

ABB BALDOR RELIANCE III

Customer information packet

VEM2514T

20HP, 3510RPM, 3PH, 60HZ, 254TC, 3928M, ODP, F1

Class - None

Division - Not Applicable

Specifications

Enclosure	ODP
Frame	254TC
Frame Material	Steel
Frequency	60.00 Hz
Haz Area Class and Group	None
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Output @ Frequency	20.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	3600 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	No Mounting
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	47.000 A @ 230.0 V 51.000 A @ 208.0 V 23.500 A @ 460.0 V
Design Code	A
Drip Cover	Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	91.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Drip Cover Mounting
Front Shaft Indicator	None

Part Detail

Revision	U
Type	AC
Mech. spec.	39D05
Base	
Status	PRD/A
Elec. spec.	39WGX101
Layout	39LYD005
Eff. date	05-28-2026
CD Diagram	CD0180
Poles	02
Leads	9#12
Proprietary	False
Created date	07-15-2016

Heater Indicator	No Heater
High Voltage Full Load Amps	23.5 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	G
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 12 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3928M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	22.12 IN
Power Factor	88
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	1.625 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	3510 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

NP3554LUA											
CAT.NO.	VEM2514T			P/N						ENCL	ODP
SPEC.	39D005X101G1	CC	010A	FRAME		254TC	SER.NO.				
HP	20		CLASS		F	HZ	60				
RPM	3510		PH	3	DES		A				
VOLTS	230/460			CODE		G	ODE BRG	6208	DE BRG	6309	
AMPS	47/23.5										
RATING	40C AMB-CONT		NEMA-NOM-EFF			91	GREASE	POLYREX EM			
PF	88	SER.F.	1.15		CT30-60(2:1) VT3-60(20:1)						
USABLE AT	50HZ 20HP 190/380V 56/28A				SF 1.0						
HTR-VOLTS	HTR-AMPS	MAX. SPACE HEATER TEMP.									

Parts List

Part number	Description	Quantity
SA324218	SA 39D005X101G1	1.000 ea
RA312049	RA 39D005X101G1	1.000 ea
HW3201A01	1/2-13 EYEBOLT	1.000 ea
HA6016	ADAPTER, CAST CONDUIT BOX	1.000 ea
09CB3003	CB W/1.75" DIA LD HL - 37, 39, 307 & 309	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	2.000 ea
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 ea
59XW2520G07	.25-20X.44,HEX SER WSHR,TAPTITE 2,GREEN	1.000 ea
HA3154A05	THRUBOLT STUD 3/8-16 X 16.875	4.000 ea
39EP3200A02	FR E P, MACH - DR CVR MTG	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
39AD2000	BAFFLE PLATE, STAMPED	1.000 ea
HW5100A08	W3118-035 WVY WSHR (WB)	1.000 ea
39EP3400A01	STD FACE MTD ENDPLATE 309 BRG	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	4.000 ea
10XN2520K28	1/4-20 X 1.75" HX HD SCRWGRADE 5, ZINC P	4.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 ea
XY3816A12	3/8-16 FINISHED NUT W/SERRATIONS	8.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	1.000 ea
39FH4500A01	DRIP COVER, STAMPED	1.000 ea
10XN2520K16	1/4-20 X 1" HX HD SCRW GRADE 5, ZINC P	2.000 ea
HA2001B08	SPL SPACER FOR AIR DEFLECTOR .50 O.D. X	2.000 ea
09CB3501SP	CONDUIT BOX LID FOR 09CB3001 & 09CB3002	1.000 ea
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 ea
PK6016	BASELESS FOOT BRACKET FOR 39 & 40 FRAME	3.000 ea
10XN5013K20	1/2-13 X 1.25 LON HEX HD SCREW SAME AS	2.000 ea
HW1000A50	1/2 SAE FLAT WASHERS	2.000 ea
XY3816A12	3/8-16 FINISHED NUT W/SERRATIONS	1.000 ea

HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.030 lb
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
MG1050Y01	CELEROL BALDOR GOLD *5 GALLON BUCKET*	0.050 ga
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0181	CONNECTION LABEL	1.000 ea
NP3554LUA	SS SUPER-E VPWM INV READY,CURUS-EEV,PREM	1.000 ea
39PA1000	PACKAGING GROUP 39 PRINT	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
LD7020D09	LEAD SET, 12AWG, 9 LEAD, 20" LONG LEADS	1.000 ea

AC Induction Motor Performance Data

Record # 56168

Typical performance - not guaranteed values

Winding: 36WGS041-R015			Type: 3622M		Enclosure: XPFC		
Nameplate Data			460 V, 60 Hz: High Voltage Connection				
Rated Output (HP)		3	Full Load Torque		4.71 LB-FT		
Volts		230/460	Start Configuration		direct on line		
Full Load Amps		7.4/3.7	Breakdown Torque		19.7 LB-FT		
R.P.M.		3450	Pull-up Torque		12 LB-FT		
Hz	60	Phase	3	Locked-rotor Torque		14.1 LB-FT	
NEMA Design Code		B	KVA Code	K	Starting Current		33.3 A
Service Factor (S.F.)			1	No-load Current		1.17 A	
NEMA Nom. Eff.		86.5	Power Factor	91	Line-line Res. @ 25°C		4.5612 Ω
Rating - Duty			40C	AMB-CONT	Temp. Rise @ Rated Load		52°C

Load Characteristics 460 V, 60 Hz, 3 HP

% of Rated Load	25	50	75	100	125	150
Power Factor	66	82	88	91	92	93
Efficiency	80.8	86.2	87.3	87.1	86	84.5
Speed	3564.7	3535.4	3504.2	3471.8	3434.1	3393.5
Line amperes	1.56	2.17	2.93	3.67	4.57	5.5

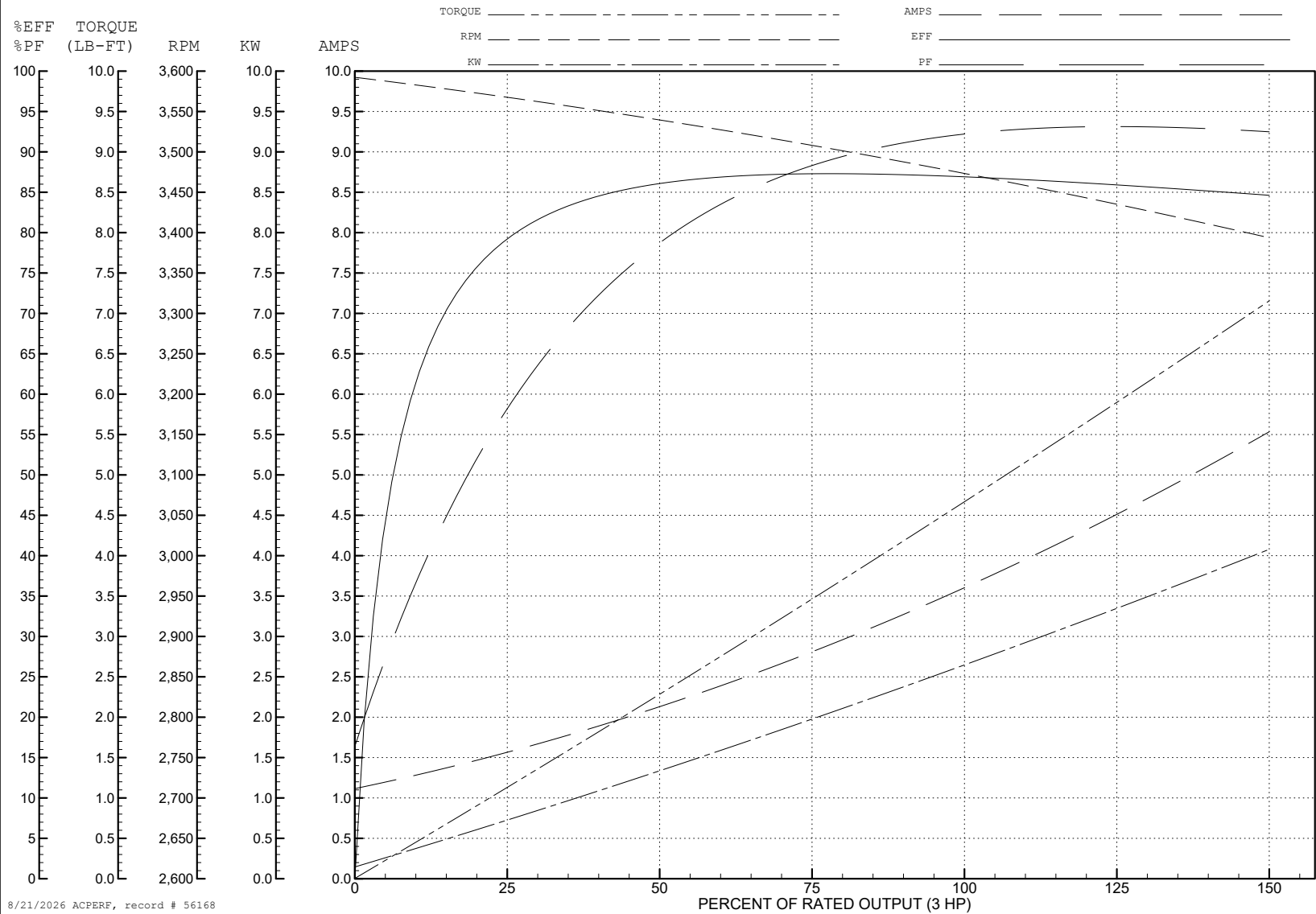
ABB Motors and Mechanical Inc.

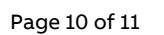
WINDING # 36WGS041

Typical performance - not guaranteed values.

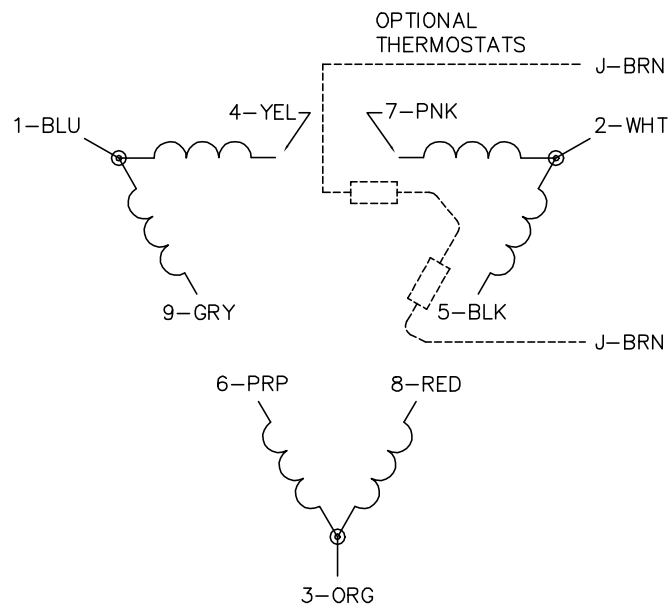
3 HP 3 PH 60 HZ 3450 RPM 460 V 3622M

TORQUES (LB-FT): PO=19.7 PU=12 LR=14.1 LRA=33.3

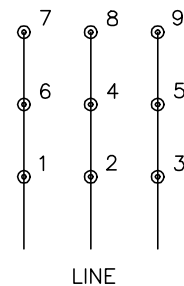




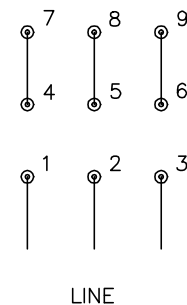
CD0180



LOW VOLTAGE
(2D)



HIGH VOLTAGE
(1D)



NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

REV. DESC: ADD CLASS CONN00000007

REV. LTR: D

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\148

REVISED: 10: 25: 29 02/19/2019

BY: ENBRIRO

MTL: -



BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1

CD0180