NMS300 DIGITAL READOUT PACKAGE

FOR MACHINE TOOL BUILDERS AND IMPORTERS

NMS300 Digital Readout System sets the standard for reliability, value and ease of use. Specifically designed to be partnered with machine tool builders and importers, the NMS300 DRO System includes Newall's Spherosyn300 and Microsyn300 encoders.
Newall's inductive encoders are simple to install and designed to provide consistent accuracy and reliability even under the harshest work shop conditions.

Features

- Lathe and Mill specific functions
- Panel mount option
- Selectable resolutions
- Global technical support
- User definable function keys
- Custom mounting brackets available
- Custom labelling, setup and display message available

Advantage

- Backed by a company with nearly 50 years of proven quality in manufacturing DRO systems & linear encoders
- Reliable and dependable inductive encoder technology
- Encoders carry an IP67 rating – All electronic and measuring components are sealed from the environment
- No glass to break or scratch
- Continually provides accurate readings even under the harshest work shop conditions
- No cleaning or maintenance required
- Tolerant to shock and vibration
- Easy to install—No backer bar or machined surface needed

Display	FSTN LCD screen - 94m x 110mm— Membrane keypad with audible tactile feedback
Common Functions	• 2 or 3 Axes configuration • Multiple language support • Four user definable function keys • Absolute / Incremental operation • Axis Pre-set / Zero reset • Inch/mm conversion • Linear and segmented error compensation • Digifind/Reference mark • Centre find • Programmable memory (200 per axis) • Built in calculator • Undo function
Milling Specific Functions	Bolthole Circle / PCD Calculations Line Hole Calculations Arc Contouring Pocket Milling
Lathe Specific Functions	Radius/Diameter Readings Tool Offset Library (50) Taper Calculation
Construction	High impact ABS front panel, powder coated steel rear housing
Dimensions	Height: 160mm (6.3"), Width: 270mm (10.63"), Depth: 38.20mm (1.5")
Electrical Requirements	Voltage of 100-240 VAC (47 – 63 Hz) to external PSU included Voltage Input to NMS300 display 15 – 24 VDC ± 10%

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SPECIFICATIONS

Encoder	Spherosyn300	Microsyn300
Scale Travels	52mm—3200mm	50mm—1,000mm
Scale Diameter / Material	15.25mm / stainless steel	5.75mm / Carbon Fibre
Reader Head Dimension	99.45mm x 47mm x 30.5mm	75mm x 35mm x 25mm
Overall Scale Length	Travel Length + 258mm	Travel Length + 173mm
Standard Cable Length	3.5 metre and/or 7.0 metre with Armour and D Style Connector	

ALL NMS300 PACKAGES INCLUDE EVERYTHING REQUIRED FOR A COMPLETE INSTALLATION:

- NMS300 DRO (2 or 3 axes)
- Spherosyn300 and/or Microsyn300 assemblies with armoured cables
- Scale bracket kit and hardware
- Reader head mounting brackets and hardware*
- Display mounting arm and hardware*

*All packages are available with or without mounting brackets for the reader head and mounting arm.

Panel Mounting (Optional)
The NMS300 is available in a panel mount configuration. The unique mounting design was specially engineered to make for a clean, seamless look. The bracket design allows for a one-person installation when mounting the DRO to the panel.
Panel cutout dimension: 120mm x 210mm +/-2.5mm

AGENCY APPROVALS & CERTIFICATIONS

CE NMS3000217EN
023-82300-UK/0

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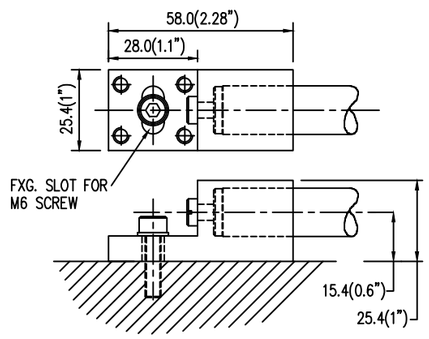
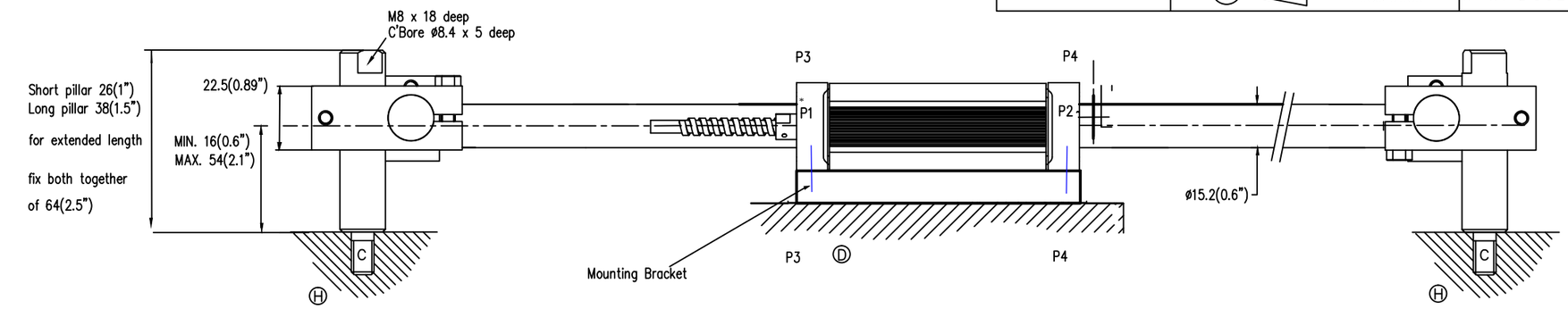
Rev.11/6/2023

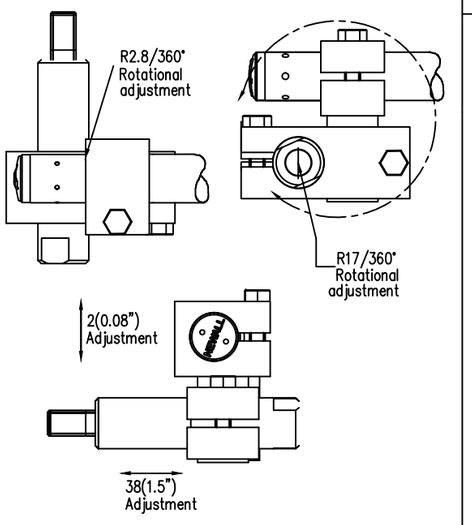
DRAWING NUMBER	316-87930	REV. ISS.	O

DO NOT SCALE | THIRD ANGLE PROJECTION | IF IN DOUBT ASK

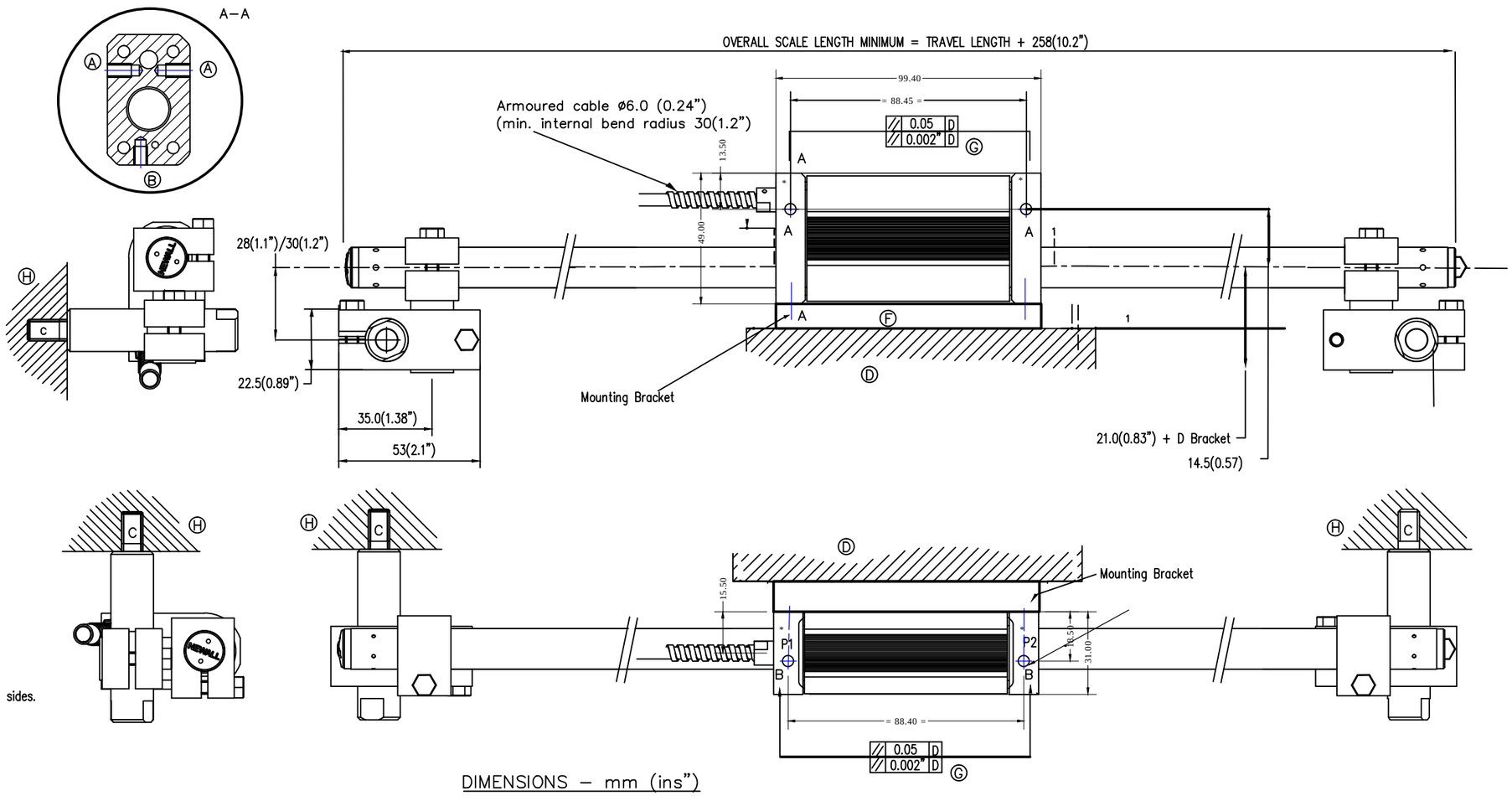


Optional Single End Scale Mounting Kit





SCALE MOUNTING BRACKET ADJUSTMENT



DIMENSIONS – mm (ins")

FOR FURTHER INFORMATION REFER TO INSTALLATION MANUAL

Notes

A – Encoder head mounting points 4off, 2off M5x8 deep holes symmetrical both sides.
B – Encoder head mounting points 2off for M5x6 deep holes.
C – Scale pillar mounting studs M8 x 15 (use spacer washer as required).
D – Machine Guideway.
E/F – Encoder head mounting faces.
G – Indicating parallel alignment required between encoder head and axis travel.
H – Scale end mounting points to machine bed.
P – Installation alignment points.

REV.ISS.	DATE	C.N.No.	ALTERATION

REV.ISS.	DATE	C.N.No.	ALTERATION

TITLE: *DIMENSIONAL DETAILS for* S300 ENCODERS

MATERIAL/ FINISH

SCALE 1=1

UNLESS OTHERWISE STATED :– DIMENSIONS ARE IN MM.

TOLERANCES: – 0 DECIMAL PLACES ±0.5; 1 DECIMAL PLACE ±0.2; 2 DECIMAL PLACES± 0.1; ANGULAR ±1°

DRAWN	C.WHITMORE	10–04–17	
CHECKED			
APPROVED			

NEWALL Leicester England

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SHEET 1 OF 1

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DRAWING NUMBER	316-87935	REV. ISS.	0

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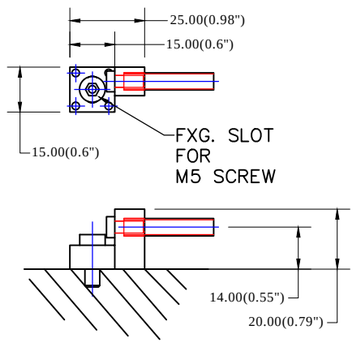
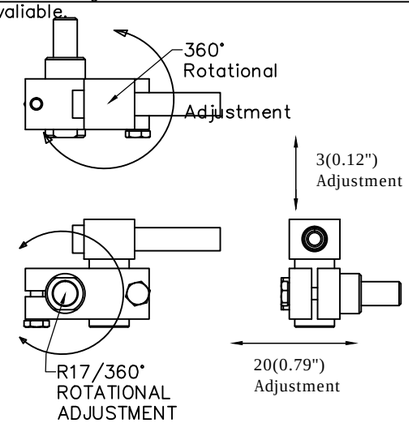


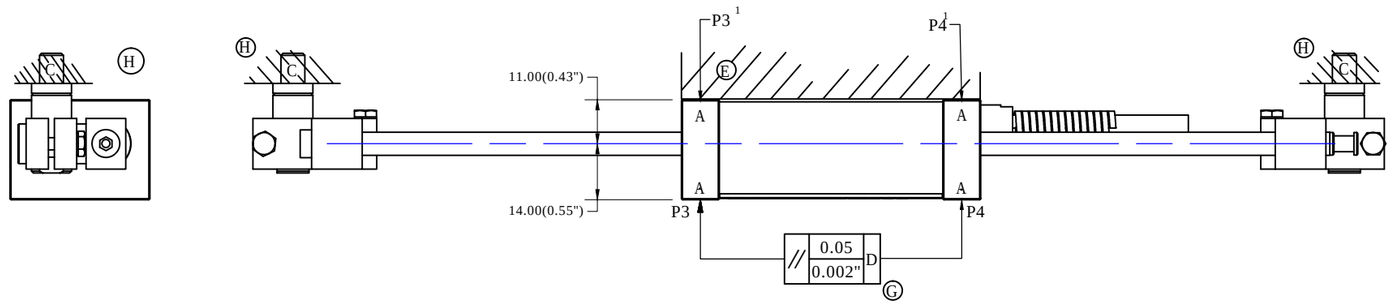
Optional Single End Scale Mounting Kit.
Left and right hand versions avaliable.

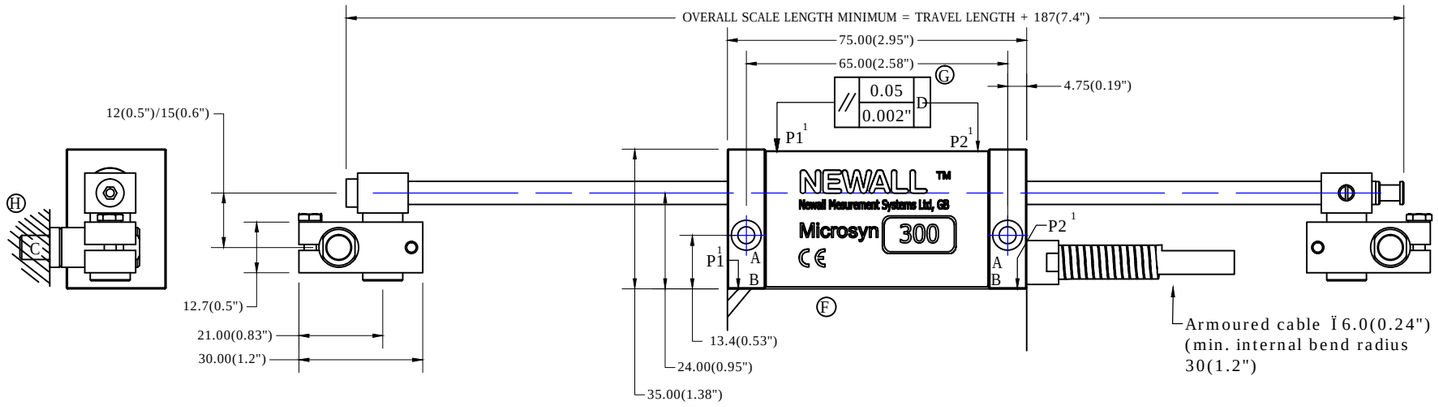
Scale 0.6:1

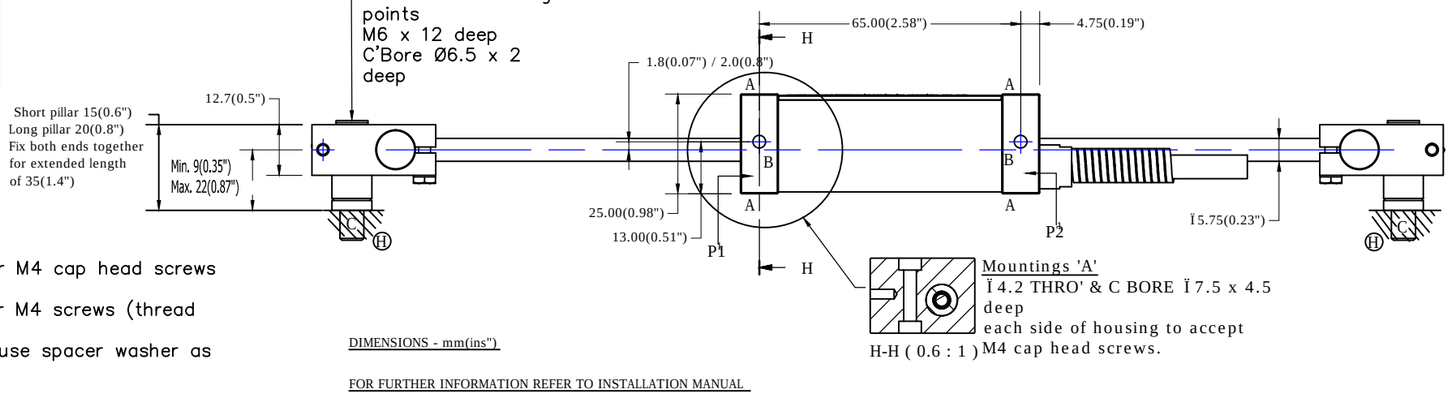


SCALE MOUNTING BRACKET ADJUSTMENT

Scale 0.8:1







A – Encoder head mounting points 2off for M4 cap head screws (clearance holes through)
B – Encoder head mounting points 2off for M4 screws (thread depth 8)
C – Scale pillar mounting studs M6 x 10 (use spacer washer as required)
D – Machine Guideway
E/F – Encoder head mounting faces
G – Indicating parallel alignment required between encoder head and axis travel
H – Scale end mounting points to machine bed
P – Installation alignment points

DIMENSIONS - mm(ins")

FOR FURTHER INFORMATION REFER TO INSTALLATION MANUAL

REV.ISS.	DATE	C.N.No.	ALTERATION

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TITLE	DIMENSIONAL DETAILS for M300 Encoders	MATERIAL / FINISH	SCALE 1=1
DRAWN	C.WHITMORE 10–04–17	NEWALL Leicester England	SHEET 1 OF 1
CHECKED			DRAWING NUMBER 316-87935 REV. ISS. 0
APPROVED			

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