

D4L and D4M digital readouts



Digital readouts D4L and D4M in a robust aluminium housing are designed for use in harsh environments. A wide range of functions enables use in various applications.

Quick and easy installation

Plug-and-play connection in combination with RLS incremental magnetic encoders LM10 and LM15, integrated setup LED and userfriendly startup.

High reliability due to high-quality system components

The robust RLS magnetic scales offer a high degree of protection. For additional protection against swarfs (e.g. metal, stone, glass, wood, etc.) a thin stainless steel cover foil is optionally available.

User-friendly handling

The physical keyboard with logically arranged buttons enables user-friendly handling.

Power saving mode

After inactivity, it can be set to 1 - 60 minutes. It is still possible to measure traverse path even in power saving mode.

Made for harsh environment

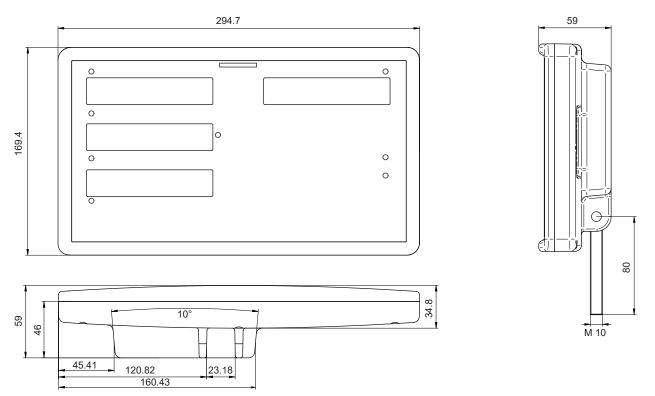
The robust aluminum housing with scratch-resistant display is designed for workshop applications such as lathes, cylindrical grinding machines, milling, drilling and surface grinding machines.

- For up to 4 axes
- Excellent degree of protection
- Measurement of traverse paths even in power-save mode
- Integrated calculator functions
- Linear and multi point error compensation
- Axis lengths up to 10 m
- Direct imperial to metric conversion
- Up to 200 tool offset compensation or datum points
- Very effective ROI: increased productivity, reduced scrap

Datasheet DROD01_01

Dimensions

Dimensions in mm.



Assembly

Each DRO system consists of a compact, sealed readhead with a cable in a protective stainless steel tube and a self-adhesive magnetic scale with magnetised reference mark and selective cover foil (each part of the system must be ordered separately, see <u>Part numbering</u>).

Each DRO model is also supplied with its own mounting bracket with aluminium attachments.



NOTE: The device should have proper protective grounding. All devices connected to the readout should have conformity certificates for applicable EU standards.

CRLS[®]

DRO functions

	D4L	D4M
Set zero for all axes	~	~
Determine the centre (1/2 value)	~	~
mm/inch display	~	~
Coordinate input	~	~
Absolute and incremental DRO operation mode	~	~
Power-off memory (20 years)	~	~
Reference value memory for every axis	~	~
Tool compensation memory (up to 200 tools)	~	х
Constant speed machining	~	x
Machining of radius	~	x
Axis summation (Z ¹ and Z)	~	x
Datum points memory (up to 200 points)	х	~
Automatic calculation of bolt and linear hole patterns	х	~
Machining of inclined surfaces	х	~

= availablex = not available

Technical specifications

General data			
Axes	3 + 1 axis		
Interfaces	RS232 / RS485 UART		
Maximum measuring length	10 m		
Repeatability	Better than unit of resolution for movement in the same direction		
Integrated calculator	+, -, ×, :, $$, trigonometric functions		
Electrical data			
Integrated universal power supply AC	100 V - 240 V (50/60 Hz)		
Power consumption	≈15 W		
Signal input	Rectangular, voltage +5 V		
Relay outputs	0.5 A, 24 V DC		
Acceptable input frequency	1 MHz		
Mechanical data			
Weight	≈1.5 kg		
Housing	Aluminium casting		
Display	Membrane keypad insensitive to dirt and chemicals		
Environmental data			
Temperature	Operating 0 °C to +45 °C		
	Storage -20 °C to +70 °C		
Humidity	<75 % annual average; <90 % in rare cases		

NOTE: For technical specifications of the readhead and magnetic scale see the corresponding datasheet from RLS media center.

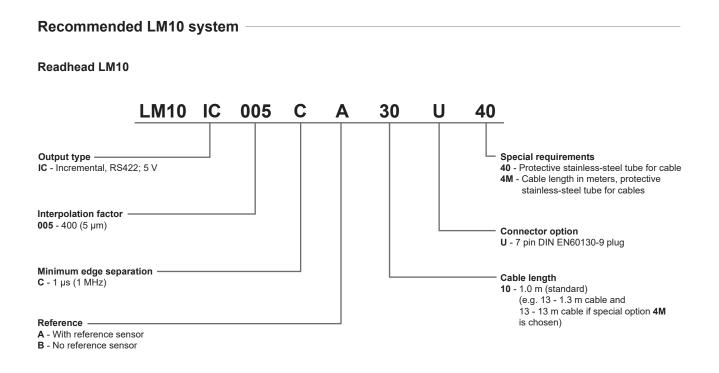
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Datasheet DROD01_01

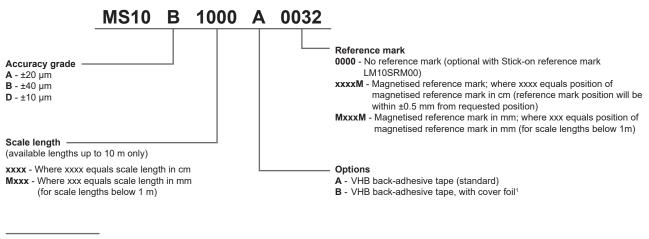
Part numbering

ACC007 - Digital readout D4L (lathe) with mounting bracket

ACC008 - Digital readout D4M (mill) with mounting bracket



Magnetic scale MS10



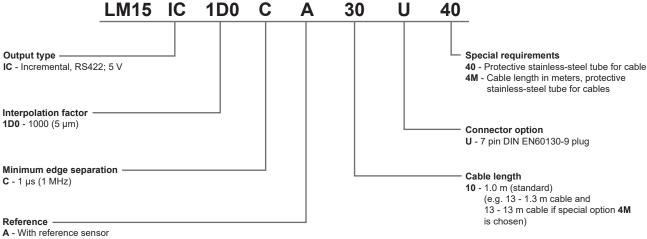
¹ Cover foil supplied separately.

NOTE: For more information on readhead LM10 refer to datasheet LM10D01.



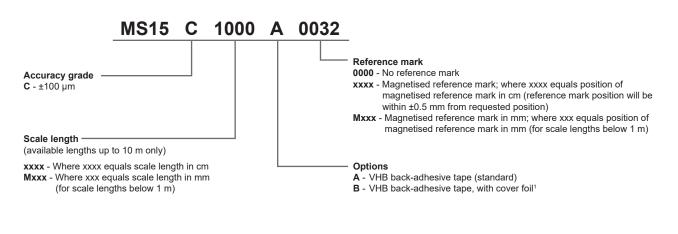
Recommended LM15 system

Readhead LM15



B - No reference sensor

Magnetic scale MS15



¹ Cover foil supplied separately.

NOTE: For more information on readhead LM15 refer to datasheet LM15D01.

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Datasheet DROD01_01

Compatible products





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Document issues

Issue	Date	Page	Corrections made
1	9. 6. 2020	General	New document

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