

Phase Modulation Driver 100436A



Phase Modulation Capable RF Driver / Optical Stabilizer

Driver

Stabilizer

DDS

8 Output

USB

Features:

- Programmable Amplitude and Phase
- Open or Closed Loop Operation
- Internal Digital Synthesizer
- Phase shifted RF outputs
- Digital Tuning
- 50 to 150MHz
- USB Control
- Optional Ethernet
- Alarm Output

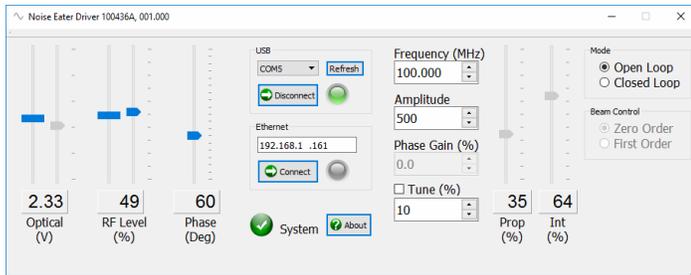


Applications:

- AO Cell Driver
- External Optical Stabilizer

Overview

The Phase Modulation Capable RF Driver / Stabilizer is an eight channel, two phase RF driver intended to drive devices such as the Harris H-401. The driver provides both amplitude and phase modulation capabilities in a single unit. The device can be operated in driver mode where the operator has full control over amplitude, frequency, and phase, or in stabilizer mode where the driver automatically adjusts the operating parameters based on optical feedback from an optical pick-off point.



Configuration and control are accomplished using the supplied Windows application and USB or optional Ethernet connection. Once connected, the operator has full control over frequency, phase, amplitude, and loop parameters.

In stabilizer mode a portion of the optical beam (after the AO cell) is sampled and fed into the “optical” BNC port. The driver automatically adjusts the amplitude and/or relative phase in an attempt to stabilize the optical level exiting the AO cell. The operator can select between open or closed loop modes, first order or zero order beam pick-off point, and loop tuning parameters.

Ordering Information

| Part Number | Description |
|-------------|--|
| 100436A | Phase Modulation RF Driver with power supply |

Operation

Specifications

| Parameter | Units | Typical Specifications |
|-------------------------------------|---------|--|
| Frequency | MHz | 50 to 150, 1Hz steps |
| Phase adjustment range | Degrees | 0 to 359 in 1 degree steps |
| Amplitude adjustment range | V | 0 to 2.5 (< 5mV steps) |
| Closed loop amplitude control range | dB | >15dB (continuous resolution) |
| 1dB RF compression (per output) | dBm | 21 |
| RF output impedance | Ohms | 50, custom / HDMI form factor |
| Optical input interface level | V | 0 to 5, 50Ω internally terminated (BNC) |
| Alarm Output | V | 3.3 CMOS levels |
| Computer Interface | | USB-2 or optional Ethernet port, Windows driver supplied |
| Power | | 5V, 3A (adapter supplied) |
| Unit Dimension | | 7” x 4.5” x 1.5” (with bumpers) |