



UC3 in 99mm magnet yoke shown

UC Series Ironless

Parameter	Remarks	Symbol	Unit	UC3 + UC3 inline	UC6
Performance	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 _p	N	36
	Continuous force*	coils @ 80°C	F _c	N	10
	Maximum speed**	@ 60 V	V _{max}	m/s	5
	Motor force constant	mount. sfc. @ 20°C	K	N/A _{rms}	11.4
	Motor constant	coils @ 25°C	S	N ² /W	9.2
	Peak current	magnet @ 25°C	I _p	A _{rms}	3.1
Electrical	Maximum continuous current	coils @ 80°C	I _c	A _{rms}	0.87
	Back EMF phase-phase _{peak}		B _{emf}	V/m/s	9.3
	Resistance per phase*	coils @ 25°C ex. cable	R _{ph}	Ω	4.7
	Induction per phase		L _{ph}	mH	0.75
	Electrical time constant*	coils @ 25°C	τ _e	ms	0.16
Thermal	Maximum continuous power loss	all coils	P _c	W	13
	Thermal resistance	coils to mount. sfc.	R _{th}	°C/W	3.6
	Thermal time constant*	up to 63% max. coiltemp.	τ _{th}	s	25
	Temperature sensors				none
Mechanical	Coil unit weight	ex. cables	W	kg	0.031
	Coil unit length	ex. cables	L	mm	34
	Motor attraction force		F _a	N	0
	Magnet pitch NN		τ	mm	16.5
	Cable mass		m	kg/m	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

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.

Magnet yoke dimensions

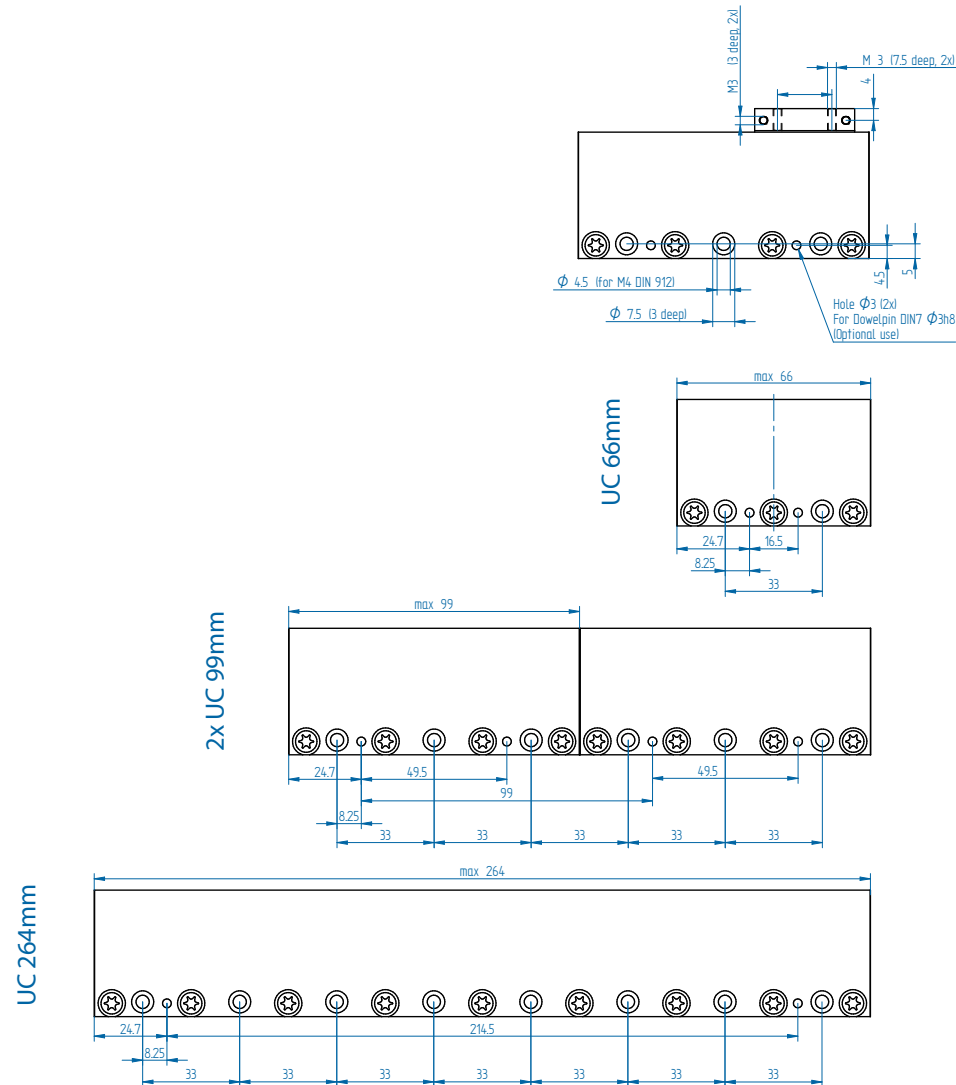
Le (mm)	66	99	264
M4 bolts	2	3	8
Mass (kg/m)	3.2		

Magnet yokes can be butted together.

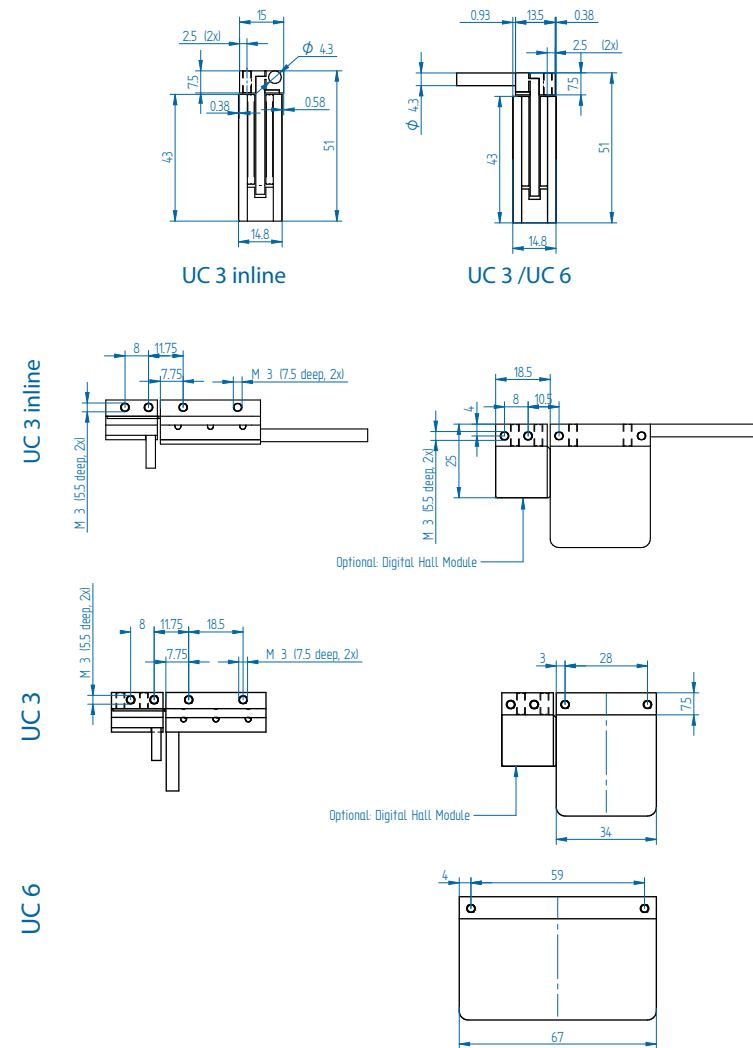
Approvals



Magnet yokes



Coil units



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.

* All sizes are in mm