ESQUENET

Mobile Safety Technology & Forklift Supplies

ESQOspeed

SAFETY ZONE RADAR

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There are still to many accidents with people working around industrial machinery.

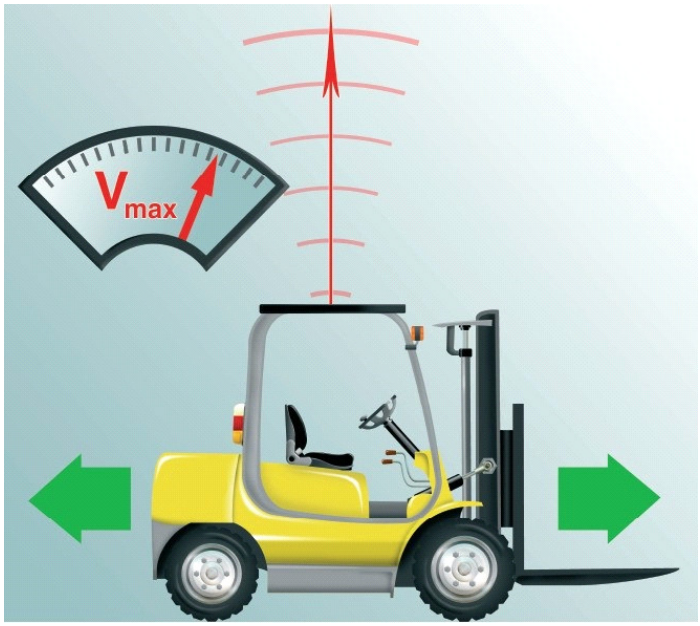
The main industries and activities that are concerned :

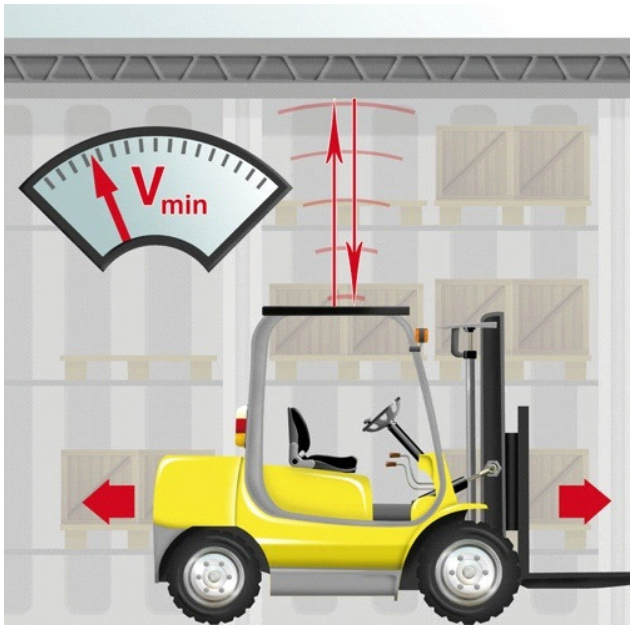
Forklift truck traffic in industrial environment, logistics, recycling, manufacturing,…

The **ESQOspeed Safety Zone Radar** by ESQUENET MST automatically selects slow speed as soon as a building is entered.

Specification and advantages:

- Drastically reduces the accidents on the workplace
- Ceiling detection by means of a very precise and qualitative industrial radar (IP67)
- Insensitive to weather conditions or light influences (IP67)
- Driver alert by means of LED indicator on the dashboard indicating that turtle speed is selected (inside).
- Easy and quick installation





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Description :

The ESQOspeed Safety Zone Radar is an assistance system that automatically reduces the speed of a vehicle as soon as it goes inside, by means of detecting the ceiling of a building*.

The system actions the speed limiter of the vehicle by selecting the switchable conditional speed**.
As long as the radar signal is not bounced, the speed limitation is inactive.

As soon as a ceiling or a structure is detected by the radar, the turtle speed is selected until the machine goes outside again (no detection of a ceiling or a structure).

* Maximum distance of 24 meters from the sensor on top of the overhead guard to the ceiling.
** In case of a vehicle does not have a selectable speed ESQUENET MST can offer a range of speed limiters for diesel and gas trucks.

Specifications :

- Protection Class IP67 can be used under extreme conditions
- Temperature range from -40 ° to +65 ° C
- Functioning of the system insensitive to weather conditions (snow, rain, wind, smog, dust, …) or to light variations
- Maximum detection distance is 24 meters above the sensor to the ceiling
- Supplied with considerably large LED-speed-switching-indicator (to be mounted in dashboard)
- Wiring loom +5 m and switchable automotive relay 12VDC/40A (IP67) or 24VDC/40A (IP54)
- Extra wiring loom +1 m to LED-sped-switching-indicator
- Extra wiring loom +2,5 m to output cabling (NC-NO)
- Dimensions radar unit box : 200 x 90 x 60 mm (l x w x h)

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Mounting instructions :

1) Installation of the radar sensor :
   - Install the housing on the driver cabin or overhead guard of the vehicle. 4 screws of 5mm
   - Make sure that nothing is in the range of the radar beam that might disturb the system

2) Installation of the LED-speed-switching-indicator in the dashboard :
   - Determin the best spot :
     - A minimum mounting depth of 40mm is needed
   - Drilling :
     - Diameter 22 mm

3) Installation of the relay 12VDC or 24VDC :
   - Secure with an M6 screw

Wiring instructions :

- Power cabling :
  - Brown (BN) : switched +12v (To be protected with 5 Amp fuse F1)
  - Blue (BL) : Negatif

- LED indicator cabling :
  - Red (RD)
  - Blue (BL)

- Relay (outputs) cabling :
  - Blue/White (BL/WT) : Pin 30 – Input relay
  - Blue/Brown (BL/BN) : Pin 87a – Output Normally Closed (NC)
  - Blue/Black (BL/BK) : Pin 87 – Output Normally Open (NO)

- 4 way connector :
  - Pin 1 : Brown (BN) : +12VDC / +24VDC
  - Pin 2 : Blue (BL) : Negatif
  - Pin3 : Black (BK) : Relay output (NO)
  - Pin 4 : White (WT) : Not in use

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Sensor settings ESQOspeed

The sensor range and sensitivity can be adjusted by means of DIP switches in the sensor housing.

DIP Switches S6 (Normally open/normally closed output functionality), S7 & S8 (Response Speed) should not be altered !

The DIP switches can be adjusted in accordance with the following tables.
Range and sensitivity can be adjusted separately.

Range			
S1	**S2**	**S3**	**Distance**
0	0	0	2 m
0	0	1	3 m
0	1	0	4 m
0	1	1	6 m
1	0	0	8 m
1	0	1	12 m
1	1	0	16 m
1	1	1	24 m

Sensitivity		
S4	**S5**	**Detection field intensity**
0	0	4 (Highest)
0	1	3 (High)
1	0	2 (Medium)
1	1	1 (Low)

Note : Highest sensitivity is achieved only if sensing distance is 8m or less.

Note : Near-field sensitivity boost is enabled when set to 4m or less.

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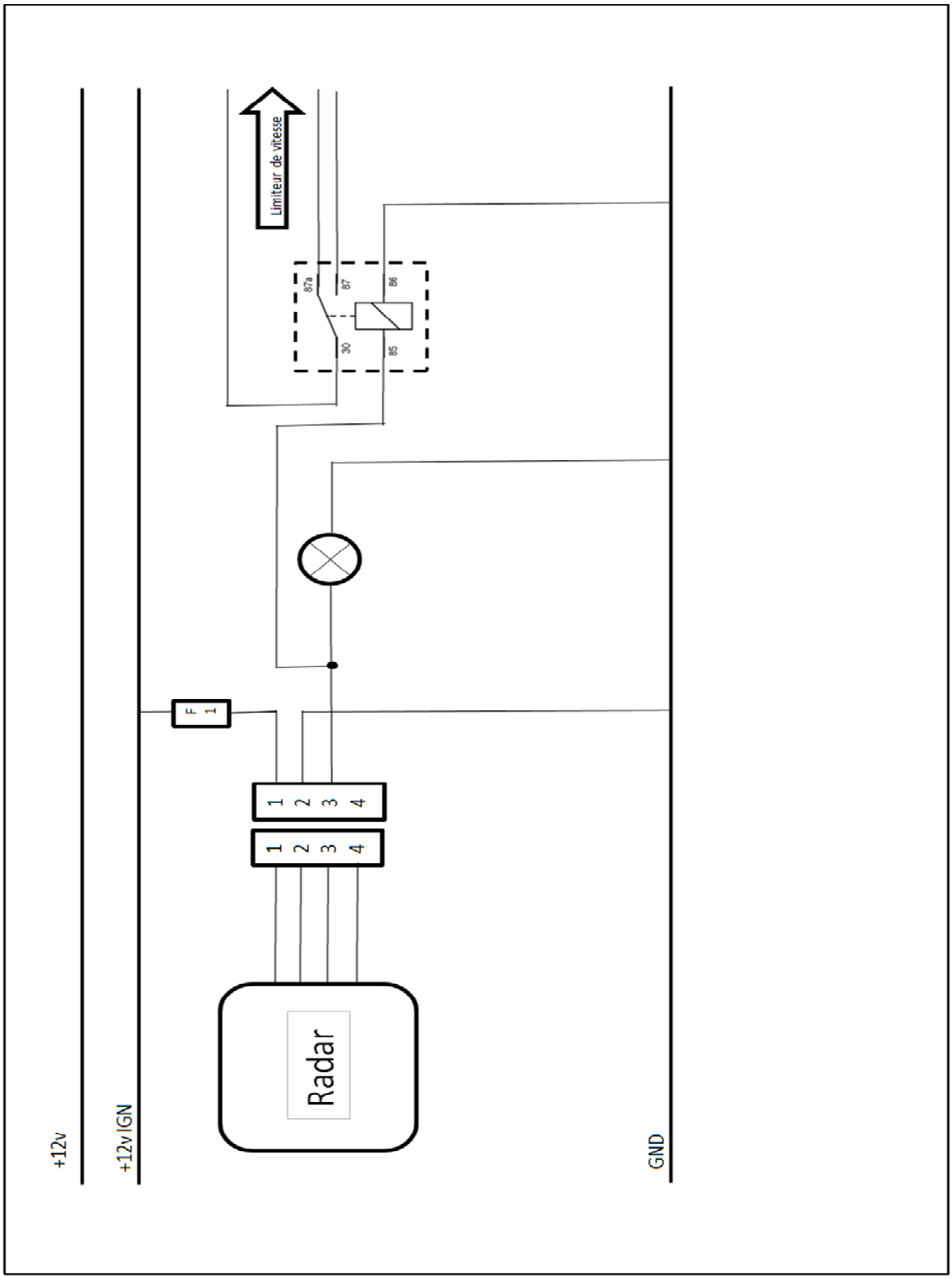
Wiring diagram :



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