

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : QUANTUM CONTROLS

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

Frame	: 280S/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	: 731 kg
Protection degree	: IP55	Moment of inertia (J)	: 1.60 kgm ²
Design	: NE		

	90 kW	90 kW	90 kW	90 kW
Output	90 kW	90 kW	90 kW	90 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	162/93.4 A	156/90.4 A	152 A	136 A
L. R. Amperes	1152/663 A	1309/759 A	1292 A	1184 A
LRC	7.1	8.4	8.5	8.7 x Code J
No load current	45.0/25.9 A	49.0/28.4 A	52.0 A	45.0 A
Rated speed	2976 rpm	2979 rpm	2981 rpm	3583 rpm
Slip	0.80 %	0.70 %	0.63 %	0.47 %
Rated torque	289 Nm	289 Nm	288 Nm	240 Nm
Locked rotor torque	220 %	230 %	250 %	280 %
Pull up torque	185 %	195 %	210 %	235 %
Breakdown torque	280 %	320 %	350 %	370 %
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	29 s	27 s	41 s
Locked rotor time (cold)	59 s	52 s	49 s	74 s
Efficiency (%)	50%	94.3	94.3	94.0
	75%	95.2	95.2	95.0
	100%	95.8	95.8	95.4
Power Factor	50%	0.80	0.77	0.76
	75%	0.86	0.85	0.84
	100%	0.88	0.87	0.87

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

Losses (%)	P1(0,9;1,0)		P2(0,5;1,0)		P3(0,25;1,0)		P4(0,9;0,5)		P5(0,5;0,5)		P6(0,5;0,25)		P7(0,25;0,25)	
	Drive end	Non drive end	Drive end	Non drive end	Drive end	Non drive end	Drive end	Non drive end	Drive end	Non drive end	Drive end	Non drive end	Drive end	Non drive end
	4.1	4.1	2.9	2.9	2.5	2.5	2.5	2.5	1.3	1.3	0.9	0.9	0.5	0.5

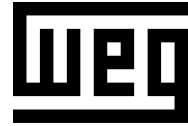
Bearing type	6314-C3	6314-C3	Foundation loads	
Lubrication interval	5000 h	5000 h	Max. traction	: 5251 N
Lubricant amount	27 g	27 g	Max. compression	: 12423 N
Lubricant type	MOBIL POLYREX EM		Load type	: -
			Load torque	: -
			Load inertia (J=GD ² /4)	: -

Notes
See notes on page 2.

Rev.	Changes Summary		Rev.	Checked	Date
Performed by	ghodgetts		1753964903		
Checked by	AUTOMATICO		Page	Rev.	
Date	17/09/2025		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

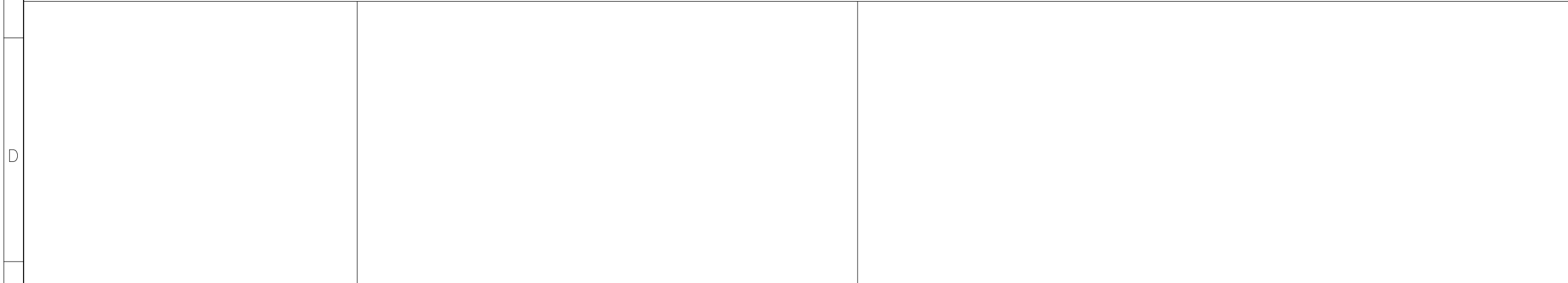
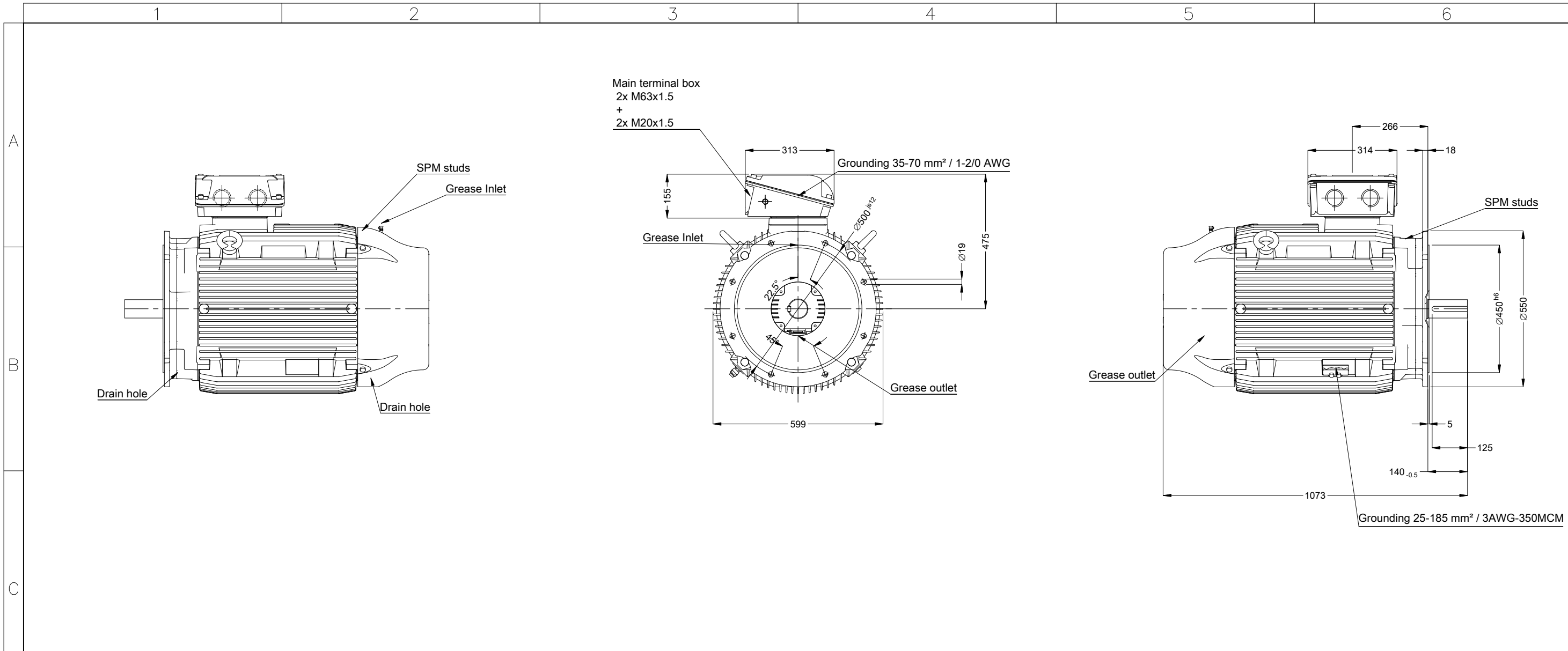
Specification	: IEC 60034-1	Vibration	: IEC 60034-14
Test	: IEC 60034-2	Tolerance	: IEC 60034-1
Noise	: IEC 60034-9		

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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Date	17/09/2025	2 / 2	0	



Space heaters 110-127 V / 200-240 V		DE Shaft End		Vibration sensor studs detail		90 kW 02 Poles 50 Hz		A	
SPM studs						QUANTUM CONTROLS		Scale 1 : 14	
Color RAL 5009								PIRWBUSER	
Painting plan 222P								00	
Mounting B5T		DM20 WEG WPR-7339				ECM LOC		SUMMARY OF MODIFICATIONS	
						EXECUTED PIRWBUSER		EXECUTED CHECKED RELEASED DATE VER	
								THREE PH. MOTOR W22 IE4	
								FRAME 280S/M IP55 TEFC	
						REL. DATE WEG REDDITCH		PREVIEW	
						[Operational]		WDD 00	
						SHEET 1 / 1			