

## Linear Synchronous iron-less two-phase Motor series LSIM-P-40-412\*

### Overall and join dimensions

Parameter	Symbol	Unit	LSIM-P-40-412...
			LSIM-P-40-412-50
			FE
Peak force (coil at 20°C)	Fp	N	960
Continuous force (coil at 120°C), water cooling	Fw	N	437
Continuous force (coil at 120°C), air cooling	Fa	N	219
Recommended supply voltage DC	Us	V	310
Motor constant (coil at 20°C)	Ko	N/√W	305.5
Peak power dissipation (coil at 20°C)	Pp	W	2975
Continuous power dissipation (coil at 120°C), water cooling	Pw	W	617
Continuous power dissipation (coil at 120°C), air cooling	Pa	W	154
Coolant flow for temperature difference 5°C by power Pw	Cf	L/min	1.8
Maximum velocity at Fp and Us (Coil at 20°C)	Vp	m/s	1.5
Maximum velocity at Fw and Us (Coil at 20°C)	Vw	m/s	3.0
Maximum velocity at Fa and Us (Coil at 20°C)	Va	m/s	3.6
Peak current (RMS) at Fp and V=0	Ip	Arms	10.6
Continuous current at 120°C with water cooling at Fw and V=0	Iw	Arms	4.8
Continuous current at 120°C with air cooling at Fa and V=0	Ia	Arms	2.4
Efficiency at Mw and 540V DC (Coil at 20°C)	Ew	%	67.6
Back EMF constant (*) (peak phase-phase)	Ku	V/(m/s)	63.8
Electrical resistance at 20°C (*)	R	Ohm	13.34
Electrical inductance (*)	L	mH	7.00

\* value «terminal-terminal»