474 Transformer & Amplifier Module Brochure

Overview

The 474 transformer and amplifier module is used as the lock-in amplifier front-end in AC systems for use with current generating detectors including large DC component.

Given a signal having both AC and DC components, the 474 transformer allows de-coupling of the two, with the DC being blocked. Gain can then be applied to the sought-after AC signal to ensure optimal recovery.

Voltage biasing of the detector used can be achieved by applying voltage across the primary coil of the transformer.

Core benefits

- ✓ Optimal AC signal recovery from detectors having DC signal component
- ✓ Ultra-low noise gain
- ✓ Facility to permit detector voltage-biasing

Features

- Free-standing transformer unit
- Single width module housed within the 417 unit
- Signal gain provided by transformer and low noise amplifier
- Decouples DC bias source generated photocurrent
- Signal gain provided by transformer and low noise amplifier
- Near-short circuit device operation

474 Transformer & Amplifier Module Specifications

Electrical	**Model**	**474 Transformer & Amplifier Module**
	Amplifier voltage Gain	500
	Amplifier bandwidth (-3dB)	5Hz to >100kHz
	Amplifier short circuit input noise	<1nV Hz-1/2 at 1kHz
	Amplifier maximum output	10V
	Transformer DC resistance	0.05Ω
	Transformer gain	~100
	Optimal transformer frequency	600Hz
Interface, Mechanical	**Dimensions**	Single width module, 3U high
	Connector	BNC

Ordering Information

S400_474	474 transformers
S400_474_PREAMP	474 fixed gain low noise voltage amplifier module

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