



N° :

Date : 23 avr. 2019

Induction motor with options

4P FLSES 180LUR 22kW IFT/IE3 V1 380D/400D/415D/690Y-460D 50-60Hz -

Draining plugs position DE

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)	380D/400D/415D/690Y-460D
Number of speed		Rated Frequency (Hz)	50-60
Polarity	4P	Operation position	IM3011(IMV1)
Motor serie	FLSES	Index of protection	IP55
Frame size (mm)	180	Index of cooling	IC411
Lenght code	LUR	Insulation class	F
HS rated power (kW)	22.000	Finish	-
	-	Moment of inertia J (kg.m2)	0.1555000
Rated speed (min-1)	1470	Motor weight (kg)	190.0
Maximum mechanical speed (min-1)	4500		

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	FF300	Shaft material type	Steel shaft
Drive end shaft type	IEC STANDARD shaft end	Nuance of shaft material	-
Diameter DE shaft (mm)	48k6	Second shaft extension	-
Length DE shaft (mm)	110	Diameter NDE shaft (mm)	-
DE bearing mounting	Locked	Second shaft end length (mm)	-
DE bearing type	DE ball bearing	NDE bearing type	NDE ball bearing
DE bearing	6310	NDE bearing	6312
Code Type de graissage	Vie		

Motor electrical interface

Connection network type	Terminal box	Cable type	-
Connection network material	Cast iron	Cable gland material	-
Connection network position	A	Main cable gland type	-
Connection network orientation	front	Principal cable gland position	Right (1)
Connection network relative position	0		

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Motor options

Vibration level	A (35µm ; 2.2mm/s ; 3.5m/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	-	Encoder type	-
Draining plugs position	DE	Encoder characteristics	-
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	22.000	143	1466.00	42.40	0.85			93.00		
400	50	22.000	143	1470	41.3	0.83	0.79	0.69	93.00	93.60	93.40
415	50	22.000	143	1474.00	40.20	0.82			93.20		
460	60	-	143	1776.00	35.90	0.82			93.70		

Motor characteristics (on mains supply) 400 V 50 Hz

Starting torque (N.m)	471.9	Id / In	7.88
Average starting torque (N.m)		Id	325.48
Maximum torque (N.m)	471.9	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))	68

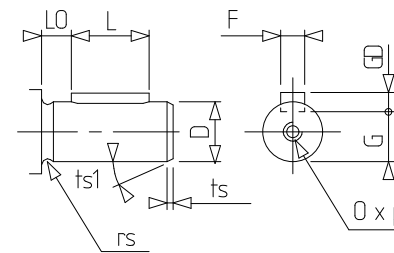
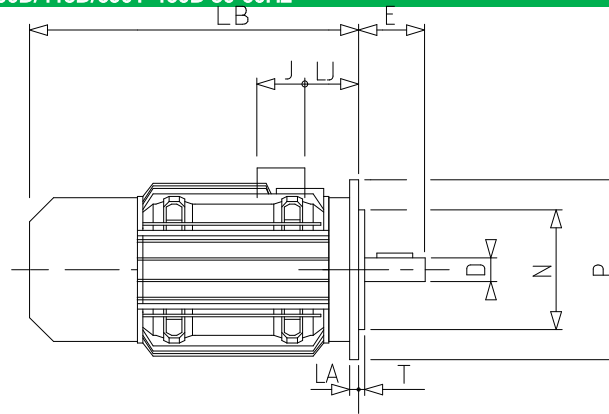
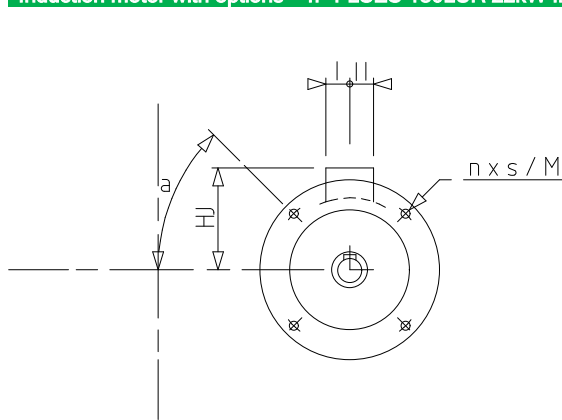
Motor characteristics (supplied via drives)

Main voltage (V)	Nominal frequency (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 D	50	22	1470	41.2	0.83	0.0	114.4	128.7	143.0	143.0	82.2	0.0

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a	45
AC	353.00
AD1	45
D	48k6
E	110
F	14
G	42.5
GD	9
HJ	297.0
I	126
II	148
J	246
L	90
LA	14
LB	593.0
LJ	42.0
LO	20
M	300
N	250
n	4
O	M16
P	350
p	36
rs	0.8
S	18.5
T	5
ts	1
ts1	45