MODEL PIFDA SERIES

PROGRAMMABLE IF DISTRIBUTION AMPLIFIERS

High Performance

The PIFDA series is a high performance local/remote programmable IF distribution amplifier system housed in a two-rack unit height chassis. These systems accept one input and provide up to 12 output channels. Each channel has 30 dB gain and is independently programmable in 0.1 dB steps with excellent frequency response. The systems are temperature compensated for gain over the entire operating range and are available with AGC and programmable IF slope equalization. These systems have low noise figure, low intermodulation distortion, high dynamic range, high 1 dB compression point and very high channel-to-channel isolation.

FEATURES

- Local/remote control
- Low intermodulation distortion
- Low noise figure
- High dynamic range
- 30 dB IF level programming
- Front panel/remote status monitoring
- Individual and summary alarm contact closure outputs
- 32 complete parameters setting save/recall
- Nonvolatile memory
- Password protection to prevent program tampering

OPTIONS

- Up to 12 channels available
- -20 to +70°C temperature operation
- 40 dB AGC with in/out control
- ±3 dB programmable IF slope equalization

GENERAL SPECIFICATIONS

LOCAL CONTROL
All the system's parameters can be programmed from the front panel

LOCAL ALARMS (LED/LCD display)
Power supply status
Communication/microcontroller self-test
Over temperature

FAULT ALARMS
Dry contacts for DC voltages, self-test and over temperature and user programmable summary alarm

REMOTE INTERFACE
RS422, RS485 and RS232 programmable
All the local controls/alarm functions can be operated/monitored remotely

IF TEST POINTS
Input IF signal monitor
Individual channel output monitor

PRIMARY POWER REQUIREMENTS
Voltage ..... 90–250 VAC
Frequency ..... 47–63 Hz
Power consumption..... 100 watts nominal (12 channels)

PHYSICAL
Weight ..... 33 pounds (15 kg) nominal
Overall dimensions..... 19" x 3.5" x 22" (48.3 cm x 8.98 cm x 55.9 cm) maximum
Rear panel connectors
- Input IF/monitor..... BNC female
- Individual channel outputs/monitors..... BNC female
- Remote interface..... 9-pin, D connector for RS422, RS485 and RS232
- Fault alarms ..... 9-pin male, D connector

ENVIRONMENTAL
Operating
- Ambient temperature..... 0 to 50°C (see Options on front cover)
- Relative humidity..... Up to 95% at 30°C, noncondensing
- Atmospheric pressure ..... Up to 10,000 feet

Nonoperating
- Ambient temperature..... -50 to +70°C
- Relative humidity..... Up to 95% at 40°C, noncondensing
- Atmospheric pressure ..... Up to 40,000 feet
- Shock and vibration..... Normal handling by commercial carriers

SPECIFICATIONS

SPECIFICATIONS	MODEL NUMBERS PIFDA-2/12-50/90	PIFDA-2/12-100/180	PIFDA-2/12-50/180
Frequency	50 – 90 MHz	100 – 180 MHz	50 – 180 MHz
Gain flatness	< ±0.15 dB	< ±0.3 dB	< ±0.4 dB
AGC contribution*	< ±0.2 dB	< ±0.25 dB	< ±0.4 dB
Slope equalization contribution*	< ±0.2 dB	< ±0.25 dB	< ±0.4 dB

* Refer to options on front cover.

Frequency ..... See table above
Number of inputs..... One
Number of outputs..... 2–12*
Input dynamic range..... Thermal noise to -20 dBm
Input noise figure..... 8 dBm maximum
Gain..... 30 dB
  Programming resolution..... 0.1 dB
  Accuracy ..... < ±0.25 dB
  Variation with temperature ..... < ±0.3 dB, 0 to 55°C,
  < ±0.5 dB, -20 to +70°C*

Gain flatness ..... See table above
Output power..... > +17 dBm
Input/output impedance..... 50 ohms nominal
Channel-to-channel isolation..... > 60 dB
VSWR ..... < 1.5:1
  Input monitor ..... 20 dBc
  Output monitor for each channel..... 20 dBc
Intermodulation ..... < -45 dBc up to +5 dBm

* Refer to options on front cover.

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