

TECHNICAL DATA MSA 7x0, MSA 8x0

READING HEAD

Model	MSA 7x0 MSA 8x0	MSA 7x0 MSA 8x0	MSA 7x0 MSA 8x0	MSA 7x0 MSA 8x0	MSA 7x0 MSA 8x0
Interface	~ 1 Vpp	⌋ TTLx5	⌋ TTLx10	⌋ TTLx25	⌋ TTLx50
Measuring step	Depending on external interpolation	1.0 µm	0.5 µm	0.2 µm	0.1 µm
Signal period	20 µm	--	--	--	--
Integrated interpolation	--	Times 5	Times 10	Times 25	Times 50
Max. velocity	2.0 m/s	2.0 m/s	1.96 m/s	0.78 m/s	0.78 m/s
Max. output frequency	100 kHz	--	--	--	--
Edge separation a _{min}	--	250 ns	250 ns	250 ns	125 ns
Electrical connection	Cable, 0.5 m, 1 m or 3 m mit D-sub connector 15-pin or M12 connector 12-pin				
Voltage supply	<ul style="list-style-type: none"> Sinusoidal voltage signals ~ 1 Vpp: +5 V ±10 % Square-wave signals via line driver ⌋: +5 V ±10 % 				
Power consumption max.	<ul style="list-style-type: none"> Sinusoidal voltage signals ~ 1 Vpp: 825 mW (without load) Square-wave signals via line driver ⌋: 990 mW (without load) 				
Current consumption typ.	<ul style="list-style-type: none"> Sinusoidal voltage signals ~ 1 Vpp: 150 mA (without load) Square-wave signals via line driver ⌋: 180 mA (without load) 				
Vibration 55 Hz – 2000 Hz Shock 8 ms	100 m/s ² 200 m/s ²				
Operating temperature Storage temperature	0 °C to 50 °C -20 °C to 70 °C				
Mass reading head	<ul style="list-style-type: none"> MSA 7x0: 50 g (without cable) MSA 8x0: 65 g (without cable) Cable: 30 g/m, connector: D-sub connector: 28 g, M12 connector: 15 g 				

GRADUATION CARRIER

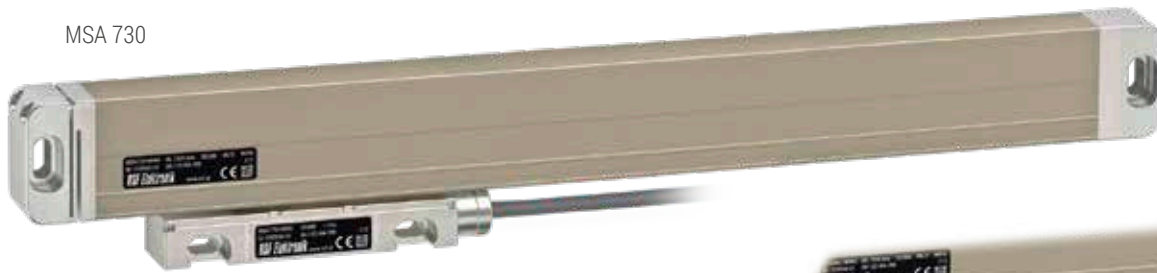
Standard measuring lengths (ML): [mm]	70, 120, 170, 220, 270, 320, 370, 420, 470, 520, 570, 620, 670, 720, 770, 820, 870, 920, 970, 1040, 1140, 1240 (other measuring lengths on request)
Graduation carrier	<ul style="list-style-type: none"> Glass scale ($\alpha \approx 8.5 \times 10^{-6}/K$), grating period: 20 µm Glass ceramic scale ($\alpha \approx 0 \times 10^{-6}/K$), grating period: 20 µm
Accuracy grades (at 20 °C)	<ul style="list-style-type: none"> ±5 µm/m ±3 µm/m
Location of the reference marks (RI):	<ul style="list-style-type: none"> Distance-coded reference marks One reference mark in the middle of the ML Up to ML 970 mm: 35 mm from left and right; from ML 1040 mm: 45 mm from left and right
Required moving force	<ul style="list-style-type: none"> With standard sealing lips (NBR): < 2.0 N
Environmental protection EN 60529	<ul style="list-style-type: none"> With standard sealing lips (NBR): IP 53
Mass scale spar (approx.)	<ul style="list-style-type: none"> MSA 7xx, MSA 8xx: 75 g + 0.57 g/mm (ML)

CONFORMITIES AND CERTIFICATIONS

RoHS	2011/65/EU, 2015/863/EU
EMV	2014/30/EU
Product-Certifications	UL, CSA, EN, IEC 61010-1

MSA 730, MSA 830

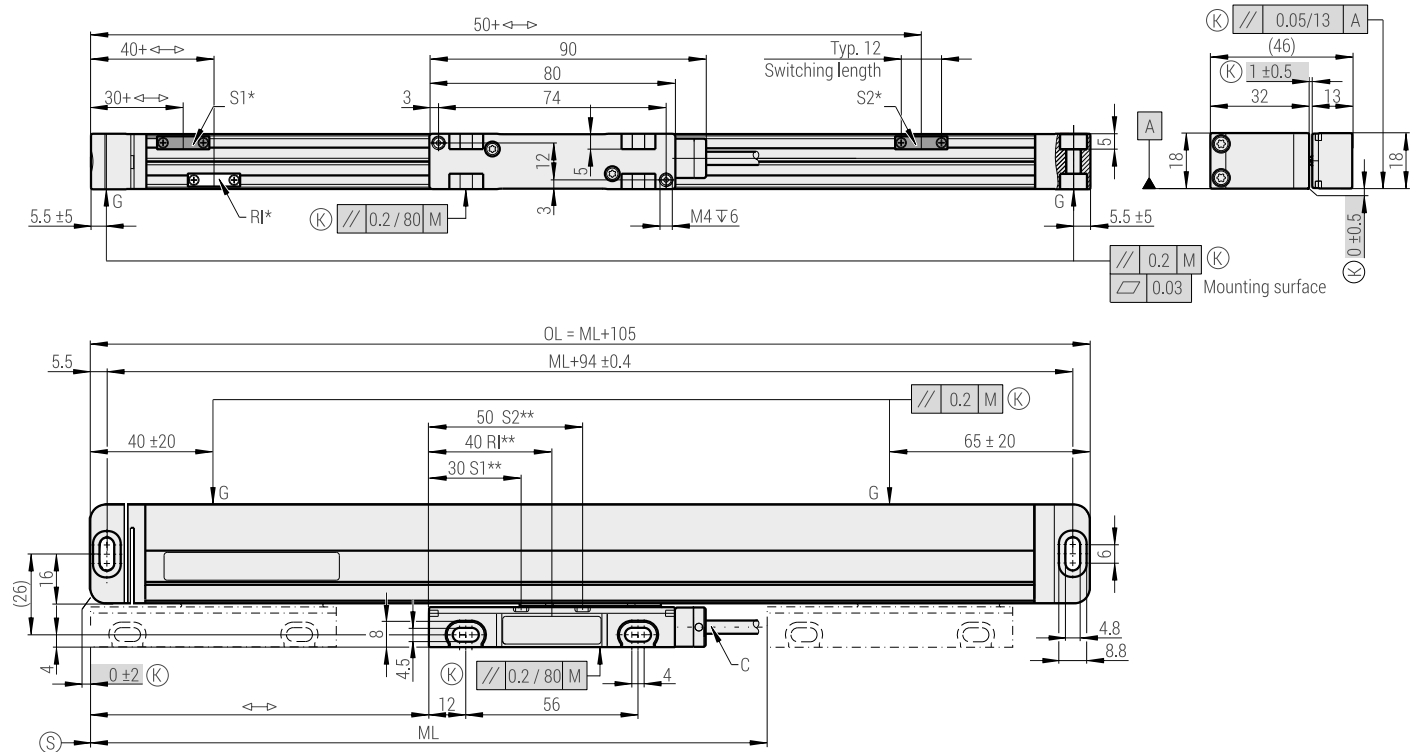
MSA 730



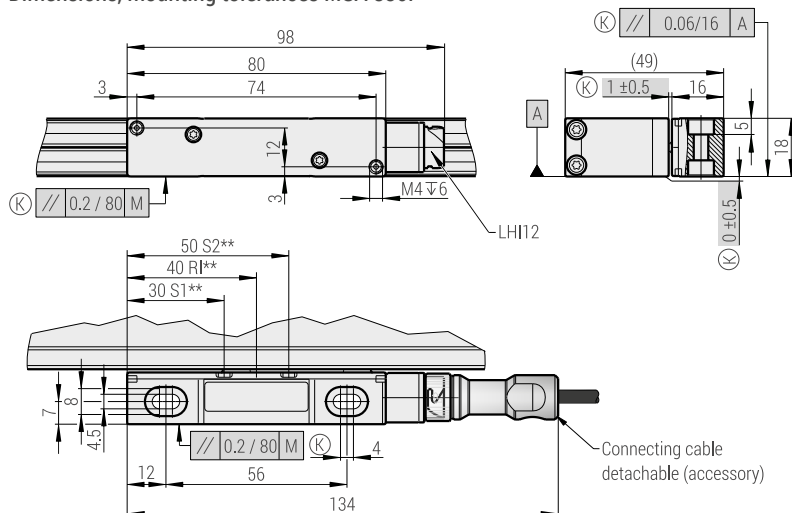
MSA 830



Dimensions, mounting tolerances MSA 730:



Dimensions, mounting tolerances MSA 830:



- M = Machine guideway
- ML = Measuring length
- G = Gauging points
- ← → = 0 ... ML
- OL = Overall length
- C = Cable

LHI12 = Male connector

- (K) = Required mating dimensions
- (S) = Beginning of the measuring length

- OPTIONAL:
- S1, S2 = Switch signals
 - RI = Selectable reference mark
 - * = Actuator magnet
 - ** = Position sensor

mm

 Tolerancing ISO 8015
 ISO 2768 - m H
 < 6 mm: ±0.2 mm