Digital Instruments

VRA-V01

RF Amplifier and Input Switch

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RF Amplifier and Input Switch

Overview

VRA-V01 is a distributor RF to 10 outputs, individually amplified, choices between two different inputs. The mechanism allows automatic switching to select the input which has a signal level above a threshold set as desired. The switch can also be activated by remote control provided to the device via RS-232 serial connection or through entrance Dry-Contact (TLC).

Each output is equipped with amplifier and coupling transformer. The level is individually adjustable between a minimum and a maximum of -2 dBm to 16 dBm. The excellent linearity and low noise allow the **VRA-V01** to be used in a wide areas of application such as a reference frequency or switching of RF signals modulated. The input stage also provides an indication of the level of input RF particularly precise. The dynamic range that extends from 0 dBm (0.63 Vpp) to 30 dBm (20 Vpp) with a bandwidth between 100 KHz up to 500MHz and a frequency linearity of the measurement in between + / - 0.1 dB.

The alphanumeric display on the front panel allows the real-time display of signal level present at both inputs, the representation takes place simultaneously in Vrms and dBm. Also on the front panel are two buttons that carries out the switching output channel A or B, respectively, at the side of the buttons, two lights, indicate the selected channel output. At the center of the front is the joystick key through which the operator can perform the programming operations of the apparatus. The technology used in **VRA-V01** is fully digital making the apparatus particularly reliable in terms of precision and repeatability, eliminating the drawbacks associated with the traditional analog approach.

Phenomena of aging, temperature drift and long term stability are completely overtaken by delegating all computational processes very fast microprocessors. **VRA-V01** version is made of rack 19" 1U.

Features

· Display & Keyboard,

· 10x independent programmable outputs (2dBm to 16 dBm with 2dB step),

· 4 dry contact independent signal usable as device's status remote-signalling,

· 4 photo-coupled inputs usable as event logger,

· Serial Connection in RS-232 standard,

· Size: 1U/19' – depth 300 mm (connector excluded),

· Weight: 1.5 Kg,

· Certification CE.

RF inputs

Bandwidth: 100 KHz to 500 MHz (for the function of RMS meter)
Insertion loss: 0.1 dBc at maximum frequency
Measure level: 0 dBm (0.63 Vpp) to 30 dBm (20 Vpp)
Linearity: + / - 0.1 dB

RF outputs

Bandwidth: 100 KHz to 80 MHz
Amplification: Programmable-2dBm Step 2 dB to 16 dBm
Distortion: -62 dBc SFDR at 21 MHz, -58 DBc SFDR at 65 MHz
Background noise in 160 kHz -45 dBmV

Signaling

Serial connection: RS-232 Connector DB9 Male ± 15 kV (ESD).
Optional: RS-485 Connector DB9 Male ± 15 kV (ESD).
Signaling: 4 dry contact over Weidmuller connector step 3.5 mm.
Remote: 4 photo-coupled contact over Weidmuller connector step 3.5 mm.

Supply

Network: 95 Vac – 240 Vac, Plug IEC320 integrated, filter EMI/RFI.
Battery: 2 independent power suppliers.

Size

Width: 1 Unity 19".
Depth: 300 mm connectors excluded.
Weight: 1.5 Kg.