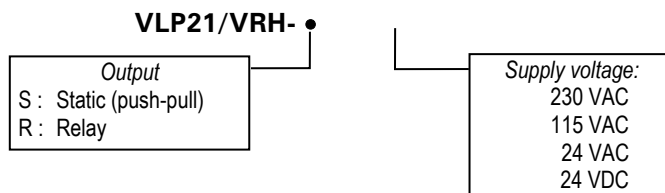


VLP21/VRH-R



VLP21/VRH-S

Reference for order



E.g.: VLP21/VRH-S 230VAC

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Subject to change without prior notice

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