NMS800

DIGITAL READOUT SYSTEM

The NMS800 Digital Readout (DRO) is the newest in Newall's range of premium readouts. The DRO hosts many productivity enhancing features that will increase machine tool efficiency.

The NMS800, when matched with Newall's Spherosyn Serial and Microsyn Serial encoders, provides years of maintenance free, trouble free performance. Newall's inductive encoders are simple to install and designed to provide consistent accuracy and reliability even under the harshest workshop conditions.

Features

- Clean, crisp PMVA LCD display with wide viewing angle
- Lathe, Mill and General Purpose functions
- Self Sensing Encoder Input
- Available in 2, 3, or 4 axes
- User definable function keys
- Linear and angular readings
- Stand alone or panel mounting

Newall Advantage

- Backed by a company with over 50 years of proven reliability in manufacturing DRO systems & linear encoders
- Encoders carry an IP67 rating – All electronic and measuring components are sealed from the environment
- Continually provides accurate readings even under the harshest shop conditions
- No cleaning or maintenance required
- Tolerant to shock and vibration
- No glass or tape to break or scratch
- Ease of installation—no backer bar or machined surface required

Warranty: 5 year mfg, 3 year No Fault*

**USA & Canada Only*
**Varies by Region, Terms and Conditions Apply*

General Purpose Functions	• 2, 3 or 4 axes configuration • Inch/mm conversion • Four user definable function keys • Absolute / Incremental operation • Axis pre-set / zero reset • Zero approach warning (graphic and audio) • Feed-rate display • Newall Encoder auto-detection • RPM display* • Angular readings* * requires rotary encoder	• Auto resolution detection* • Linear and segmented error compensation • Digifind / reference mark • Centre find (establish workpiece midpoints) • Programmable memory for datums and tools • Built in calculator • Undo function (move back up to eight steps) • USB port for loading new firmware and settings • Sleep mode • Scaling factor
Milling Specific Functions	• Bolthole circle / PCD calculations • Line hole / grid array calculations • Arc contouring • Pocket / island milling • Summing two encoders within the same plane	
Lathe Specific Functions	• Radius / diameter readings • Tool offset library (50) • Taper calculation • Vectoring (requires 3 axes)	
Encoder Compatibility	Serial Input: Newall Spherosyn & Microsyn Serial, Propriety Signal not compatible with previous Newall DRO Encoders (S2G/M2G). Digital (TTL) Input: Newall TTL Encoders. Many third party TTL encoders including Rotary. Contact your local sales representative for advise on compatibility.	

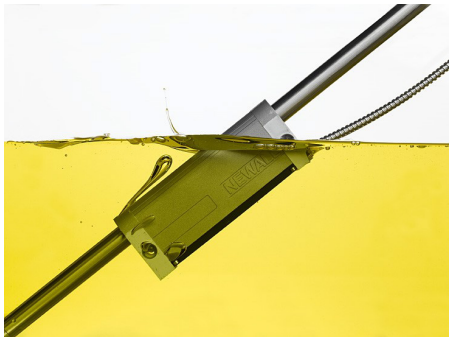
Display	PMVA LCD Screen — 127mm x 122mm — Membrane keypad with audible tactile feedback
Construction	High pressure aluminium alloy cast front and rear panel
Dimensions	Height: 187mm (7.36"), Width: 306mm (12.04"), Depth: 46.6mm (1.83")
Electrical Requirements	Voltage of 100-240 VAC (47 – 63 Hz) to external PSU included

SPECIFICATIONS

Encoder	Spherosyn Serial	Microsyn Serial
Scale Travels	52mm—13,000mm	50mm—1,000mm
Scale Diameter / Material	15.25mm / Stainless Steel	5.75mm / Carbon Fibre
Reader Head Dimension	112mm x 53.5mm x 28mm	75mm x 37.5mm x 23mm
Overall Scale Length	Travel Length + 258mm	Travel Length + 187mm
Standard Cable Length	3.5 metre and/or 7.0 metre with Armour and D Style Connector	
Output Type:	Newall Proprietary Serial	

Compatible with the Spherosyn and Microsyn Serial Encoders, which have a number of advantages:

- IP67 environmental rating, fully submersible
- Withstands dust, dirt, oil and other harsh environment conditions
- No mechanical wear characteristics
- No more broken or scratched glass
- Requires no cleaning or regular maintenance



Designed and engineered in the
UNITED KINGDOM

CONTACT US

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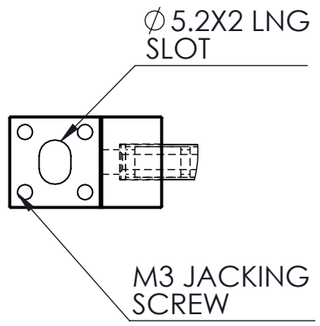
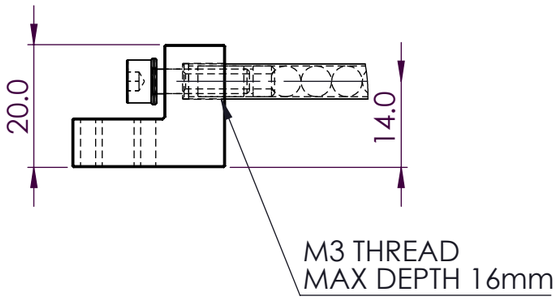
Rev.11,06, 2023

DRAWING NUMBER	316-88305	REV. ISS.	1

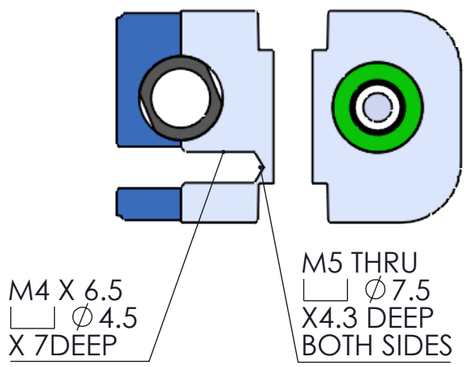
DO NOT SCALE | THIRD ANGLE PROJECTION | IF IN DOUBT ASK

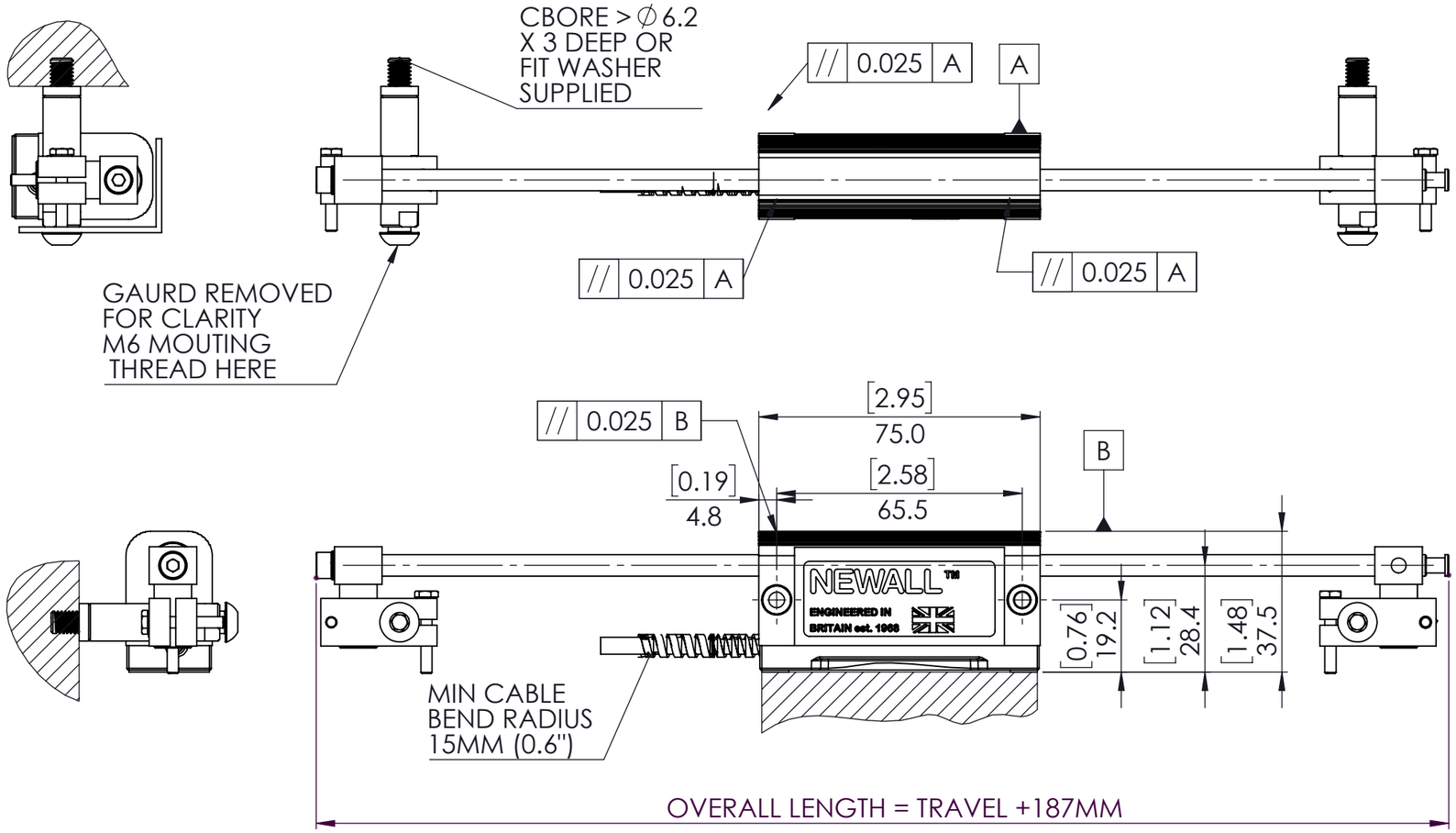
OPTIONAL SINGLE END MOUNT KIT
FOR MAXIMUM SCALE LENGTH 400mm

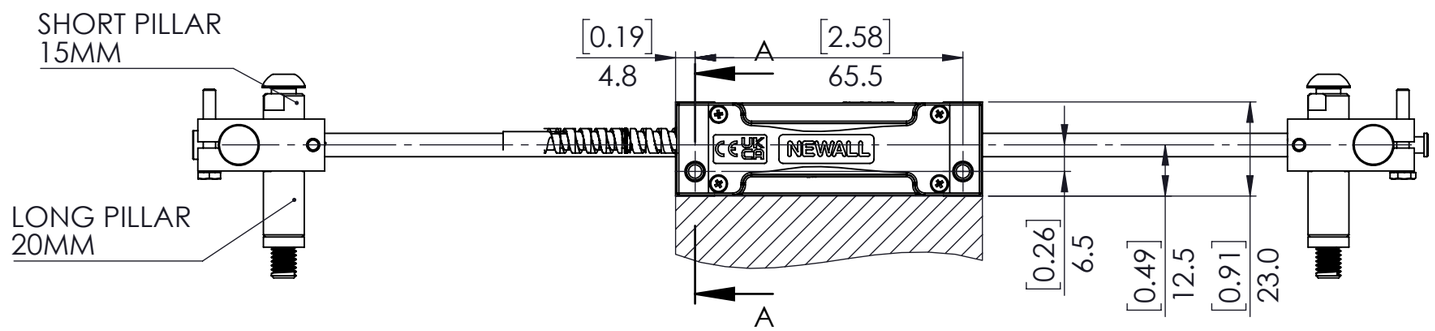




MOUNTING HOLE DETIALS
SECTION A-A
SCALE 2:1







1	20/2	A.H	BRACKET CHANGED TO INBOUND
1	20/2	A.H	OVERALL LENGTH CHANGED +187
REV	DATE	ECO	ALTERATION

TITLE: Microsyn Serial Instal l Drawing

MATERIAL: NA

FINISH: NA

WEIGHT: KG

NOTE: ENSURE: SHARP EDGES AND BORES ARE DEBURRED
SURFACE FINISH HAS NO BLEMISHES OR SCRATCHES AND PARTS ARE CLEAN

SCALE 1:1.5

UNLESS OTHERWISE STATED:-
DIMENSIONS ARE IN M.M.
THREADS ARE METRIC COARSE

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

DRAWN:	C.WHITMORE	22/09/2021
CHECKED:		
APPROVED:		

Leicester NEWALL England

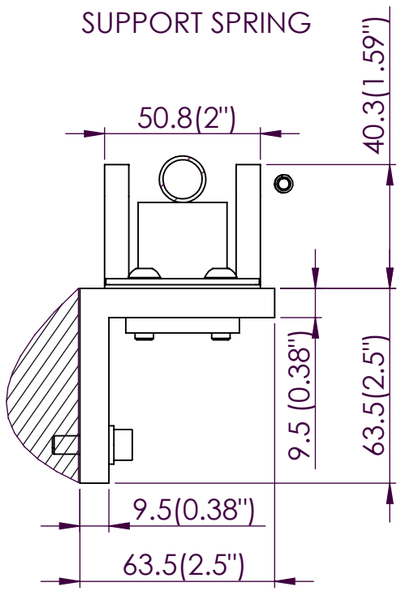
SHEET 1 OF 1

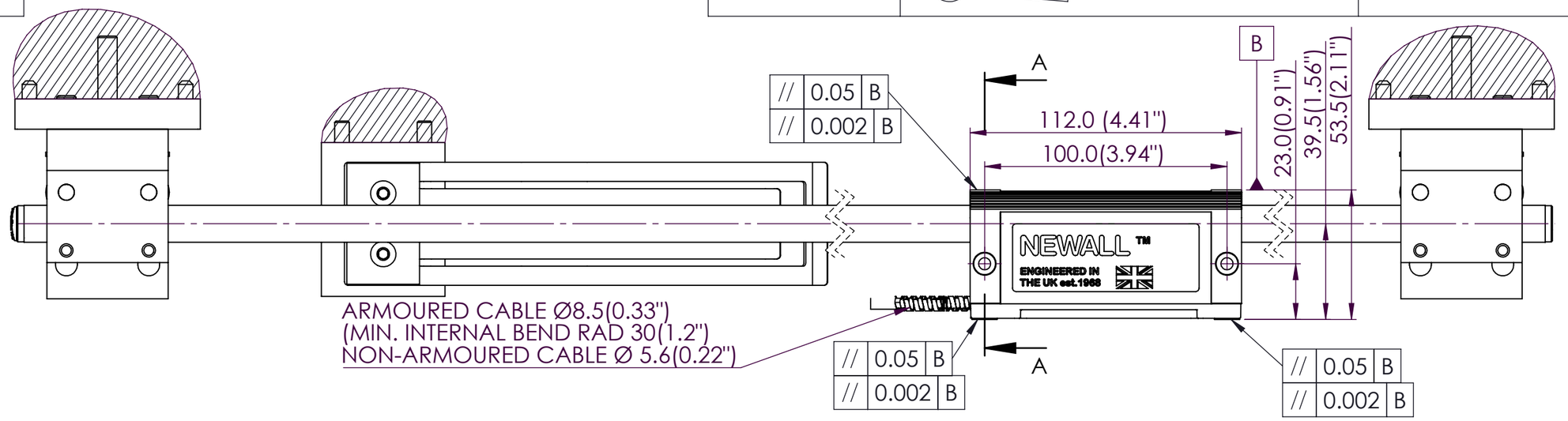
DRAWING NUMBER	316-88305	REV. ISS.	1

DRAWING NUMBER	316–88301	REV. ISS.	0

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

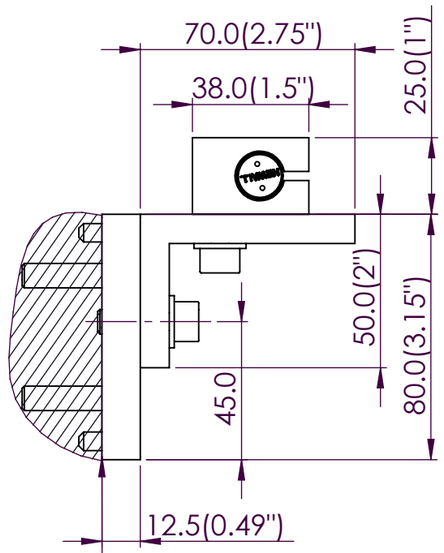
SUPPORT SPRING

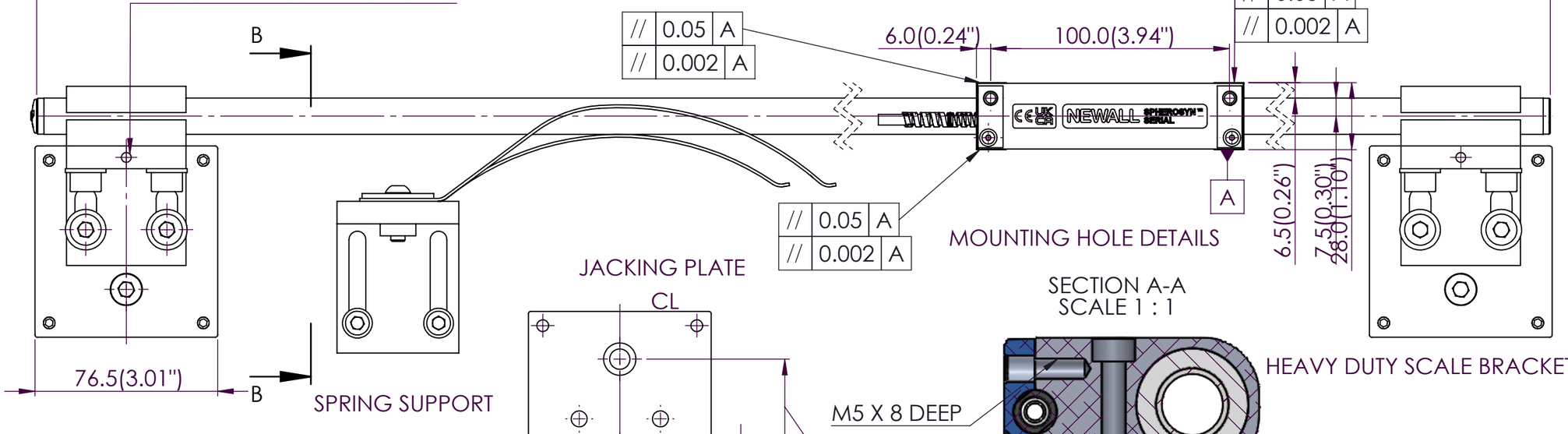




OVERALL SCALE LENGTH MINIMUM = TRAVEL LENGTH + 258 (10.2")

ALI GUARD MOUNTING HOLES

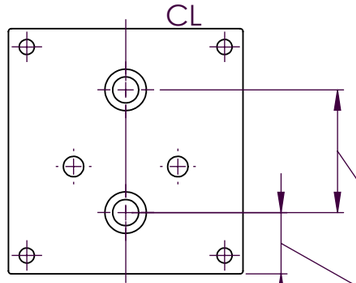




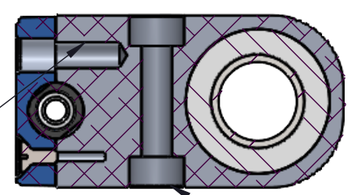
MOUNTING HOLE DETAILS

SPRING SUPPORT

JACKING PLATE
CL



SECTION A-A
SCALE 1 : 1



HEAVY DUTY SCALE BRACKET

JACKING PLATE
4OFF M6 TAPPED HOLES
2OFF M8 TAPPED HOLES
2OFF Ø8.5 HOLE C/BORE Ø13.5 X 8.5mm DEPTH

SPRING SUPPORTS ARE INTENDED FOR USE WHERE THE READER HEAD IS MOVING AND THE SCALE TUBE IS STATIONARY
REFER TO INSTALLATION MANUAL FOR RECOMMENDED NUMBER AND POSITONAL DETAILS OF SPRING SUPPORTS

REV	DATE	ECO	ALTERATION

TITLE: SPHEROSYN SERIAL INSTALL DRAWING (>100)

MATERIAL: N/A

FINISH: N/A

WEIGHT: 1.23 KG

NOTE: ENSURE: SHARP EDGES AND BORES ARE DEBURRED
SURFACE FINISH HAS NO BLEMISHES OR SCRATCHES AND PARTS ARE CLEAN

SCALE 1:10

UNLESS OTHERWISE STATED:-
DIMENSIONS ARE IN M.M.
THREADS ARE METRIC COARSE

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

DRAWN:	A.HARDING	21/02/2024
CHECKED:		
APPROVED:		

Leicester NEWALL England

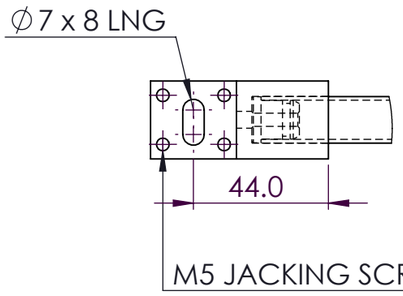
SHEET 1 OF 1

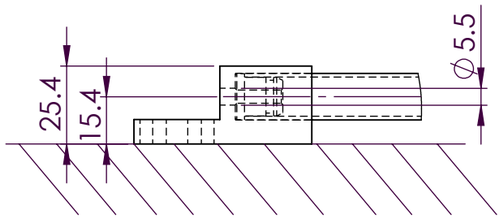
DRAWING NUMBER 316–88301 REV. ISS. 0

DRAWING NUMBER	316-88300	REV. ISS.	1

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

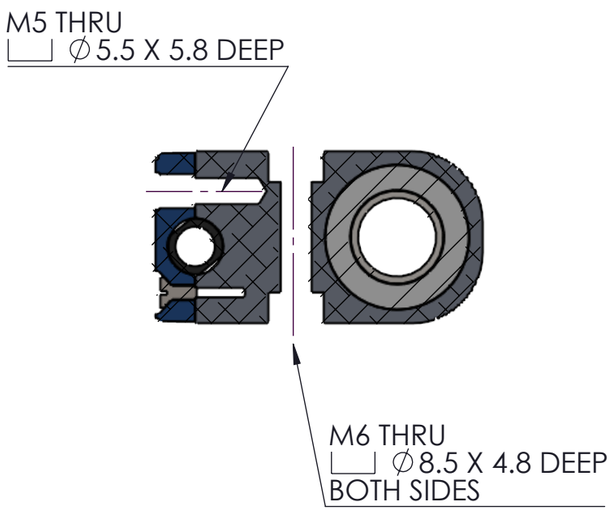
OPTIONAL SINGLE END MOUNT KIT FOR MAXIMUM SCALE OVERALL LENGTH 610mm

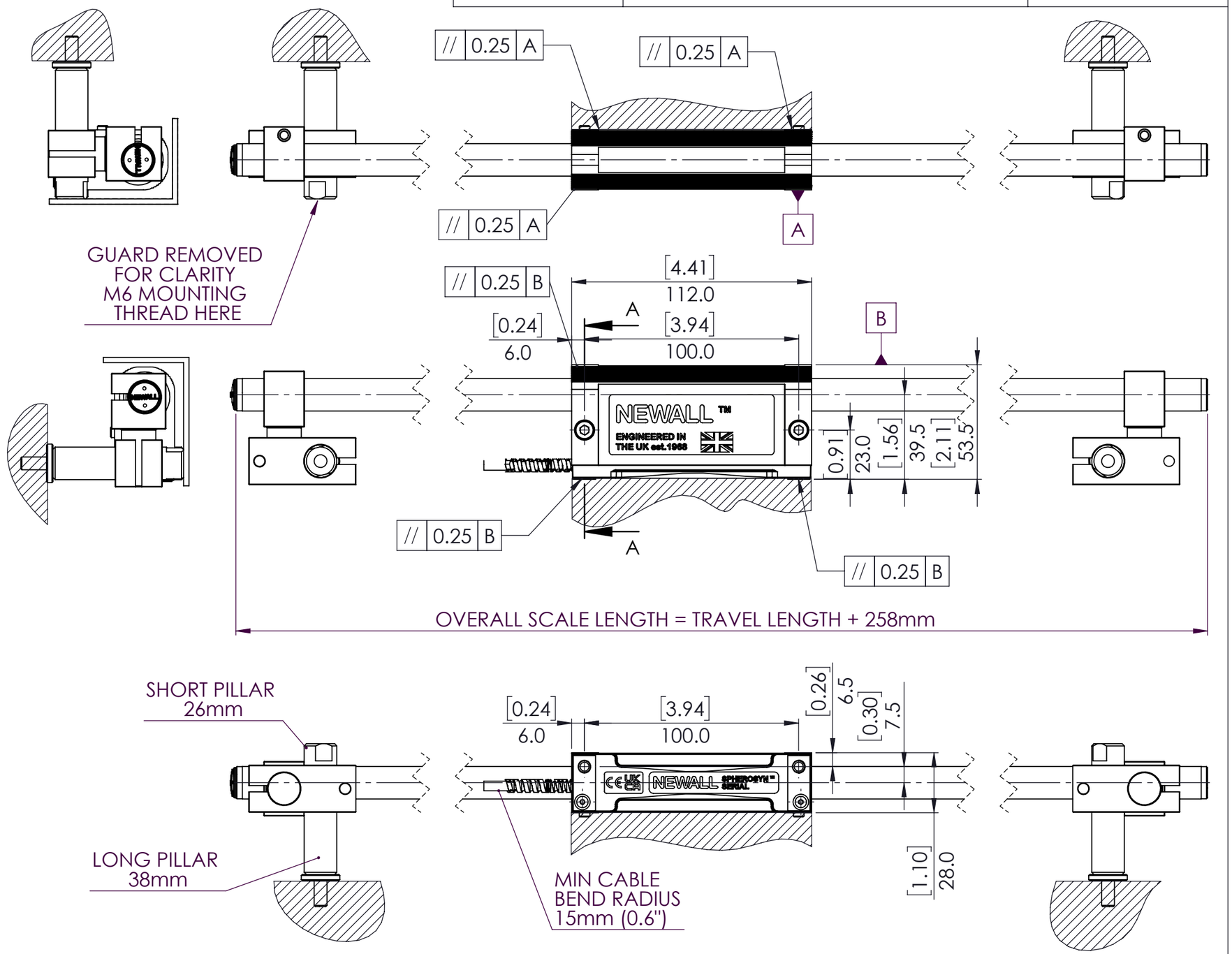




MOUNTING HOLE DETAILS

SECTION A-A
SCALE 1 : 1





1	20/2	A.H	HEAVY DUTY BRAKETS REMOVED	DRAWN:	C.WHITMORE	20/09/2021	
REV	DATE	ECO	ALTERATION	CHECKED:			
				APPROVED:			

TITLE: SPHEROSYN SERIAL INSTALL DRAWING

MATERIAL: N/A

FINISH: N/A

WEIGHT: KG

NOTE: ENSURE: SHARP EDGES AND BORES ARE DEBURRED
SURFACE FINISH HAS NO BLEMISHES OR SCRATCHES AND PARTS ARE CLEAN

SCALE 1:10

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THREADS ARE METRIC COARSE

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1 DECIMAL PLACE ±0.2
2 DECIMAL PLACES ±0.1
ANGULAR ±1°

Leicester NEWALL England

SHEET 1 OF 1

DRAWING NUMBER	316-88300	REV. ISS.	1