

# M series

LINEAR



## General specification

<b>Measurement</b>	By means of graduated glass scale, with 20 µm etching pitch
<b>Maximum speed</b>	60 m/min
<b>Maximum vibration</b>	3 g
<b>Moving thrust</b>	< 5 N
<b>Operating temperature</b>	0 °C...50 °C
<b>Storage temperature</b>	-20 °C...70 °C
<b>Weight</b>	0.58 kg + 0.6 kg/m
<b>Relative humidity</b>	20...80%
<b>Protection</b>	IP 53 (standard) IP 64 (DIN 40050) using pressurized air in linear encoders at 0.8 ± 0.2 bar
<b>Reader head</b>	With detachable cable connector (except MKT and MKX)

Designed for applications on standard machines with travels up to 1540 mm. With reference marks every 50 mm or distance-coded and detachable cable connector built into the reader head (except the MK series where the reader head comes standard with a 3-meter attached cable).

### Measuring lengths in millimeters

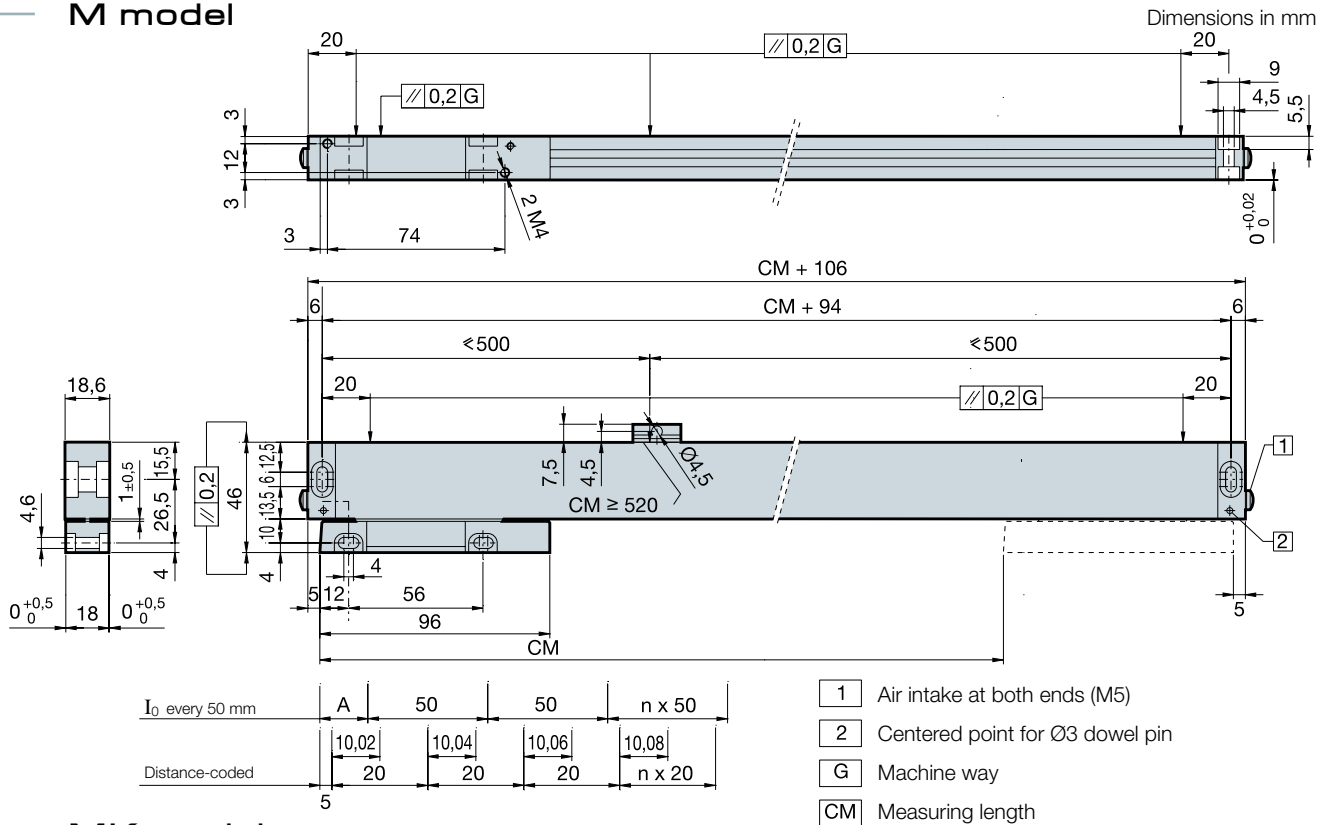
40 (\*) • 70 • 120 • 140 • 170 • 220 • 270 • 320 • 370  
420 • 470 • 520 • 620 • 720 • 770 • 820 • 920 • 1020  
1140 • 1240 • 1340 • 1440 • 1540

(\*) On MT and MX models.

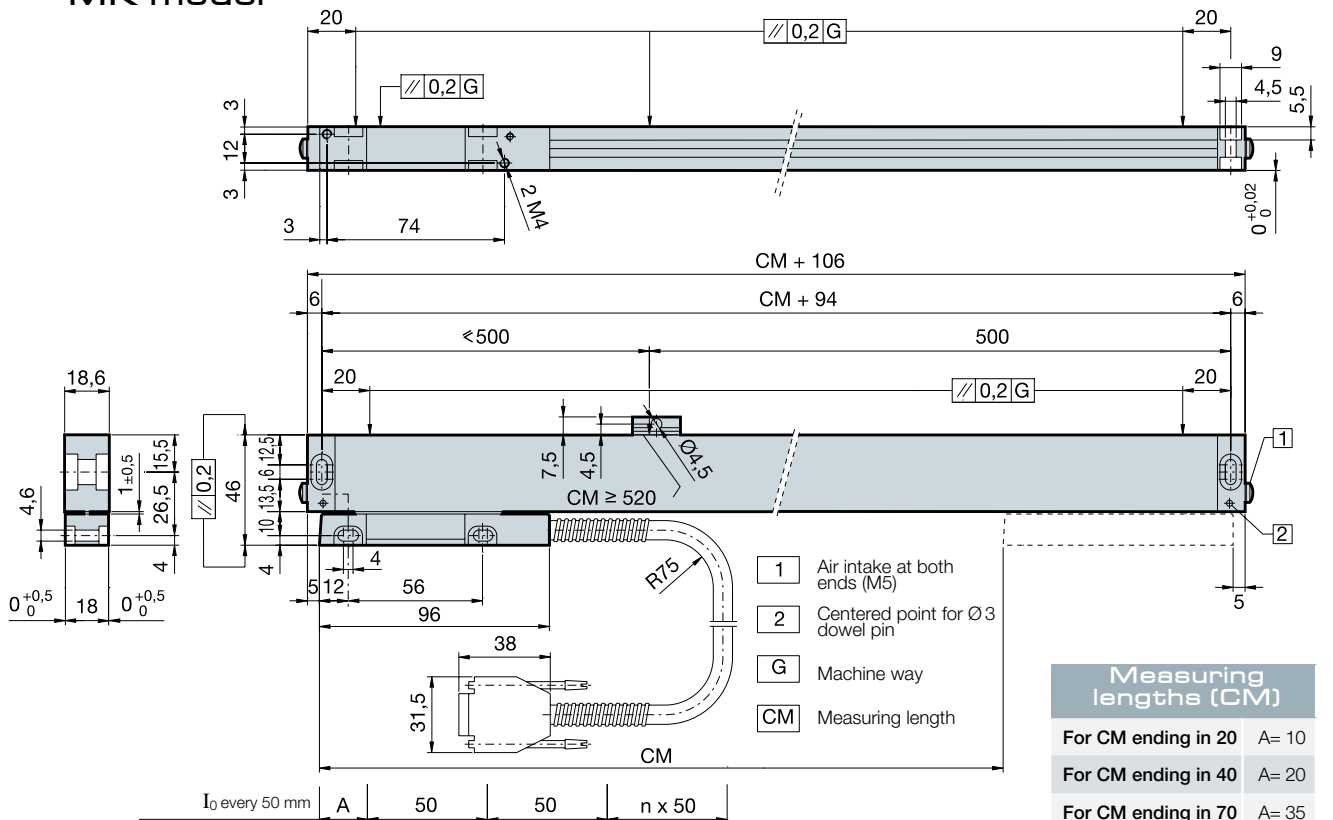
## Specific characteristics

	MT MOT	MTD	MKT	MX MOX	MKX	MP MOP
<b>Accuracy</b>		± 10 µm		± 5 µm	± 10 µm	± 5 µm
<b>Resolution</b>		5 µm		1 µm		Up to 0.1 µm
<b>Reference marks (I<sub>0</sub>)</b>		MKT and MKX: I <sub>0</sub> every 50 mm MT, MTD, MX and MP: I <sub>0</sub> every 50 mm MOT, MOX and MOP: Distance-coded I <sub>0</sub>				
<b>Output signals</b>		□ TTL		□□ TTL differential		~ 1 Vpp
<b>T period of output signals</b>		20 µm		4 µm		20 µm
<b>Limit frequency</b>		50 kHz		250 kHz		50 kHz
<b>Maximum cable length</b>	20 m	50 m	20 m	50 m		150 m
<b>Supply voltage</b>	5V ±5% ,100 mA (without load)					5V ±10%, <100 mA (without load)

## M model



## MK model



## Order identification

Example for an incremental encoder : MOP - 425

M	O	P	42	5
<b>Type of profile:</b> M: for limited spaces	<b>Type of reference mark I<sub>0</sub>:</b> • Blank space: Incremental, one mark every 50 mm • O: Absolute distance-coded marks	<b>Type of signal:</b> • T: 5 µm resolution TTL • TD: 5 µm resolution differential TTL • X: 1 µm resolution differential TTL • P: 1 Vpp sinusoidal	<b>Measuring lengths in cm:</b> In the example (42) = 42 cm = 420 mm	<b>Accuracy of the linear encoder:</b> • 5: ± 5 µm • Blank space: ± 10 µm