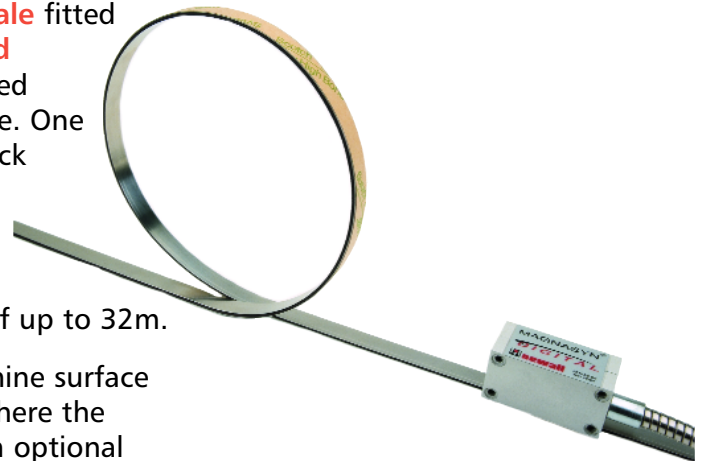


MAGNASYN TECHNOLOGY

The Magnasyn encoder comprises a **flexible tape scale** fitted to a fixed surface of the machine, and a **reader head** fastened to the moving part to be measured, arranged such that it travels in very close proximity to the scale. One or more **index markers** can be fitted in a second track parallel with the main scale.

The flexible nature of the tape scale makes the Magnasyn encoder ideal for **rotary** as well as **linear** applications. Magnasyn tape is available in lengths of up to 32m.

The scale can be mounted directly to a smooth machine surface using the adhesive strip supplied. For applications where the mounting surface is uneven, it can be attached to an optional backing bar, supported by standoffs.

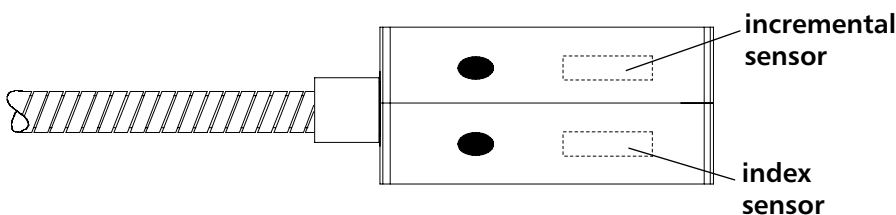
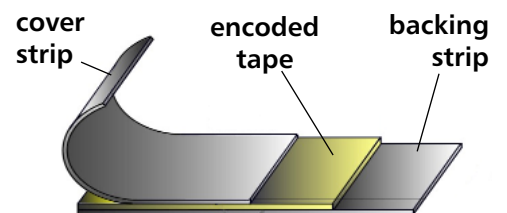


Principal of operation

The Magnasyn tape scale is made up of a flexible magnetic rubber strip, sandwiched between a backing strip and a cover strip made from thin stainless steel. The rubber strip is encoded with magnetic markers at intervals of 2mm, along its entire length.

As the incremental sensor in the reader head passes over the tape, the magnetic field strength is converted to an electrical signal, which is sampled by a high-speed digital-signal-processor (DSP). The field between the markers varies sinusoidally, and from this the DSP can determine the precise position of the sensor in relation to each marker.

As with the Spherosyn and Microsyn, this analogue information is converted into the industry standard digital differential quadrature signals that can be read by most modern DRO, CNC and PLC systems. Provided the reader head starts from a known datum, the absolute position, speed and direction of the head can be determined. The datum position can be detected automatically using an index marker.



Index markers

One or more index markers (short lengths of tape containing just one magnetic pole) can be fitted in the parallel track. These are detected by the index sensor and output as the RM signal.

Note:
When indexing, the marker must always be approached from the same direction.