

ABB BALDOR RELIANCE III

Customer information packet

EM3581T

1HP, 1760RPM, 3PH, 60HZ, 143T, 0520M, TEFC, F1

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 NEMA PREMIUM (OLD LOGO)
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	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater

Part Detail

Revision	P
Type	AC
Mech. spec.	05C001
Base	
Status	PRD/A
Elec. spec.	05WGX508
Layout	05LYC001
Eff. date	11-05-2025
CD Diagram	CD0005
Poles	04
Leads	9#18
Proprietary	False
Created date	01-15-2019

High Voltage Full Load Amps	1.6 a
Insulation Class	F
Inverter Code	Inverter Ready
IP Rating	NONE
KVA Code	N
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	No Locked Bearing
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	Ball
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

NP3441LUA									
CAT.NO.	EM3581T								
SPEC	05C001X508G1								
HP	1								
VOLTS	230/460								
AMPS	3.26/1.63								
RPM	1760								
FRAME	143T		HZ	60		PH	3		
SF	1.15	CODE	N	DES	B	CLASS	F		
NEMA NOM. EFF	85.5	PF	67						
RATING	40C AMB-CONT								
CC	010A								
ENCL	TEFC	SER							
DE	6205		ODE	6203					
VPWM INVERTER READY	SFA 3.52/1.76								
CT6-60H(10:1)VT3-60H(20:1									
	50HZ 1HP 190/380V 3.6/1.8A								

Parts List

Part number	Description	Quantity
SA364979	SA 05C001X508G1	1.000 ea
RA354345	RA 05C001X508G1	1.000 ea
35FN3002A05SP	EXFN, PLASTIC, 6.376 OD, .638 ID	1.000 ea
HW3201A05	3/8-16 EYEBOLT	1.000 ea
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 ea
10XN2520A06	1/4 20X3/8 HX HD CAP	2.000 ea
06CB3000	BALDOR CONDUIT BOX CAST	1.000 ea
06GS1000	GASKET,CONDUIT BOX	1.000 ea
51XW2520A12	SCREW, HEX SER SLT HD, ZN, 1/4-20 X .75	2.000 ea
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	1.000 ea
HW3001B02	BRASS CUP WASHER W/GROUND SYMBOL TAB,	1.000 ea
35EP1100A02	FR ENDPLATE, TEFC W/GREASER	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HW5100A03	WAVY WASHER (W1543-017)	1.000 ea
35EP1102A02	PU ENDPLATE, MACH	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HA3100A37	THRUBOLT 10-32 X 8.500	4.000 ea
XY1032A02	10-32 HEX NUT DIRECTIONAL SERRATION	4.000 ea
51XB1214A16	12-14X1.00 HXWSSLD SERTYB	1.000 ea
35FH4005A02	IEC FH W/GREASER - W/PRIMER	1.000 ea
51XW1032A06	10-32 X .38, TAPTITE II, HEX WSHR SLTD S	3.000 ea
06CB3500	BALDOR CONDUIT BOX LID	1.000 ea
06GS1001	BALDOR CONDUIT BOX GASKET	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 ea
HW2501D13	KEY, 3/16 SQ X 1.375	1.000 ea
HA7000A01	KEY RETAINER 7/8" DIA SHAFT	1.000 ea
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.050 lb
MG1050Y01	CELEROL BALDOR GOLD *5 GALLON BUCKET*	0.022 ga
LC0005	CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING	1.000 ea

NP3441LUA	AL SUPER-E VPWM INV RDY,UL EEV,NEMA PREM	1.000 ea
36PA1000	PKG GRP, PRINT PK1016A08	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea

Accessories

Part number	Description	Multiplier
35-1300	C FACE KIT	A8

AC Induction Motor Performance Data

Record # 82131

Typical performance - not guaranteed values

Winding: 05WGX508-R001			Type: 0520M		Enclosure: TEFC			
Nameplate Data			460 V, 60 Hz: High Voltage Connection					
Rated Output (HP)		1	Full Load Torque		2.979 LB-FT			
Volts		230/460	Start Configuration		direct on line			
Full Load Amps		3.2-3.2/1.6	Breakdown Torque		13.9 LB-FT			
R.P.M.		1760	Pull-up Torque		8 LB-FT			
Hz	60	Phase	3	Locked-rotor Torque		9.18 LB-FT		
NEMA Design Code		B	KVA Code	N	Starting Current		14.4 A	
Service Factor (S.F.)		1.15	No-load Current		1.11 A			
NEMA Nom. Eff.		0	Power Factor		0	Line-line Res. @ 25°C		16.215 Ω
Rating - Duty		40C	AMB-CONT		Temp. Rise @ Rated Load		24°C	
S.F. Amps					Temp. Rise @ S.F. Load		28°C	
					Locked-rotor Power Factor		62	

Load Characteristics 460 V, 60 Hz, 1 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	29	46	59	68	74	79	72
Efficiency	71.2	81.4	84.6	85.5	85.4	84.7	85.4
Speed	1791.4	1784.2	1776.7	1768.6	1760	1750.7	1763
Line amperes	1.14	1.25	1.41	1.61	1.84	2.11	1.75

ABB Motors and Mechanical Inc.

WINDING # 05WGX508

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1760 RPM 460 V 0520M

TORQUES (LB-FT): PO=13.9 PU=8 LR=9.18 LRA=14.4



