

ABB BALDOR RELIANCE III

Customer information packet

IDM3581T

1HP, 1760RPM, 3PH, 60HZ, 143TC, 0520M, TEBC, F1

Class - None

Division - Not Applicable

Specifications

Enclosure	TEBC
Frame	143TC
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	230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	CSA UR
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	BLOWER
Current @ Voltage	1.630 A @ 460.0 V 3.200 A @ 208.0 V 3.260 A @ 230.0 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
High Voltage Full Load Amps	1.6 a

Part Detail

Revision	E
Type	AC
Mech. spec.	05E535
Base	
Status	PRD/A
Elec. spec.	05WGX508
Layout	05LYE535
Eff. date	03-16-2026
CD Diagram	CD0005
Poles	04
Leads	9#18
Proprietary	False
Created date	07-21-2022

Insulation Class	H
Inverter Code	Inverter Ready
KVA Code	N
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	6000 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	19.15 IN
Power Factor	67
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.00
Shaft Diameter	0.875 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	Shaft Slinger
Speed	1760 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	Normally Closed Thermostat
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None
Winding Thermal 2	None

Nameplate

NP4544L													
CAT.NO.	IDM3581T												
SPEC.	05E535X508G1												
FRAME	143TC			H.P.		1							
VOLTS	230/460												
MAG. CUR.	2.4/1.2				F.L. AMPS			3.26/1.63					
R.P.M.	1760			R.P.M. MAX			6000						
HZ.	60		PH.		3		CLASS		H				
SER.F.	1.00		DES.		B		SL HZ		1.3				
NEMA NOM. EFF.	85.5		WK2		0.144								
BLOWER	V		115		PH		1		HZ		60	AMPS	.4
RATING	40C AMB-CONT						ENCL		TEBC				
DE	6205		ODE		6203								
CC	010A		SN										
	1000:1 CT/VT												

Parts List

Part number	Description	Quantity
SA409034	SA 05E535X508G1	1.000 ea
RA400580	RA 05E535X508G1	1.000 ea
35FN3002A05SP	EXFN, PLASTIC, 6.376 OD, .638 ID	1.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	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
HW3001B01	BRASS CUP WASHER, FOR #10 SCREW	1.000 ea
35EP1100B21	FRONT TEBC 203 BRG W/ GREASER & THRU-SHA	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HW5100A03	WAVY WASHER (W1543-017)	1.000 ea
35EP1329A01	PU EP ENCL 143-5TC 205 BRG W/GRSR & STD	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
51XN1032A20	10-32 X 1 1/4 HX WS SL SR	2.000 ea
HA3100A28	THRUBOLT 10-32 X 8.187	4.000 ea
10XN2520A08	1/4-20X1/2 HEX HEAD CAP	1.000 ea
HA3218A04	MALE-FEMALE STANDOFF .25-.20 .38 HEX	3.000 ea
10XN2520A04	1/4-20 X 1/4 HEX HD MACH SCREW	3.000 ea
HW1003A25	WASHER, 1/4 EX TH LK, ZN X	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
HA1005A05SP	SLINGER, OD 1.50, ID .659, 203 BRG	1.000 ea
HW2501D13	KEY, 3/16 SQ X 1.375	1.000 ea
HA7000A01	KEY RETAINER 7/8" DIA SHAFT	1.000 ea
MJ5004A05	#242-21 LOCTITE GENERAL PURPOSE MED. STR	0.005 ea
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea

LB1009N	LABEL,ROTATION DIRECTION (ON ROLLS)	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.050 lb
05FH5001A03	BLOWER KIT,05FH4002,EF0008,35CB3002	1.000 ea
MG1050G01	CELEROL MEDIUM CHARCOAL METALLIC GRAY	0.022 ga
LC0035B01	1PH, SV, FIX, 2 LEAD	1.000 ea
LC0145B01	CONNECTION LABEL	1.000 ea
NP4544L	ALUM INV UL EEV CC NEMA PREM W/ENCL	1.000 ea
G7PA1000	PKG GRP, PRINT PK1034A07	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
PE-0000001	ZRTG PE ASSEMBLY	1.000 ea

AC Induction Motor Performance Data

Record # 86913

Typical performance - not guaranteed values

Winding: 05WGX508-R003			Type: 0520M		Enclosure: TEBC		
Nameplate Data			460 V, 60 Hz: High Voltage Connection				
Rated Output (HP)		1	Full Load Torque		2.98 LB-FT		
Volts		230/460	Start Configuration		direct on line		
Full Load Amps		3.26/1.63	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	No-load Current		1.11 A		
NEMA Nom. Eff.		85.5	Power Factor	67	Line-line Res. @ 25°C		16.7 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		24°C	
				Locked-rotor Power Factor		61.9	
				Rotor inertia		0.144 lb-ft²	

Load Characteristics 460 V, 60 Hz, 1 HP

% of Rated Load	25	50	75	100	125	150
Power Factor	29	46	59	68	75	79
Efficiency	71.3	81.3	84.7	85.6	85.4	84.7
Speed	1791	1784	1777	1769	1760	1751
Line amperes	1.14	1.25	1.41	1.61	1.84	2.11

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





