RESmith
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Model IHV24AT   Rev. A1   AUG 2007

RS232<=>3KV ISOLATED RS485 Automatic Converter
with Removable Terminal Strip, LED Indicators, for Industrial Applications

General Description:
The IHV24AT has fast automatic transmit-enable timing for easy RS232<=>RS485 conversion, in 2-wire half-duplex applications, at data rates up to 115.2Kbps. LED indicators for Power, TXD, RXD, with jumper selectable bias and termination. Single unit load Intersil ISL83491 Transceiver IC, and onboard transient protection. A loop-back jumper allows for easy self-testing of the unit.

Features:
Temperature Range: -40C to +85C
3KV Isolated for Industrial Applications
Fast Automatic Transmit Enable
LED Indicators for RS232 & RS485
Removable Terminal Strip for RS485
Optional communications up to 2 miles

Physical Properties:

RS232:	3-wire interface to RJ11/12 Connector (TXD, RXD, Common), DTE/DCE Jumpers
RS485:	Removable screw terminal strip (TXD/RXD-, TXD/RXD+, Common)
Power:	2.1mm center positive "Barrel" connector, Terminals, (9-35Vdc), switching regulator
LEDs:	For RS232 & RS485: Power (Yellow), TXD (Red), RXD (Green)
Bias:	470 Ohm pull-up and pull-down (jumper selectable)
Termination:	150 Ohm (jumper selectable), RS485 inline 27-Ohm 2W resistors
Special:	Robust transient protection and isolation, Loop-back test jumper

Specifications:

Temp./Humidity:	-40C to +85C (-40F to +185F) operating temp., 10-90% relative humidity, non-condensing
Isolation Voltage	3KV for 1-Sec. peak for opto-isolators and onboard DC-DC converter
Input Voltage Range:	9-35Vdc (Switching regulator)
Power:	Under 1/2 Watt (typical) + external load
Physical Size:	PCB size: 3.25" X 3.00" X 0.9" with connectors: 3.50" X 3.25 X 0.9" (built-in #6 standoffs)
RS485 Distance:	4000ft. (1250 meters) minimum, with 32 unit loads (Optional to 2 miles @ 38.4Kbps)
Speed/Format:	Up to 115.2Kbps data rate, with any combination of bits (start, data, parity, stop, etc.)
Operation:	2-wire, half-duplex, RS485 data, using twisted 24AWG wire (100-120 Ohm impedance)

Options and Ordering Information:

IHV24AT:	$114.00ea. (Fully tested & operational, Circuit board only, no accessories)
Enclosure:	$10.00ea. P/N Enclosure-M (medium)
RS232 Cable:	$7.50ea. P/N DB9F-7 (RJ11/12 to DB9F adapter with 7ft. cable)
Power Supply:	$8.50ea. P/N 12VDC-SPS (12Vdc @ 0.45A Switching Power Supply)
IHV24AT-B9FSPS:	$139.00ea. IHV24AT Converter with all options (Qty. 1-9)
NOTE:	Top end, industrial/robust applications, can be used with outdoor wiring (signs, camera PTZ, etc.)