

ABB BALDOR RELIANCE III

Customer information packet

VFSWDM3538-E

.5HP, 1770RPM, 3PH, 60HZ, 56C, 3512M, TENV, F1

Class - None

Division - Not Applicable

Specifications

Enclosure	TENV
Frame	56C
Frame Material	Stainless Steel
Frequency	60.00 Hz
Haz Area Class and Group	None
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Output @ Frequency	.500 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	208.0 V @ 60 HZ 230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	CSA CURUSEEV NEMA PREMIUM UR WEEE
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Auxiliary Box Lead Termination	None
Base Indicator	No Mounting
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	1.900 A @ 208.0 V 1.800 A @ 230.0 V .900 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	80.0 %
Electrically Isolated Bearing	Not Electrically Isolated

Part Detail

Revision	E
Type	AC
Mech. spec.	35E4656
Base	
Status	PRD/A
Elec. spec.	35WGZ944
Layout	35LYE4656
Eff. date	08-14-2023
CD Diagram	CD0005
Poles	04
Leads	9#18
Proprietary	False
Created date	11-23-2021

Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	0.9 a
Insulation Class	H
Inverter Code	Inverter Duty
KVA Code	M
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	2700 rpm
Motor Finish	UNPAINTED
Motor Lead Quantity/Wire Size	9 @ 18 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3512M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	11.78 IN
Power Factor	65
Product Family	WD All SD Non-Encapsulated
Pulley End Bearing Type	Sealed Bearing
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	0.625 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	None

Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None
Winding Thermal 2	None

Nameplate

NP4427AAA01															
CAT #	VFSWDM3538-E					WT	33		LBS						
SPEC	35E4656Z944G1					ENCL	TENV								
SER #						CC	010A		IP	69					
HP	.5		MAG CUR			1.34-1.58/.79									
VOLTS	208-230/460					NEMA NOM. EFF					80				
AMPS	1.9-1.8/.9					PF	65								
RATING	40C AMB-CONT														
RPM	1770					MAX RPM		2700							
FRAME	56C	HZ	60		CODE	M	CLASS		H						
SER.F.	1.15	SF AMP	2.1-1.9/0.95				PH	3	DES	B					
DE	6205		ODE		6205										
LUBRICATION	POLYREX EM														
ID LOGO	INVERTER TYPE				VPWM		CHP	60	TO	90	1.5:1				
ID LOGO	WK2	0.087	CT	15	TO	60	4:1								
ID LOGO	SL HZ	1	VT	3	TO	60	20:1								

Parts List

Part number	Description	Quantity
SA399303	SA 35E4656Z944G1	1.000 ea
RA390362	RA 35E4656Z944G1	1.000 ea
35CB1017A01	35/36 MID SECT - 3 PC. CONDUIT BOX 1/2 N	1.000 ea
HA3424S48	STUD - M6X1.0 THDS X 3.00"	1.000 ea
RM1070A81	O-RING, -043 VITON/FKM .070CS X 3.489ID	1.000 ea
35CB1513A01	35-36-37 MACH. LID - 3 PC. CONDUIT BOX	1.000 ea
11XW1032G08	10-32 X .50, TAPTITE II, HEX WSHR SLTD U	1.000 ea
HW3001B02	BRASS CUP WASHER W/GROUND SYMBOL TAB,	1.000 ea
35EP1940A03	FRONT TENV 205 BRG (STAINLESS)	1.000 ea
RM1070A25	O-RING, VITON/FKM .070CS X 6.190ID	1.000 ea
HW4500S33	1/8 NPT STAINLESS #304 SS PLUG	4.000 ea
HW5100A05	WVY WSHR F/205 & 304 BRGS	1.000 ea
35EP1935A02	PULLEY 56C/143-5TC ENCL 205 BRG	1.000 ea
RM1070A25	O-RING, VITON/FKM .070CS X 6.190ID	1.000 ea
HW4600G01	.984X1.499X.25 VITON SLICK SERIES LIP	1.000 ea
HW4600E99	25 X 42 X 6 AFX SEAL, GRAPHITE INFUSED V	1.000 ea
HW4500S33	1/8 NPT STAINLESS #304 SS PLUG	4.000 ea
RM1070A26	O-RING,4.5MM I.D.X1.5MM C.S. (VITON)	4.000 ea
RM1070A81	O-RING, -043 VITON/FKM .070CS X 3.489ID	1.000 ea
HW2502D13	SS KEY, 3/16 SQ X 1.375	1.000 ea
HA7000A04	KEY RETAINER 0.625 DIA SHAFTS	1.000 ea
MJ5001A27	32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL	0.005 qt
MJ5004A93	FOOD GRADE (H1 RATED) ANTISEIZE THRD COM	0.005 ea
HA1025A21	WSHR,FELT .125" THK	1.000 ea
HA5027A09	DRAIN KIT,(2)HA4002A03 BAGGED W/LABEL	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.050 lb
WD5603A01	KIT, CLOSED-END LEAD SPLICE (18-14GA)	1.000 ea
HA3100FS11	THRUBOLT, 10-32 X 8.500 SS FOOD SAFE	4.000 ea
36PA1000	PKG GRP, PRINT PK1016A08	1.000 ea
PK3082	STYROFOAM CRADLE	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea

FE-0000007	ZRTG FE ASSEMBLY	1.000 ea
PE-0000010	ZRTG PE ASSEMBLY	1.000 ea

AC Induction Motor Performance Data

Record # 91508

Typical performance - not guaranteed values

Winding: 35WGZ944-R002			Type: 3512M		Enclosure: TENV		
Nameplate Data			460 V, 60 Hz: High Voltage Connection				
Rated Output (HP)		.5	Full Load Torque		1.49 LB-FT		
Volts		208-230/460	Start Configuration		direct on line		
Full Load Amps		1.9-1.8/.9	Breakdown Torque		6.28 LB-FT		
R.P.M.		1770	Pull-up Torque		3.26 LB-FT		
Hz	60	Phase	3	Locked-rotor Torque		4.04 LB-FT	
NEMA Design Code		B	KVA Code	M	Starting Current		6.71 A
Service Factor (S.F.)		1.15		No-load Current		0.792 A	
NEMA Nom. Eff.		80	Power Factor	65	Line-line Res. @ 25°C		43.2 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		58°C	
S.F. Amps		2.1-1.9/0.95		Temp. Rise @ S.F. Load		64°C	
				Locked-rotor Power Factor		70.7767	
				Rotor inertia		0.0866 lb-ft²	

Load Characteristics 460 V, 60 Hz, 0.5 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	27	41	52	62	69	75	66
Efficiency	56.5	70.7	76.5	78.9	80	80	79.6
Speed	1792	1786	1779	1771	1763	1755	1766
Line amperes	0.795	0.827	0.889	0.966	1.06	1.18	1.02

ABB Motors and Mechanical Inc.

WINDING # 35WGZ944

Typical performance - not guaranteed values.

0.5 HP 3 PH 60 HZ 1770 RPM 460 V 3512M

TORQUES (LB-FT): PO=6.28 PU=3.26 LR=4.04 LRA=6.71





