

PSI-MODEM-SHDSL/ETH - Ethernet extender



2313643

<https://www.phoenixcontact.com/gb/products/2313643>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



First generation: Unmanaged Ethernet extender for point-to-point connections, line and ring structures, data rates up to 30 Mbps, distances of up to 20 km on in-house copper cables, diagnostics via USB and LEDs, 2 SHDSL ports, 1 LAN port

Your advantages

- Distances up to 20 km
- Up to 15.3 Mbps in 2-wire operation
- Up to 30 Mbps in 4-wire operation
- Robust modulation method (SHDSL)
- PROFINET
- Automatic SHDSL data rate detection
- Network transparent (no IP configuration required)
- Protocol transparent
- Automatic detection of network cable type (auto MDI(X))
- Automatic network data rate detection (10/100 Mbps)
- Easy startup, plug and play
- Future proof (IPv4 and IPv6-compatible)
- 2 digital outputs for alerting external controllers

Commercial data

Item number	2313643
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNC442
Product key	DNC442
GTIN	4046356509206
Weight per piece (including packing)	259.7 g
Weight per piece (excluding packing)	258.7 g
Customs tariff number	85176200
Country of origin	DE

Technical data

Notes

Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.
------------	---

Product properties

Product type	Ethernet extender
MTTF	711 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	308 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	125 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)
MTBF	1017 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	205 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))

Electrical properties

Electrical isolation	VCC // Ethernet // DSL (A) // DSL (B) // FE
Maximum power dissipation for nominal condition	4.32 W
Mains type	Permanent line
Test voltage data interface/power supply	1.5 kV _{rms} (50 Hz, 1 min.)

Supply

Supply voltage range	18 V DC ... 30 V DC
Nominal supply voltage	24 V DC ±5 % (as an alternative or redundant, via backplane bus contact and system current supply)
	5 V DC (configuration only, via mini-USB type B)
Typical current consumption	< 180 mA (24 V DC)
Max. current consumption	≤ 2 A (For operation in a joining station, via the DIN rail connector)

Function

Management	Plug and play, user-friendly software: Diagnostic functions, log book, individual configuration
Status and diagnostic indicators	LEDs: VCC (supply voltage), ACT/LINK (Ethernet data traffic), ERR (errors) 2 x LINK / 2 x STAT (DSL data traffic port A and port B), DIAG (diagnostic messages)

Output data

Signal

Output name	Digital output
Number of outputs	2
Voltage output signal	18 V DC ... 30 V DC (depending on the operating voltage)

PSI-MODEM-SHDSL/ETH - Ethernet extender



2313643

<https://www.phoenixcontact.com/gb/products/2313643>

Current output signal	≤ 150 mA (Short-circuit-proof)
-----------------------	--------------------------------

Connection data

Supply

Connection method	COMBICON plug-in screw terminal block
Tightening torque	0.56 Nm ... 0.79 Nm

Interfaces

Signal	Ethernet
--------	----------

Data: Ethernet interface, 10/100Base-T(X) in accordance with IEEE 802.3

Serial transmission speed	10/100 Mbps, auto negotiation
Connection method	RJ45 jack, shielded
No. of channels	1
Transmission length	< 100 m (shielded twisted pair)
Protocols supported	Transparent protocol for IPv4 and IPv6

Data: SHDSL interface according to ITU-T G.991.2.bis

Serial transmission speed	4-wire operation: 64 kbps ... 30 Mbps
	2-wire operation: 32 kbps ... 15.3 Mbps
Connection method	2 x 2-pos. COMBICON plug-in screw terminal blocks
Tightening torque	0.56 Nm ... 0.79 Nm
Transmission length	< 20 km (Depending on data rate and cable cross section)
Conductor cross-section flexible max.	2.5 mm ²
Conductor cross-section flexible min.	0.2 mm ²
Conductor cross-section, rigid max.	2.5 mm ²
Conductor cross-section, rigid min.	0.2 mm ²
Max. AWG conductor cross-section, flexible	14
Min. AWG conductor cross-section, flexible	24
Single-wire/terminal point, rigid AWG max.	14
Single-wire/terminal point, rigid AWG min.	24

Data: USB 2.0

Connection method	Mini-USB type B, 5-pos.
Transmission length	< 5 m (only for configuration and diagnostics)

Dimensions

Width	35 mm
Height	99 mm
Depth	114.5 mm

Material specifications

Color (Housing)	green (RAL 6021)
Material (Housing)	PA 6.6-FR

Mechanical tests

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	Vibration (operation): 5g, 10...150 Hz, 2.5 h, in XYZ direction
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	Shock (operation): 15g, 11 ms period, half-sine shock pulse

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 60 °C (Freestanding (40 mm spacing to the right and left), no supply of other modules via the device)
	-20 °C ... 55 °C (Mounted in rows with zero spacing and low power dissipation of aligned modules)
	-20 °C ... 50 °C (Mounted in rows with zero spacing)
	-20 °C ... 45 °C (aligned without spacing and supply of other modules via the device, 1.5 A)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)

Approvals

CE

Certificate	CE-compliant
-------------	--------------

ATEX

Identification	⊕ II 3 G Ex nA IIC T4 Gc X
Note	Please follow the special installation instructions in the documentation!

UL, USA/Canada

Identification	508 Listed
----------------	------------

Corrosive gas test

Identification	ISA-S71.04-1985 G3 Harsh Group A
----------------	----------------------------------

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
-------------------------------	---

Standards and regulations

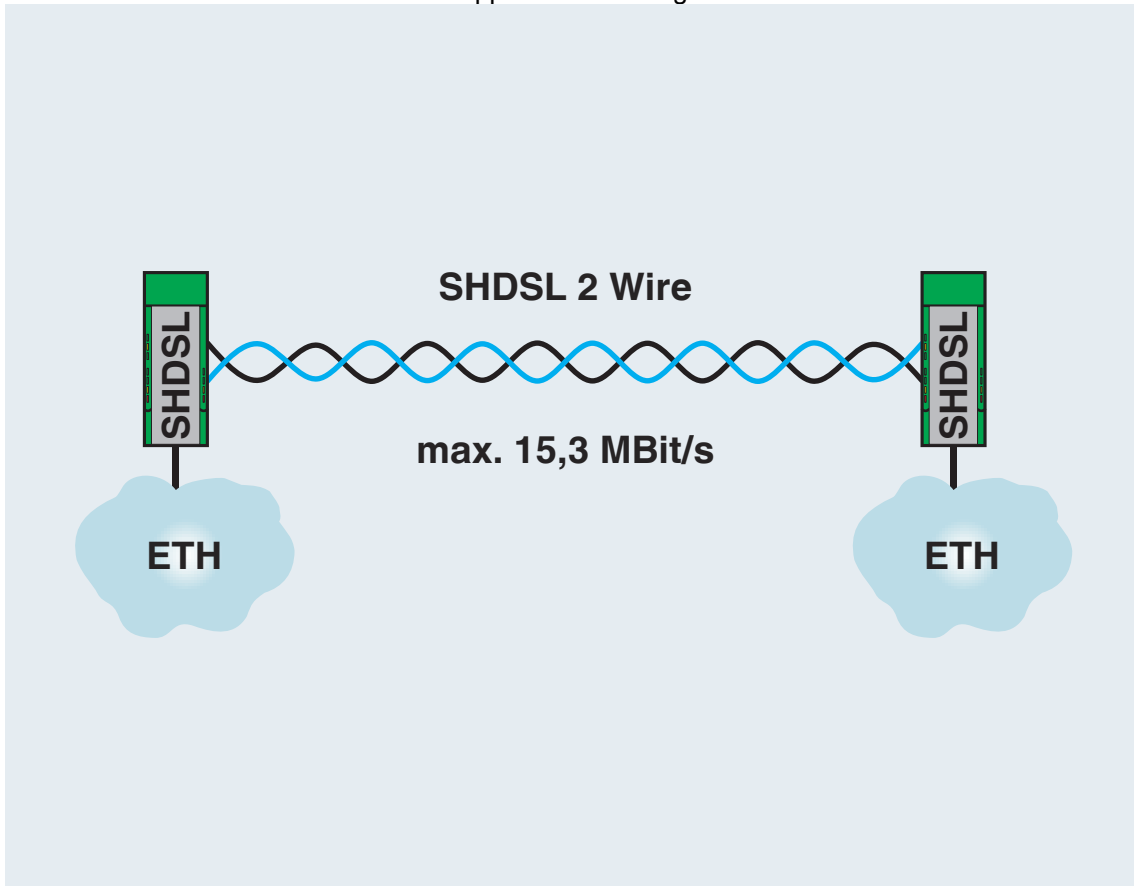
Standards/regulations	EN 50121-4
-----------------------	------------

Mounting

Mounting type	DIN rail: 35 mm
---------------	-----------------

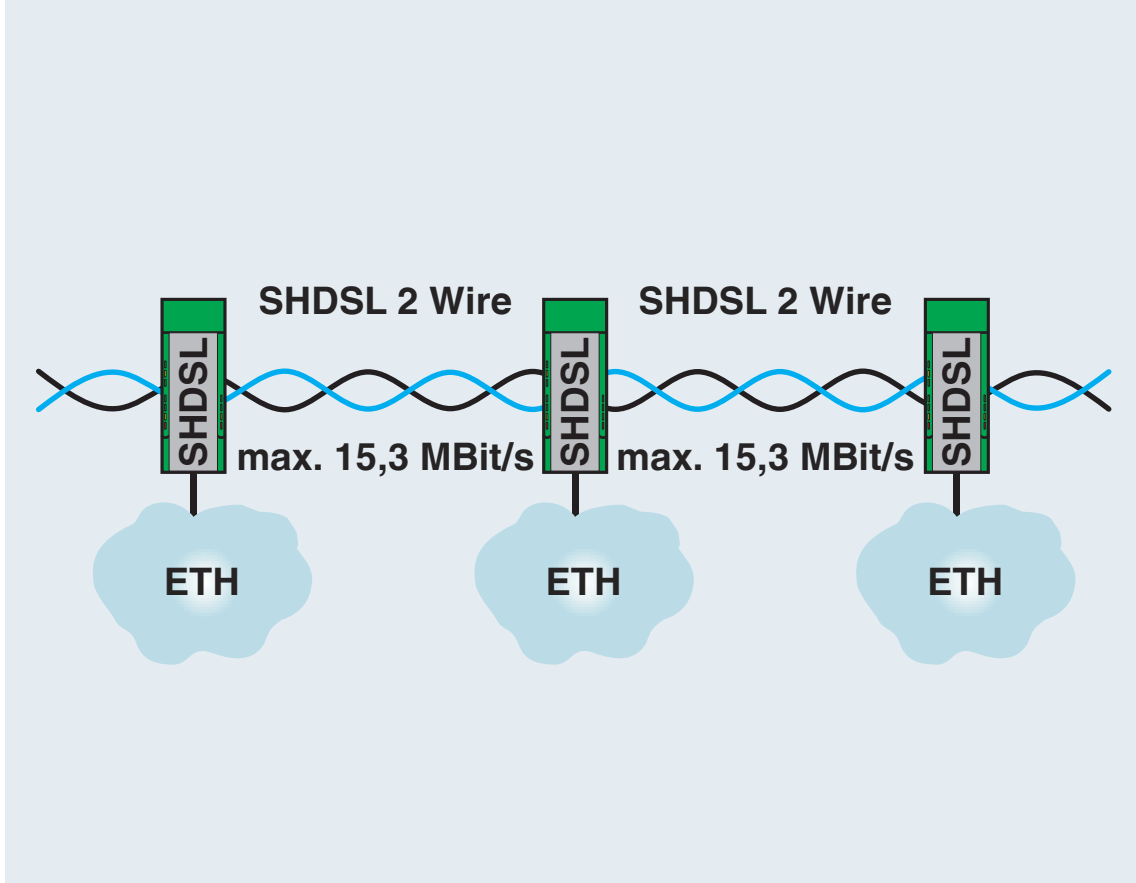
Drawings

Application drawing



Point-to-point connection (2-wire)

Application drawing

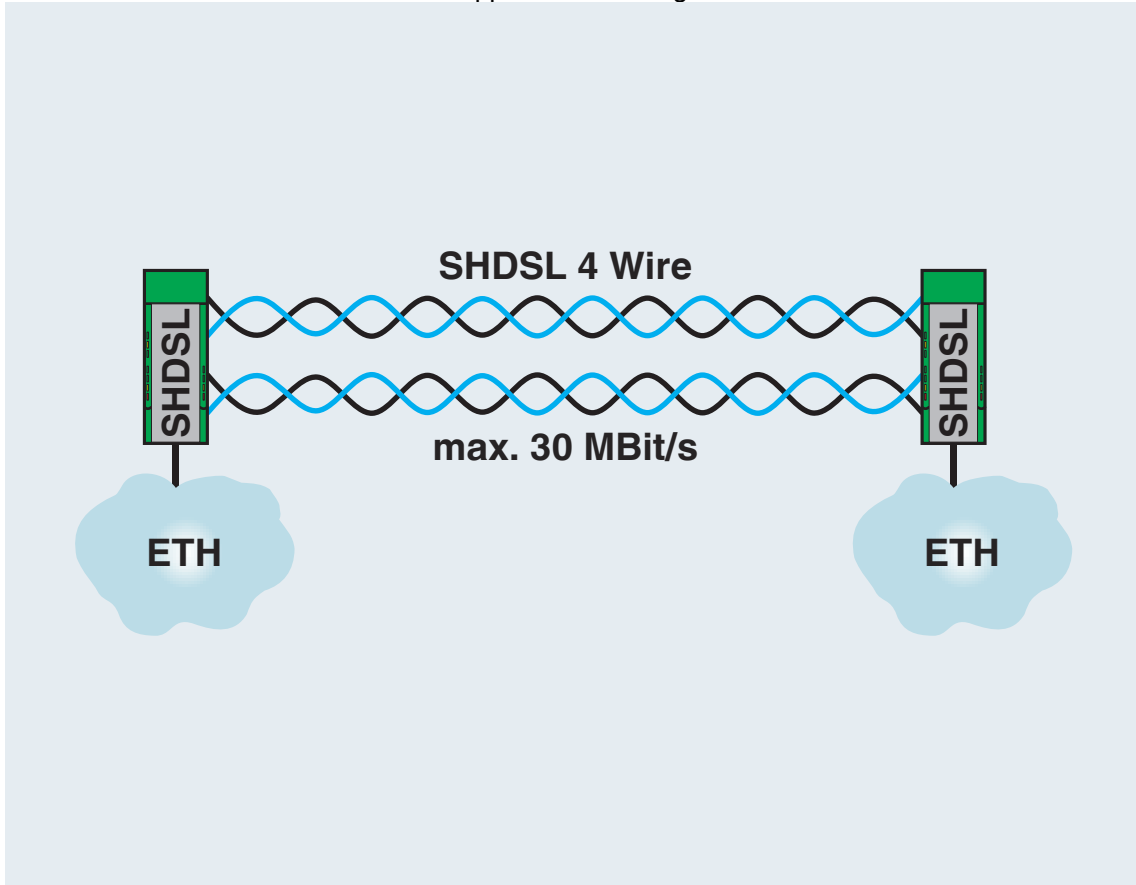


Linear structure (2-wire)

2313643

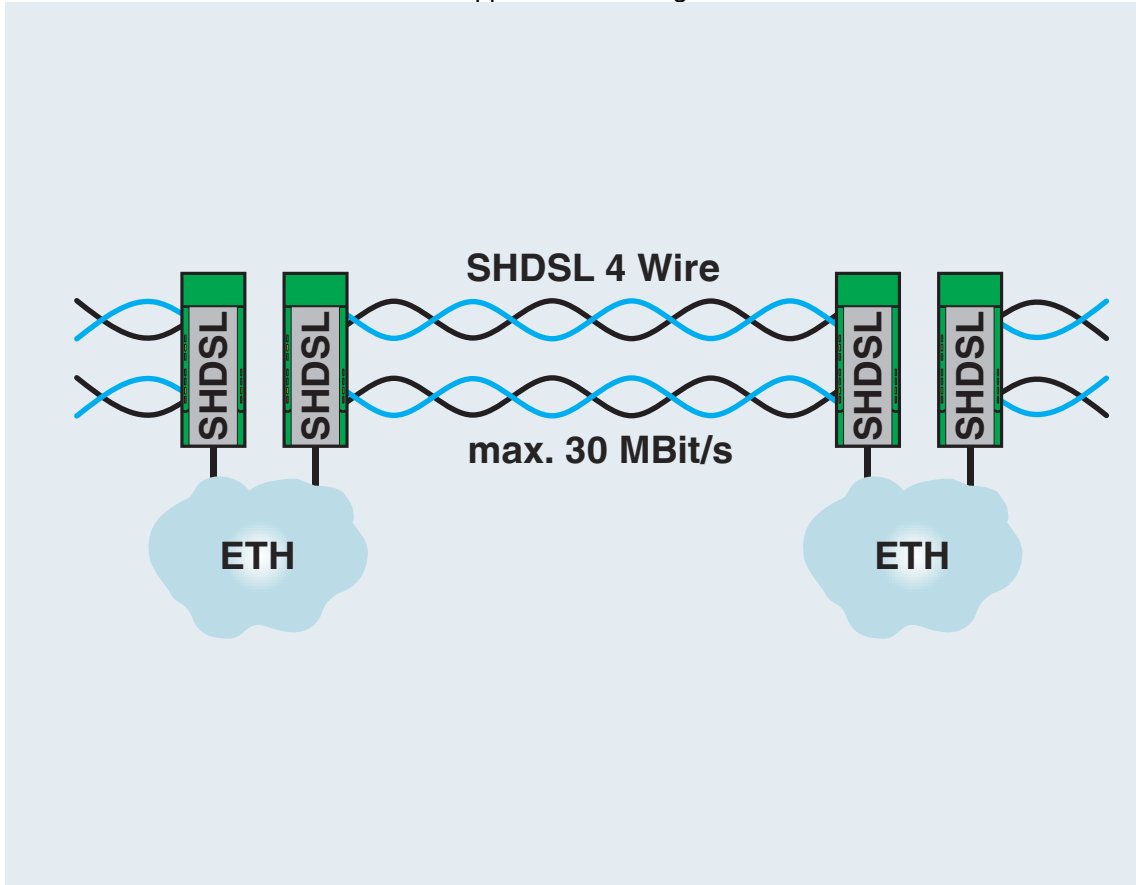
<https://www.phoenixcontact.com/gb/products/2313643>

Application drawing



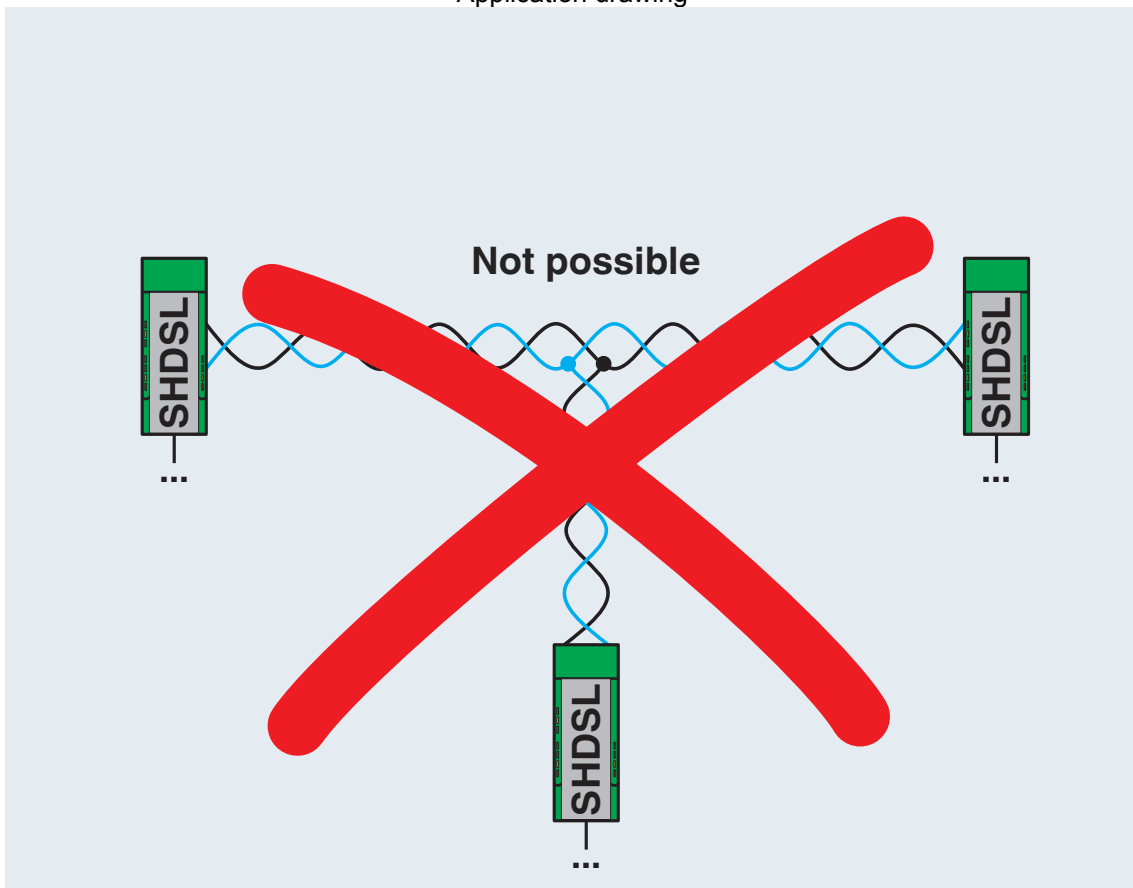
Point-to-point connection (4-wire)

Application drawing



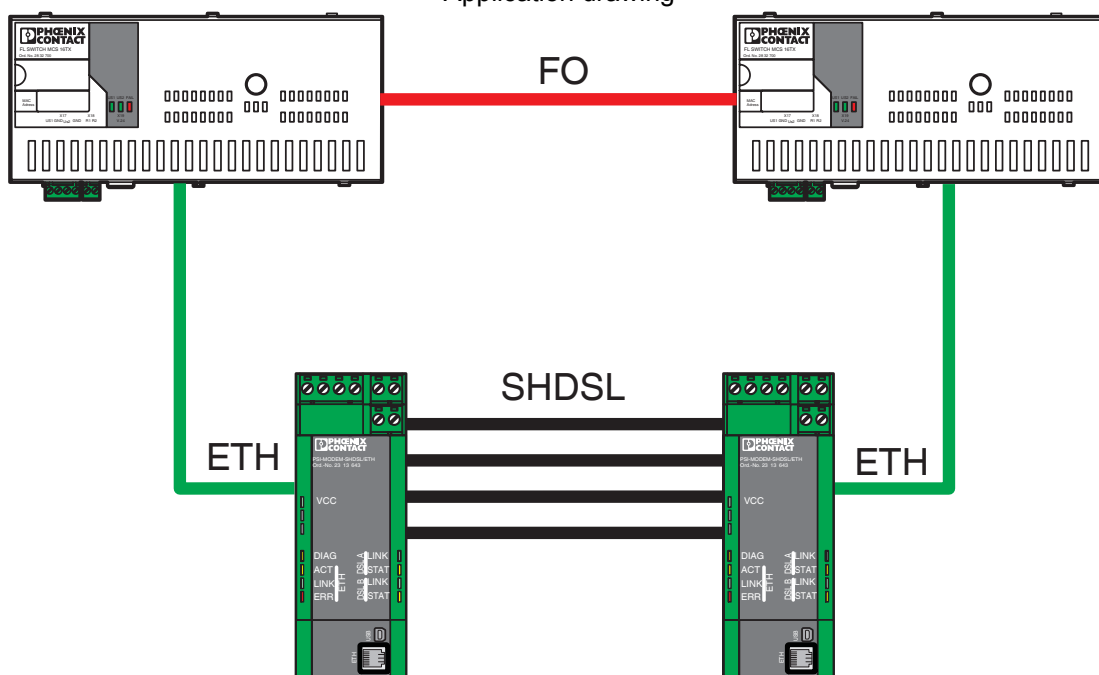
Linear structure (4-wire)

Application drawing



Multipoint communication via SHDSL not supported

Application drawing

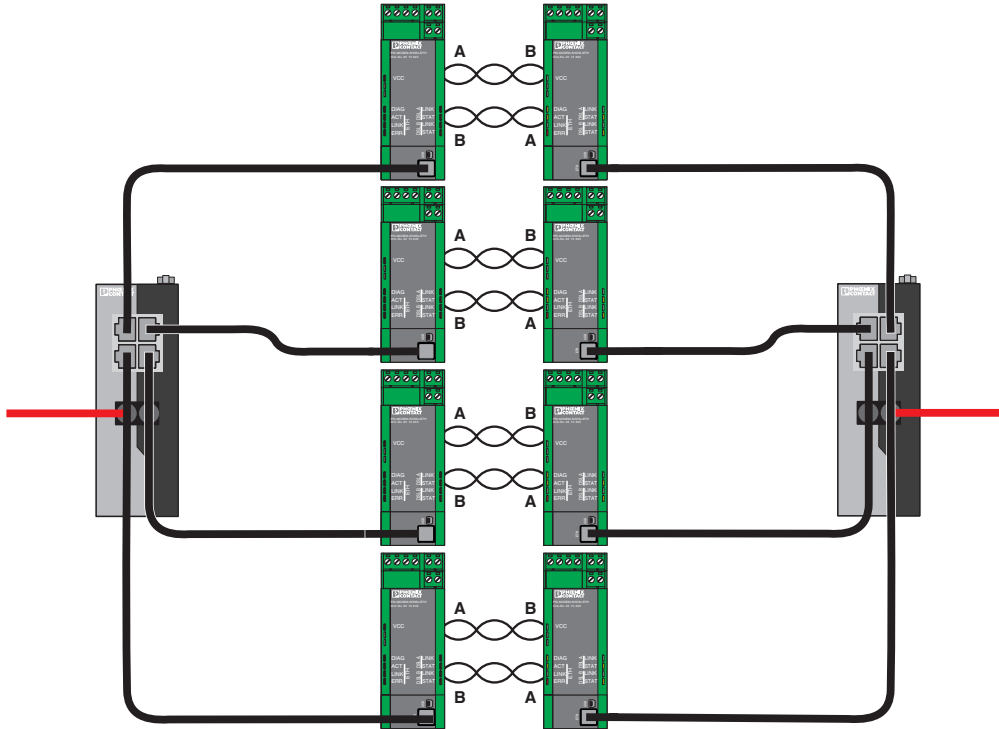


Example application: redundant system via SHDSL and manageable switch

2313643

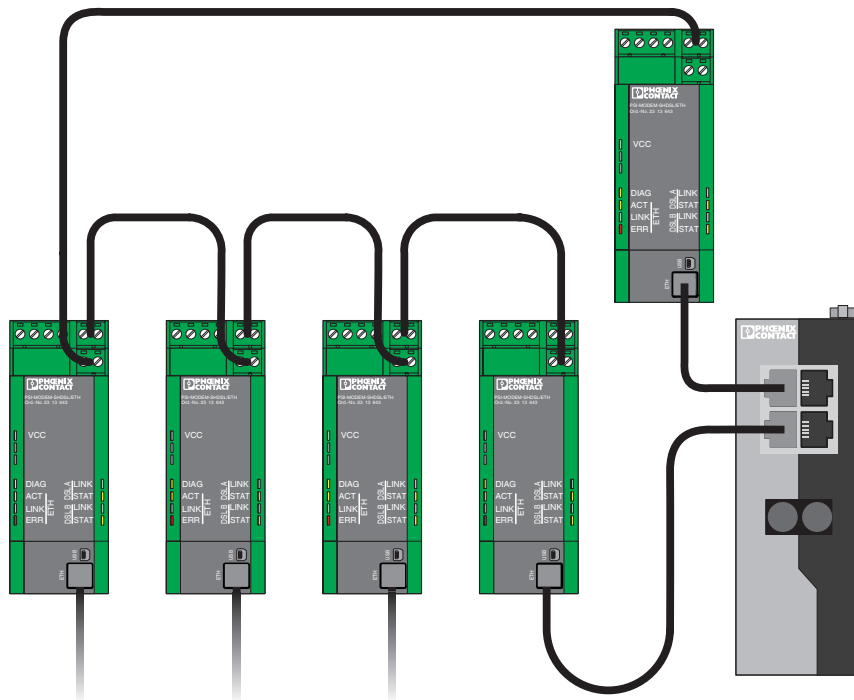
<https://www.phoenixcontact.com/gb/products/2313643>

Functional drawing



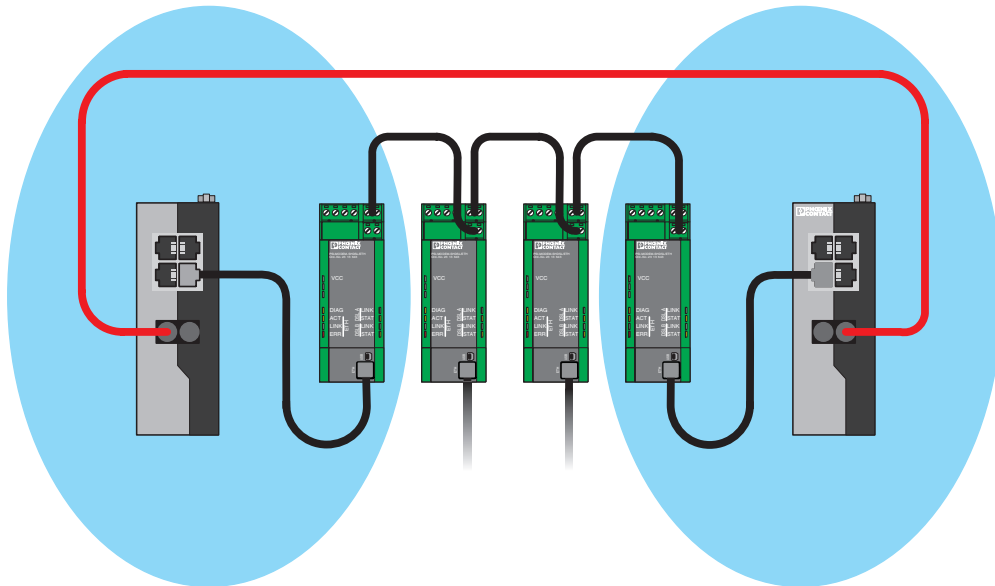
Link aggregation

Functional drawing



Redundancy, ring closure via an external switch

Functional drawing



Redundancy via parallel fiber optic path

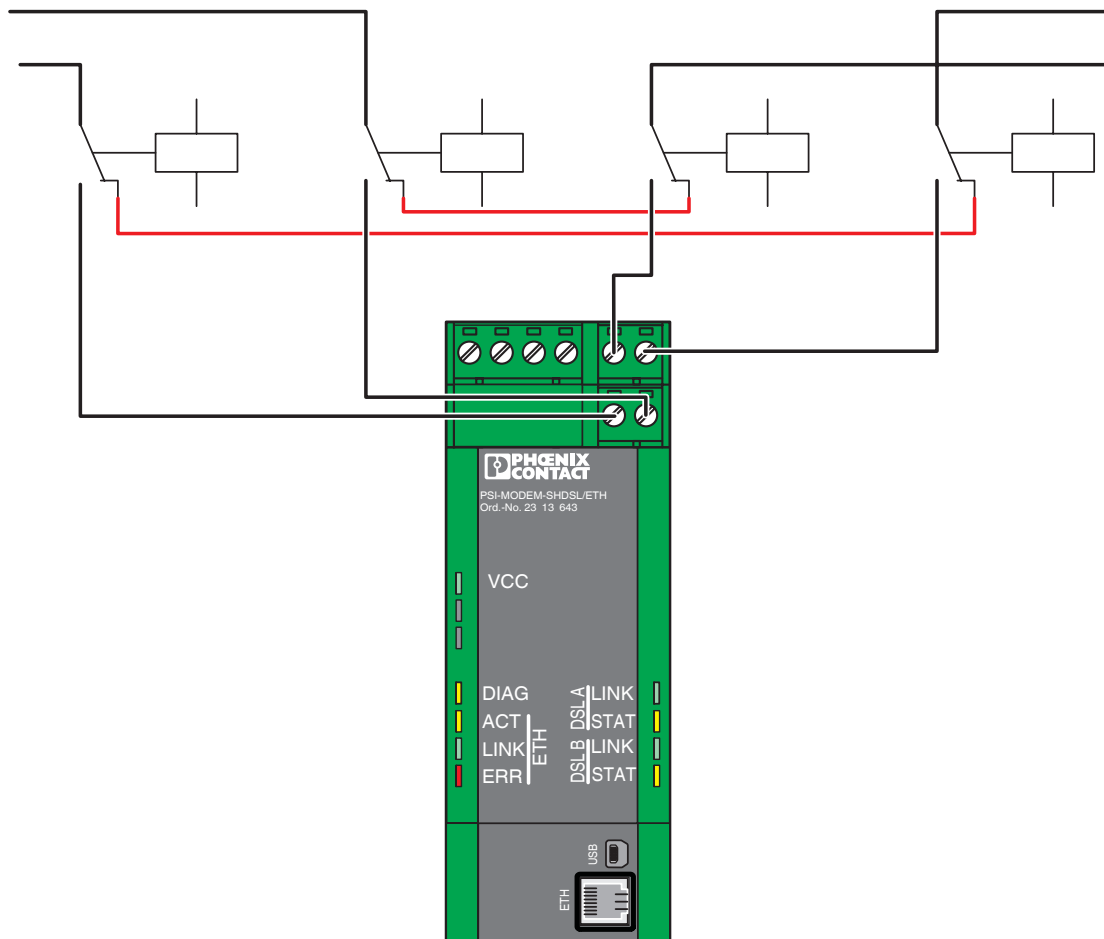
PSI-MODEM-SHDSL/ETH - Ethernet extender



2313643

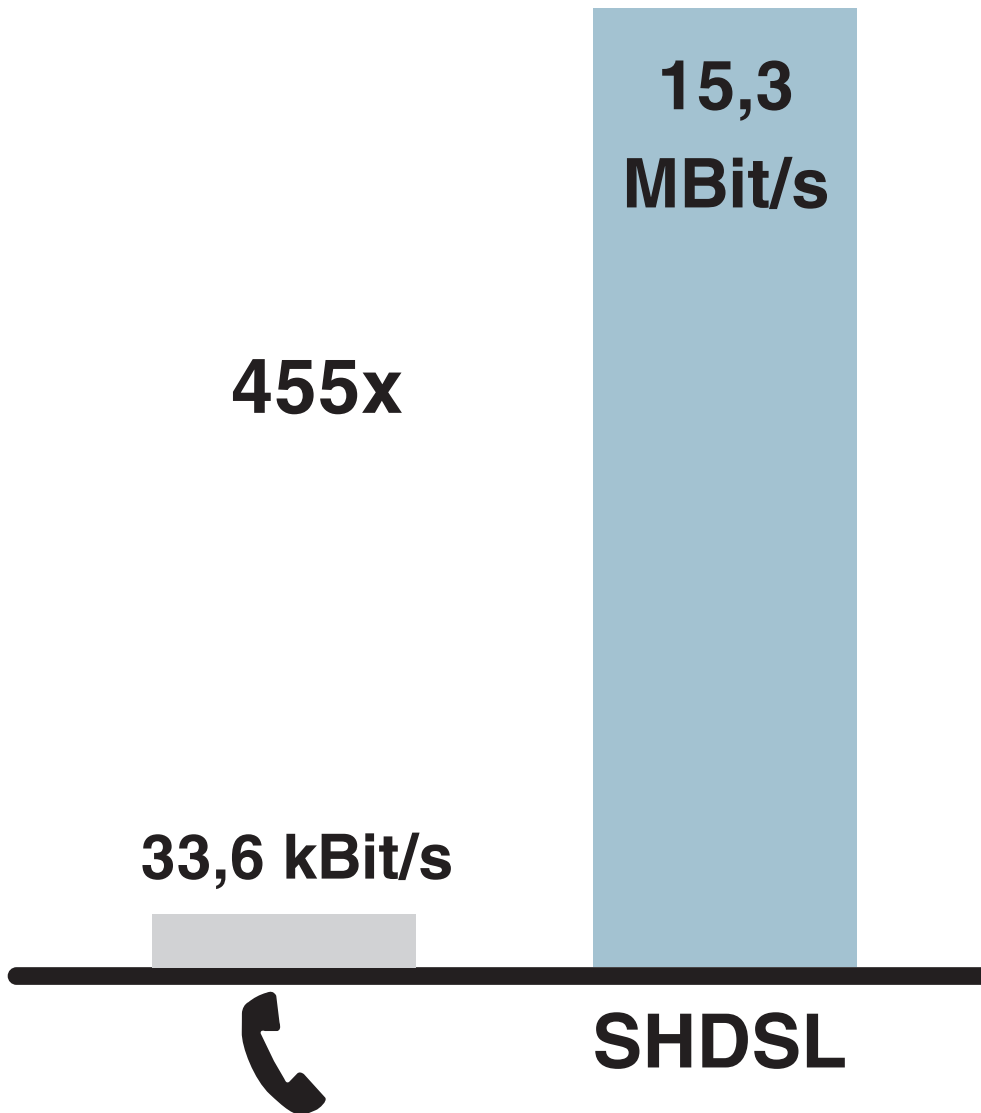
<https://www.phoenixcontact.com/gb/products/2313643>

Functional drawing



Jumpering with relay

Diagram



Speed comparison between the analog and SHDSL connection

PSI-MODEM-SHDSL/ETH - Ethernet extender



2313643

<https://www.phoenixcontact.com/gb/products/2313643>

Classifications

ETIM

ETIM 8.0	EC000309
----------	----------

UNSPSC

UNSPSC 21.0	43223100
-------------	----------

2313643

<https://www.phoenixcontact.com/gb/products/2313643>

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
-------------------------------------	----------------------

Phoenix Contact 2025 © - all rights reserved
<https://www.phoenixcontact.com>

PHOENIX CONTACT Ltd
Halesfield 13, Telford
Shropshire, TF7 4PG
01952 681700
info@phoenixcontact.co.uk