Celebrating 38 Years in the Design and Manufacture of pressure altitude reporting equipment for the general and military aviation markets! Gliders, Balloons and UAV's too!

The Smallest, Lightest and Lowest Power Consumption Altitude Encoder on the Market!

Available with Serial Data Outputs in RS232 or RS485 Formats! Operating Ranges up to 100,000 ft.!

New Adapter Plates - TSO Approved, Convert to a Nano in Minutes!

Trans-Cal Altitude Encoders Feature:

- FAA TSO-C88a and EASA ETSO-C88a Approval
- Tested and Conforming to MIL-STD-704E and RTCA DO-160E
- Operating Voltage +10 to +33Vdc
- Low Power Consumption
- Standard D-Subminiature Electrical Connectors or MIL Cylindrical Connectors
- Dual 1/8-27NPT Static Port Inlets or Optional 1/8" Hse Barb with 360° Adjustable Swivel
- All Aluminum Housings Treated to Resist Corrosion as per MIL-C-5541E or Anodized as per MIL-A-8625 or Black Powder Coat
- Standard Operating Temperature Range: -20° to +70°C (-4° to +158°F)
  Optionally Available with Extended Temperature Range: -55° to +70°C (-67° to +158°

*The **SSD120-(XX)N-RS232** & **SSD120-(XX)NE-RS232** are all solid-state Altitude Encoders. These devices provide a rugged and reliable means of measuring air pressure and converting this measurement into the ICAO parallel data for Pressure Altitude Transmission.*

These units also provide altitude data on two asynchronous RS232 outputs. The serial data protocol is individually selectable for each output and is commonly used to provide pressure altitude data to GPS, Auto-Pilots, Transponders and other navigation devices.

Resolution of the serial altitude data may be set to 100 feet or 10 feet. A data protocol offering one-foot resolution is available, as well as one protocol offering altitude data in meters.

This device is available in a variety of configurations based upon the operating altitude, temperature range and data formats required.

An "E" suffix in the part number calls out the extended operating temperature range. -55° to +70°C (-67° to +158°F)

Model SSD120-(XX)N-RS232 (High Altitude)

Model SSD120-(XX)N1-RS232 with 360° Adjustable Swivel Hose Barb Static Port Fitting

Devices with operating ceilings of 50,000 feet and higher are designed around rugged proprietary solid-state sensor technology and operate with a current consumption of 60mA at +28Vdc!

*The **SSD120-(XX)N-RS232 & SSD120-(XX)NE-RS232** are all solid-state Altitude Encoders. These devices provide a rugged and reliable means of measuring air pressure and converting this measurement into the ICAO parallel data for Pressure Altitude Transmission.*

This unit also provides altitude data on two asynchronous RS232 outputs. The serial data protocol is individually selectable for each output and is commonly used to provide pressure altitude data to GPS, Auto-Pilots, Transponders and other navigation devices.

Resolution of the serial altitude data may be set to 100 feet or 10 feet. A data protocol offering one-foot resolution is available, as well as one protocol offering altitude data in meters.

Available with either dual 1/8-27NPT static ports or 360° adjustable swivel hose barb fitting.

This device is available in a variety of configurations based upon the operating altitude, temperature range and data formats required.

Model SSD120-(XX)N-RS5

An "E" suffix in the part number calls out the extended operating temperature range. -55° to +70°C (-67° to +158°F)

An "E" suffix in the part number calls out the extended operating temperature range. (ie. SSD120-30NE-RS5)

*The **SSD120-(XX)N-RS5 & SSD120-(XX)NE-RS5** are all solid-state Altitude Encoders. These devices provide a rugged and reliable means of measuring air pressure and converting this measurement into the ICAO parallel data for*

	Pressure Altitude Transmission. *The devices also provide altitude data on **FIVE** asynchronous RS232 outputs. The serial data protocol is selectable and is commonly used to provide pressure altitude data to GPS, Auto-Pilots, Transponders and other navigation devices.* *The **SSD120-(XX)N-RS1** is an all solid-state Altitude Digitizer/Encoder. This device provides a rugged and reliable means of measuring air pressure and converting this measurement into the ICAO parallel data for Pressure Altitude Transmission.* *The **SSD120-(XX)N-RS1** also provides altitude data on **Two** asynchronous RS232 and **One** RS485 output. The serial data protocol is selectable and is commonly used to provide pressure altitude data to GPS, Auto-Pilots, Transponders and other navigation devices. **One-Foot Resolution Data** is available on the second RS232 output only.* *The **SSD120-(XX)N-RS** is an all solid-state Altitude Digitizer/Encoder. This device provides a rugged and reliable means of measuring air pressure and converting this measurement into the ICAO parallel data for Pressure Altitude Transmission.* *This unit also provides altitude data on **Two** asynchronous RS232 and **One** RS485 output. The serial data protocol is selectable and is commonly used to provide pressure altitude data to GPS, Auto-Pilots, Transponders and other navigation devices.* *Resolution of the serial altitude data may be set to 100 feet or 10 feet. A data protocol offering altitude in meters is available.* *This device is available in a variety of*

configurations based upon the operating altitude, temperature range and data formats required.

Model SSD120-(XX)NEH-RS

Model SSD120-30NEH-RS *(Altitude Range -1000 to +30,000 feet)*

Model SSD120-35NEH-RS *(Altitude Range -1000 to +35,000 feet)*

Model SSD120-42NEH-RS *(Altitude Range -1000 to +42,000 feet)*

Model SSD120-50NEH-RS *(Altitude Range -1000 to +50,000 feet)*

Model SSD120-62NEH-RS *(Altitude Range -1000 to +62,000 feet)*

Model SSD120-65NEH-RS *(Altitude Range -1000 to +65,000 feet)*

Model SSD120-80NEH-RS *(Altitude Range -1000 to +80,000 feet)*

*The **SSD120-(XX)NEH-RS** is an all solid-state Altitude Digitizer/Encoder. This device provides a rugged and reliable means of measuring air pressure and converting this measurement into the ICAO parallel data for Pressure Altitude Transmission.*

*The **SSD120-(XX)NEH-RS** also provides altitude data on Two asynchronous RS232 and one*

Model SSD120-(XX)NEH-RS

RS485 output. The serial data protocol is selectable and is commonly used to provide pressure altitude data to GPS, Auto-Pilots, Transponders and other navigation devices.

Resolution of the serial altitude data may be set to 100 feet or 10 feet. A data protocol offering one-foot resolution is available, as well as one protocol offering altitude data in meters.

This device is designed for exposure to an environment where it may be subjected to water (generally the result of condensation, driving rain and/or water spray.) The instrument case is constructed of anodized aluminum and incorporates a hermetically sealed MIL-DTL-38999 Series III connector.

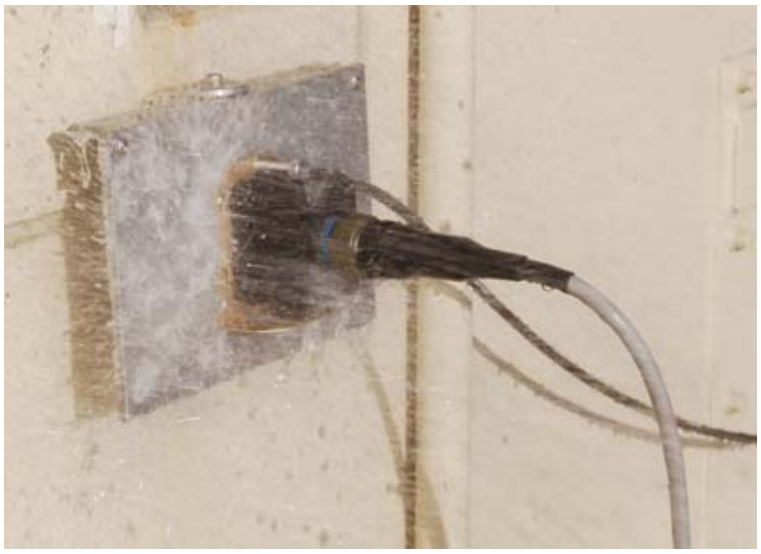
Available with either dual 1/8-27NPT static ports or 360° adjustable swivel hose barb fitting.

This device is available in a variety of configurations based upon the operating altitude, temperature range and data formats required.

Model SSD120-(XX)NEH1-RS with 360° Adjustable Swivel Hose Barb Static Port

Model SSD120-(XX)NEH-RS

RTCA/DO-160E Category R Spray-Proof Testing



Model SSD120-(XX)M

Model SSD120-35M *(Altitude Range -1000 to +35,000 feet)*

Model SSD120-50M *(Altitude Range -1000 to +50,000 feet)*

*The **SSD120-(XX)M** is an all solid-state Altitude Digitizer/Encoder Module. This device is designed to be mounted within a flight altimeter or other protective enclosure and provides a rugged and reliable means of measuring air pressure and converting this measurement into the ICAO parallel data for Pressure Altitude Transmission.*

*The **SSD120-(XX)M** also provides altitude data on **Two** asynchronous RS232 outputs. The serial data*

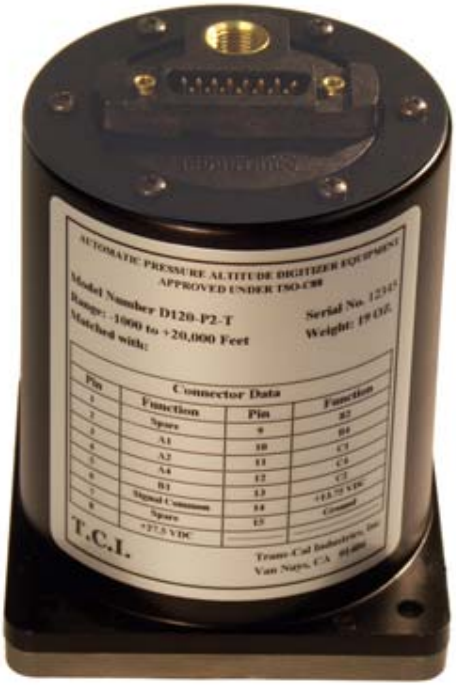
Model SSD120-(XX)M

protocol is selectable and is commonly used to provide pressure altitude data to GPS, Auto-Pilots, Transponders and other navigation devices.

Resolution of the serial altitude data may be set to 100 feet or 10 feet. A data protocol offering one-foot resolution is available, as well as one protocol offering altitude data in meters.

The module is mounted via a hermetically sealed jam nut connector MS3114-H16C-26PN type.

This device is available in a variety of configurations based upon the operating altitude, temperature range and data formats required.



Model D120-P2-T 20K *(Altitude Range -1000 to +20,000 feet)*

Model D120-P2-T 30K *(Altitude Range -1000 to +30,000 feet)*

Model D120-P2-T 35K *(Altitude Range -1000 to +35,000 feet)*

This is the unit that earned Trans-Cal its reputation for reliability. TCI still receives units for initial repair that have been in service since that original production run in 1971. Like all TCI designs, this unit offers unprecedented reliability and a rock-solid design. This is an electro-mechanical instrument. An optical shaft angle

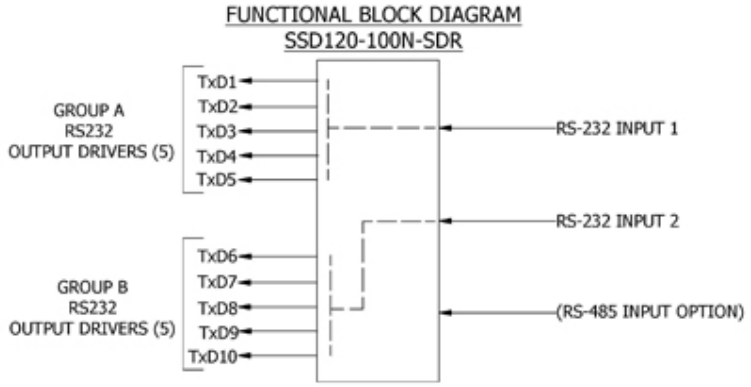
Model D120-P2-T	*encoder linked to a mechanical aneroid. Offering low current consumption and a high MTBF the D120 is still in production 38 years later. Offered in 20,000 ft. 30,000 ft., and 35,000 feet operating ranges, the D120-P2-T is a tried and true instrument.*

Model SSD120-100N-SDR

Serial Data Repeater

Break the RS-232 Fan-Out Limit!

Drive up to Ten RS232 Devices with a Single Input!



RS232 is a popular format for transmitting data within the aircraft; but RS232 is limited to one reciever per driver. Break the Fan-Out limit using the SSD120-100N-SDR. Designed to accept one or two RS232 inputs and then retransmit the signal over two groups of five or one group of ten RS232 outputs, the SSD120-100N-SDR is a simple solution to the RS232 fan-out limitation.

Featuring:

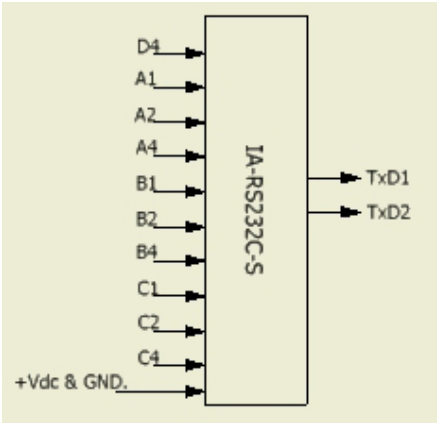
- *One or two RS232 data inputs /or one RS485 input*
- *Fan-Out of up to ten RS232 outputs*
- *Installer configured outputs transmit as one group of ten or two groups of five*
- *FAA TSO-C88a and ETSO-C88a Approved*
- *Tested and conforming to MIL-STD-704E and RTCA DO-160E*
- *Operating voltage +10 to +33Vdc*
- *Current 20mA (one output) / 60mA (ten outputs)*
- *Operating temperature range -40° to +70°C*
- *Operating altitude range -1200 to +100,000 feet*
- *Weight 3 oz. (mounting tray and knob adds 1 oz.)*

Model IA-RS232C-S

Interface Adapter (Serializer)

Converts ICAO Pressure Altitude Code into RS232 Data

Designed to convert parallel 10-bit ICAO pressure altitude data to a fan-out of two RS-232 compliant outputs, the IA-RS232C-S is an all solid-state Interface Adapter (Serializer.) This device provides a simple and robust means of converting parallel data into serial data and retransmitting to multiple aircraft systems in a compact package.

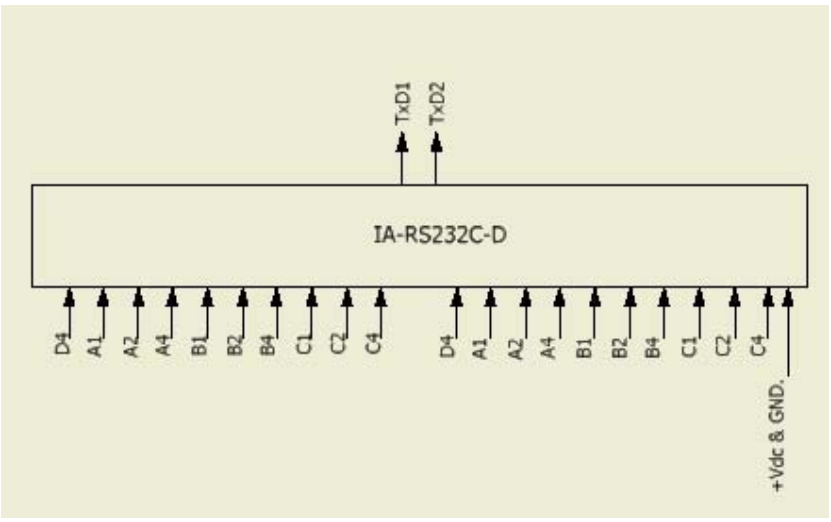


Model IA-RS232C-D

Dual Port Interface Adapter (Serializer)

Converts ICAO Pressure Altitude Code into RS232 Data

Designed to convert parallel 10-bit ICAO pressure altitude data from TWO altitude reporting digitizers to a fan-out of two RS-232 compliant outputs, the IA-RS232C-D is an all solid-state Interface Adapter (Serializer.) The IA-RS232C-D will accept data from only one digitizer at a time. This device provides a simple and robust means of converting parallel data into serial data and retransmitting to multiple aircraft systems in a compact package.


TxD1
TxD2
IA-RS232C-D
D4
A1
A2
A4
B1
B2
B4
C1
C2
C4
D4
A1
A2
A4
B1
B2
B4
C1
C2
C4
+Vdc & GND.

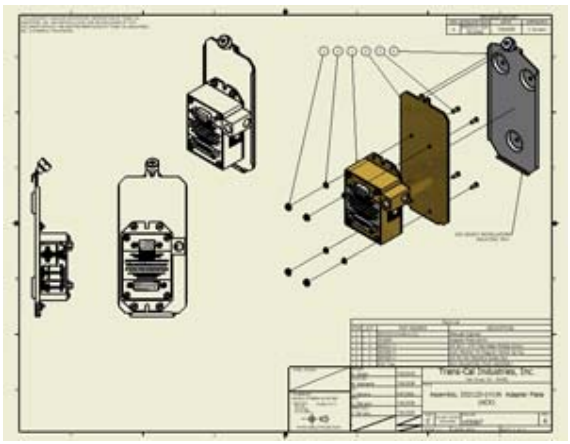
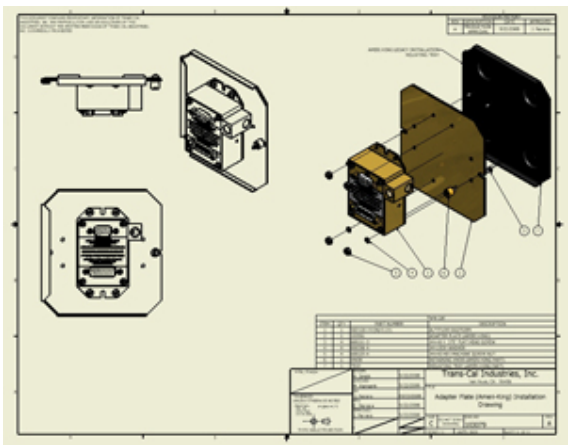
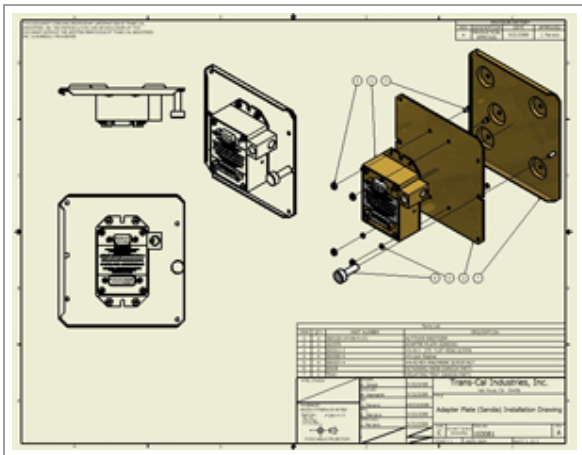
Adapter Plates

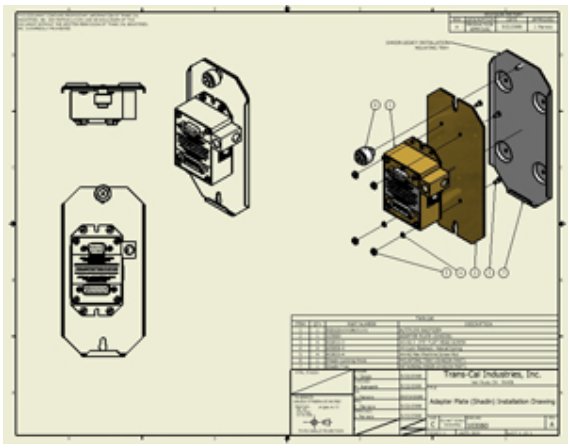
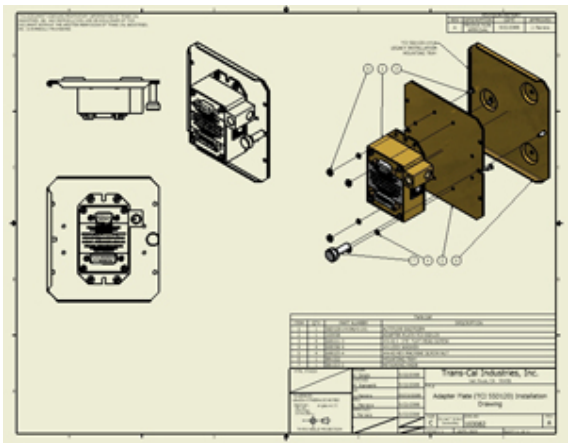
Install in Minutes not Hours!

Swap an Old Encoder for a new TCI!

Trans-Cal Industries has developed **Adapter Plates** that allow the technician to quickly replace existing or legacy encoder installations in favor of the new Trans-Cal SSD120-(XX)N series of altitude digitizer/encoders. These plates simplify the installation task by providing an adapter designed for the Trans-Cal unit, while utilizing the exisiting mounting tray.

All adapter plates include stainless steel mounting hardware and are approved for installation under TSO-C88a and ETSO-C88a.

ACK Adapter Plate 103059	
Ameri-King Adapter Plate 103061	
Sandia Adapter Plate 103035	

Shadin Adapter Plate 103060	
Trans-Cal SSD120 & Narco AR850 Adapter Plate 103038	
Trans-Cal D120 Adapter Plate 103036	

EET-200 and EET200E

Encoder Emulator Tester

EET-200E Specifically targets the four test points required by EASA AD No. 2006-0265

End the shotgun approach to troubleshooting and reduce the time spent diagnosing altitude encoder/transponder problems. TRANS-CAL INDUSTRIES' EET-200 and EET-200E offers the avionics technician an inexpensive diagnostic tool for altitude encoder/transponder troubleshooting.

Open or shorted wire in your encoder harness? A bad input gate on the transponder? Why waste time jumping individual data bits to ground using a clip lead and paper clip? The EET-200 provides the avionics technician a clean, quick and reasonably priced method of emulating an altitude encoder output by providing a known good altitude code source to aide in isolating each data bit D2 through C4. The EET-200E will provide the 4 data points specifically required by EASA AD No. 2006-0265 simplifying your certification tasks.

Simply unplug the altitude encoder and substitute the EET-200; rotating the knob will

move the transponder through a variety of preprogrammed altitudes testing each data bit in sequence.

Suspect a problem with the altitude encoder? Unplug the encoder and plug both the transponder and the encoder into the EET-200. Use the built in vacuum syringe to simulate any altitude from below sea level to over 30,000 feet (using supplied 12” x 1/8” tubing, not pictured). Compare the encoder output to the supplied altitude code chart to determine if an error is present.

Strobe function not working? Simply toggle the strobe switch on the EET-200 to simulate an open strobe on the digitizer or the transponder.

Power supply connected correctly? Simply unplug the altitude encoder and substitute the EET-200. If the power LED glows green then your good to go, if it glows red then your power is connected improperly.