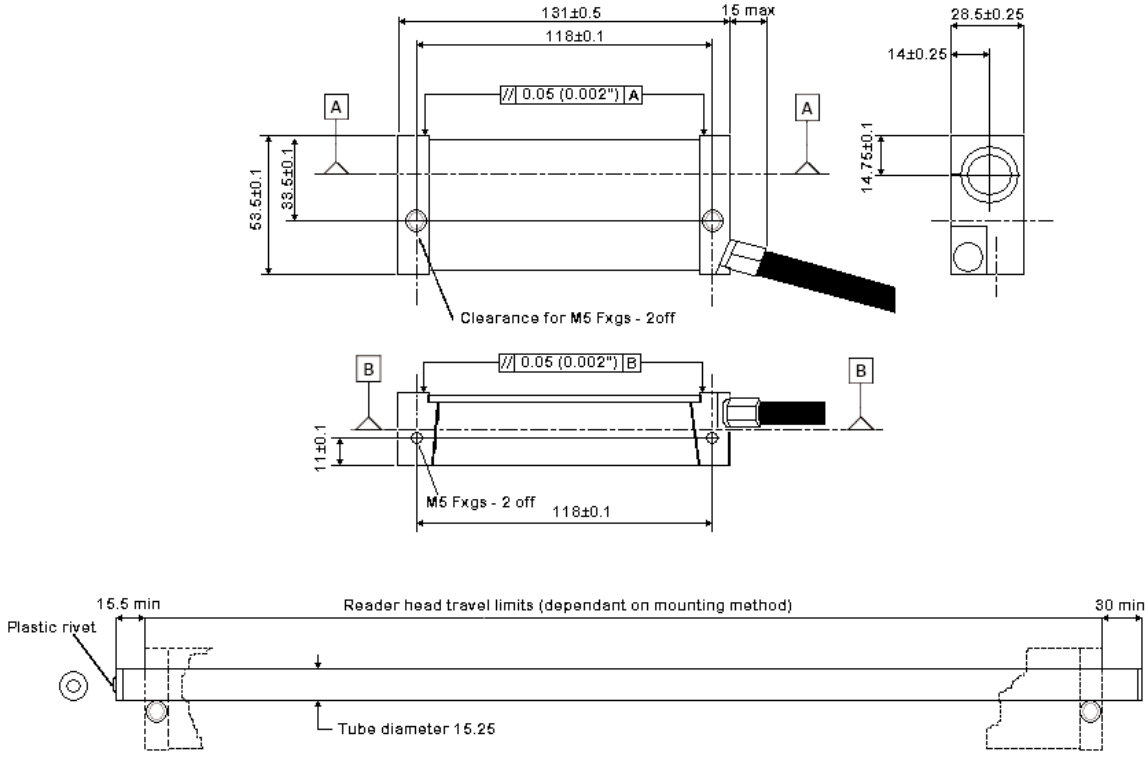
DSG-TT, EV & EM LINEAR ENCODER
DATASHEET

NEWALL

- High tolerance to shock and vibration
- Comparable range of accuracy and resolutions
- High level of repeatability
- Thermal co-efficient of expansion is similar to steel
- Zero maintenance
- Easy installation
- Travel lengths up to 12 metres with single scale
- Travel lengths 12 metres to over 30 metres available with modular scales



Type	Inductive
Output signal	TTL, 1Vpp & 11µApp
Accuracy grade (µm/m)	+/-10 (+/-0.0004 in)
Resolutions (µm)	1, 2, 5, 10
Resolutions (in)	(0.0001 in, 0.0002 in, 0.0005 in, 0.00002 in)
Signal Period (1Vpp or 11µApp)	20µm or 40µm
Reference type	None
Maximum traverse rate	1MHz (1m/s at 1µm resolution)
Maximum Acc. / Dec.	10g / 98m/s (head moving)
Power supply	5VDC +/- 5% < 80mA
Shock (11ms)	100g / 980m/s² (IEC 69-2-6)
Vibration (55-2000Hz)	30g / 294m/s² (IEC 68-2-27)
Ingress protection level	IP67 (Exceeds NEMA 6)
Operating temperature range	0 to 55ºC (32 to 131ºF)
Storage temperature range	-20 to 70ºC (-4 to 158ºF)
Overall cross-section	53.5 x 28.5mm (2x1in)
Scale material	316 grade stainless steel
Co-efficient of expansion	12ppm/ºC
Scale OD	15.25mm (0.6 in)

Maximum scale travel	12,000mm (472 in.)*
Maximum single end mount measuring length	350mm (14 in)
Maximum length between supports	1500mm (59 in)**
Scale over-travel requirements	258mm (10 in)
Cable	9 or 15 core screened cable with PUR (polyurethane) cover with armour
Cable length	3.5m
Minimum bend radius with PUR	50.8mm (2in)
Maximum cable length	20m (787 in)
Connector	D type 9 pin, 12 pin Round, 9 pin Round
EMC compliance	BS EN 61000-6-4 & BS EN 61000-6-2
OPTIONS	
Cable length option	7 metre

Note:
* Single scale only; longer travels available using modular scales
** Only applies for travels over 2540mm (100in)

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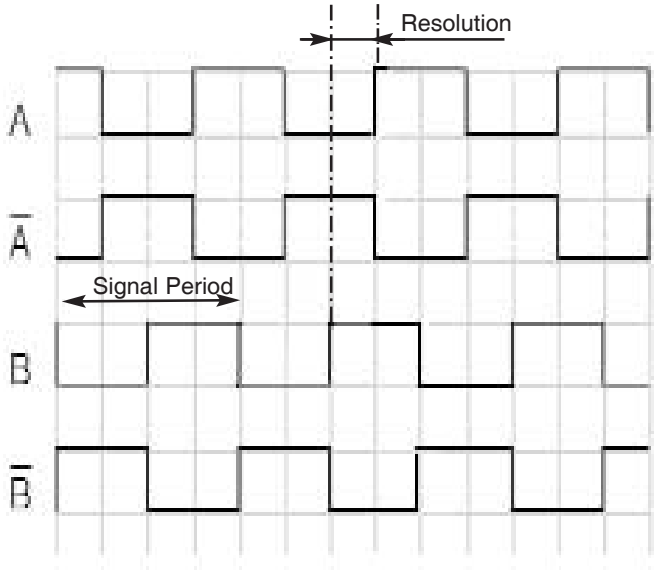
DSG-TT - TTL Output Signal - Differential Quadrature

Newall TT Series Linear Encoders provide a differential quadrature output at RS422 TTL levels. The output signals are transmitted via 9-core cable.

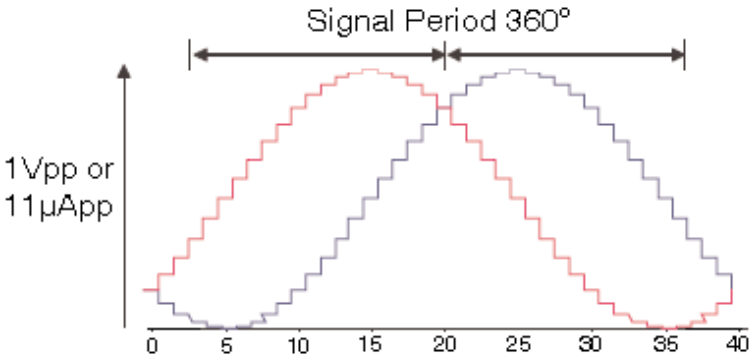
The distance between two successive edges of the combined pulse trains A and B is one measuring step (resolution).



DSG-EV & EM - 1Vpp & 11µApp Output Signal

Newall EV & EM Series linear encoders provide differential sinusoidal output signals that are phase shifted by 90°, and can provide 1Vpp or 11µApp signal levels depending on which model is selected.

The output signals are transmitted via 15 core cable.



1Vpp is available with 20µm signal period only

11µApp is available with 20µm or 40µm signal period

Assumes 120 Ohm termination resistor

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