# SSI DuraCoder Option

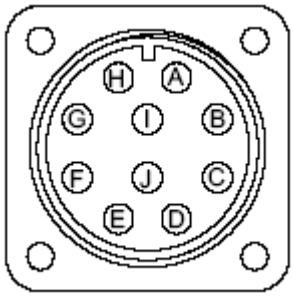
The DC25F-S1S3BEM26 is an option to the standard AMCI SSI DuraCoder and is both electrically and mechanically equivalent to BEI's HMTD-F1-SS-12X4-NB-S3-CW-E-M18 SSI Encoder.

The DC25F-S1S3BEM26 outputs 4096 counts / turn of binary data over 16 turns of travel. If the shaft makes more than 16 turns, the count value will roll over to zero and start counting again.

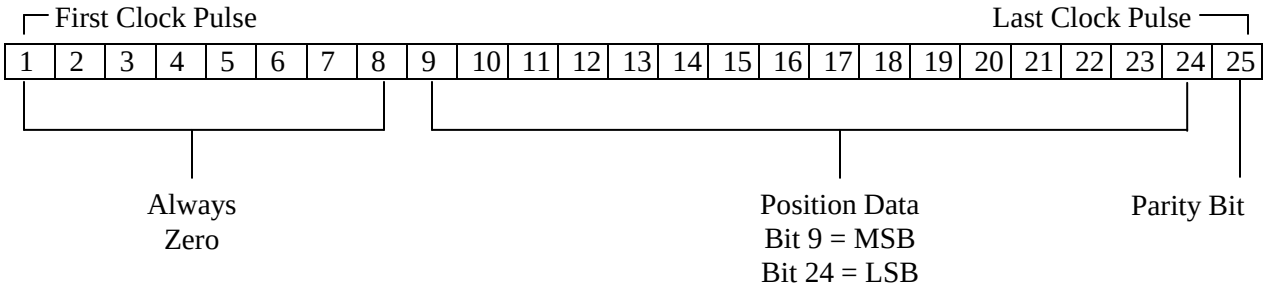
This DuraCoder uses a 10 pin connector. The following table and diagram shows the pin out of this 10-pin connector.

| Pin # | Function |
|---|---|
| A | +Data |
| B | +Clock |
| C | Direction |
| D | +Vdc |
| E | No Connection |
| F | DC Return |
| G | Case Ground |
| H | - Data |
| I | - Clock |
| J | Reset |

**Output Connector**
**MS3102E18-1P**




- The following diagram shows the data format of the DC25F-S1S3BEM26. Please note that there are 25, not 24 as on the standard DuraCoder, clock pulses, and the addition of a Parity Bit. Also note that the position data is not right justified.




- This DuraCoder cannot communicate over RS485. This means that it can only be configured at the factory, and that it will not work with AMCI's programming software
- The Reset and Direction Inputs must be connected to DC Return to operate. This is different from the standard SSI DuraCoder's inputs that must be connected to +Vdc to operate.
- The Reset Input must be connected to DC Return for a minimum of one second before the position will be reset to zero.
- The state of the Direction Input is only read at power up.
- The Parity Bit will be set whenever the number of Position Data bits that are set is an odd number. For example, if the Position Data = 5 (0101 binary), the Parity Bit will be reset. However, the Parity Bit will be set if the Position Data = 7 (0111 binary).
- The DuraCoder Case must be connected to Earth Ground. This is usually accomplished through its mounting. If not properly grounded through its mounting, a wire from Pin G must be connected to an Earth Ground Point as close as possible to the DuraCoder. Do not connect Pin G to the cable shields. This can form a ground loop that may affect the operation of the DuraCoder.



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