

ABB BALDOR RELIANCE III

Customer information packet

HBEM3581T

20M 4P TEFC HOR 143T

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	143T
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	None
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Output @ Frequency	1.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ 230.0 V @ 60 HZ
Agency Approvals	CURUSEEV NEMA PREMIUM WEEE
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Auxiliary Box Lead Termination	None
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	3.200 A @ 208.0 V 3.260 A @ 230.0 V 1.630 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	85.5 %
Electrically Isolated Bearing	Electrically Isolated Bearings
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater

Part Detail

Revision	E
Type	AC
Mech. spec.	05H396
Base	
Status	PRD/A
Elec. spec.	05WGX508
Layout	05LYH396
Eff. date	12-06-2024
CD Diagram	CD0005
Poles	04
Leads	9#18
Proprietary	False
Created date	01-04-2022

High Voltage Full Load Amps	1.6 a
Insulation Class	H
Inverter Code	Inverter Ready
KVA Code	N
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	No Locked Bearing
Max Speed	2700 rpm
Motor Lead Quantity/Wire Size	9 @ 18 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0520M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	12.54 IN
Power Factor	67
Product Family	General Purpose
Pulley End Bearing Type	Sealed Bearing
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
RoHS Status	ROHS COMPLIANT
Service Factor	1.15
Shaft Diameter	0.875 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1760 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

Nameplate

NP4312A01A01L																						
CAT #		HBEM3581T							SER						CC	010A		WGT				LBS
SPEC		05H396X508G1							RATING		40C AMB-CONT											
HZ		VOLTS				AMPS				RPM				HP		SF		NEMA NOM. EFF				
60		230/460				3.26/1.63				1760				1HP		1.15		85.5				
PH	3	CL	H	CODE		N	DES	B	ENCL	TEFC		IP	54	PF	67	%						
DE BRG		6205							ODE BRG		6203				FRAME		143T					
INV TYPE:				VPWM			SL HZ		1.3		CHP		60		TO		90		1.5:1			
WK2		0.144		LB FT2			MAX RPM		2700		CT		6		TO		60		10:1			
2.4/1.2							VT		3		TO		60		20:1							
SFA 3.52/1.76																						
YR																						

AC Induction Motor Performance Data

Record # 90512

Typical performance - not guaranteed values

Winding: 35WGG184-R018			Type: 3522M	Enclosure: TEFC	
Nameplate Data			460 V, 60 Hz: High Voltage Connection		
Rated Output (HP)		1	Full Load Torque		2.99 LB-FT
Volts		230/460	Start Configuration		direct on line
Full Load Amps		3.34/1.67	Breakdown Torque		16.6 LB-FT
R.P.M.		1770	Pull-up Torque		7.42 LB-FT
Hz	60	Phase	3	Locked-rotor Torque	10.32 LB-FT
NEMA Design Code	B	KVA Code	N	Starting Current	16.1 A
Service Factor (S.F.)		1.15	No-load Current		1.23 A
NEMA Nom. Eff.	85.5	Power Factor	66	Line-line Res. @ 25°C	14.4 Ω
Rating - Duty		40C AMB-CONT	Temp. Rise @ Rated Load		32°C
S.F. Amps			Temp. Rise @ S.F. Load		37°C
			Locked-rotor Power Factor		59.3666
			Rotor inertia		0.159 lb-ft²

Load Characteristics 460 V, 60 Hz, 1 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	27	43	56	66	73	78	70
Efficiency	70.8	81.2	84.5	85.9	85.8	85.2	85.8
Speed	1793	1786	1781	1773	1766	1758	1769
Line amperes	1.25	1.34	1.49	1.67	1.87	2.12	1.79

ABB Motors and Mechanical Inc.

WINDING # 35WGG184

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1770 RPM 460 V 3522M

TORQUES (LB-FT): PO=16.6 PU=7.42 LR=10.32 LRA=16.1





