CNC Design introduces new robust, accurate measuring scale

22 November 2010 - AMO Corporation has released the new IP67-rated LMB-410 spar linear encoder at the recently held IMTS 2010 in Chicago, US. The LMB-410 measuring scale comes with a stainless steel carrier, offering robust measuring/position feedback with IP-67 rating and performance similar to a linear optical encoder.

Available through Melbourne-based automation and control specialist CNC Design, the LMB-410, operating on an inductive scanning principle, is best suited for general purpose machines, such as machine tools, medical equipment, printing equipment, and military/aerospace applications. Its IP67 rating makes the scale ideal for dirty or contaminated conditions including being fluid submersible.

Its adhesive-free mounting spar with a snap cover eliminates concerns related to adhesive-backed spars becoming loose in oily environments. A slim stainless steel carrier is attached to the machine with screws, with an interlocking “snap cover” securing the scale tape in position. Its encoder head can be optionally equipped with wipers to automatically clean the scale during operation. The encoder head’s gain compensation and auto offset eliminate the need to use a test box during setup.

The LMB-410 is rated for operation that ranges from -10 to +100C for up to 30-m measuring length and 3 μm/m accuracy. The new encoder also meets high-shock, high-speed and vibration specifications.AMOSIN inductive measuring systemsAny non-guided AMOSIN encoder head can be used with any of the LMB-400 or LMB-100 scale mounting version. The AMOSIN inductive measuring systems are supplied in two principal versions: an open, non-contacting system, or as a guided, encapsulated system.

Operating entirely on an inductive basis, all AMOSIN systems achieve high precisions of up to +/- 3 μm/m, but are nevertheless very well able to resist environmental influences and extremely high resistance to shock and vibration.

The high precision is mainly due to the procedure used to manufacture the rigid steel measuring tape, and to the exceptionally high quality sensor signal, with deviations in the ideal sine wave down to < 0.1 % harmonic content, as a measure of the achievable interpolation precision within the grating pitch.Inductive scanning – high protection class IP67Reference marks can be integrated on the measuring tape, and are supplied with a single, multiple, or distance coded patterns. The purely inductive scanning allows for the high protection class IP67 where the operation of the systems is not affected by contamination and pollutants in the form of dust, smoke, or liquids. Optical encoders require a complicated mechanical encapsulating enclosure, are more susceptible to damage and hence commonly incorporate air purging to protect the optical scale – neither which are necessary with the AMOSIN encoders. As a result, AMOSIN encoders require much less maintenance than optical encoders.

Particularly noteworthy is the insensitivity from magnetic interference as there are no magnetic components in the purely inductive scanning and a completely different technology than magnetic encoders. As a result, AMOSIN encoders are not at all sensitive to electromagnetic interference of any kind and have no measurement hysteresis (machine backlash error).

Contact:

CNC Design Pty LtdBruce RowleyManaging DirectorPh: 03 9411 1511Bruce_Rowley@cncdesign.com.auwww.cncdesign.com

Contacts

Barbara Schulz
0488771477
mailto: bschulz@com4tech.com.au