Avionics

429EX ARINC 429 DATABUS ANALYZER

The easy method for troubleshooting ARINC 429 labels

The 429EX provides avionics technicians and line-maintenance personnel with an easy method for troubleshooting ARINC 429 labels. It has the capability to selectively trap labels three different ways. The 429EX has a non-volatile memory and features user-selectable ARINC Air Transport Equipment Identifier Codes. Transmitted and received data can be viewed in either hexadecimal or easy-to-understand engineering format.

The 429EX is housed in a rugged, compact case with internal, rechargeable NiCad batteries. The unit comes with either a 110V or 230V plug-in battery charger. An optional carrying case is available for convenience and protection of the unit.

Transmitter Operation

The 429EX provides capability for transmitting up to ten 32 bit words in ARINC 429 or 419 bipolar RZ format. The transmit bit rate can be set for high (100 kbps) or low (12.5 kbps) speed with selectable odd or even parity. The unit allows keypad entry of transmit label (octal) with data entry via hexadecimal (bits 32 through 9) or by engineering equivalent values. Entry by engineering values allows individual entry of primary data (miles, knots, MHz, etc.), SDI, SSM, word rate and individual bit switching functions. Non-RF labels have additional screens that allow for slewing data with programmable slew limits and direction of slew in desired increments. The transmitter operation is completely independent of the receiver, allowing simultaneous operation of both the transmitter and receiver. Transmitted labels can be stored in non-volatile memory.

Receiver Operation

The unit is capable of receiving and trapping (storing) up to 255 high or low speed 32 bit words in 429 or 419 bipolar RZ format. The unit is also capable of trapping 511 occurrences of one label of data only from strings of data containing multiple words. The special trigger trap mode expands receiver capabilities further to allow trapping of block data protocols or of alphanumeric strings of data. The receiver also allows the user to view all individual bits. Receiver bus speed is switch selectable. LCD display of received labels is provided with selection of hexadecimal or engineering formats. Initial receiver screen displays the number of labels that have been received with ability provided for stepping through each label for data display. Trap mode allows operator to select which labels are to be trapped (four possible user selectable label/data combinations). Access to received or stored data is accomplished by single-step scrolling keys or by automatic scrolling mode. Trapped data is stored in non-volatile memory until cleared.

GENERAL SPECIFICATIONS

TRANSMITTER OPERATION

Pulse Rise/Fall time

Lo speed 10 + 5.0 µs

Hi speed 1.5 µs

Voltage Levels (Line A to B)

HI +10.0 + 1.0 Vdc

NULL 0.0 + 0.5 Vdc

LO -10.0 + 1.0 Vdc

Output Impedance

75 + 5 Ω (Line A to B)

Bit Rate

Low speed, 12.5 kbps + 0.5%

Hi speed, 100.0 kbps + 0.5%

Word Rate

4 to 59998 µs (selectable)

Parity

ODD or EVEN (selectable)

RECEIVER OPERATION

Impedance

75 + 5 ohms balanced between A and B terminals

Bit Rate

8 to 20 kbps (low speed)

80 to 125 kbps (high speed)

Voltage Levels (Line A to B)

HI +6.5 to +13 VDC

NULL +2.5 to -2.5 VDC

LO -6.5 to -13 VDC

Word Rate

+ 2 µs average

Input Impedance

12 kΩ minimum (balanced)

PHYSICAL CHARACTERISTICS

Dimensions

Height 7.25 in (18.42 cm)

Width 4.5 in (11.43 cm)

Depth 2.5 in (6.35 cm)

Weight 3 lbs (1.36 kg)

POWER REQUIREMENTS

Input

110 VAC, 60 Hz, 500 mA OR 230 VAC, 50 Hz, 300 mA

OR Six (6) internally mounted AA size rechargeable NiCad batteries

ORDERING INFORMATION

429EX-110	ARINC 429 Databus Analyzer (110V)
429EX-220	ARINC 429 Databus Analyzer (220V)

Similar Models:

429E-110	ARINC 429 Databus Analyzer (110V)
429E-220	ARINC 429 Databus Analyzer (220V)

Economical version (no data slewing or non-volatile memory)

429EB-110	ARINC 429 Databus Analyzer (110V)
429EB-220	ARINC 429 Databus Analyzer (220V)

Equivalent to 429E with addition of unique label definitions for testing of Boeing aircraft avionics

429EBP-110	ARINC 429 Databus Analyzer (110V)
429EBP-220	ARINC 429 Databus Analyzer (220V)

Equivalent to 429EX with addition of printer port and unique label definitions to test Boeing aircraft avionics

429EXR-110	ARINC 429 Databus Analyzer (110V)
429EXR-220	ARINC 429 Databus Analyzer (220V)

Rack-mountable version of the 429EX

Standard Accessories

Battery charger, 3-Conductor ¼" phone plugs, Operations manual

Optional Accessories

AC15502200	429 Soft-side vinyl case; 429E, 429EX, 429EB
AC15502201	429 Soft-side vinyl case; 429EBP

Extended Warranty

W429/203C	Extended standard warranty 36 months with scheduled calibration
W429/205C	Extended standard warranty 60 months with scheduled calibration

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A passion for performance.

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Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.

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