SV2 series

Linear encoder with threaded head option for different installation options without the need for nuts.
Small mounting support that may be secured from the top or from the bottom for easier installation.

Especially indicated for high standard environments in terms of speed and vibration.

Their special design of the securing points of the linear encoder (TDMS™), drastically reduces the errors and ensures the accuracy and repeatability of the encoders.

Measuring lengths in millimeters:

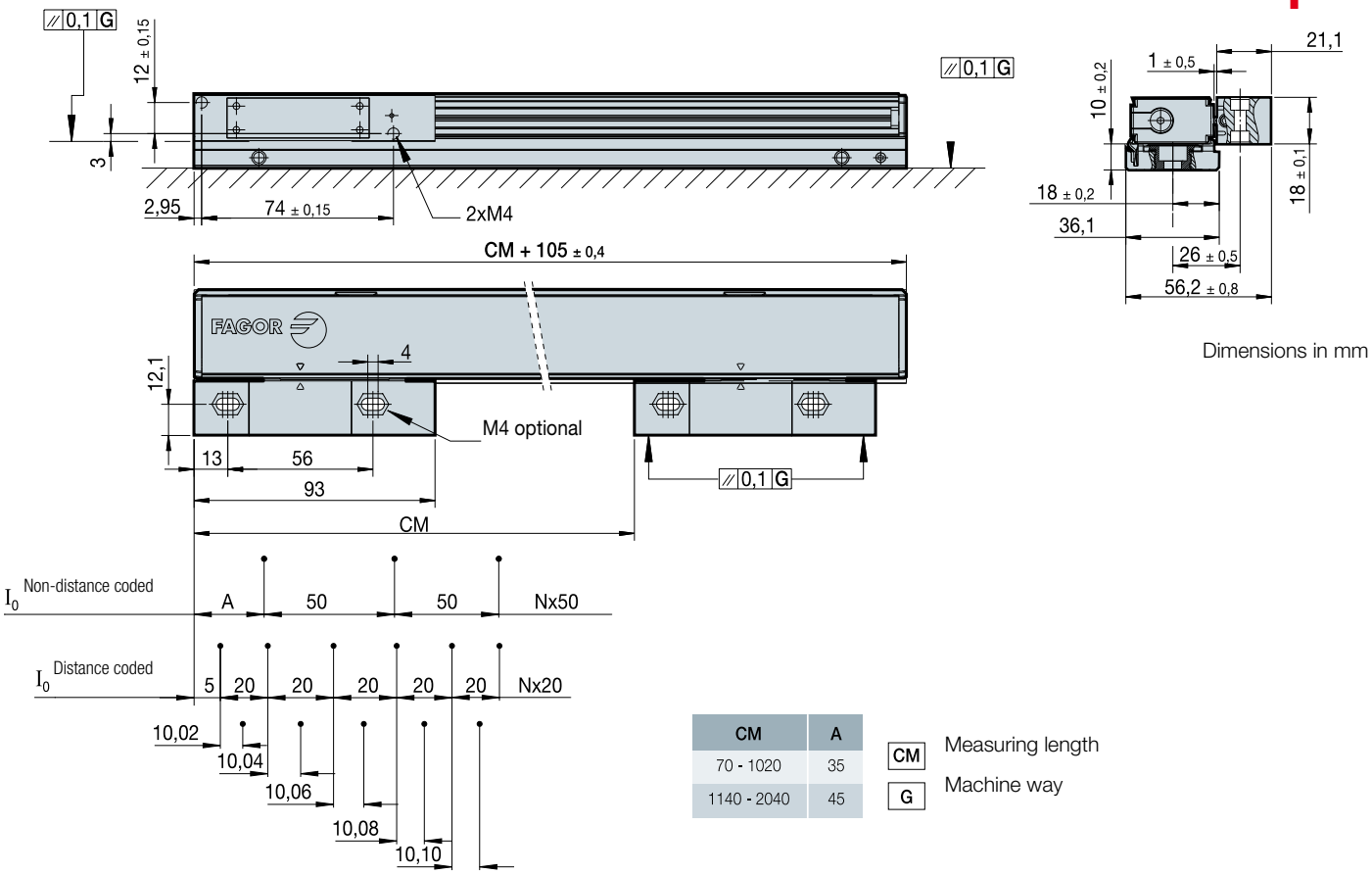
70 • 120 • 170 • 220 • 270 • 320 • 370 • 420 • 470 • 520 • 570 • 620 • 670 • 720 • 770 • 820 • 870 • 920 • 970 • 1020 • 1070 • 1140 • 1240 • 1340 • 1440 • 1540 • 1640 • 1740 • 1840 • 2040

Characteristics

	SV2X	SV2Y	SV2W	SV2Z	SV2P
Measurement	By means of a 20 µm-pitch graduated glass				
Glass thermal expansion coefficient	α_{therm}: 8 ppm/K aprox.				
Measuring resolution	1 µm	0.5 µm	0.1 µm	0.05 µm	Up to 0.1 µm
Output signals	⊓⊓ TTL differential	⊓⊓ TTL differential	⊓⊓ TTL differential	⊓⊓ TTL differential	∿ 1 Vpp
Incremental signal period	4 µm	2 µm	0.4 µm	0.2 µm	20 µm
Limit frequency	500 KHz	1 MHz	1,5 MHz	500 KHz	100 KHz
Maximum speed	120 m/min	120 m/min	36 m/min	6 m/min (*)	120 m/min
Minimum distance between flanks	0.2 µs	0.2 µs	0.1 µs	0.3 µs	–
Reference marks I_0	SV2X, SV2Y, SV2W, SV2Z and SV2P: every 50 mm SV2OX, SV2OY, SV2OW, SV2OZ and SV2OP: distance-coded I_0				
Maximum cable length	50 m	50 m	50 m	50 m	150 m
Supply voltage	5 V ± 5 %, < 150 mA (without load)	5 V ± 5 %, < 150 mA (without load)	5 V ± 5 %, < 150 mA (without load)	5 V ± 5 %, < 150 mA (without load)	5 V ± 10 %, < 150 mA (without load)
Accuracy	± 5 µm/m ± 3 µm/m				
Maximum vibration	200 m/s² (55 … 2000 Hz) IEC 60068-2-6				
Maximum shock	300 m/s² (11 ms) IEC 60068-2-27				
Maximum acceleration	100 m/s² in the measuring direction				
Required moving force	< 4 N				
Operating temperature	0 °C … 50 °C				
Storage temperature	-20 °C ... 70 °C				
Weight	0.25 kg + 2.25 kg/m				
Relative humidity	20 … 80 %				
Protection	IP 53 (standard) IP 64 (DIN 40050) using pressurized air at 0.8 ± 0.2 bar in linear encoders				
Reader head	With built-in connector				

(*): contact Fagor Automation for higher speed.

SV2 model



Dimensions in mm

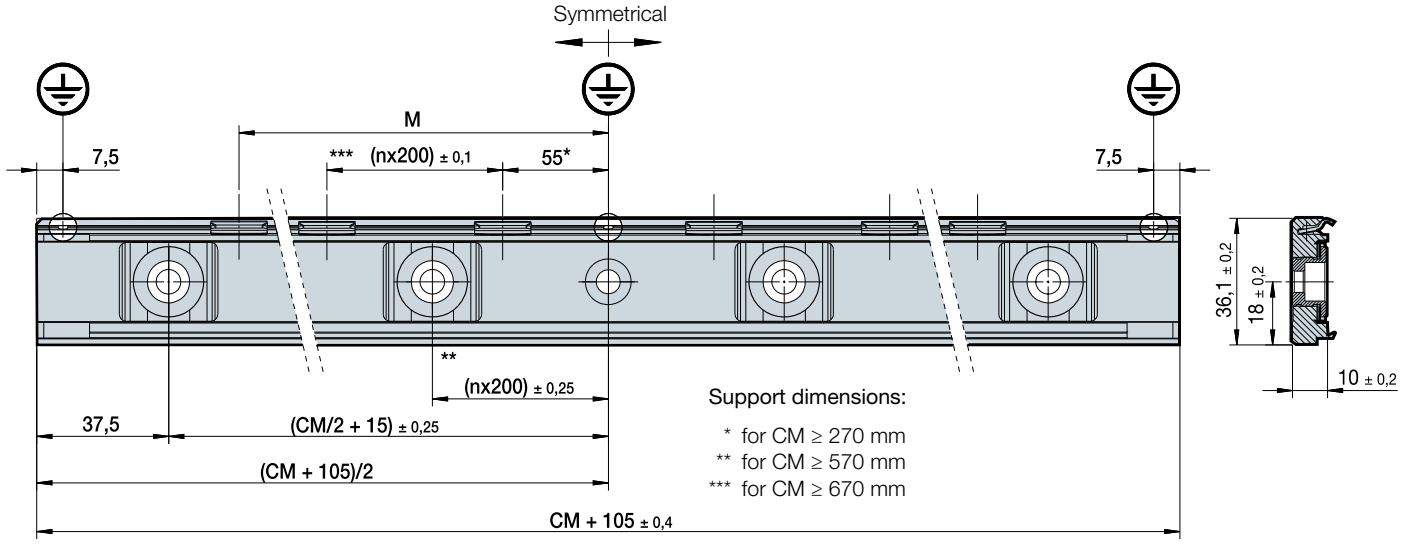
CM	A
70 - 1020	35
1140 - 2040	45

CM Measuring length

G Machine way

CM	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770
M	37.5	55	75	100	115	140	175	200	225	250	275	300	325	350	375

CM	820	870	920	970	1020	1070	1140	1240	1340	1440	1540	1640	1740	1840	2040
M	400	425	450	475	500	515	555	610	655	710	760	810	855	910	1010



Additional information can be found in the installation manual available on the website ***www.fagorautomation.com***

Order identification

Example of Linear Encoder: SV2OX-1140-5-B-A-T

SV2	O	X	1140	5	B	A	T
Type of profile for reduced spaces: • **SV2: Vibration mounting for up to 200 m/s²**	***Type of reference mark I_0:*** • Blank space: Incremental, one mark every 50 mm • **O: Distance-coded marks**	***Type of signal:*** • **X: 1 µm resolution differential TTL** • Y: 0.5 µm resolution differential TTL • W: 0.1 µm resolution differential TTL • Z: 0.05 µm resolution differential TTL • P: 1 Vpp sinusoidal	***Measuring lengths in millimeters:*** In the example (1140) = 1 140 mm	***Precisión del encoder lineal:*** • **5: ± 5 µm** • 3: ± 3 µm	***Linear encoder with mounting support:*** • **B: With mounting support for vibrations of up to 200 m/s²**	***Air intake on the reader head:*** • **A: With air intake**	***Threaded head:*** • Blank space: No • **T: M4**