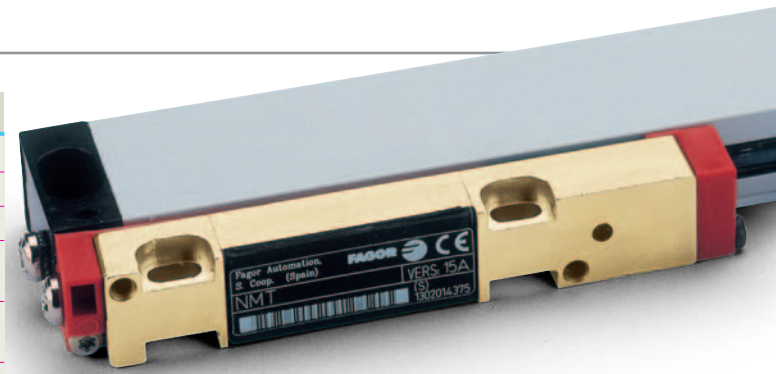


# M Series



Designed for standard machines with a measuring length of up to 1540 mm and limited spaces. With reference marks every 50 mm or distance-coded and a connector on the reader head (except the MKT series whose reader head comes with a 3 meter cable).

GENERAL CHARACTERISTICS	
Maximum speed	60 m/min. (198 ft / min.)
Maximum vibration	3 g
Moving force	<5N (≤ 2 N MX-L series)
Operating temperature	0°...50°C
Storage temperature	-20°...70°C
Weight	0.58 Kg + 0.6 Kg/m
Humidity	20...80%
Protection	IP 53 (standard) IP 64 (DIN 40050) with pressurized air intake
Movement	On roller bearings
Light source	IRED
Power supply	5V ± 5%, 100 mA
Reader head	With built-in connector (except MKT) (see pages 26-27 for connection devices)
Method of measuring	Chromed glass scale with 20 µm (0.0008 inch) grating pitch

SPECIFICATIONS	MT / MOT	MTD	MKT	MX / MOX	MKX	MP / MOP
Accuracy	± 10 µm (±0.0004 inch)	±10 µm (±0.0004 inch)	± 10 µm (±0.0004 inch)	± 5 µm (±0.0002 inch)	± 10 µm (±0.0004 inch)	± 5 µm (±0.0002 inch)
Resolution	5 µm (0.0002 inch)	5 µm (0.0002 inch)	5 µm (0.0002 inch)	1 µm (0.00004 inch)		Up to 0.1 µm (0.000004 inch)
Reference marks I <sub>0</sub>	MKT and MKX: every 50 mm (1.97 inches) MT, MTD, MX and MP: every 50 mm (1.97 inches) from the middle to both ends MOT, MOX and MOP: Distance-coded reference marks					
Output signals	□ □ TTL	□ □ Differential TTL	□ □ TTL	□ □ Differential TTL		~ 1 Vpp
Period "T" of output signals	20 µm	20 µm	20 µm	4 µm		20 µm
Maximum cable length	20 m (66 ft)	50 m (166 ft)	20 m (66 ft)	50 m (166 ft)		150 m (495 ft)

## Order Identification

Example: MOP - 42 - 5

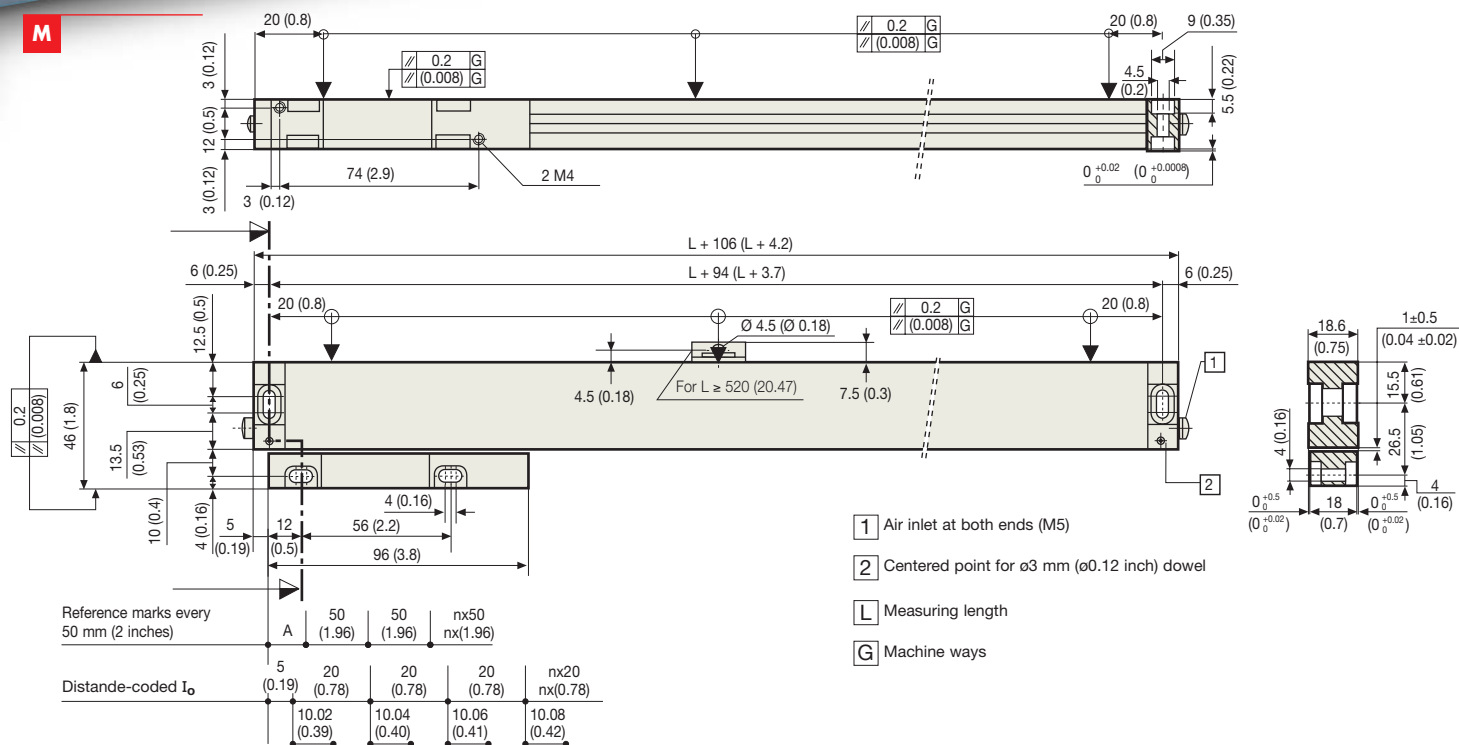
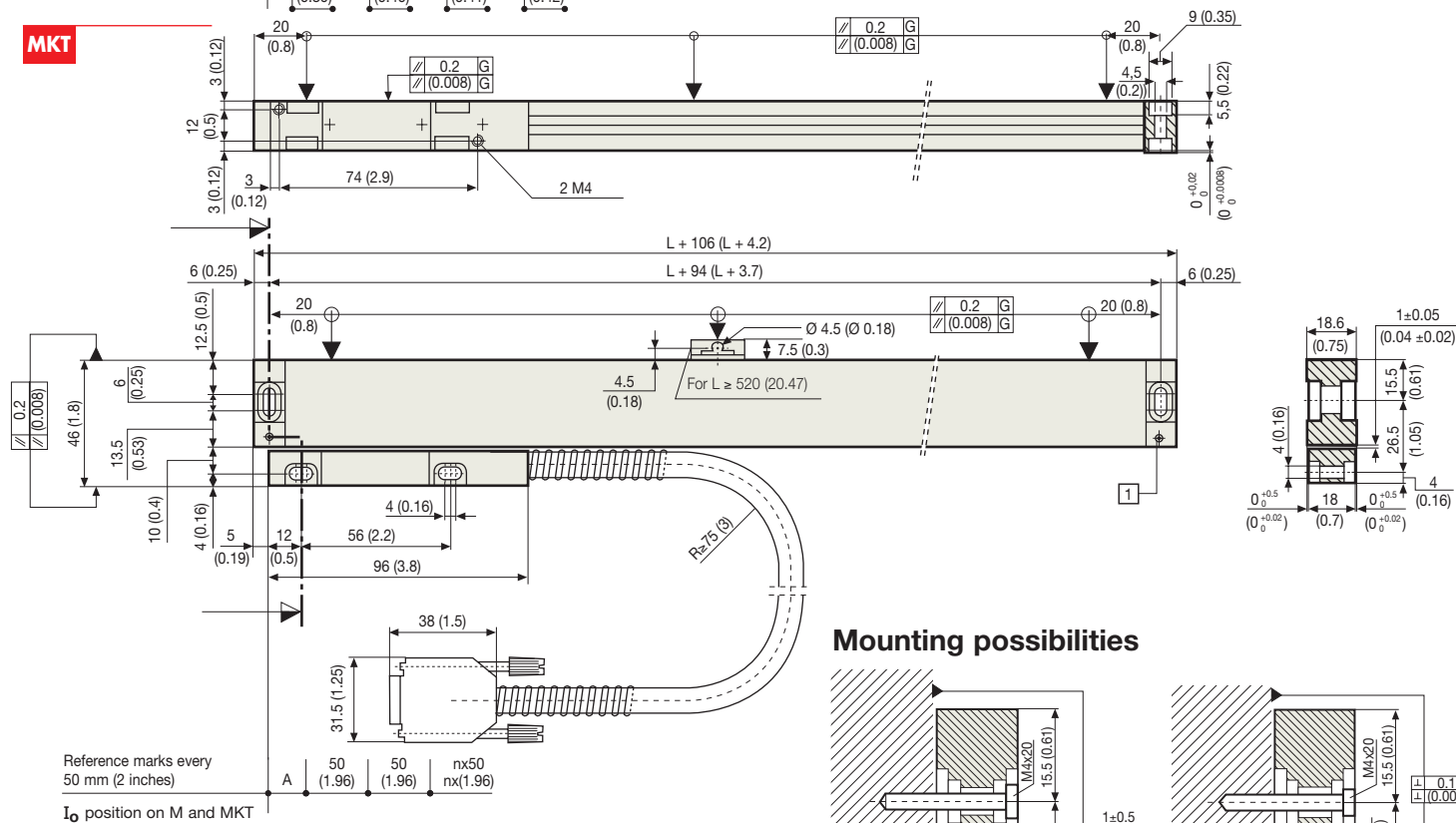
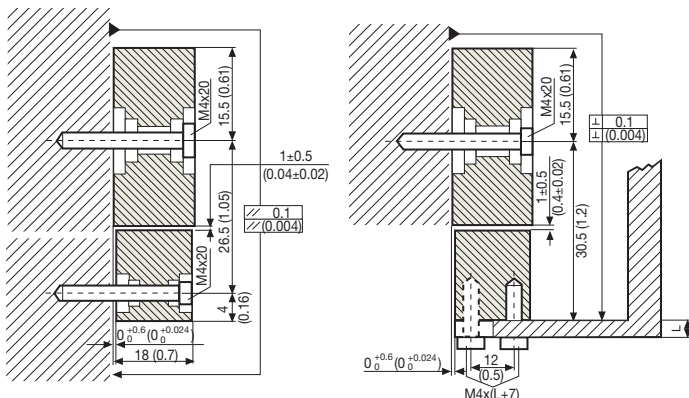
<b>M</b>	Type of profile <ul style="list-style-type: none"> <li>M: Limited space</li> </ul>
<b>0</b>	Reference mark type I <sub>0</sub> <ul style="list-style-type: none"> <li>Blank space: Reference mark every 50 mm (1.97 inches)</li> <li>O: Distance-coded reference mark</li> </ul>
<b>P</b>	Signal type <ul style="list-style-type: none"> <li>T: TTL, resolution of 5 or 10 µm (0.0002 or 0.0004 inch)</li> <li>TD: Differential TTL, resolution of 5 or 10 µm (0.0002 or 0.0004 inch)</li> <li>X: Differential TTL, resolution of 1 µm (0.00004 inch)</li> <li>C: 11 µA current modulated sinusoidal signal</li> <li>P: 1Vpp sinusoidal signal</li> </ul>
<b>42</b>	Measuring length in cm In the example (42) = 42 cm = 420 mm (16.5 inches)
<b>5</b>	Accuracy <ul style="list-style-type: none"> <li>5: ± 5 µm (± 0.0002 inch)</li> <li>Blank space: ± 10 µm (± 0.0004 inch)</li> </ul>

## Measuring length: M Series

mm	inches	mm	inches
40 (*)	1,63 (*)	620	24,4
70 (*)	2,85 (*)	720	28,4
120	4,7	770	30,3
140	5,5	820	32,3
170	6,7	920	36,2
220	8,7	1020	40,2
270	10,6	1140	45
320	12,6	1240	48,8
370	14,6	1340 (**)	52,7 (**)
420	16,5	1440 (**)	56,7 (**)
470	18,5	1540 (**)	60,6 (**)
520	20,5		

(\*) Only on MT and MOT models

(\*\*) Only on MT and MTD models

**M****MKT****Mounting possibilities****Measuring lengths (L)**

- For L ending in 20, A=10
- For L ending in 40, A=20
- For L ending in 70, A=35