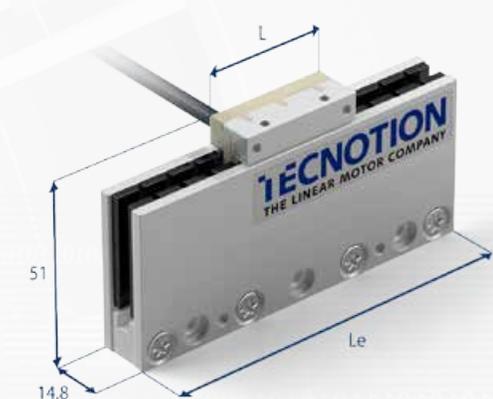


|             | Parameter                            | Remarks                  | Symbol           | Unit               | UC3 + UC3 inline   | UC6   |
|-------------|--------------------------------------|--------------------------|------------------|--------------------|--|-------|
| Performance | Motortype, max voltage ph-ph         |                          |                  |                    | 3-phase synchronous Ironless, 45V <sub>ac rms</sub> (60V <sub>dc</sub> ) |       |
|             | Peak Force @ 20°C/s increase         | magnet @ 25°C            | F <sub>p</sub>   | N                  | 36   | 72    |
|             | Continuous Force*                    | coils @ 80°C             | F <sub>c</sub>   | N                  | 10   | 20    |
|             | Maximum Speed**                      | @ 60 V                   | v <sub>max</sub> | m/s                | 5  | 5     |
|             | Motor Force Constant                 | mount. sfc. @ 20°C       | K                | N/A <sub>rms</sub> | 11.4   | 11.4  |
|             | Motor Constant                       | coils @ 25°C             | S                | N <sup>2</sup> /W  | 9.2  | 18.3  |
| Electrical  | Peak Current                         | magnet @ 25°C            | I <sub>p</sub>   | A <sub>rms</sub>   | 3.1  | 6.2   |
|             | Maximum Continuous Current           | coils @ 80°C             | I <sub>c</sub>   | A <sub>rms</sub>   | 0.87   | 1.75  |
|             | Back EMF Phase-Phase <sub>peak</sub> |                          | B <sub>emf</sub> | V/m/s              | 9.3  | 9.3   |
|             | Resistance per Phase*                | coils @ 25°C ex. cable   | R <sub>ph</sub>  | Ω                  | 4.7  | 2.4   |
|             | Induction per Phase                  |                          | L <sub>ph</sub>  | mH                 | 0.75   | 0.38  |
|             | Electrical Time Constant*            | coils @ 25°C             | τ <sub>e</sub>   | ms                 | 0.16   | 0.16  |
| Thermal     | Maximum Continuous Power Loss        | all coils                | P <sub>c</sub>   | W                  | 13   | 26    |
|             | Thermal Resistance                   | coils to mount. sfc.     | R <sub>th</sub>  | °C/W               | 3.6  | 1.8   |
|             | Thermal Time Constant*               | up to 63% max. coiltemp. | τ <sub>th</sub>  | s                  | 25   | 25    |
|             | Temperature Sensors                  |                          |                  |                    | none   | none  |
| Mechanical  | Coil Unit Weight                     | ex. cables               | W                | kg                 | 0.031  | 0.062 |
|             | Coil Unit Length                     | ex. cables               | L                | mm                 | 34   | 67    |
|             | Motor Attraction Force               |                          | F <sub>a</sub>   | N                  | 0  | 0     |
|             | Magnet Pitch NN                      |                          | τ                | mm                 | 16.5   | 16.5  |
|             | Cable Mass                           |                          | m                | kg/m               | 0.07   | 0.07  |
|             | Cable Type (Power)                   | length 1 m               | d                | mm (AWG)           | 4.3 (24)   |       |
|             | Cable Type (Sensor)                  |                          |                  |                    | N/A  |       |
|             | Cable Life (Power FLEX)***           | minimum                  |                  |                    | 15,000,000 cycles  |       |
|             | Bending Radius Static                | minimum                  |                  |                    | 5x cable diameter  |       |
|             | Bending Radius Dynamic               | minimum                  |                  |                    | 8x cable diameter  |       |



UC3 in 99mm magnet yoke shown

Approvals

| Magnet yoke dimensions |     |    |     |
|------------------------|-----|----|-----|
| Le (mm)                | 66  | 99 | 264 |
| M4 bolts               | 2   | 3  | 8   |
| Mass (kg/m)            | 3.2 |    |     |

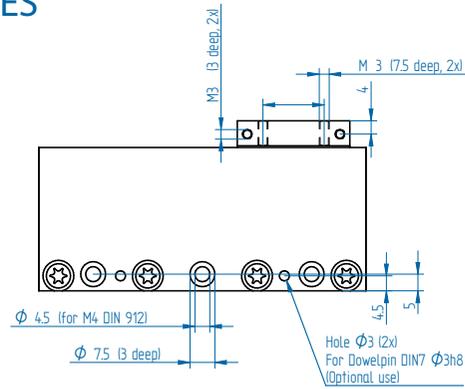
Magnet yokes can be butted together.

All specifications ±10%

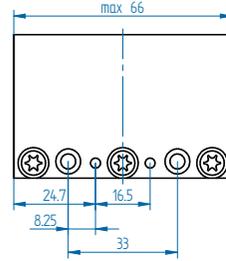
\* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.  
 \*\* Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.  
 \*\*\* Depending on Bending Radius, Velocity and Acceleration.

Mounting instructions and flatness or parallelism requirements can be found in the Ironless installation manual. CAD files and 3D models can be downloaded from our website.

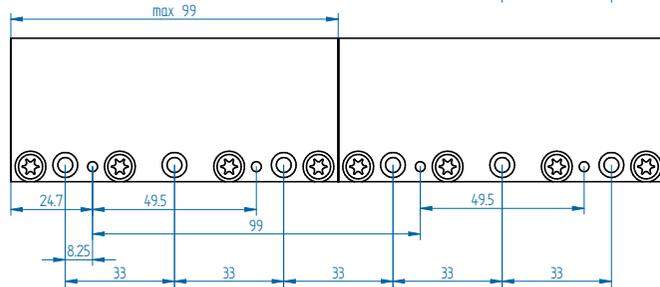
## MAGNET YOKES



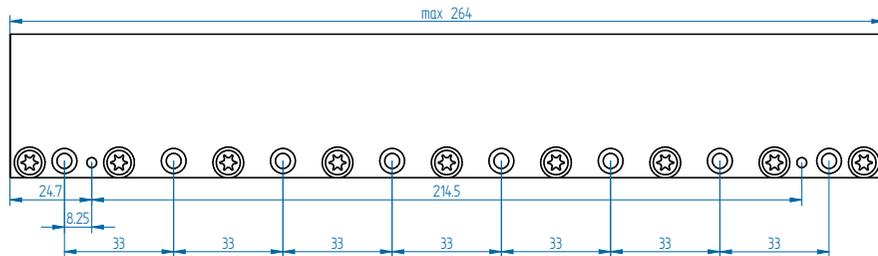
UC 66mm



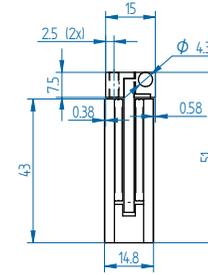
2x UC 99mm



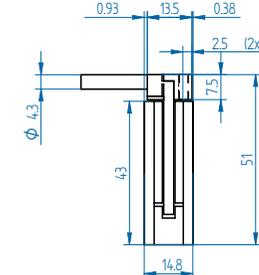
UC 264mm



## COIL UNITS

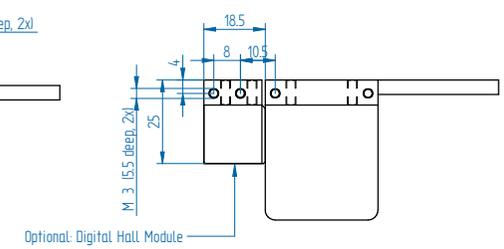
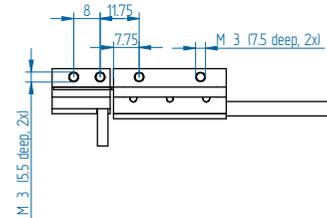


UC 3 inline

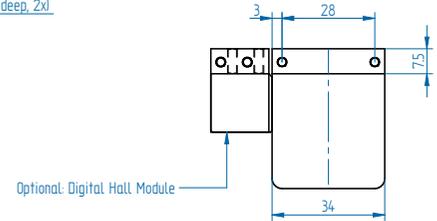
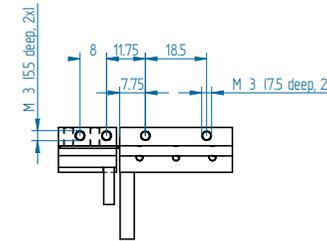


UC 3/UC 6

UC 3 inline



UC 3



UC 6

