

## Explosion prevention

# TRUCK EARTHING VERIFICATION TES-01 (IP) (EX)

### Scope

Loading and unloading non-conducting liquids or powders from trucks can generate electrostatic charges. If enough electrostatic energy is generated, there will be an explosion hazard. This risk can be avoided by earthing the truck via a TES-01 earthing verification system.

### Benefits of the TES-01 earthing verification

The Stuvex TES-01 earthing verification system has been specially designed for the safe earthing of trucks and offers the following benefits:

- Safe electrostatic discharge of the truck
- Earth clamp resistance measurement
- Verification of the truck's electrical capacity
- Red and green indicators
- Potential-free contact provides release of loading and unloading functions
- Power supply 100-240 V AC and 24 V DC as standard
- Complies with IEC 60079-32-1 and NFPA77
- Easy 'plug and play' installation
- Verification unit in gas or dust Ex version

### Variants

The TES-01 IP variant may be used in zones 21 and 22.

The TES-01 EX is suitable for use in zones 1, 2, 21 and 22.

### Operation

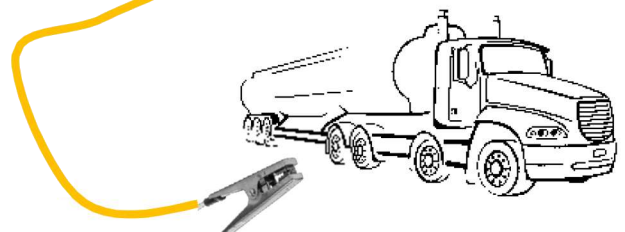
The Stuvex TES-01 earthing verification system has been designed to detect a low electrical resistance between the clamp jaws that are attached to the truck's earthing point. If resistance values are low enough, the TES-01 will conduct the electrostatic charge from the truck to earth in a controlled way. This will avoid sparks. The TES-01 will subsequently check the electrical capacity at the clamp. If the capacity corresponds with that of the truck, the green indicator will light up and loading or unloading will be released. The TES-01 will now continuously monitor the connection between the truck and the clamp jaws to avoid an electrostatic charge build-up. If the clamp is removed from the truck, the TES-01 will see this as a potentially hazardous situation and the red indicator will light up. This will immediately interrupt loading or unloading thanks to the interlock relay.



TES-01 EX



TES-01 IP



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The earthing verification system consists of the TES-01 control unit, an earth clamp and a cable.

## Earthing verification unit TES-01

The control unit provides five important functions:

- Verification of the earth clamp connection with the truck
- Recognises that the object to be earthed is a truck
- Earths the truck without forming sparks
- Potential-free contact to release loading and unloading functions



## Active earth clamp

With active clamps, the two clamp jaws are insulated from each other and from the clamp body itself. As long as the clamp is not connected to a conductor, the circuit between the clamp jaws will stay open and no current can flow. Connecting the clamp to the truck's earthing point will close the circuit. An optional storage point for the clamp can be supplied, with or without a shelter.



## Cable, spiral cable or cable reel

You can choose from a separate cable, spiral cable or cable reel to connect the TES-01 to the truck. The cable reel has an automatic retractor. Cable lengths vary from 10 to 15 m.



Stuvex International NV reserves the right to implement changes to these products without prior notification.



### Stuvex International NV

Heiveldekens 8, 2550, Kontich, Belgium, +32 3458 2552, info@stuvex.com

### Stuvex Safety Systems Ltd

Abbey Studio, Church Walk, Chertsey, Surrey KT16 8RE, United Kingdom  
+44 1932 57 1303, info@stuvex.co.uk

