

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	: B5T
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	: 1077 kg
Protection degree	: IP55	Moment of inertia (J)	: 3.05 kgm ²
Design	: NE		

Output	160 kW	160 kW	160 kW	160 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	284/163 A	269/156 A	263 A	238 A
L. R. Amperes	2156/1241 A	2263/1312 A	2338 A	2192 A
LRC	7.6	8.4	8.9	9.2 x Code J
No load current	73.0/42.0 A	79.0/45.8 A	83.0 A	74.0 A
Rated speed	2978 rpm	2980 rpm	2982 rpm	3583 rpm
Slip	0.73 %	0.67 %	0.60 %	0.47 %
Rated torque	513 Nm	513 Nm	512 Nm	427 Nm
Locked rotor torque	230 %	250 %	270 %	290 %
Pull up torque	195 %	210 %	230 %	245 %
Breakdown torque	280 %	300 %	340 %	360 %
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)	33 s	31 s	30 s	36 s
Locked rotor time (cold)	59 s	56 s	54 s	65 s
Efficiency (%)	50%	95.6	95.4	94.0
	75%	96.2	96.2	95.5
	100%	96.3	96.3	95.8
Power Factor	50%	0.82	0.80	0.78
	75%	0.87	0.86	0.85
	100%	0.89	0.89	0.88

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

Losses (%)	P1(0,9;1,0)	3.9	3.9	3.9	4.4
	P2(0,5;1,0)	2.9	2.9	2.9	3.4
	P3(0,25;1,0)	2.5	2.5	2.5	2.9
	P4(0,9;0,5)	2.2	2.2	2.2	2.5
	P5(0,5;0,5)	1.3	1.3	1.3	1.5
	P6(0,5;0,25)	0.9	0.9	0.9	1.0
	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	: 8442 N
Lubricant amount	27 g	27 g	Max. compression	: 19008 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			1751202027	
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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.

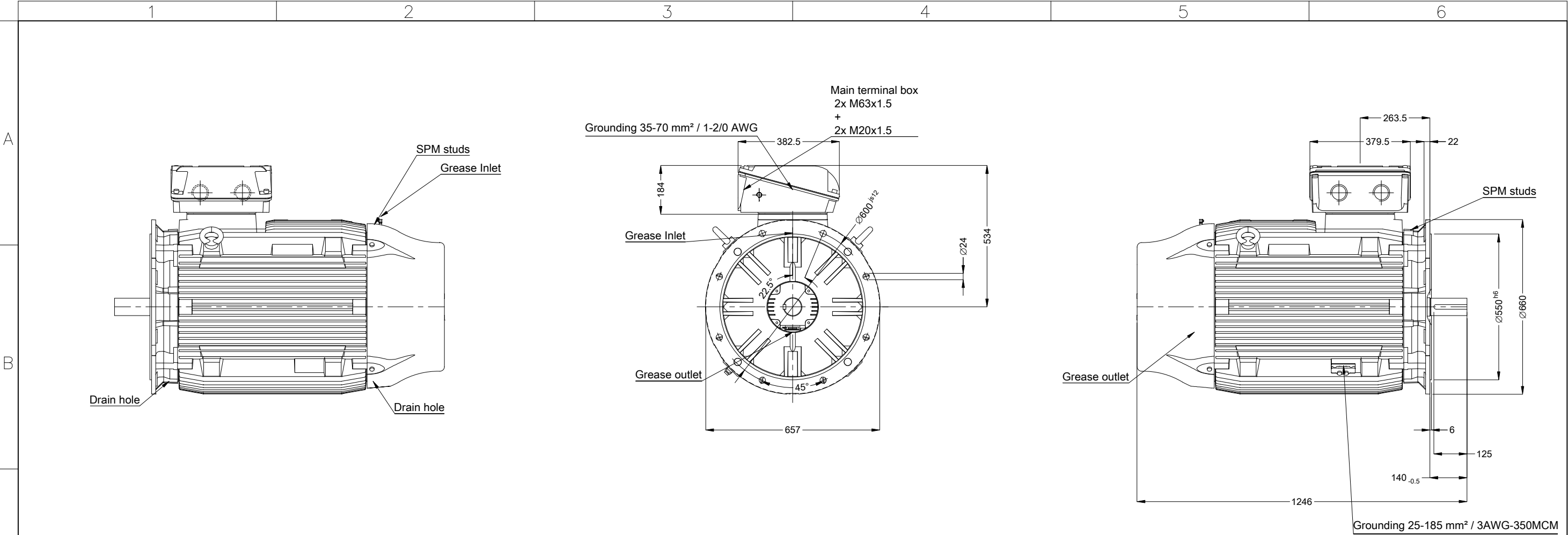
(1) Looking the motor from the shaft end.

(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																		
E	Space heaters 110-127 V / 200-240 V		DE Shaft End DM20 WEG WPR-7339	Vibration sensor studs detail	160 kW 02 Poles 50 Hz										A			
	DE grounding brush holder kit				QUANTUM CONTROLS													
	SPM studs				Scale 1 : 15													
	Sealing - Viton oil seal ring				PIRWBUSER										00			
	NDE endshield with electrically insulated bearing hub				ECM LOC SUMMARY OF MODIFICATIONS EXECUTED CHECKED RELEASED DATE VER													
	Color RAL 5009				EXECUTED PIRWBUSER										THREE PH. MOTOR W22 IE4	PREVIEW		
	Painting plan 222P				CHECKED										FRAME 315S/M IP55 TEFC		WDD 00	
	Mounting B5T				RELEASED										REL. DATE WEG REDDITCH [Operational]		SHEET 1 / 1	