

ABB BALDOR RELIANCE III

Customer information packet

VSPM2514T

20HP, 3525RPM, 3PH, 60HZ, 254TC, 3940M, OPSB, F

Class - None

Division - Not Applicable

Specifications

Enclosure	OPSB
Frame	254TC
Frame Material	Steel
Frequency	60.00 Hz
Haz Area Class and Group	None
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Output @ Frequency	20.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	3600 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	CURUSEEV NEMA PREMIUM 4 WEEE
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Auxiliary Box Lead Termination	None
Base Indicator	No Mounting
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	23.000 A @ 460.0 V 46.000 A @ 230.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	92.4 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	23.0 a

Part Detail

Revision	B
Type	AC
Mech. spec.	39E764
Base	
Status	PRD/A
Elec. spec.	39WGX341
Layout	39LYE764
Eff. date	12-12-2025
CD Diagram	CD0005
Poles	02
Leads	9#10
Proprietary	False
Created date	11-16-2023

Insulation Class	F
Inverter Code	Inverter Duty
KVA Code	J
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	5400 rpm
Motor Lead Quantity/Wire Size	9 @ 10 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3940M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	21.69 IN
Power Factor	89
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
RoHS Status	ROHS COMPLIANT
Service Factor	1.15
Shaft Diameter	1.625 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	3525 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	None
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None
Winding Thermal 2	None

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CAT #	VSPM2514T					WGT	242	LBS					
SPEC	39E764X341					ENCL	OPSB						
SER #						CC	010A	IP	23				
HP	20	MAG CUR				16.4/8.2							
VOLTS	230/460					NEMA NOM. EFF					92.4		
AMPS	46/23						PF	89					
RATING	40C AMB-CONT												
RPM	3525					MAX RPM			5400				
FRAME	254TC	HZ	60	CODE		J	CLASS			F			
SER.F.	1.15	SF AMP	52/26				PH	3	DES	A			
DE	6309		ODE		6208								
LUBRICATION	POLYREX EM												
ID LOGO	INVERTER TYPE				VPWM		CHP	1.5	TO	1	1.5:1		
ID LOGO	WK2	1.02	CT	10	TO	1	10:1						
ID LOGO	SL HZ	1.25	VT	20	TO	1	20:1						
							QR						
YR													

AC Induction Motor Performance Data

Record # 101130

Typical performance - not guaranteed values

Winding: 39WGX341-R005			Type: 3940M		Enclosure: OPSB		
Nameplate Data				460 V, 60 Hz: High Voltage Connection			
Rated Output (HP)		20		Full Load Torque		29.7 LB-FT	
Volts		230/460		Start Configuration		direct on line	
Full Load Amps		46/23		Breakdown Torque		131 LB-FT	
R.P.M.		3525		Pull-up Torque		45 LB-FT	
Hz	60	Phase	3	Locked-rotor Torque		68 LB-FT	
NEMA Design Code		A	KVA Code	J	Starting Current		200 A
Service Factor (S.F.)		1.15		No-load Current		8.2 A	
NEMA Nom. Eff.		92.4	Power Factor	89	Line-line Res. @ 25°C		0.347 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		28°C	
S.F. Amps		52/26		Temp. Rise @ S.F. Load		34°C	
				Locked-rotor Power Factor		28.6	
				Rotor inertia		1.02 lb-ft²	

Load Characteristics 460 V, 60 Hz, 20 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	56	76	85	89	90	90	90
Efficiency	86.5	91.5	92.6	92.7	92.4	91.7	92.5
Speed	3584	3569	3553	3537	3521	3501	3527
Line amperes	9.94	13.67	18.01	22.81	28.13	33.66	26

ABB Motors and Mechanical Inc.

WINDING # 39WGX341

Typical performance - not guaranteed values.

20 HP 3 PH 60 HZ 3525 RPM 460 V 3940M

TORQUES (LB-FT) : PO=131 PU=45 LR=68 LRA=200





