

ABB BALDOR RELIANCE III

Customer information packet

VEM3581

1HP, 1760RPM, 3PH, 60HZ, 56C, 0520M, TEFC, F1, N

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	56C
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	CURUSEEV NEMA PREMIUM
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	1.630 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	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	1.6 a

Part Detail

Revision	F
Type	AC
Mech. spec.	05C013
Base	
Status	PRD/A
Elec. spec.	05WGX508
Layout	05LYC013
Eff. date	01-05-2026
CD Diagram	CD0005
Poles	04
Leads	9#18
Proprietary	False
Created date	09-29-2021

Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	N
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
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	12.47 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	1.15
Shaft Diameter	0.625 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1760 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

NP3441LUA									
CAT.NO.	VEM3581								
SPEC	05C013X508G1								
HP	1								
VOLTS	230/460								
AMPS	3.26/1.63								
RPM	1760								
FRAME	56C		HZ	60		PH	3		
SF	1.15	CODE	N	DES	B	CLASS	F		
NEMA NOM. EFF	85.5	PF	67						
RATING	40C AMB-CONT								
CC	010A								
ENCL	TEFC	SER							
DE	6205		ODE	6203					
VPWM INVERTER READY	SFA 3.52/1.76								
CT6-60H(10:1)VT3-60H(20:1									
50HZ 1HP 190/380V 3.6/1.8A									SF1.0

AC Induction Motor Performance Data

Record # 82131

Typical performance - not guaranteed values

Winding: 05WGX508-R001			Type: 0520M		Enclosure: TEFC			
Nameplate Data			460 V, 60 Hz: High Voltage Connection					
Rated Output (HP)		1	Full Load Torque		2.979 LB-FT			
Volts		230/460	Start Configuration		direct on line			
Full Load Amps		3.2-3.2/1.6	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.)		1.15	No-load Current		1.11 A			
NEMA Nom. Eff.		0	Power Factor		0	Line-line Res. @ 25°C		16.215 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		24°C		
S.F. Amps				Temp. Rise @ S.F. Load		28°C		
				Locked-rotor Power Factor		62		

Load Characteristics 460 V, 60 Hz, 1 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	29	46	59	68	74	79	72
Efficiency	71.2	81.4	84.6	85.5	85.4	84.7	85.4
Speed	1791.4	1784.2	1776.7	1768.6	1760	1750.7	1763
Line amperes	1.14	1.25	1.41	1.61	1.84	2.11	1.75

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





