

ABB BALDOR RELIANCE III

Customer information packet

VEM31116

1HP, 1770RPM, 3PH, 60HZ, 56C, 3520M, OPEN, F1, N

Class - None

Division - Not Applicable

Specifications

Enclosure	OPEN
Frame	56C
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	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
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	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
Insulation Class	F

Part Detail

Revision	M
Type	AC
Mech. spec.	35E4017
Base	
Status	PRD/A
Elec. spec.	35WGG004
Layout	35LYE4017
Eff. date	01-05-2026
CD Diagram	CD0005
Poles	04
Leads	9#18,0# Y
Proprietary	False
Created date	01-10-2022

Inverter Code	Inverter Duty
IP Rating	NONE
KVA Code	N
Lifting Lugs	No 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	3520M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	12.22 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

NP3155LUA												
CAT.NO.	VEM31116											
SPEC.	35E4017G004G1											
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			
F.L. AVG. EFF.	85.5		PF	67								
RATING	40C AMB-CONT											
CC												
DE	6205		ODE	6203								
ENCL	OPEN		SN									
USABLE AT	50HZ 1HP 190/380V 3.6/1.8A									SF1.0		

AC Induction Motor Performance Data

Record # 86927

Typical performance - not guaranteed values

Winding: 35WGG004-R007			Type: 3520M		Enclosure: OPEN	
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		3.26/1.63	Breakdown Torque		13.68 LB-FT	
R.P.M.		1760	Pull-up Torque		7.85 LB-FT	
Hz	60	Phase	3	Locked-rotor Torque	9.01 LB-FT	
NEMA Design Code	B	KVA Code	N	Starting Current	14.13 A	
Service Factor (S.F.)		1.15	No-load Current		1.08 A	
NEMA Nom. Eff.	85.5	Power Factor	67	Line-line Res. @ 25°C	16.9 Ω	
Rating - Duty		40C AMB-CONT	Temp. Rise @ Rated Load		24°C	
S.F. Amps		3.52/1.76	Temp. Rise @ S.F. Load		27°C	
			Locked-rotor Power Factor		61.5	
			Rotor inertia		0.144 lb-ft²	

Load Characteristics 460 V, 60 Hz, 1 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	30	47	60	69	76	79	73
Efficiency	72.1	81.7	84.7	85.7	85.5	84.7	85.6
Speed	1791	1784	1776	1768	1759	1750	1763
Line amperes	1.11	1.22	1.38	1.59	1.82	2.09	1.73

ABB Motors and Mechanical Inc.

WINDING # 35WGG004

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1760 RPM 460 V 3520M

TORQUES (LB-FT): PO=13.68 PU=7.85 LR=9.01 LRA=14.13





