

ABB BALDOR RELIANCE III

Customer information packet

ZDM3581T

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	ENCODER
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	1.6 a

Part Detail

Revision	D
Type	AC
Mech. spec.	05E535
Base	
Status	PRD/A
Elec. spec.	05WGX508
Layout	05LYE535
Eff. date	09-30-2025
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

NP4539L										
CAT.NO.	ZDM3581T									
SPEC.	05E535X508G2									
FRAME	143TC			H.P.		1 TE				
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					
BLWR V	115	PH		1	HZ		60	AMPS		.4
RATING	40C AMB-CONT									
DE	6205		ODE		6203					
CC	010A	SN								
	1000:1 CT/VT									

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





