

# 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 <sup>1</sup>	: Both
Ambient temperature	: -20 °C to +40 °C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l	Approx. weight <sup>3</sup>	: 960 kg
Protection degree	: IP55	Moment of inertia (J)	: 2.87 kgm <sup>2</sup>
Design	: NE		

Output	110 kW	110 kW	110 kW	110 kW	
Poles	4	4	4	4	
Frequency	50 Hz	50 Hz	50 Hz	60 Hz	
Rated voltage	380/660 V	400/690 V	415 V	460 V	
Rated current	204/118 A	199/115 A	194 A	175 A	
L. R. Amperes	1327/764 A	1390/806 A	1454 A	1383 A	
LRC	6.5	7.0	7.5	7.9 x Code J	
No load current	70.0/40.3 A	76.0/44.1 A	82.0 A	71.0 A	
Rated speed	1489 rpm	1491 rpm	1491 rpm	1792 rpm	
Slip	0.73 %	0.60 %	0.60 %	0.44 %	
Rated torque	706 Nm	705 Nm	705 Nm	586 Nm	
Locked rotor torque	240 %	260 %	280 %	300 %	
Pull up torque	200 %	220 %	235 %	255 %	
Breakdown torque	250 %	280 %	300 %	310 %	
Service factor	1.00	1.00	1.00	1.00	
Noise level <sup>2</sup>	71.0 dB(A)	71.0 dB(A)	71.0 dB(A)	75.0 dB(A)	
Locked rotor time (hot)	39 s	36 s	33 s	41 s	
Locked rotor time (cold)	70 s	65 s	59 s	74 s	
Efficiency (%)	50%	95.6	95.4	95.1	95.3
	75%	96.1	96.0	95.9	96.1
	100%	96.3	96.3	96.3	96.2
Power Factor	50%	0.73	0.69	0.65	0.67
	75%	0.81	0.79	0.77	0.77
	100%	0.85	0.83	0.82	0.82

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

Losses (%)	P1(0,9;1,0)	3.8	3.8	3.8	3.9
	P2(0,5;1,0)	2.9	2.9	2.9	3.0
	P3(0,25;1,0)	2.5	2.5	2.5	2.6
	P4(0,9;0,5)	2.2	2.2	2.2	2.3
	P5(0,5;0,5)	1.4	1.4	1.4	1.4
	P6(0,5;0,25)	1.0	1.0	1.0	1.0
	P7(0,25;0,25)	0.6	0.6	0.6	0.6

Bearing type	Drive end 6319-C3	Non drive end 6316-C3	Foundation loads	
Lubrication interval	11000 h	13000 h	Max. traction	: 11943 N
Lubricant amount	45 g	34 g	Max. compression	: 21360 N
Lubricant type	MOBIL POLYREX EM		Load type	: -
			Load torque	: -
			Load inertia (J=GD <sup>2</sup> /4)	: -

### Notes

See notes on page 2.

Rev.	Changes Summary	Rev.	Checked	Date
Performed by	ghodgetts	1751178204		
Checked by	AUTOMATICO	Page	Rev.	
Date	11/09/2025	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

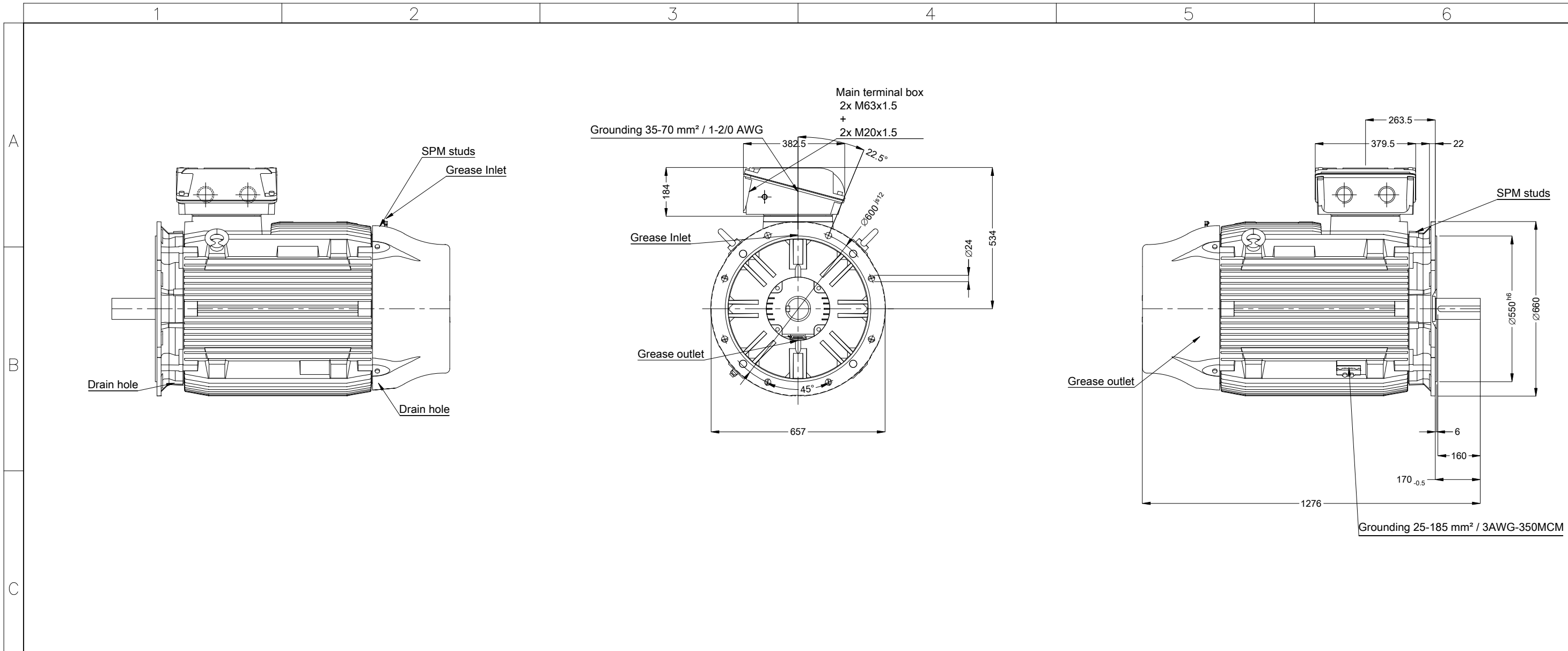
Specification	: IEC 60034-1	Vibration	: IEC 60034-14
Test	: IEC 60034-2	Tolerance	: IEC 60034-1
Noise	: IEC 60034-9		

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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Space heaters 110-127 V / 200-240 V		110 kW 04 Poles 50 Hz		A																																					
DE grounding brush holder kit		<b>QUANTUM CONTROLS</b>																																							
				Scale 1 : 15																																					
SPM studs				PIRWUSER 00																																					
Sealing - Viton oil seal ring																																									
NDE endshield with electrically insulated bearing hub																																									
Color RAL 5009																																									
Painting plan 222P																																									
Mounting B5T																																									
DE Shaft End  DM20 WEG WPR-7339		Vibration sensor studs detail 		<table border="1"> <tr> <td>ECM</td> <td>LOC</td> <td colspan="2">SUMMARY OF MODIFICATIONS</td> <td>EXECUTED</td> <td>CHECKED</td> <td>RELEASED</td> <td>DATE</td> <td>VER</td> </tr> <tr> <td>EXECUTED</td> <td>PIRWUSER</td> <td colspan="2" rowspan="2">THREE PH. MOTOR W22 IE4 FRAME 315S/M IP55 TEFC</td> <td colspan="2" rowspan="2"> <b>PREVIEW</b>  WDD 00  </td> <td colspan="3" rowspan="2"> [Operational] SHEET 1 / 1 </td> </tr> <tr> <td>CHECKED</td> <td></td> </tr> <tr> <td>RELEASED</td> <td></td> <td colspan="2">WEG REDDITCH</td> <td colspan="3"></td> <td></td> </tr> <tr> <td>REL. DATE</td> <td></td> <td colspan="2"></td> <td colspan="3"></td> <td></td> </tr> </table>		ECM	LOC	SUMMARY OF MODIFICATIONS		EXECUTED	CHECKED	RELEASED	DATE	VER	EXECUTED	PIRWUSER	THREE PH. MOTOR W22 IE4 FRAME 315S/M IP55 TEFC		<b>PREVIEW</b> WDD 00 		[Operational] SHEET 1 / 1			CHECKED		RELEASED		WEG REDDITCH						REL. DATE							
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