

# AM-4000/4100 Series Phase Locked Oscillator

*Amplus Communication offers a complete line of state-of-the-art phase locked dielectric/coaxial resonator oscillators covering the range of 0.5 to 24GHz.*

*Designed using low noise solid state transistors and high-Q dielectric or coaxial our*



*resonators, PLDROs / PLCROs offer high frequency stability, low phase noise and low microphonics characteristics. Phase locking is achieved by utilizing Sampling Phase Detection technique for low spurious of <-80dBc. Internal or external reference configurations available. Isolators are optionally included for enhanced output frequency pulling. Designs with higher output power, multiple output ports, custom mechanical outline according to customer's specifications is available.*

## Features

- Low cost
- Low phase noise
- External / Internal reference
- Locked alarm
- No sub-harmonics
- Low spurious signal
- Low microphonics
- Low power consumption
- Wide temperature range
- Small size / light weight

## Applications

- Digital Microwave Radio
- Satellite Communications
- RF Transceivers
- PL-LNBs
- Surveillance & EW Receivers
- Radars
- Comm. / Data Link applications
- LMDS

## Options

- Higher output power
- Output isolator
- Multiple output ports
- Lockable Reference
- Field replaceable connectors
- Customized outlines

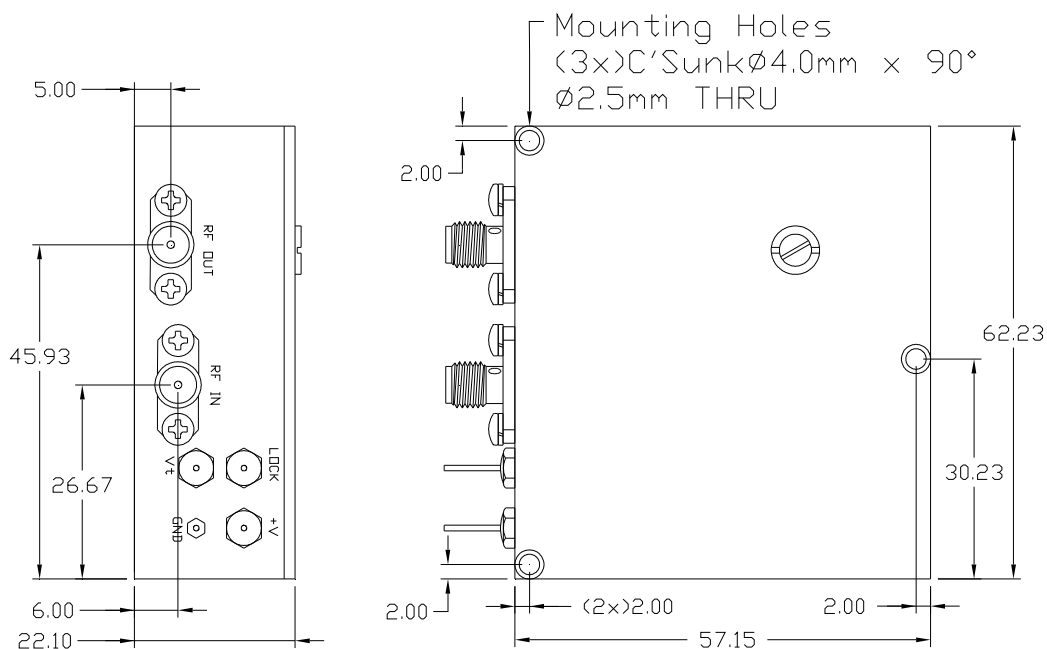
### Specifications for AM-4000/4100 Series Phase Locked Oscillator

Parameters	Units	Typical Specifications			
		External Reference	External Reference	Internal Reference	Internal Reference
Output Frequency	GHz	4 to 6	6 to 18	4 to 6	6 to 18
Output Power	dBm	+11	+11	+11	+11
Variation Over Temperature	dBm	±1	±1	±1	±1
Output Impedance	Ohm	50	50	50	50
Load VSWR		1.5:1	1.5:1	1.5:1	1.5:1
Supply Voltage	Vdc	+12 or +15	+12 or +15	+12 or +15	+12 or +15
Voltage Regulation	Vdc	±0.5	±0.5	±0.5	±0.5
Supply Current	mA	180	180	250	250
Spurious	dBc	-80	-80	-80	-80
Harmonics	dBc	-25	-30	-25	-30
Phase Noise @ 10 kHz offset	dBc/Hz	20 log N + 3	20 log N + 3	-110	-105
Locked Alarm		TTL or O/C	TTL or O/C	TTL or O/C	TTL or O/C
Reference Frequency <sup>(1)</sup>	MHz	10 to 200	10 to 200	N/A	N/A
Reference Power	dBm	0 ±2	0 ±2	N/A	N/A
Frequency Stability	ppm	Same as ref	Same as ref	±5	±5
Connectors: RF Output Reference Input Locked Alarm Supply Voltage Ground		SMA(F) SMA(F) Feedthru Feedthru Solder Lug	SMA(F) SMA(F) Feedthru Feedthru Solder Lug	SMA(F) N/A Feedthru Feedthru Solder Lug	SMA(F) N/A Feedthru Feedthru Solder Lug
Operating Temperature	°C	-30 to +70	-30 to +70	-30 to +70	-30 to +70
Storage Temperature	°C	-45 to +85	-45 to +85	-45 to +85	-45 to +85

(1) for external reference PLO, customer needs to specify reference frequency

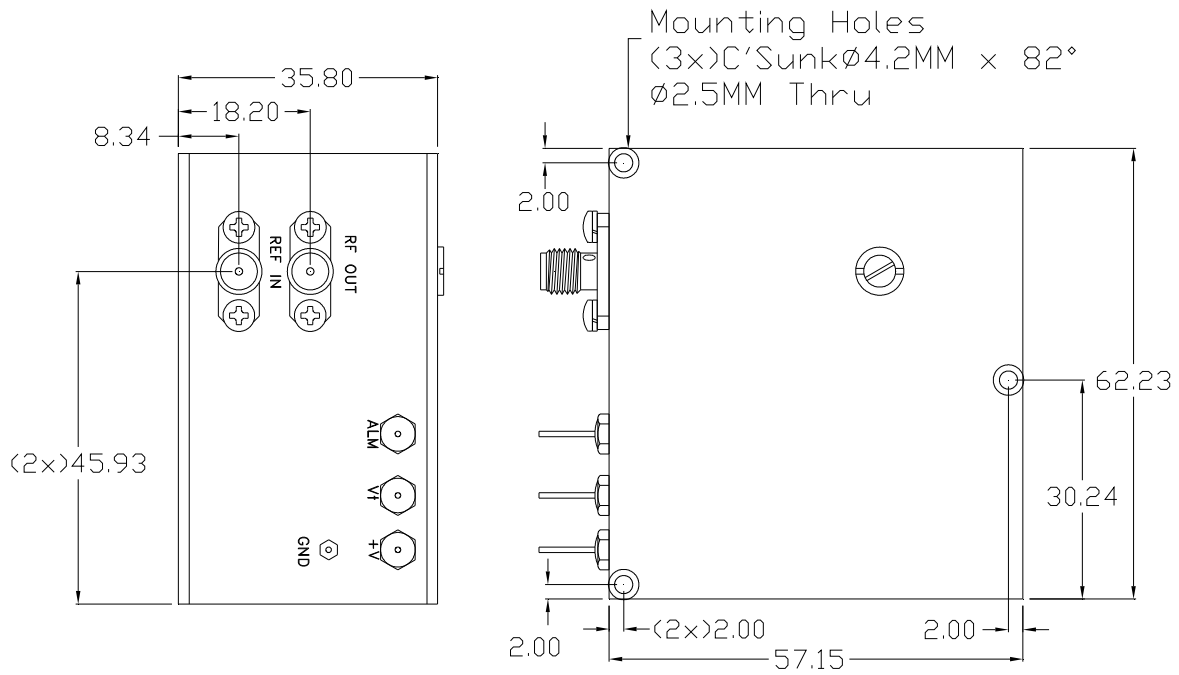
### Mechanical Outline

External Reference PLDRO 4 to 6GHz (Frequency to Reference ratio < 150)



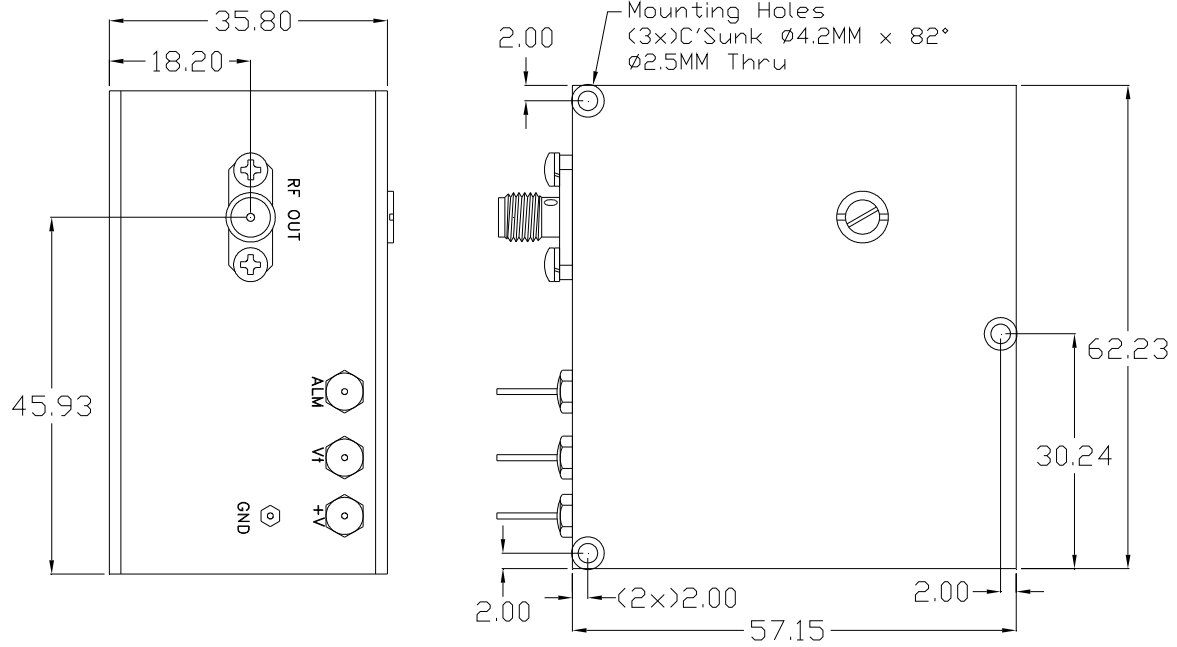
# Mechanical Outline

External Reference PLDRO 4 to 6GHz (Frequency to Reference ratio > 150)



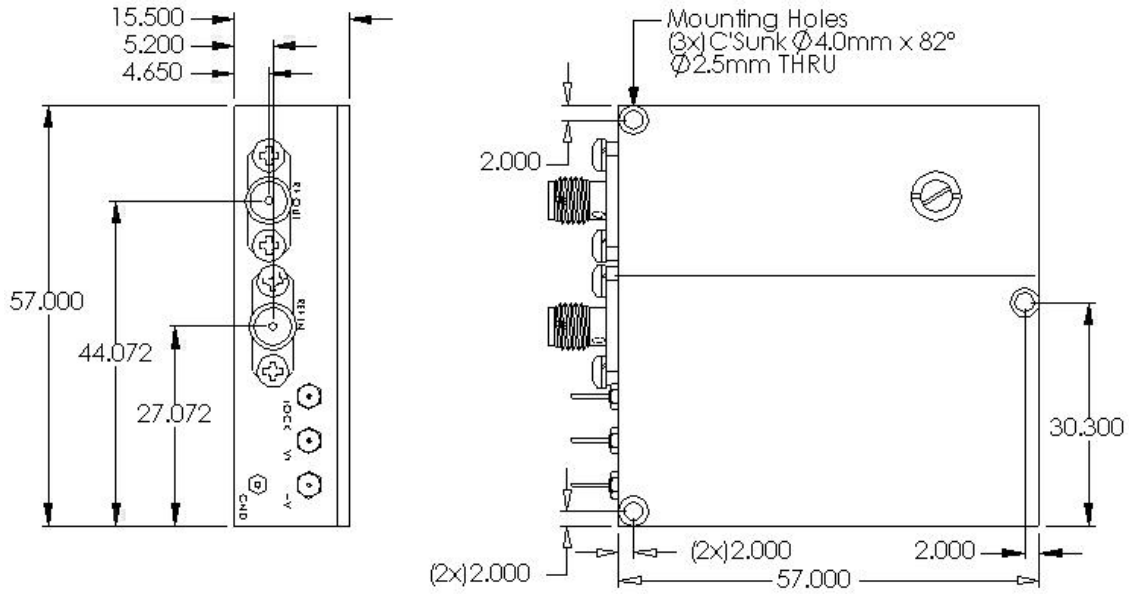
# Mechanical Outline

Internal Reference PLDRO 4 to 6GHz



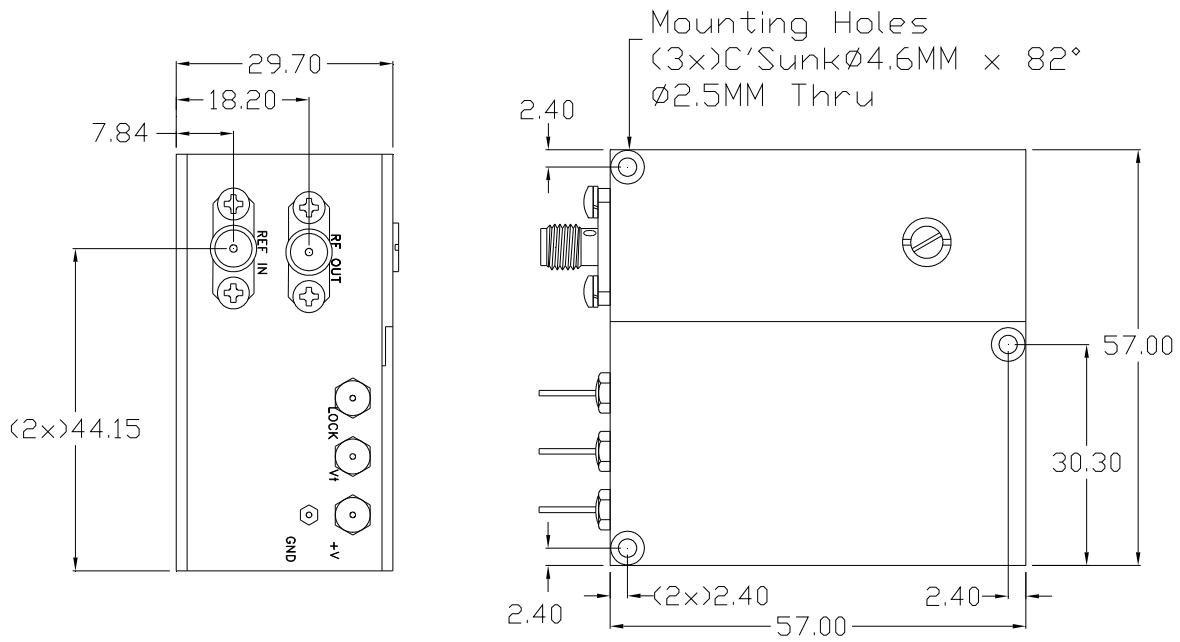
# Mechanical Outline

External Reference PLDRO 6 to 18GHz (Frequency to Reference ratio < 100)



# Mechanical Outline

External Reference PLDRO 6 to 18GHz (Frequency to Reference ratio > 100)



# Mechanical Outline

Internal Reference PLDRO 6 to 18GHz

