

ABB BALDOR RELIANCE III

Customer information packet

ZDVSNC3581T

1HP, 1770RPM, 3PH, 60HZ, 143TC, 0522M, TENV, F1

Class - None

Division - Not Applicable

Specifications

Enclosure	TENV
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	None
Current @ Voltage	3.200 A @ 230.0 V 1.600 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	ENCODER
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	1.6 a
Insulation Class	H

Part Detail

Revision	D
Type	AC
Mech. spec.	05F205
Base	
Status	PRD/A
Elec. spec.	05WGX545
Layout	05LYF205
Eff. date	03-05-2026
CD Diagram	CD0005
Poles	04
Leads	9#18 Y
Proprietary	False
Created date	03-11-2022

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	0522M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	14.61 IN
Power Factor	68
Product Family	Chemical Processing (Not DC)
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	No Slinger
Speed	1770 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

NP4357L									
CAT NO	ZDVSNCP3581T								
SPEC.	05F205X545G1								
FRAME	143TC			HP	1 TE				
VOLTS	230/460								
MAG CUR	2.14/1.07				FLA		3.2/1.6		
RPM	1770		RPM MAX			6000			
HZ	60	PH	3	CLASS		H			
SER.F.	1.00			SL HZ		0.77			
NEMA-NOM-EFF	85.5		WK2		0.159				
RATING	40C AMB-CONT								
DE BRG	6205		ODE BRG			6203			
CC	010A	SN							
	1000:1 CT/VT								

Parts List

Part number	Description	Quantity
SA409002	SA 05F205X545G1	1.000 ea
RA400549	RA 05F205X545G1	1.000 ea
35FN3002A05SP	EXFN, PLASTIC, 6.376 OD, .638 ID	1.000 ea
HW3201A05	3/8-16 EYEBOLT	1.000 ea
06CB1000A02G	CONDUIT BOX, MACH GRAY	1.000 ea
RM1016	LEAD SEPARATOR GASKET - 305/306 C.P.MOTO	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
10XN2520S06	1/4 20X3/8 HX HD CAP S.S.	1.000 ea
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 ea
35EP1100C64G	FRONT TENV 203 BRG CP DUTY FOR THRU-SHAF	1.000 ea
HW4500A19	1/4-28X1/4 SLOTTED PLUG F/S	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 ea
HW5100A03	WAVY WASHER (W1543-017)	1.000 ea
35EP1329A16G	PUEP ENCL 143-5TC 205 BRG,GRSR,RLF,NPT D	1.000 ea
HW4500A19	1/4-28X1/4 SLOTTED PLUG F/S	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 ea
51XN1032A18	10-32 X 1 1/8 HX WS SL SR (ESKAY)	2.000 ea
HA3100A28	THRUBOLT 10-32 X 8.187	4.000 ea
10XN2520A08	1/4-20X1/2 HEX HEAD CAP	1.000 ea
35FH4801G	THRU-SHAFT ENCODER COVER INV/VECTOR F1 &	1.000 ea
10XN2520A08	1/4-20X1/2 HEX HEAD CAP	4.000 ea
06CB1502G	LIPPED CONDUIT BOX LID CAST, GRAY EPOXY	1.000 ea
06GS1003	GASKET, KOBX LID, 1/8" THICK BLACK NEOPR	1.000 ea
10XN2520A12	1/4-20 X 3/4 HEX HEAD CAP	2.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	2.000 ea
HA1005A05SP	SLINGER, OD 1.50, ID .659, 203 BRG	1.000 ea
HW4600B32SP	V-RING SLINGER 1.000 X 1.540 X .24 VITON	1.000 ea

HW2501D13	KEY, 3/16 SQ X 1.375	1.000 ea
HA7000A01	KEY RETAINER 7/8" DIA SHAFT	1.000 ea
MJ5001A27	32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL	0.001 qt
MJ5004A05	#242-21 LOCTITE GENERAL PURPOSE MED. STR	0.005 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
OE5011A08	HS25 ENCODER ASSY - TENV "CP DUTY"	1.000 ea
MG1025N19	WILKOFAS, 778.50, RELIANCE BLUE-GREEN 8	0.022 ga
LC0145B01	CONNECTION LABEL	1.000 ea
NP4357L	SS VEC UL CSA-EEV PREM CC (W/OUT DESIGN	1.000 ea
36PA1001	PKG GRP, PRINT PK1017A07	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 # 87236

Preliminary Data Sheet

Winding: 05WGX545-R005			Type: 0522M		Enclosure: TENV		
Nameplate Data			460 V, 60 Hz: High Voltage Connection				
Rated Output (HP)		1	Full Load Torque		2.97 LB-FT		
Volts		230/460	Start Configuration		direct on line		
Full Load Amps		3.2/1.6	Breakdown Torque		13.7 LB-FT		
R.P.M.		1770	Pull-up Torque		6.77 LB-FT		
Hz	60	Phase	3	Locked-rotor Torque		8.13 LB-FT	
NEMA Design Code		B	KVA Code	N	Starting Current		12.1 A
Service Factor (S.F.)		1	No-load Current		1.07 A		
NEMA Nom. Eff.		85.5	Power Factor	68	Line-line Res. @ 25°C		16.4 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load			
				Locked-rotor Power Factor		61.4	
				Rotor inertia		0.159 lb-ft²	

Load Characteristics 460 V, 60 Hz, 1 HP

% of Rated Load	25	50	75	100	125	150
Power Factor	31	49	62	72	78	82
Efficiency	68.5	79.7	83.6	85.1	85.6	85.5
Speed	1794	1789	1783	1777	1771	1765
Line amperes	1.11	1.2	1.35	1.54	1.76	2

ABB Motors and Mechanical Inc.

WINDING # 05WGX545

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1770 RPM 460 V 0522M

TORQUES (LB-FT): PO=13.7 PU=6.77 LR=8.13 LRA=12.1



