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datair400/tr

HAND HELD ARINC 429/575 DATABUS ANALYSER & TRANSMITTER

The DATAIR-400/TR Data Monitor and Transmitter combines all of the features of the DATAIR-400 Data Monitor with a single Label ARINC429 Transmitter.

The user interface is designed to be simple to use - the DATAIR-400/TR has just three buttons to navigate through the intuitive menu system. When the Monitor part of the instrument is connected to an ARINC429 data bus, an instant presentation of active *(Tags)* Labels is presented on the display.

The ARINC data word associated with a displayed Label may be viewed by simply positioning the cursor over the desired displayed Label and pressing the SELECT button. The display then shows the ARINC word in binary or hexadecimal format, the repetition rate of the word in milliseconds, the SSM value and the state of the Parity bit - *All in real time!* In addition to this, the monitor circuitry automatically adapts to the ARINC bit-rate and displays this as either "Hi" or "Lo". If a Label has an active SDI field, data with the desired Label/SDI combination can be viewed by scrolling through the SDI values. For fields that do not have a SDI the filter can be set to "don't care" *(=XX)*.

ARINC data is only displayed whilst it is active. If the selected data goes inactive for more than five seconds the display will be blanked. The Monitor is provided with a FREEZE button to freeze the last captured value for prolonged viewing if so desired.

A single Label can be set up for transmission in either single shot or repetitive mode. The Label in Octal, the transmitter bus bit-rate, the repetition rate or single shot mode, and control over all of the upper 24-bits in binary format is selected using the easy-to-use menu driven user interface. A hexadecimal representation of the binary field is also provided. Note: there is no engineering unit data entry facility provided for the transmitted data.
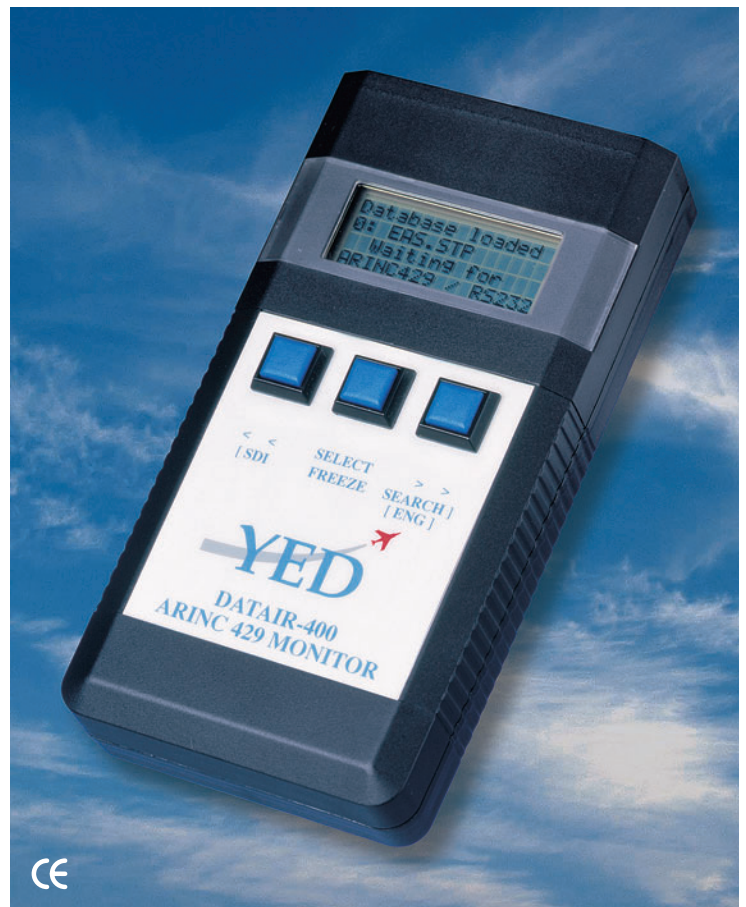
The DATAIR-400/TR is packaged as a hand held unit. It is powered from 4 x AA batteries or from an external 6V DC supply.

datair400/tr product features

✈ Very user friendly and easy to use.

✈ Single Label ARINC429/575 binary Transmitter.

✈ Simple intuitive user interface - 3 button menu driven, 4 line by 16 character LCD user display.

✈ Automatic bus search with bit rate detection.

✈ User definable engineering units format for up to 100 labels.

✈ Binary and Hexadecimal display.

✈ Opto-couple isolation inputs.

✈ Internal battery providing operation for up to five hours.

✈ External 6VDC *(@200mA)* operation.

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Engineering units Word Definition Software

The DATAIR-400/TR unit *(Monitor section)* can display engineering unit formatted data according to internally held data conversions. These conversions are defined using the Engineering Units Word Definition Software, and downloaded via an RS232 link to the DATAIR-400/TR unit.

The conversions are defined by assigning a unique name for each ARINC Label and definitions for up to three fields within each word. Each field entry comprises of a Start position and a Length, an MSB Value, the Conversion Format *(2's compliment, BCD, etc.)* and a Name for the Units. Up to one hundred ARINC words can be defined. All definitions can be stored to and retrieved from the hard disk.
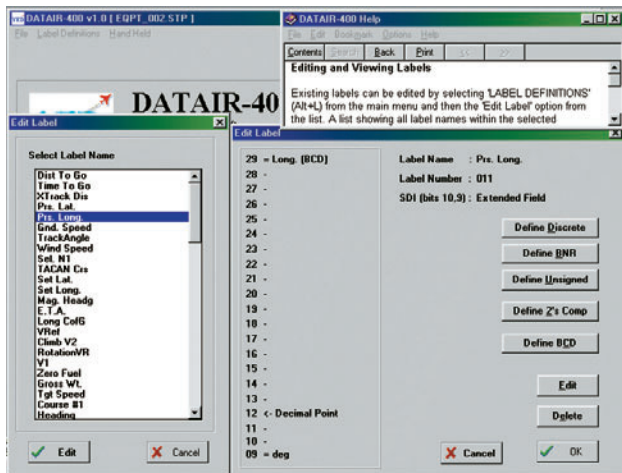
The software operates on any Pentium PC running Microsoft Windows™ 95/98/NT4/W2k/XP.
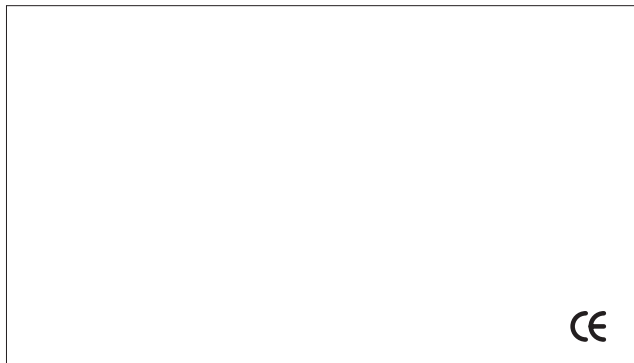
datair400/tr technical specification

transmitter operation		
pulse rise/fall time	Lo Speed	10 ± 5µs
	High Speed	1.5 ± 0.5µs
voltage levels (Line A to B)	HI	10 ± 1.0 Vdc
	NULL	0 ± 0.5 Vdc
	LO	-10 ± 1.0 Vdc
output impedance	75 Ω ± 3 Ω	
bit rate	Lo speed, 12.5 kbps ± 0.5 %	
	Hi speed, 100.0 kbps ± 0.5 %	
word rate	5 to 1000 ms (selectable) or S/Shot	
parity	ODD or EVEN (selectable)	
receiver operation		
bit rate	Lo Speed 8 to 14 kbps	
	Hi Speed 90 to 110 kbps	
voltage levels (line A to B)	HI	10 ± 6 Vdc
	NULL	0 ± 2.5 Vdc
	LO	-10 ± 6 Vdc
input impedance	3 kΩ minimum (balance)	
general		
product dimensions (mm)	195L x 100W x 42D	
weight	600 grams	
user interface	4 line x 16 character LCD	
	3 push button menu selection	
power requirements		
External DC	3 to 7 VDC @ 120mA	
Batteries	4x MN1500 or AA size	
Battery Lifetime	Up to 6 hours	
operating environment		
Temperature	+0°C to 50°C	
Humidity Range	0% to 95% non-condensing	

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