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	Rotation¹	: Both
Ambient temperature	: -20 °C to +40 °C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l	Approx. weight³	: 799 kg
Protection degree	: IP55	Moment of inertia (J)	: 2.85 kgm²
Design	: NE		

Output		90 kW	90 kW	90 kW	90 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		169/97.5 A	165/95.6 A	161 A	145 A
L. R. Amperes		1220/702 A	1319/765 A	1367 A	1290 A
LRC		7.2	8.0	8.5	8.9 x Code K
No load current		62.0/35.7 A	68.0/39.4 A	72.0 A	65.0 A
Rated speed		1487 rpm	1489 rpm	1490 rpm	1790 rpm
Slip		0.87 %	0.73 %	0.67 %	0.56 %
Rated torque		578 Nm	577 Nm	577 Nm	480 Nm
Locked rotor torque		240 %	270 %	290 %	310 %
Pull up torque		200 %	230 %	245 %	260 %
Breakdown torque		260 %	290 %	310 %	320 %
Service factor		1.00	1.00	1.00	1.00
Noise level²		69.0 dB(A)	69.0 dB(A)	69.0 dB(A)	73.0 dB(A)
Locked rotor time (hot)		27 s	25 s	23 s	29 s
Locked rotor time (cold)		49 s	45 s	41 s	52 s
Efficiency (%)	50%	95.5	95.5	95.0	95.0
	75%	95.9	96.0	96.0	96.1
	100%	96.1	96.1	96.1	96.2
Power Factor	50%	0.72	0.69	0.66	0.65
	75%	0.80	0.78	0.76	0.76
	100%	0.84	0.82	0.81	0.81

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	3.8
	P2(0,5;1,0)	3.1	3.1	3.1	3.0
	P3(0,25;1,0)	2.8	2.8	2.8	2.7
	P4(0,9;0,5)	2.1	2.1	2.1	2.0
	P5(0,5;0,5)	1.3	1.3	1.3	1.3
	P6(0,5;0,25)	0.9	0.9	0.9	0.9
	P7(0,25;0,25)	0.6	0.6	0.6	0.6

	Drive end	Non drive end
Bearing type	6316-C3	6316-C3
Lubrication interval	13000 h	13000 h
Lubricant amount	34 g	34 g
Lubricant type	MOBIL POLYREX EM	

Foundation loads	
Max. traction	: 11740 N
Max. compression	: 19579 N
Load type	: -
Load torque	: -
Load inertia (J=GD²/4)	: -

Notes
See notes on page 2.

Rev.	Changes Summary	Rev.	Checked	Date

Performed by	ghodgetts		1753971352	
Checked by	AUTOMATICO		Page	Rev.
Date	17/09/2025		1 / 2	0

DATA SHEET
Three Phase Induction Motor - Squirrel Cage

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

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

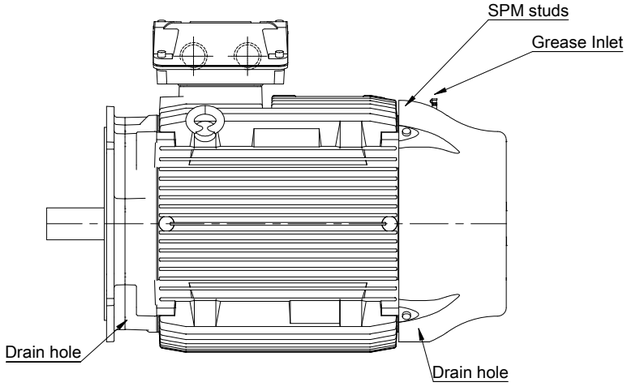
Specification	: IEC 60034-1	Vibration	: IEC 60034-14
Test	: IEC 60034-2	Tolerance	: IEC 60034-1
Noise	: IEC 60034-9		

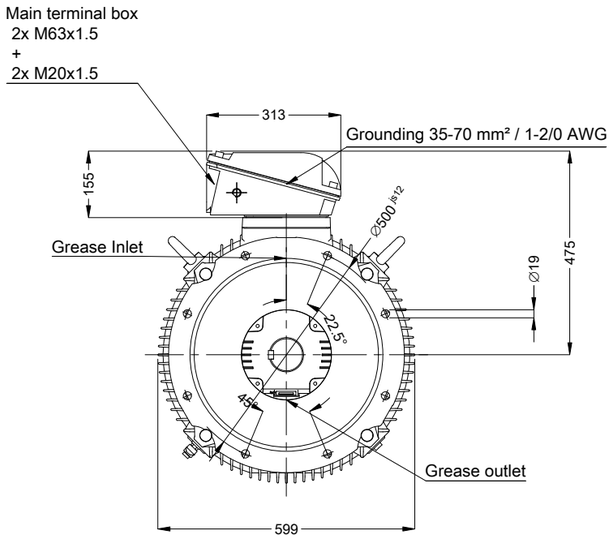
This revision replaces and cancel the previous one, which must be eliminated.
(1) Looking the motor from the shaft end.
(2) Measured at 1m and with tolerance of +3dB(A).
(3) Approximate weight, subject to be changed after manufacturing process.

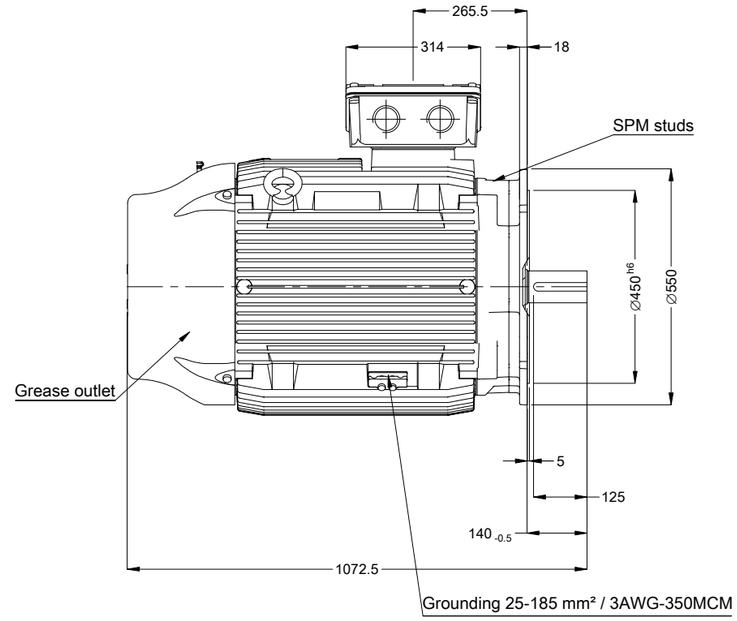
These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in IEC 60034-1.

Rev.	Changes Summary	Rev.	Checked	Date

Performed by	ghodgetts		1753971352	
Checked by	AUTOMATICO		Page	Rev.
Date	17/09/2025		2 / 2	0

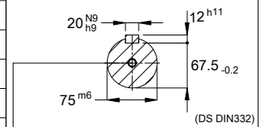






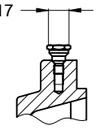
Space heaters 110-127 V / 200-240 V
SPM studs
Color RAL 5009
Painting plan 222P
Mounting B5T

DE Shaft End



DM20 WEG WPR-7339

Vibration sensor studs detail



90 kW 04 Poles 50 Hz | A

QUANTUM CONTROLS

Scale 1 : 14

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
			PIRWBUSER				00

EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 IE4	PREVIEW
CHECKED		FRAME 280S/M IP55 TEFC	WDD 00
RELEASED			
REL. DATE		WEG REDDITCH [Operational]	SHEET 1 / 1

Dimensions in mm

A3