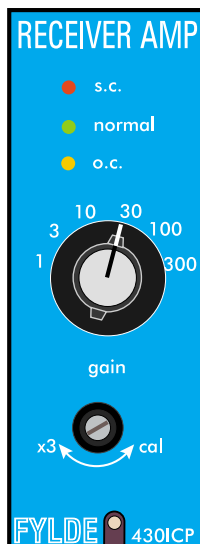


FE-430-ICP RECEIVER AMPLIFIER



The FE-430-ICP is a combined amplifier and power supply module which is particularly suited to the requirements of ICP head amplifiers.

A specially designed constant current supply is established to energise the head amplifier via the co-axial cable, and special features of the input connection enhance the common mode rejection when the remote transducer has an electrical connection to earth.

LED indicators are provided which give front panel display of open or short circuit cable condition. Other features include a 180 deg phase change switch, and a built in low pass active filter.

The module is AC coupled with a low frequency cut off of 0.16Hz and bandwidth extends to greater than 50kHz.

Power supply may be mains 240V (standard) 110V 60Hz or 12V dc when fitted with FE-605-DCC, DC-DC converter.

Up to 16 modules (plus power switch module) fit standard 2u-PE17 crate. 8 in a PE8 1/2 rack, 4 in a PE4 and 2 in a PE2.

FYLDE also manufactures ICP head amplifiers for charge type sources. The FE-074-HA/C is scaled in V/pC to match piezo-electric accelerometers. The FE-074-HA is powered, received and amplified by the FE-430-ICP.

- * GAIN RANGE x1 to x1000 WITH VERNIER
- * HIGH INPUT IMPEDANCE
- * LOW NOISE FET INPUT
- * 3 LED BIAS CHECK
- * BUILT IN LOW PASS ACTIVE FILTER
- * REMOTE AND LOCAL EARTHING OPTIONS

The Fylde FE-430-ICP is a combined amplifier and power supply module which is particularly suited to the requirements of ICP head amplifiers. Additionally, the amplifier operates as a high performance AC coupled differential or single ended amplifier for general application.

Integrated Circuit Piezo-electric transducer (ICP) amplifiers have advantages over charge amplifiers for use with high impedance transducers, and the FE-430-ICP module has been designed to augment the attractions of the ICP approach.

A specially designed constant current supply is established to energise the head amplifier via standard coaxial cable, and special features of the input connection enhance the common mode rejection when the remote transducer has an electrical connection to earth.

Overload indicators are provided which give front panel display of open circuit or short circuited cable. Other features include 180° phase change jumpers and a low pass filter for noise reduction or anti-alias application.

Front Panel gain control covers x1 to x1000 gain via switch and vernier controls.

The conditioner is presented as a 1" wide module in the Fylde range of miniature instrumentation units. The connections are compatible with standard amplifier housings and modules may be operated directly from standard mains supplies or 12V DC option.

The FE-430-ICP is particularly suited for application with Fylde Head Amplifier type FE-074-HA/C.

SPECIFICATION

INPUT	Impedance	1M Ω each input (2M Ω differential).	
	Coupling	1 μ F and 1M Ω .	
	Protection	Against open circuit static damage or short circuit.	
	Range	20V pk-pk max.	
	Connector	Typically rear panel BNC or 3 pin connector to order.	
GAIN	Control	6 position switch covers gain x1 to x300 in 1, 3, 10, steps.	
	Vernier	x1 to > x3 by 22 turn front panel screw driver control.	
	Accuracy	\pm 0.5% on all switch settings typ. with vernier at x1. Max \pm 1%	
	Stability	0.02% over 12 months. \pm 0.01%/°C max.	
COMMON MODE	Rejection	>80dB (50 - 400Hz).	
	Impedance	1M Ω (remote setting).	
NOISE	Referred to input	(gain 100) 5 μ V	RMS DC - 100kHz.
	Referred to input	(gain 1) 1 μ V	RMS DC - 100kHz.
	Referred to output	(gain 1) 0.1mV	RMS DC - 100kHz.
BANDWIDTH	Filter OUT	<0.25Hz to 50kHz typ x1 to x30 (>25kHz x100 & x300).	
	Filter IN	Low Pass Filter set by plug in single in line resistor pack.	
	Filter setting range	Typ. 100Hz to 10kHz. 3 Pole Butterworth characteristic.	
OUTPUT	Voltage	20V pk-pk (10 k Ω load).	
	Current	\pm 2 mA.	
	Protection	Short circuit limited.	
	Capacity Load	5000pF max.	
	DC Offset	<10mV.	
CONSTANT CURRENT	Setting	Preset at 4mA dc (Alternative setting 2-6mA).	
	Working Range	5 - 22 volts DC.	
	Impedance	1 Megohm approximately.	
	Noise	<0.1 μ A RMS (DC - 20 kHz).	
	Indication	LED monitors current flow.	
POWER	Requirement	Mains 200 - 250V 50/60Hz. Alternative 110V option, or 12V dc via dc-dc converter option.	
PRESENTATION		1" wide module compatible with all standard FYLDE housings.	