

# SERIES 3414

## DATA LINE PROTECTORS

### Description

#### Protection components for symmetric twisted pair data lines

HUBER+SUHNER data line protectors have been designed to protect sensitive high speed data-, voice and multimedia application over copper lines against damaging transients caused by natural events such as lightning or man made surges. The protectors have been optimized to provide data transmission for several

physical layers (with bandwidth up to Class D, Cat-5). Possible interconnections are made via the industrial standard RJ11, RJ45, RJ48, D-Sub and IEC 60130-9 connector, and the devices are suitable for screened (STP) or unshielded (UTP) twisted pair cables or multi-core cables. Some protectors are suitable for use with Power over Ethernet (PoE acc. IEEE 802.3af).

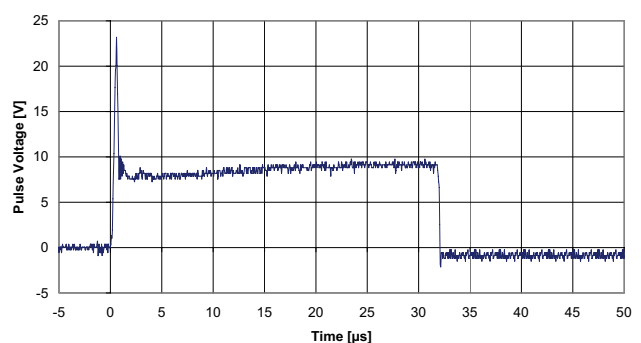
### Applications

Series 3414 are designed for the protection of current and future sensitive data networks. The most important and frequently used devices are switches, multiplexers and cross-connects, hubs (also WLAN hubs), modems and network interface cards. The placement of DLP is in series between the incoming data line and I/O port of the equipment to be protected. For an effective protection we recommend to install the DLP on both ends of data lines.

- Ethernet lines
- T1/E1 telecommunication lines
- AISG based antenna systems

Typical residual pulse for series 3414  
(test pulse acc. to IEC 61000-4-5  
1.2/50  $\mu$ s 4 kV; 8/20  $\mu$ s 2 kA):

Residual pulse voltage: 25 V  
Residual pulse energy: 50  $\mu$ J



# PROTECTORS FOR ETHERNET LINES

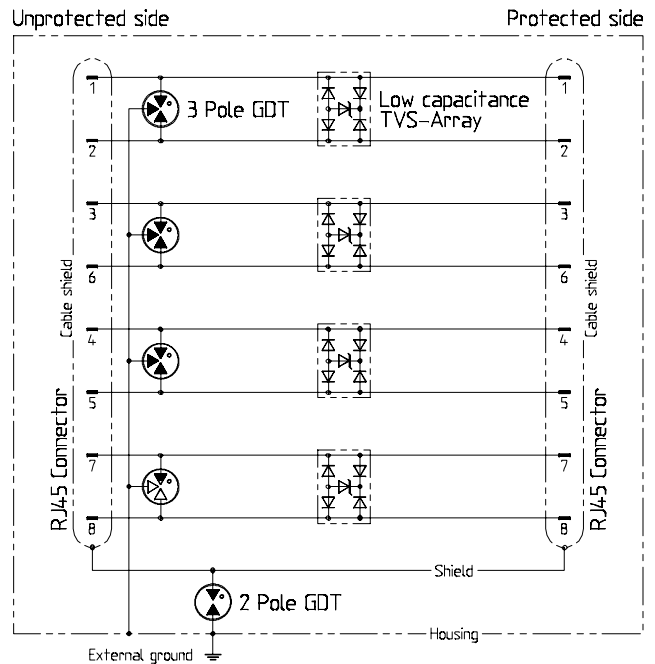
## Description

The optimized 3414 data line protectors can be used in state of the art Ethernet twisted pair systems class D channel link (Cat 5e), xDSL and other high speed data

transmission applications. Series 3414 includes hybrid units which integrate first stage and fine protection components.

## Features

- coarse and fine protection
- fast response time
- conform to installation class D (Cat 5e) (ISO/IEC 11801, ANSI/TIA/EIA-586-B, EN 50173)
- suitable for Ethernet 10 to 1000 Base-T
- supports «Power over Ethernet» (PoE acc. IEEE 802.3af)
- interface RJ45
- all eight lines protected
- shield and housing/grounding separated
- shield through-connected
- several grounding and mounting options
- waterproof versions up to IP rating IP68 (according to product detail specification)
- easy mountable
- maintenance free



## Specifications

Electrical data	
<b>DC/RF:</b>	
Data transmission rate	1000 Mbps
Frequency range	DC - 100 MHz
Impedance	100 Ω
Voltage rating:	
- line - line (pair)	±6 V
- line - ground	±60 V
Current rating (per line)	1.5 A
Connector interfaces	RJ45 jack
<b>Protection:</b>	
Surge current handling capability:	(8/20 μs test pulse)
- shield - ground	6 kA
- line - ground	2.5 kA
- line - line (pair)	100 A
Response time	2 ns
<b>Environmental data</b>	
Operating temperature range	-40 °C to +85 °C

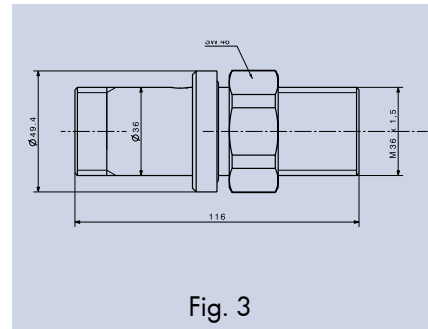
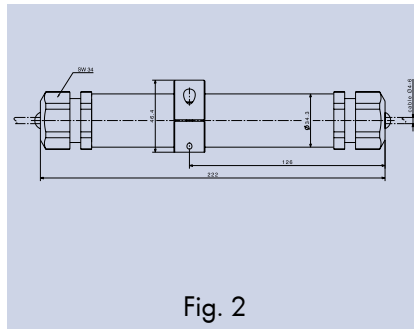
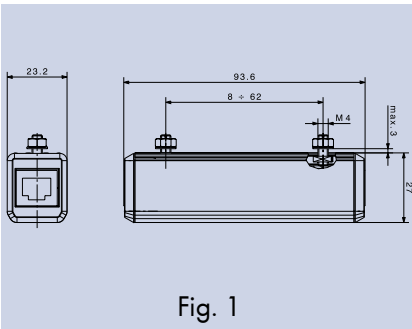
# SERIES 3414 ETHERNET LINES



Type	Waterproof	Mounting/grounding	Description	Option	Figure
3414.99.0003*	IP20	wire, screw	general purpose		Fig. 1
3414.99.0008	IP68	wire, screw, clamp (incl.)	water proof metal housing for permanent outdoor installations		Fig. 2
3414.99.0009	IP68	bulkhead	rugged metal housing for temporary outdoor installations	optional interconnect accessories	Fig. 3

\* patch cable 12 cm (4.72 in.) included

All dimensions in mm



## Accessories for 3414.99.0009 data line protector

H+S Type	Description	Figure
9073.99.0002	RJ45 plug kit, field assembly	Fig. 4
9073.99.0004	protective cap for data line protector	Fig. 5
9073.99.0003	protective cap for RJ45 plug kit	Fig. 6

All dimensions in mm

