

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : QUANTUM CONTROLS

Product line : W22 - IE4 Super Premium Efficiency
(Multivoltage)

Frame : 315S/M	Cooling method : IC411 - TEFC
Insulation class : F	Mounting : B3T
Duty cycle : S1	Rotation ¹ : Both
Ambient temperature : -20 °C to +40 °C	Starting method : Direct On Line
Altitude : 1000 m.a.s.l	Approx. weight ³ : 938 kg
Protection degree : IP55	Moment of inertia (J) : 2.34 kgm ²
Design : NE	

Output	110 kW	110 kW	110 kW	110 kW
Poles	2	2	2	2
Frequency	50 Hz	50 Hz	50 Hz	60 Hz
Rated voltage	380/660 V	400/690 V	415 V	460 V
Rated current	198/114 A	190/110 A	185 A	168 A
L. R. Amperes	1345/775 A	1521/882 A	1538 A	1430 A
LRC	6.8	8.0	8.3	8.5 x Code J
No load current	58.0/33.4 A	60.0/34.8 A	63.0 A	56.0 A
Rated speed	2977 rpm	2980 rpm	2982 rpm	3582 rpm
Slip	0.77 %	0.67 %	0.60 %	0.50 %
Rated torque	353 Nm	353 Nm	352 Nm	293 Nm
Locked rotor torque	200 %	210 %	230 %	240 %
Pull up torque	170 %	175 %	195 %	200 %
Breakdown torque	260 %	290 %	310 %	330 %
Service factor	1.00	1.00	1.00	1.00
Noise level ²	77.0 dB(A)	77.0 dB(A)	77.0 dB(A)	81.0 dB(A)
Locked rotor time (hot)	50 s	46 s	46 s	50 s
Locked rotor time (cold)	90 s	83 s	83 s	90 s
Efficiency (%)	50%	94.0	94.0	94.5
	75%	95.5	95.5	95.4
	100%	96.0	96.0	95.4
Power Factor	50%	0.79	0.76	0.74
	75%	0.85	0.84	0.83
	100%	0.88	0.87	0.86

Losses at normative operating points (speed;torque), in percentage of rated output power

Losses (%)	P1(0,9;1,0)	4.0	4.0	4.0	4.6
	P2(0,5;1,0)	2.8	2.8	2.8	3.3
	P3(0,25;1,0)	2.4	2.4	2.4	2.8
	P4(0,9;0,5)	2.4	2.4	2.4	2.8
	P5(0,5;0,5)	1.3	1.3	1.3	1.5
	P6(0,5;0,25)	0.9	0.9	0.9	1.1
	P7(0,25;0,25)	0.5	0.5	0.5	0.6

Bearing type	Drive end 6314-C3	Non drive end 6314-C3	Foundation loads
Lubrication interval	5000 h	5000 h	Max. traction : 4002 N
Lubricant amount	27 g	27 g	Max. compression : 13204 N
Lubricant type	MOBIL POLYREX EM		Load type : -
			Load torque : -
			Load inertia (J=GD ² /4) : -

Notes
See notes on page 2.

Rev.	Changes Summary	Rev.	Checked	Date
Performed by	ghodgetts	1753579885		
Checked by	AUTOMATICO	Page	Rev.	
Date	10/09/2025	1 / 2	0	

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Thermal protection				
ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermistor - 2 wires	1 x Phase	155°C

Space heater information
Voltage: 110-127/200-240 V
Output: 117-156/97-139 W

Notes

Standards	Specification	: IEC 60034-1	Vibration	: IEC 60034-14
	Test	: IEC 60034-2	Tolerance	: IEC 60034-1
	Noise	: IEC 60034-9		

This revision replaces and cancel the previous one, which must be eliminated.

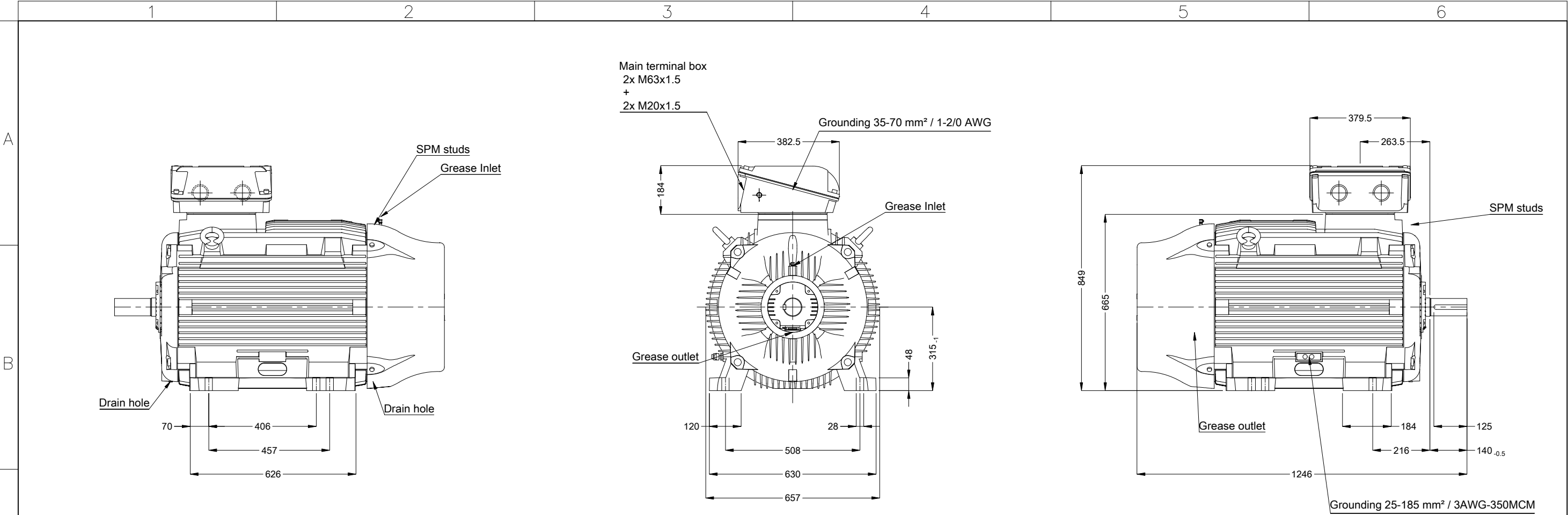
(1) Looking the motor from the shaft end.

(2) Measured at 1m and with tolerance of +3dB(A).

(3) Approximate weight, subject to be changed after manufacturing process.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in IEC 60034-1.

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D															110 kW 02 Poles 50 Hz		A																			
					QUANTUM CONTROLS																															
															Scale		1 : 15																			
															PIRWUSER																					
																	00																			
E	Space heaters 110-127 V / 200-240 V		DE Shaft End				Vibration sensor studs detail												ECM		LOC		SUMMARY OF MODIFICATIONS				EXECUTED		CHECKED		RELEASED		DATE		VER	
	DE grounding brush holder kit																		EXECUTED		PIRWUSER		THREE PH. MOTOR W22 IE4				PREVIEW									
	SPM studs																		CHECKED				FRAME 315S/M IP55 TEFC				WDD		00							
	NDE endshield with electrically insulated bearing hub																		RELEASED																	
	Color RAL 5009																		REL. DATE				WEG REDDITCH [Operational]				SHEET		1 / 1							
Painting plan 222P																																				
Mounting B3T		DM20 WEG WPR-7339																																		