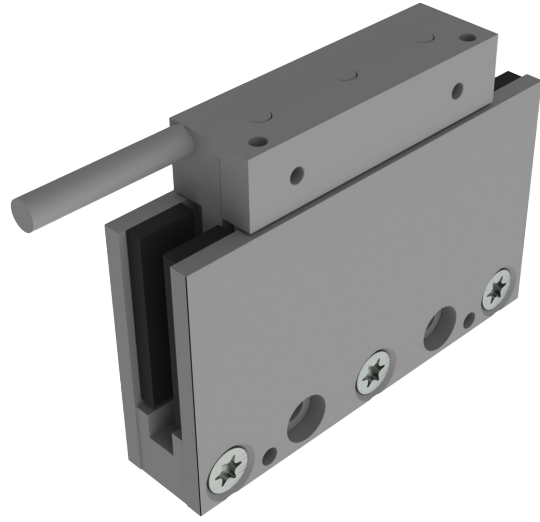


KMC92S SERIES - IRONLESS LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS



Magnet plate dimensions

| Code | KMM920072 | KMM920120 |
|--|-----------|-----------|
| Le (mm) | 72 | 120 |
| M5 bolts | 2 | 3 |
| Mass (kg/m) | 3,2 | |
| <i>Magnet plates can be butted together.</i> | | |

| | | Parameter | Remarks | Sym | Unit | KMC92S | |
|------------------------|--------------------------------------|--------------------------|------------------|--------------------|-------------------|--|-------|
| Performance | Winding type | | | | | IU04H | IU08H |
| | Motor type, max voltage ph-ph | | | | | 3-phase synchronous Ironless, 45V _{ac rms} (60V _{dc}) | |
| | Peak force @ 20°C/s increase | Magnet @ 25°C | F _u | N | 42,5 | 85 | |
| | Continuous force* | Coils @ 110°C | F _c | N | 19,5 | 39 | |
| | Maximum speed** | @ 60 V | V _{max} | m/s | 5,1 | 5,1 | |
| | Motor force constant | Mount. sfc. @ 20°C | K | N/A _{rms} | 12,3 | 12,3 | |
| Electrical | Motor constant | Coils @ 25°C | S | N ² /W | 14,6 | 29,2 | |
| | Peak current | Magnet @ 25°C | I _p | A _{rms} | 3,5 | 6,9 | |
| | Maximum continuous current | Coils @ 110°C | I _c | A _{rms} | 1,58 | 3,17 | |
| | Back EMF Phase-Phase _{peak} | | B _{emf} | V/m/s | 10,1 | 10,1 | |
| | Resistance per phase | Coils @ 25°C ex. cable | R _{ph} | Ω | 3,5 | 1,8 | |
| | Induction per phase | | I _{ph} | mH | 1,24 | 0,62 | |
| Thermal | Electrical time constant* | Coils @ 25°C | T _e | ms | 0,36 | 0,36 | |
| | Max. continuous power loss | All coils | P _c | W | 35 | 70 | |
| | Thermal resistance | Coils to mount. sfc. | R _{th} | °C/W | 2,4 | 1,2 | |
| | Thermal time constant* | up to 63% max. coiltemp. | T _{th} | s | 34 | 34 | |
| Mechanical | Temperature sensor | | | | | NTC | NTC |
| | Coil unit weight | ex. cables | W | kg | 0,045 | 0,087 | |
| | Coil unit length | ex. cables | L | mm | 49 | 97 | |
| | Motor attraction force | | F _a | N | 0 | 0 | |
| | Magnet pitch NN | | t | mm | 24 | 24 | |
| | Cable mass | | m | kg/m | 0,07 | 0,07 | |
| | Cable Type (power and sensor) | Length 3 m | d | mm (AWG) | 4,3 (24) | | |
| | Cable life (FLEX)*** | minimum | | | 15,000,000 cycles | | |
| | Bending radius static | minimum | | | 5x cable diameter | | |
| Bending radius dynamic | minimum | | | 8x cable diameter | | | |

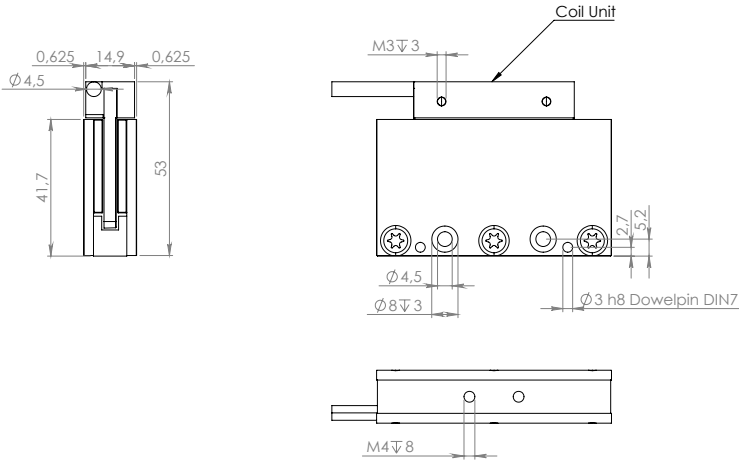
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

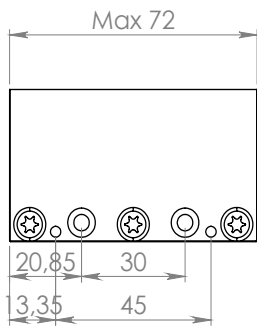
*** Depending on bending radius, velocity and acceleration.

KMC92S SERIES - IRONLESS LINEAR MOTOR DIMENSIONS AND SPECIFICATIONS

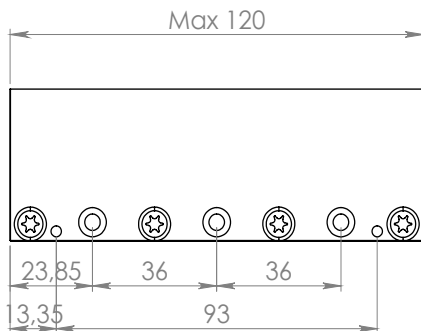
MAGNET PLATES



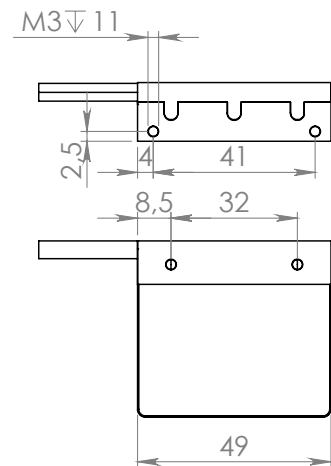
KMM920072



KMM920120



KMC92S-IU04H



KMC92S-IU08H

