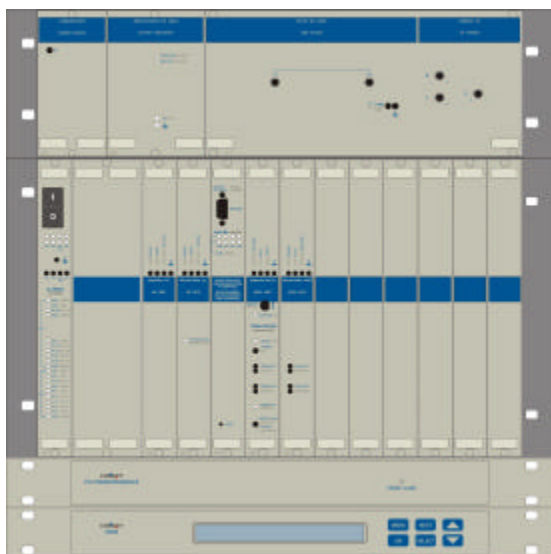


DIGITAL PLC SYSTEM TYPE

OPD-2



GENERAL CHARACTERISTICS

The OPD-2 terminal is the DIMAT's solution for the cases on which digital PLCs are required but bandwidth congestion does not allow the OPD-1 terminal to be used.

This extremely versatile system can be integrated in the existing networks without any problem as it uses the same channeling as analogue PLCs and meets all the HF requirements of the IEC 495 standard.

The high immunity to the line noise and to the environmental disturbances make the OPD-2 suitable to work in the most extreme conditions.

The OPD-2 terminal is fully programmable by the user from a compatible PC. Its integrated supervision system allows the most important parameters of each terminal of a link, such as noise level, received pilot level, chronological list of alarms and so on, to be retrieved from any of the terminals of the link.

MAIN FEATURES

- Up to 6 speech and/or data channels in a 4+4 kHz
- Up to 12 speech and/or data channels in an 8+8 kHz
- 5, 20, 40 and 80W P.E.P. versions available
- Carrier frequency programmable from 40 to 508 kHz
- Optional 3 or 4-command built-in teleprotection system without reducing channel capacity



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TECHNICAL CHARACTERISTICS

GENERAL

Operation mode	QAM Modulation with triple frequency conversion by means single-side-band with suppressed carrier
Synchronization	By master-slave operation or Plesiochronous (no synchronization)
Basic bandwidth	4 kHz per channel
Net bit rate	28,000 bit/s for D version and 2 x 28,000 bit/s for DD version
Minimum SNR at Rx input for a BER better than 10 ⁻⁶ (AWGN)	30 dB
Frequency stability	±1ppm
Ageing	<1ppm / year
Automatic Gain Control (AGC) Dynamics	>55 dB with 10% pilot modulation
Programming and supervision system interface	RS-232C

HIGH FREQUENCY

Carrier-frequency range	From 40 kHz to 508 kHz, programmable in 1 Hz steps
Transmit and receive band	Erect or inverted, adjacent or non-adjacent
Nominal impedance	Selectable between 50, 75, 125 and 140 Ω. Other values on request
Bandwidth	4 + 4 kHz for D-type and 8 + 8 kHz for DD-type
Return loss	Better than 11 dB
Transmitter Peak Envelope Power over resistive load	5, 20, 40 or 80 W, depending on the version
Spurious emission	In accordance with IEC 495 cls. 5.2.4 and figures 7 and A.2
Sensitivity (minimum pilot level for AGC threshold)	-30 dBm
Selectivity	Higher than 65 dB at 300 Hz, and higher than 100 dB starting from 4 kHz, in accordance with IEC 495 cls. 5.3.1.5
Tapping loss	In accordance with IEC 495, figure 5

MULTIPLEXER

Number of ports	Up to 6 speech and/or data channels in D version and up to 12 speech and/or data channels in DD version
Speech ports	Bit rate 4800 or 6400 bit/s (MP-MLQ compression). Interface 4-wire E&M or DTMF, balanced 600 Ω Fax relay G3 in accordance with Rec. V.21, V.27ter and V.29 of the ITU-T Modem data relay V.22bis @ 2400 bit/s
Data ports	Interface In accordance with Rec. V.24/V.28 of the ITU-T (EIA RS-232C) 300 to 19200 bit/s asynchronous

OPERATING CONDITIONS

Temperature and humidity	From -5 °C to +45 °C and relative humidity not greater than 95%,(IEC 721-3-3 class 3K5)
Maximum temperature	+55 °C for a period no greater than 24 hours (IEC 495 cls 3.1)
Power supply	24, 48 or 110 Vdc ±20%. Others on request
Insulation, voltage withstand and electromagnetic compatibility	In accordance with: IEC 495 tables 2 and 3, IEC 255-4 (II and III), IEC 255-5, IEC 255-22-1 (II and III), IEC 801-2 (III), IEC 801-3, IEC 801-4 level 3
Maximum power consumption	100 to 360W, depending on the version

MECHANICAL CHARACTERISTICS

Storage conditions	In accordance with IEC 721-3-1, class 1K5
Weight	18 to 36 kg, depending on the version

Available versions

Output power	Up to 6 channels 4 + 4 kHz	Up to 12 channels 8 + 8 kHz
5W	OPD-205D	OPD-205DD
20W	OPD-220D	OPD-220DD
40W	OPD-240D	OPD-240DD
80W	OPD-280D	OPD-280DD