

N° :

Date : 17 mai 2019

Induction motor with options

4P FLSES 112MU 4kW IFT/IE3 B3 230D/380Y/400Y/415Y-460Y 50-60Hz -

Incremental encoder 5V 1024pts TTL ; 1 set of 3 probes PTC (winding) ; With Space heater 25W 200/240V - 50/60Hz ;

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

Motor characteristics : Cast iron housing ; Cast iron DE endshield ; Cast iron NDE endshield.



Motor definition

Protection type	-	Application	General applications
Generation code	IFT	Main voltage (V)	400
Efficiency class	IE3	Connection	DY
Number of network phases	3	Motor winding (V)	230D/380Y/400Y/415Y-460Y
Number of speed		Rated Frequency (Hz)	50-60
Polarity	4P	Operation position	IM1001(IMB3)
Motor serie	FLSES	Index of protection	IP55
Frame size (mm)	112	Index of cooling	IC411
Length code	MU	Insulation class	F
HS rated power (kW)	4.000	Finish	-
	-	Moment of inertia J (kg.m2)	0.0142900
Rated speed (min-1)	1458	Motor weight (kg)	49.0
Maximum mechanical speed (min-1)	9900		

Common definitions

Paint shade	RAL6000
Paint system	Ila (1 epoxy base coat 30/40 microns + 1 polyurethane finish 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	Cast iron	Cable gland material	Cable gland not supplied, holes tapped with polyamide plugs
Connection network position	A	Main cable gland type	2xM20 ; 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 ²)	Cover	Metal cover
Balancing type	Half-key (H)	Drip proof cover option	-
Impregnation type	< 95% ; -16+40°C (T)	cooling type	-
Winding thermal protection	1 set of 3 probes PTC (winding)	Forced ventilation characteristics	-
Space heater	With	Encoder type	Incremental encoder
Draining plugs position	6H	Encoder characteristic	5V 1024pts TTL
Nameplate material	Aluminium nameplate	Screw material	Steel screw
Endshield thermal protection	-	Adaptation for vibration sensor	-
Reinforced insulation system	-		

Motor characteristics (on mains supply)

Main voltage (V)	Rated Frequency (Hz)	HS rated power (kW)	Rated torque (N.m)	Rated speed (min-1)	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	1458.00	8.30	0.83			88.60		
400	50	4.000	26,2	1458	8.1	0,8	0,75	0,64	88.80	89.50	88.90
415	50	4.000	26,2	1462.00	8.05	0.78			89.40		
460	60	4	21,66	1764.00	7.65	0.77			85.50		

Motor characteristics (on mains supply) 400 V 50 Hz

Starting torque (N.m)	70.74	Id / In	7.05
Average starting torque (N.m)		Id	57.11
Maximum torque (N.m)	81,22	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))	50

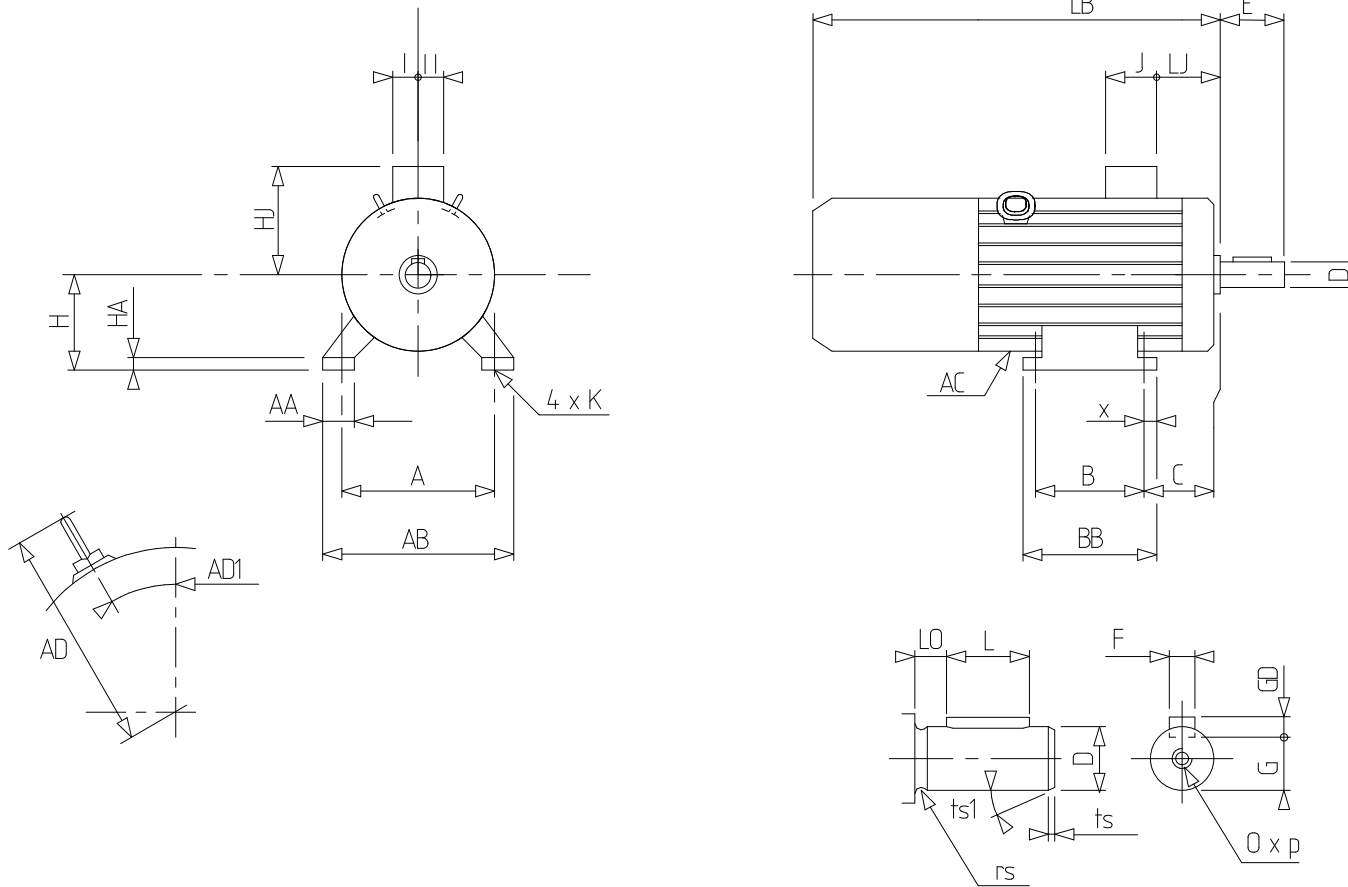
Motor characteristics (supplied via drives)

Main voltage (V)	fn (Hz)	Pn (kW)	Nn (min-1)	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 Y	50	4	1458	8.1	0.8	0.0	23.6	26.2	26.2	26.2	15.1	0.0
400 D	87	6.96	2525	15.37	0.8	0.0	23.6	26.2	26.2	26.2	0.0	0.0

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A	190
AA	48
AB	230
AC	230.00
AD1	41
B	140
BB	186
C	60.0
D	28j6
E	60
F	8
G	24
GD	7
H	112
HA	12
HJ	176.0
I	60
II	60
J	152
K	12
L	50
LB	386.0
LJ	16.0
LO	6
O	M10
p	22
rs	0.5
ts	2
ts1	20
x	32