

Horsettiera retronodulo:

- 1 = LINE SENSE INPUT
- 2 = CLTS INPUT
- 3 = COMMON INPUT
- 4 = OUT I-LOOP (4..20 mA)
- 5 = SUPPLY +21 V.cc
- 6 = SUPPLY GND

Co: Elettronica BRUZZONE (GE)

Title: ANSALDO ENERGIA (PMA)

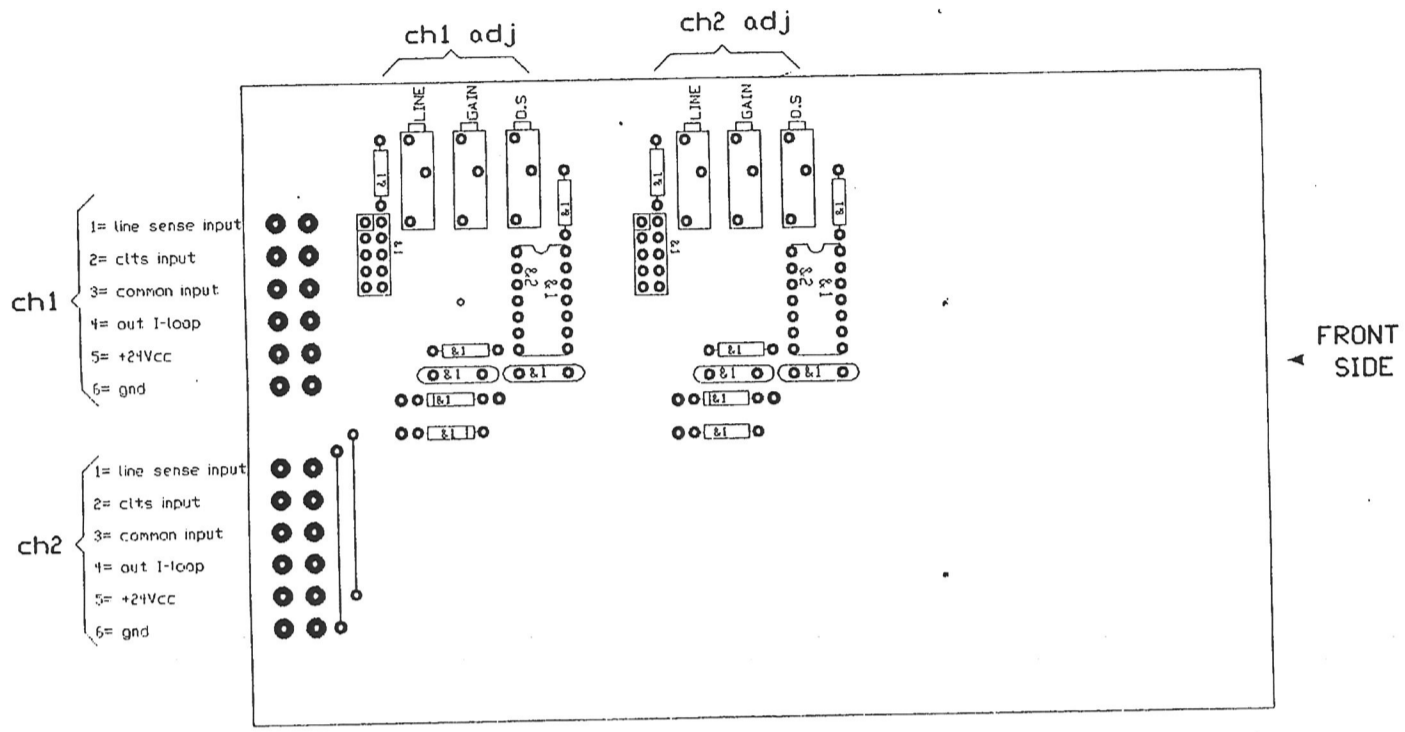
Board: amplif/condiz. CLTS Revision: b

Author: .../enni

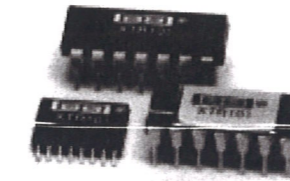
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Date: Apr '97

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Co:	Elettronica BRUZZONE (GE)		
Title:	ANSALDO ENERGIA		
Board:	Lay-out ampli, CLTS	Revision:	
Drawn:		Size:	
Date:	Nov 96	Sheet	of



XTR101

## Precision, Low Drift 4-20mA TWO-WIRE TRANSMITTER

### FEATURES

- INSTRUMENTATION AMPLIFIER INPUT  
Low Offset Voltage, 30 $\mu$ V max  
Low Voltage Drift, 0.75 $\mu$ V/ $^{\circ}$ C max  
Low Nonlinearity, 0.01% max
- TRUE TWO-WIRE OPERATION  
Power and Signal on One Wire Pair  
Current Mode Signal Transmission  
High Noise Immunity
- DUAL MATCHED CURRENT SOURCES
- WIDE SUPPLY RANGE: 11.6V to 40V
- -40 $^{\circ}$ C to +85 $^{\circ}$ C SPECIFICATION RANGE
- SMALL 14-PIN DIP PACKAGE, CERAMIC AND PLASTIC

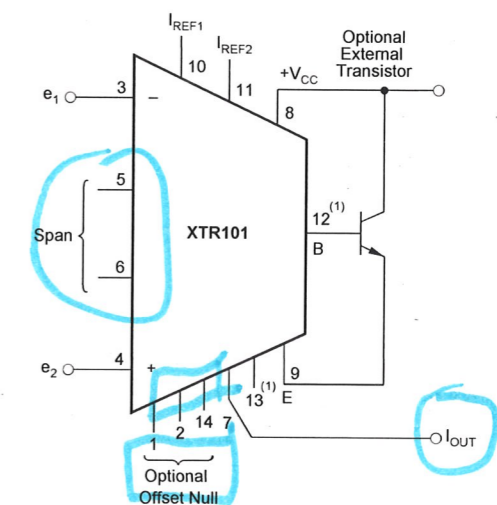
### APPLICATIONS

- INDUSTRIAL PROCESS CONTROL  
Pressure Transmitters  
Temperature Transmitters  
Millivolt Transmitters
- RESISTANCE BRIDGE INPUTS
- THERMOCOUPLE INPUTS
- RTD INPUTS
- CURRENT SHUNT (mV) INPUTS
- PRECISION DUAL CURRENT SOURCES
- AUTOMATED MANUFACTURING
- POWER/PLANT ENERGY SYSTEM MONITORING

### DESCRIPTION

The XTR101 is a microcircuit, 4-20mA, two-wire transmitter containing a high accuracy instrumentation amplifier (IA), a voltage-controlled output current source, and dual-matched precision current reference. This combination is ideally suited for remote signal conditioning of a wide variety of transducers such as thermocouples, RTDs, thermistors, and strain gauge bridges. State-of-the-art design and laser-trimming, wide temperature range operation and small size make it very suitable for industrial process control applications. In addition, the optional external transistor allows even higher precision.

The two-wire transmitter allows signal and power to be supplied on a single wire-pair by modulating the power supply current with the input signal source. The transmitter is immune to voltage drops from long runs and noise from motors, relays, actuators, switches, transformers, and industrial equipment. It can be used by OEMs producing transmitter modules or by data acquisition system manufacturers.



NOTE: (1) Pins 12 and 13 are used for optional BW control.

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