



CLE-P3-1

Description: 3 in One Absolute encoder

■ Medical industry

■ The application:

The requirement was to control the positioning of 3 collimator beams in a medical instrument. A major obstacle for the use of off-the-shelf solutions is the lack of space. The customer requested a customized solution aiming at use of the lowest volume possible. Another requirement was not to use cabling to the moving arms.

■ Our solution:

The chosen implementation was developed: A 3-in-1 encoder, making use of passive read heads, and where 3 such read heads "share" a single transceiver scale system.

The 3 encoder solution required a small foot-print of 42 x 33 mm and a height of 16 mm.

The proposed solution performance was tailored to the system requirements in order to provide the best cost/performance ratio.

The product is in full production since 2005.

Project Specification:

Encoder Interface Analog Sine/Cosine for	3 channels
Encoder pitch length in Fine Mode	2.0 mm
Resolution:	2.5 μ m
Accuracy:	$\pm 60 \mu$ m
Repeatability:	$\pm 10 \mu$ m
Maximum operating motion speed	28 mm/sec
Permissible read head shift from center line in Y-axis	± 0.10 mm
Permissible read head yaw on the mounting points	± 0.05 mm
Temp. range	15 \div C to 45 \div C
Permissible relative humidity	15%<H<85% no condensation
Recommended supply voltage	5 V
Max. operating current, no load	< 50 mA
Storage temperature range	-15 \div C to +45 \div C
Weight	0.050 kg

* Please note that the presented parameters refer to specific implementations requested by customers and may be adapted to other requirements.