

CROCUS SHDSL REPEATER



< CROCUS SHDSL 2 PAIR REPEATER OUTDOOR



v CROCUS SHDSL REPEATER OUTDOOR & INDOOR HOUSING

FEATURES & BENEFITS

- > REPEATER FOR 1-PAIR OR 2-PAIR SHDSL SYSTEMS
- > BASED ON THE G.SHDSL STANDARD FOR HIGHER SPEEDS AND LONGER LOOP RANGES
- > VARIABLE LINE-TRANSMISSION RATES UP TO 2 MBPS
- > LOCALLY OR REMOTELY POWERED
- > AVAILABLE IN INDOOR AND OUTDOOR HOUSING
- > MANAGEABLE VIA DSL LINK

> THE SHDSL LINE CODING UTILIZED IN THE TELINDUS SHDSL TRANSMISSION EQUIPMENT PROVIDES SUPERIOR REACH AND NOISE IMMUNITY COMPARING TO OTHER DSL TECHNOLOGIES.

Nevertheless local loop distances may exceed the distance achievable by simple point-to-point configurations, especially

if full 2Mbps transport is required. Examples include DSL links alongside railways, motorways, pipelines, waterways, power lines and local loops in rural areas. Therefore, the Telindus SHDSL range is complemented with a SHDSL repeater.

Each repeater fully regenerates the signal and thus doubles the transmission distance. It is possible to deploy multiple repeaters on a single link without introducing jitter and wander problems. Repeaters can be locally or remotely powered. Remote powering can be sourced by a Telindus 2300 or by Crocus SHDSL rack-mount unit with remote powering. The Crocus SHDSL Repeater is available as an indoor and an outdoor version. The outdoor version is IP67 protected.

The Crocus SHDSL Repeater can be managed locally with a VT100 terminal or terminal emulation. Alternatively it is manageable over the line from the central SHDSL equipment, using the standard EOC messages. It means that the Crocus SHDSL Repeater can be fully integrated in the network maintenance and management suite as described in this catalogue. Apart from status, performance and alarms information, test loops can be initiated.

LINE INTERFACE

- > Applicable standards: ITU-T G.991.2, G.994, plesiochronous mode
- > Single pair or dual pair line access
- > Connector: one RJ45
- > Coding: TC PAM, compliant ITU-T G.991.2 Annex A&B (G.SHDSL), ETSI TS 101524
- > Transmission speeds: between 1024 and 2048 kbps
- > Handshaking: compliant G.994.1 (automatic speed negotiation) or fixed speed
- > Performance monitoring: compliant G.826 (errored seconds, severely errored seconds, unavailability seconds)
- > Remote Digital Loop test towards central SHDSL modem

IDEAL MAXIMUM DISTANCE (NOISE-FREE)

1 pair	2 pair	0.4mm	0.5mm	0.6mm	0.8mm	1.0mm	1.2mm
Speed (kbps)	Speed (kbps)	26AWG (km)	24AWG (km)	20AWG (km)	18AWG (km)	18AWG (km)	18AWG (km)
1024	1024	7.2	9.9	14.0	17.8	25.0	27.7
1536	2048	5.5	7.6	10.7	13.6	19.1	21.2
2048		4.0	5.5	7.8	9.9	13.9	15.4
		4.2	5.8	8.2	10.4	14.6	16.2

LOCAL CONSOLE INTERFACE

- > Electrical: ITU-T V.24, V.28
- > Connector: female DB9 (EIA/TIA 574)

FRONT PANEL INDICATIONS

- > Only visible for in-door housings
- > NE: indicates the near line status (green/red) (line towards central modem)
- > FE: indicates the far line status (green/red) (line towards remote modem)

MAINTENANCE AND MANAGEMENT SUPPORT

- > Direct connection for VT100 local console
- > Management information available over the line via the EOC messages
- > RDL loop

- > Complete set of management tools on a central SHDSL equipment gives full access to repeater information

MECHANICAL DATA (H X W X D)

- > 1-pair indoor housing: 46 x 230 x 160 mm, weight: 700 g
- > 2-pair indoor housing: 45 x 100 x 197 mm, weight: 800 g
- > 1-pair outdoor housing
 - > EN 60529 IP67, wall mountable
 - > 70 x 295 x 170 mm, weight: 3.6 kg
- > 2-pair outdoor housing
 - > EN 60529 IP67, wall mountable
 - > 130 x 252 x 400 mm, weight: 6.8 kg

ENVIRONMENTAL

- > Ambient operational temperature: -10 - +50°C
- > Operational relative humidity: 5 - 100%
- > Compliant to ETSI ETS 300019-1-3 Class 3.2 for stationary use at weather protected locations
- > Compliant to ETSI ETS 300019-1-1 Class 1.1 for storage
- > Mechanical protection: EN 60529 IP67
- > Fire protection: UL94HB

POWER REQUIREMENTS

- > Power consumption:
 - > 1-pair system: 3.2W
 - > 2-pair system: 7W
- > Remote power over the SHDSL line (-38 V dc... -100 V dc)
- > -48VDC connector (-36 Vdc... -72 Vdc)
- > Molex mini-fit 4-pins connector for indoor housings
- > Weatherproof connector for outdoor housings
- > Switch for local power / remote power selection

SALES CODES

- > **180913** Crocus SHDSL 1-pair indoor repeater
- > **184587** Crocus SHDSL 1-pair outdoor repeater IP67 including IP65 connector kit
- > **190433** Crocus SHDSL 2-pair indoor repeater
- > **190434** Crocus SHDSL 2-pair outdoor repeater IP67 including IP67 connector kit

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