

ABB BALDOR RELIANCE III

Customer information packet

EM2540T

40HP, 1180RPM, 3PH, 60HZ, 364T, 4278M, OPSB, F1

Specifications

Enclosure	OPSB
Frame	364T
Frame Material	Steel
Frequency	60.00 Hz
Motor Letter Type	Three Phase
Output @ Frequency	40.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1200 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	51.000 A @ 460.0 V 110.000 A @ 208.0 V 104.000 A @ 230.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	94.1 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	51.0 a
Insulation Class	F

Part Detail

Revision	E
Type	AC
Mech. spec.	42F100
Base	
Status	PRD/A
Elec. spec.	42WGW920
Layout	42LYF100
Eff. date	11-29-2023
CD Diagram	CD0005
Poles	06
Leads	9#8
Proprietary	False
Created date	03-30-2022

Inverter Code	Not Inverter
KVA Code	H
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Quantity/Wire Size	9 @ 8 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	4278M
Mounting Arrangement	F1
Number of Poles	6
Overall Length	30.69 IN
Power Factor	79
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	2.375 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1180 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

NP2138LUA												
CAT.NO.	EM2540T			P/N					ENCLOSURE			OPSB
SPEC.	42F100W920G1		CC	010A	FRAME		364T		S/N			
HP	40			CLASS		F	HZ	60				
RPM	1180			PH	3	DES		A				
VOLT	230/460			KVA-CODE			H	ODE BRG		6311	DE BRG	6313
AMP	104/51											
RATING	40C AMB-CONT			GREASE			POLYREX EM					
NEMA-NOM-EFF	94.1	PF	79	SER.F.	1.15							
	50HZ 40HP 190/380V 120/60A					SF 1.0						
HTR-VOLTS	HTR-AMPS											

Parts List

Part number	Description	Quantity
SA404507	SA 42F100W920G1	1.000 ea
RA395870	RA 42F100W920G1	1.000 ea
HA6360	LIFTING LUG FOR 42 FRAME MOTORS.	2.000 ea
HA6017	CAST ADAPTER, 40,42 KOBX	1.000 ea
19XW3118A12	.31-18 X .75 HEX WASHER HEAD TAPTITE II	2.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	2.000 ea
10CB3001	CONDUIT BOX CAST W/2.500 LEAD HOLE	1.000 ea
19XW3118A12	.31-18 X .75 HEX WASHER HEAD TAPTITE II	4.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	4.000 ea
WD1000B25	GND LUG, BURNDY L125HP OR T&B L125HP-BB	1.000 ea
19XW3118G08	.31-18X.50,HEX WSHR HD,TAPTITE 2,GREEN	1.000 ea
42EP3200A01	FR ENDPLATE, MACH	1.000 ea
HW5100A13	W4627-047 WVY WSHR	1.000 ea
42EP1202A01	STD PU ENDPLATE MODEL 42 313 BRG.	1.000 ea
10XN3816K44	3/8-16 X 2.75 HEX HD CAP SCREW, GRADE 5	4.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
XY5013A12	NUT,1/2-13,HEX,STEEL,ZINCPLATED	8.000 ea
10CB3500SP	CONDUIT BOX LID, CAST	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	4.000 ea
HW2501J36	KEY, 5/8 SQ X 4.250	1.000 ea
42AD2001A01	BAFFLE PLATE 42 OPEN, SLOTTED BAND MTRS	1.000 ea
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
HW3100A40	ALL THREAD ROD 1/2-13 X 22.750	4.000 ea
MG1050Y01	CELEROL BALDOR GOLD *5 GALLON BUCKET*	0.080 ga
MJ1000A02	GREASE, POLYREX EM EXXON	0.030 lb
42AD2001A01	BAFFLE PLATE 42 OPEN, SLOTTED BAND MTRS	1.000 ea
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea

85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0005	CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING	1.000 ea
NP2138LUA	ALUM SUPER-E UL PREM CC (300SER)	1.000 ea
42PA1000	PACKAGING GROUP PRINT PK1024A07	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
PE-0000013	ZRTG PE ASSEMBLY	1.000 ea

AC Induction Motor Performance Data

Record # 34461

Typical performance - not guaranteed values

Winding: 42WGW920-R001				Type: 4278M		Enclosure: OPSB	
Nameplate Data				460 V, 60 Hz: High Voltage Connection			
Rated Output (HP)		40		Full Load Torque		178 LB-FT	
Volts		230/460		Start Configuration		direct on line	
Full Load Amps		104/51		Breakdown Torque		521 LB-FT	
R.P.M.		1180		Pull-up Torque		232 LB-FT	
Hz	60	Phase	3	Locked-rotor Torque		317 LB-FT	
NEMA Design Code		A	KVA Code	Starting Current		337 A	
Service Factor (S.F.)		1.15		No-load Current		21.9 A	
NEMA Nom. Eff.		94.1	Power Factor	Line-line Res. @ 25°C		0.154 Ω	
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		41°C	
S.F. Amps				Temp. Rise @ S.F. Load		50°C	
				Locked-rotor Power Factor		28	
				Rotor inertia		14.9 LB-FT2	

Load Characteristics 460 V, 60 Hz, 40 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	43	64	74	79	81	82	80
Efficiency	89.3	93.1	94.1	94.1	93.3	92.2	93.6
Speed	1195	1191	1187	1183	1177	1170	1179
Line amperes	24.8	31.6	40.5	50.9	62.2	77.5	57.7

ABB Motors and Mechanical Inc.

WINDING # 42WGW920

Typical performance - not guaranteed values.

40 HP 3 PH 60 HZ 1180 RPM 460 V 4278M

TORQUES (LB-FT): PO=521 PU=232 LR=317 LRA=337





