



N° :

Date : 26 févr. 2018

### Induction motor

4P LSES 112MU 4kW IFT/IE3 B3 380D/400D/415D/690Y-460D 50-60Hz -

**Utilisation :** Environment Current ; Ambiance Non corrosive ; Finition - ; Zone Non specific ; General applications ; Ambient temperature -16 +40 °C ; Maximum altitude 1000 m.

**Motor characteristics :** Aluminium alloy housing ; Cast iron DE endshield ; Cast iron NDE endshield.



### Motor definition

Motor definition		Application	General applications
Protection type	-	Main voltage (V)	400
Generation code	IFT	Connection	DY
Efficiency class	IE3	Motor winding (V)	380D/400D/415D/690Y-460D
Number of network phases	3	Rated Frequency (Hz)	50-60
Number of speed		Operation position	IM1001(IMB3)
Polarity	4P	Index of protection	IP55
Motor serie	LSES	Index of cooling	IC411
Frame size (mm)	112	Insulation class	F
Length code	MU	Finish	-
HS rated power (kW)	4.000	Moment of inertia J (kg.m <sup>2</sup> )	0.0131200
LS rated power (kW)	-	Motor weight (kg)	34.4
Rated speed (min-1)	1458		
Maximum mechanical speed (min-1)	9900		

### Common definitions

Paint shade	RAL6000
Paint system	la (1 polyurethane coat 20/30 microns)

### Motor mechanical interface

Mounting flange	-	Shaft material type	Steel shaft
Drive end shaft type	IEC STANDARD shaft end	Nuance of shaft material	-
Diameter DE shaft (mm)	28j6	Second shaft extension	-
Length DE shaft (mm)	60	Diameter NDE shaft (mm)	-
DE bearing mounting	Located	Second shaft end length (mm)	-
DE bearing type	DE ball bearing	NDE bearing type	NDE ball bearing
DE bearing	6206	NDE bearing	6206
Code Type de graissage	Vie		

### Motor electrical interface

Connection network type	Terminal box	Cable type	-
Connection network material	Composite materials	Cable gland material	Cable gland not supplied, holes tapped with polyamide plugs
Connection network position	A	Main cable gland type	1xM20 ; With plugs
Connection network orientation	up	Principal cable gland position	Right (1)
Connection network relative position	0		

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**Motor options**

Vibration level	A (25µm ; 1.6mm/s ; 2.5m/s <sup>2</sup> )	Cover	Metal cover
Balancing type	Half-key (H)	Drip proof cover option	-
Impregnation type	< 95% ; -16+40°C (T)	cooling type	-
Winding thermal protection	-	Forced ventilation characteristics	-
Space heater	-	Encoder type	-
Draining plugs position	6H	Encoder characteristics	-
Nameplate material	Aluminium nameplate	Screw material	Steel screw
Endshield thermal protection	-	Adaptation for vibration sensor	-
Reinforced winding insulation	-		

**Motor characteristics (on mains supply)**

Main voltage (V)	Rated Frequency (Hz)	HS rated power (kW)	Rated torque (N.m)	Rated speed (min <sup>-1</sup> )	Rated current (A)	Power factor at 4/4 of the load	Power factor at 3/4 of the load	Power factor at 2/4 of the load	Efficiency at 4/4 (IEC 60 034-2-1) of the load (%)	Efficiency at 3/4 (IEC 60 034-2-1) of the load (%)	Efficiency at 2/4 (IEC 60 034-2-1) of the load (%)
380	50	4.000	26,2	1450.00	8.30	0.83			88.60		
400	50	4.000	26,2	1458	8.1	0,8	0,73	0,62	88.80	89.60	89.20
415	50	4.000	26,2	1462.00	8.05	0.78			88.90		
460	60	-	-	1764.00	7.10	0.79			90.20		

**Motor characteristics (on mains supply) 400 V 50 Hz**

Starting torque (N.m)	70.7	Id / In	7.05
Average starting torque (N.m)		Id	57.10
Maximum torque (N.m)	81,2	Maximum current (A)	
Unload maximum starting frequency (d/h)	-	No-load current (A)	0.00
Rotor locked time (cold) (s)		Acoustic pressure level (dB(A))	54

**Motor characteristics (supplied via drives)**

Main voltage (V)	Nominal frequency (Hz)	Pn (kW)	Nn (min <sup>-1</sup> )	In (A)	Cos Phi	Mn @ f/10 (N.m)	Mn @ f/5 (N.m)	Mn @ f/3 (N.m)	Mn @ f/2 (N.m)	Mn (N.m)	Mn @ fx1.7 (N.m)	Mn @ fx2 (N.m)
400 D	50	4	1458	8.37	0.8	0.00	23.58	26.20	26.20	26.200	15.06	0.00

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