

## Modem - TC EXTENDER 6004 ETH-2S - 2702255

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's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




Managed Ethernet extender, point-to-point, line and ring structures, data rates up to 30 Mbps, distances of up to 20 km on in-house copper cables, replaceable surge protection, 2 SHDSL ports, 4-port switch, diagnostics via display and Ethernet

### Why buy this product

- ✓ 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)
- ✓ Automatic SHDSL data rate detection
- ✓ Network transparent (no IP configuration required)
- ✓ Automatic detection of network cable type (auto MDI(X))
- ✓ Automatic network data rate detection (10/100 Mbps)
- ✓ Easy startup, plug and play
- ✓ Two digital outputs for alerting external controllers
- ✓ Remote diagnostics via IP and automatic event messages via SNMP



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 055626 055541
GTIN	4055626055541
Weight per Piece (excluding packing)	780.000 g
Custom tariff number	85176200
Country of origin	Germany

# Modem - TC EXTENDER 6004 ETH-2S - 2702255

## Technical data

### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
-------------------------	---

### Dimensions

Width	60 mm
Height	130 mm
Depth	160 mm

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
	-25 °C ... 0 °C (Display inactivity can occur, image changes may take several seconds)
	55 °C ... 60 °C (Display contrast can deteriorate)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)
Altitude	2500 m (For restrictions see manufacturer's declaration)
Degree of protection	IP20

### General

Electrical isolation	VCC // Ethernet // DSL (A) // DSL (B) // FE
Test voltage data interface/power supply	1.5 kV AC (50 Hz, 1 min.)
Standards/regulations	EN 50121-4
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Net weight	786 g
Housing material	Aluminum / steel sheet DC01
MTTF	506 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day))
	260 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	110 Years (SN 29500 standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day))
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X (Please follow the special installation instructions in the documentation!)
UL, USA/Canada	508 Listed

### Power supply

Nominal supply voltage	24 V DC ±5 %
Supply voltage range	10 V DC ... 60 V DC
Typical current consumption	90 mA (60 V DC)

# Modem - TC EXTENDER 6004 ETH-2S - 2702255

## Technical data

### Power supply

	200 mA (24 V DC)
	450 mA (10 V DC)
Connection method	Push-in spring connection

### Serial interface

Interface 1	Ethernet interface, 10/100Base-T(X) in acc. with IEEE 802.3u
Interface	Ethernet
No. of ports	4
Connection method	RJ45 socket
	4 ports 10/100BaseT(X), auto negotiation and autocrossing
Transmission length	< 100 m (shielded twisted pair)
Protocols supported	IPv4, IPv6, TCP/IP, HTTP, HTTPS
Auxiliary protocols	ARP, DHCP (Client), PING, SNMP
Serial transmission speed	10/100 Mbps, auto negotiation
Interface 2	SHDSL interface according to ITU-T G.991.2.bis
No. of ports	2 (2-wire operation)
Connection method	Push-in spring connection
Transmission length	< 20 km (Depending on data rate and cable cross section)
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Serial transmission speed	4-wire operation: 64 kbps ... 30 Mbps
	2-wire operation: 32 kbps ... 15.3 Mbps

### Function

Web-based management	yes
Management	Web-based management: Diagnostics, log book, customized configuration
Status and diagnostic indicators	Display for warning, status and device information

### Digital outputs

Output name	Digital output
Number of outputs	2
Voltage output signal	depending on the operating voltage
Current output signal	≤ 500 mA (Short-circuit-proof)
Connection method	Push-in spring connection

# Modem - TC EXTENDER 6004 ETH-2S - 2702255

## Technical data

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	5g, 10...150 Hz, 2.5 h, in XYZ direction
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	15g
Standards/regulations	EN 61000-4-2
Contact discharge	± 6 kV
Indirect discharge	± 6 kV
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 3 GHz
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	± 1 kV (asymmetrical, shielded Ethernet cable)
	± 4 kV (asymmetrical: line to ground, unshielded SHDSL cable)
	± 2 kV (symmetrical: line to line, unshielded SHDSL cable)
Standards/regulations	EN 55011
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Standards/regulations	EN 50121-4
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	508 Listed
Noxious gas test	ISA-S71.04-1985 G3 Harsh Group A

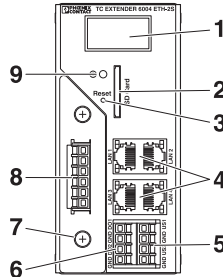
### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

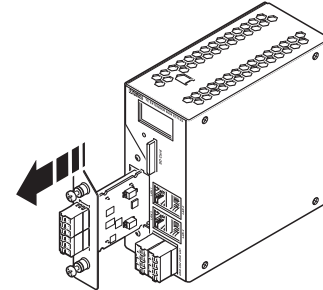
# Modem - TC EXTENDER 6004 ETH-2S - 2702255

Schematic diagram



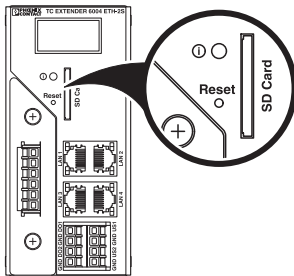
Front view

Schematic diagram



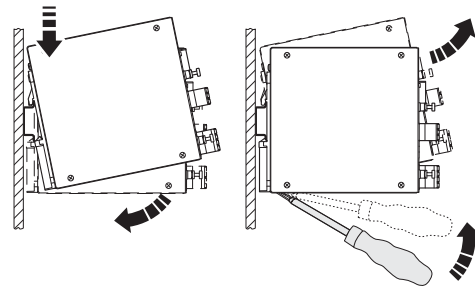
Replacement of protective module

Schematic diagram



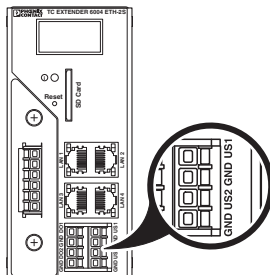
Reset button

Schematic diagram



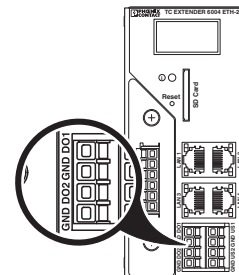
Assembly/removal

Schematic diagram



Power supply

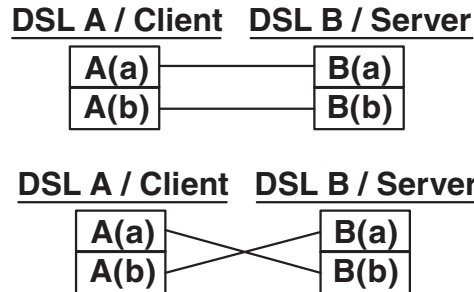
Schematic diagram



Digital switching outputs

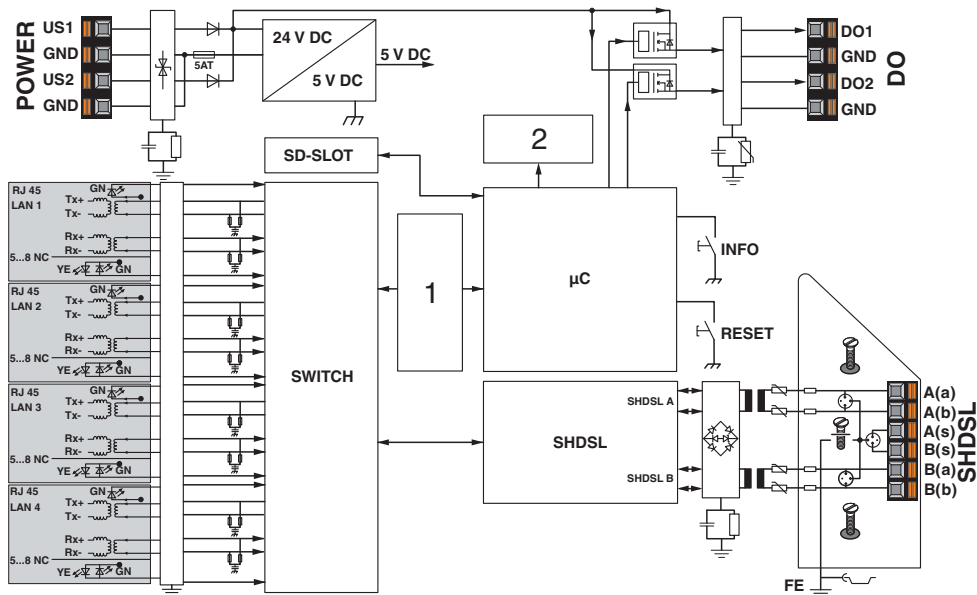
# Modem - TC EXTENDER 6004 ETH-2S - 2702255

Connection diagram



DSL connection

Circuit diagram



## Classifications

eCl@ss

eCl@ss 5.1	27242208
eCl@ss 6.0	27242208
eCl@ss 8.0	19060590
eCl@ss 9.0	19060590

ETIM

ETIM 4.0	EC000740
----------	----------

# Modem - TC EXTENDER 6004 ETH-2S - 2702255

## Classifications

### ETIM

ETIM 5.0	EC000740
ETIM 6.0	EC000740

### UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	43222628

## Approvals

### Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

ATEX

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
-----------	--	---	---------------

cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
------------	--	---	---------------

cULus Listed			
--------------	--	--	--

## Accessories

Accessories

Data cable preassembled

## Modem - TC EXTENDER 6004 ETH-2S - 2702255

### Accessories

Network cable - FL CAT5 HEAVY CONF/ - 2744827



CAT5-SF/UTP cable (J-02YS(ST)C HP 2 x 2 x 24 AWG), heavy-duty installation cable, 2 x 2 x 0.22 mm<sup>2</sup>, solid conductor, shielded, outer sheath: 7.8 mm diameter, inner sheath: 5.75 mm ± 0.15 mm diameter, preassembled on both sides with RJ45 plug, crossover or line

---

### Parameterization memory

Memory - SD FLASH 512MB - 2988146



Program and configuration memory, plug-in, 512 Mbyte.

---

### Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263



Patch cable, CAT5, assembled, 0.5 m

---

Patch cable - FL CAT5 PATCH 5,0 - 2832580



Patch cable, CAT5, assembled, 5 m

---

### Power supply



## Modem - TC EXTENDER 6004 ETH-2S - 2702255

### Accessories

Power supply unit - MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



Primary-switched MINI POWER supply for DIN rail mounting, input: 1-phase, output: 24 V DC/1.5 A

---

### Replacement plug

Surge protection plug - TC EXTENDER PT-IQ-2S - 2702258



Replaceable surge protection module, only for Ethernet extender TC EXTENDER 6004 ETH-2S (2702255), 2 SHDSL ports, two-wire protection for floating SHDSL cables, two-level protective circuit

---

### Safety locking

Port Guard Security Element - FL PATCH SAFE CLIP - 2891246



Security element for FL patch cable

---

### Surge protection for information technology

Surge protection device - DT-LAN-CAT.6+ - 2881007



Surge protection in accordance with Class E<sub>A</sub> (CAT6<sub>A</sub>), for Gigabit Ethernet (up to 10 Gbps), token ring, FDDI/CDDI, ISDN, and DS1. Suitable for Power over Ethernet (PoE+) "Mode A" and "Mode B". RJ45 attachment plug with separate grounding cable and ground connection snap-on foot for NS 35 DIN rails.