

## PCM2R regenerator

### G.703 2048 kbit/sec

#### Features

- G.703 line interface 2048 kbit/sec
- G.703 receiver sensitivity -43 dB
- Regeneration distance up to 2.4 km
- Jitter suppression
- Capability to enable loops on each direction independently
- Built-in overvoltage protection
- Bearer loss and BPV error indication

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## Description

The PCM2R regenerator is designed for increasing the communication range between devices equipped with an interface corresponding to recommendation ITU-T G.703 2048 kbit/sec. The regenerator regenerates the signal weakened by line cable, and suppresses phase jitter.

The regenerator may be used to connect two parts of a physical communication line, increasing its overall length.

The capability to enable loops in both directions independently allows testing the joined parts of physical line. The regenerator is designed for installation on heated premises, and receives electric power supply from 220 VAC mains, or from a 60 VDC exchange battery. An example of building a communication link using the regenerator and two PCM2 modems is shown on Fig.1.

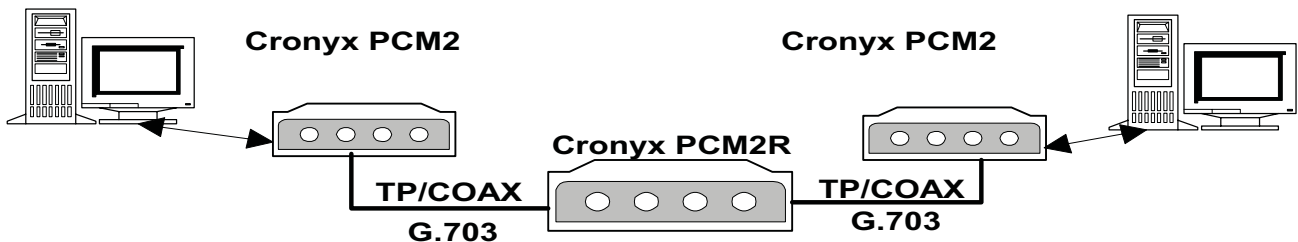


Fig. 1

## Technical specifications

G.703 interface	
Connector	DB-15 for twisted pair BNC for coaxial cable
Encoding	HDB3
Line impedance	120 Ohms (balanced twisted pairs) 75 Ohms (coaxial)
Signal level at the receiver input	0 to -43 dB
Maximum length of the regeneration part	2.4 km (for TPP-0.5 cable)
Jitter suppression	In the receiver path, attenuation up to 120 U <sub>lpp</sub>
Maximum value of phase jitter	according to recommendation ITU-T G.823
Error control	Encoding violation
Overvoltage protection	TVS      10 V - 15 V
Diagnostic modes	
Loops	Local (on the G.703), on both sides independently)

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Design parameters	
Size	140 x 35 x 110
Weight (without power adaptor)	not more than 150 g.
Power supply	
Supply voltage	220 VAC $\pm$ 10%
Current consumption	not more than 30 ma
Operating conditions	
Environment temperature	+5°C to +50 °C
Relative air humidity	not more than 90% @ +25°C
Operating mode	continuous

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### Order code:

Model \_\_\_\_\_ **PCM2R-AC**

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**Power supply**  
(for desktop models only)  
AC - ~220V  
DC - =60V

### Delivered items:

- PCM2R regenerator
- power adaptor (220 VAC or 60 VDC)
- user's guide

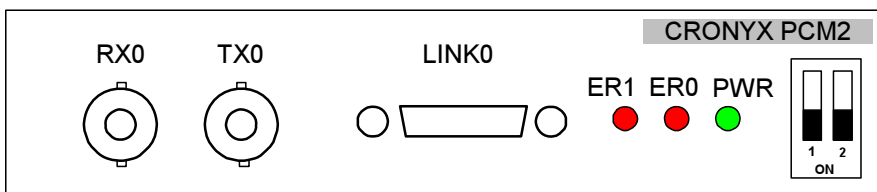
### Indicators and controls

**S1 DIP switch** - enables loop on link 0 when in the ON position.

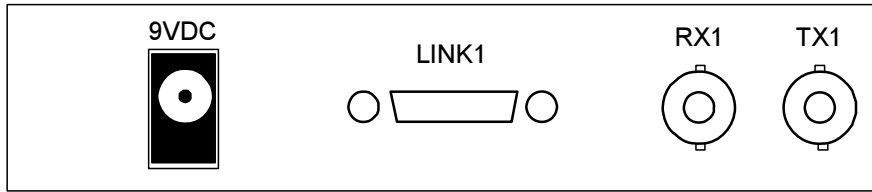
**S2 DIP switch** - enables loop on link 1 when in the ON position.

**ER1 indicator** - lights during loss of carrier or encoding errors (BPV) in link 1.

**ER0 indicator** - lights during loss of carrier or encoding errors (BPV) in link 0.



## Front and rear panel connectors



The front panel contains connectors designed for connecting to link 0. The rear panel contains connectors designed for connecting to link 1. TX and RX BNC connectors serve for connecting to a coaxial cable. The DB-15 connector, which pinout is presented in the table, serves for connecting to a telephone line:

Pin number	Signal
1	XMT-a
3	RCV-b
9	XMT-b
11	RCV-a

## Loops

