

ABB BALDOR RELIANCE III

Customer information packet

VEM3704T

3HP, 1160RPM, 3PH, 60HZ, 213TC, 3738M, TEFC, F1

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	213TC
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	3.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1200 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	NEMA PREMIUM (OLD LOGO) 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	9.600 A @ 208.0 V 9.200 A @ 230.0 V 4.600 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	89.5 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None

Part Detail

Revision	Q
Type	AC
Mech. spec.	37A003
Base	
Status	PRD/A
Elec. spec.	37WGS519
Layout	37LYA003
Eff. date	05-01-2026
CD Diagram	CD0005
Poles	06
Leads	9#14
Proprietary	False
Created date	04-23-2015

Heater Indicator	No Heater
High Voltage Full Load Amps	4.6 a
Insulation Class	F
Inverter Code	Inverter Ready
IP Rating	NONE
KVA Code	L
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 14 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3738M
Mounting Arrangement	F1
Number of Poles	6
Overall Length	19.75 IN
Power Factor	68
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
RoHS Status	ROHS COMPLIANT
Service Factor	1.15
Shaft Diameter	1.375 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1160 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.	VEM3704T								
SPEC	37A003S519G2								
HP	3								
VOLTS	230/460								
AMPS	9.2/4.6								
RPM	1160								
FRAME	213TC		HZ	60		PH	3		
SF	1.15	CODE	L	DES	B	CLASS	F		
NEMA NOM. EFF	89.5	PF	68						
RATING	40C AMB-CONT								
CC	010A								
ENCL	TEFC	SER							
DE	6307		ODE	6206					
VPWM INVERTER READY									
CT6-60H(10:1)VT3-60H(20:1									
50Hz 3HP 190/380V 10.6/5.3A									
SF1.0									

AC Induction Motor Performance Data

Record # 53388

Typical performance - not guaranteed values

Winding: 37WGS519-R032			Type: 3738M		Enclosure: TEFC	
Nameplate Data			460 V, 60 Hz: High Voltage Connection			
Rated Output (HP)		3	Full Load Torque			13.4 LB-FT
Volts		230/460	Start Configuration			direct on line
Full Load Amps		9.2/4.6	Breakdown Torque			50.4 LB-FT
R.P.M.		1160	Pull-up Torque			31.8 LB-FT
Hz	60	Phase	Locked-rotor Torque			33.9 LB-FT
NEMA Design Code	B	KVA Code	Starting Current			34 A
Service Factor (S.F.)		1.15	No-load Current			2.56 A
NEMA Nom. Eff.	89.5	Power Factor	Line-line Res. @ 25°C			2.67 Ω
Rating - Duty		40C AMB-CONT	Temp. Rise @ Rated Load			38°C
S.F. Amps			Temp. Rise @ S.F. Load			45°C
			Locked-rotor Power Factor			22.9
			Rotor inertia			0.945 LB-FT2

Load Characteristics 460 V, 60 Hz, 3 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	30	50	62	69	73	75	70
Efficiency	82.1	88.6	89.5	89.8	89.1	87.6	89.1
Speed	1193	1186	1178	1170	1160	1149	1166
Line amperes	2.74	3.19	3.82	4.53	5.44	6.41	5.14

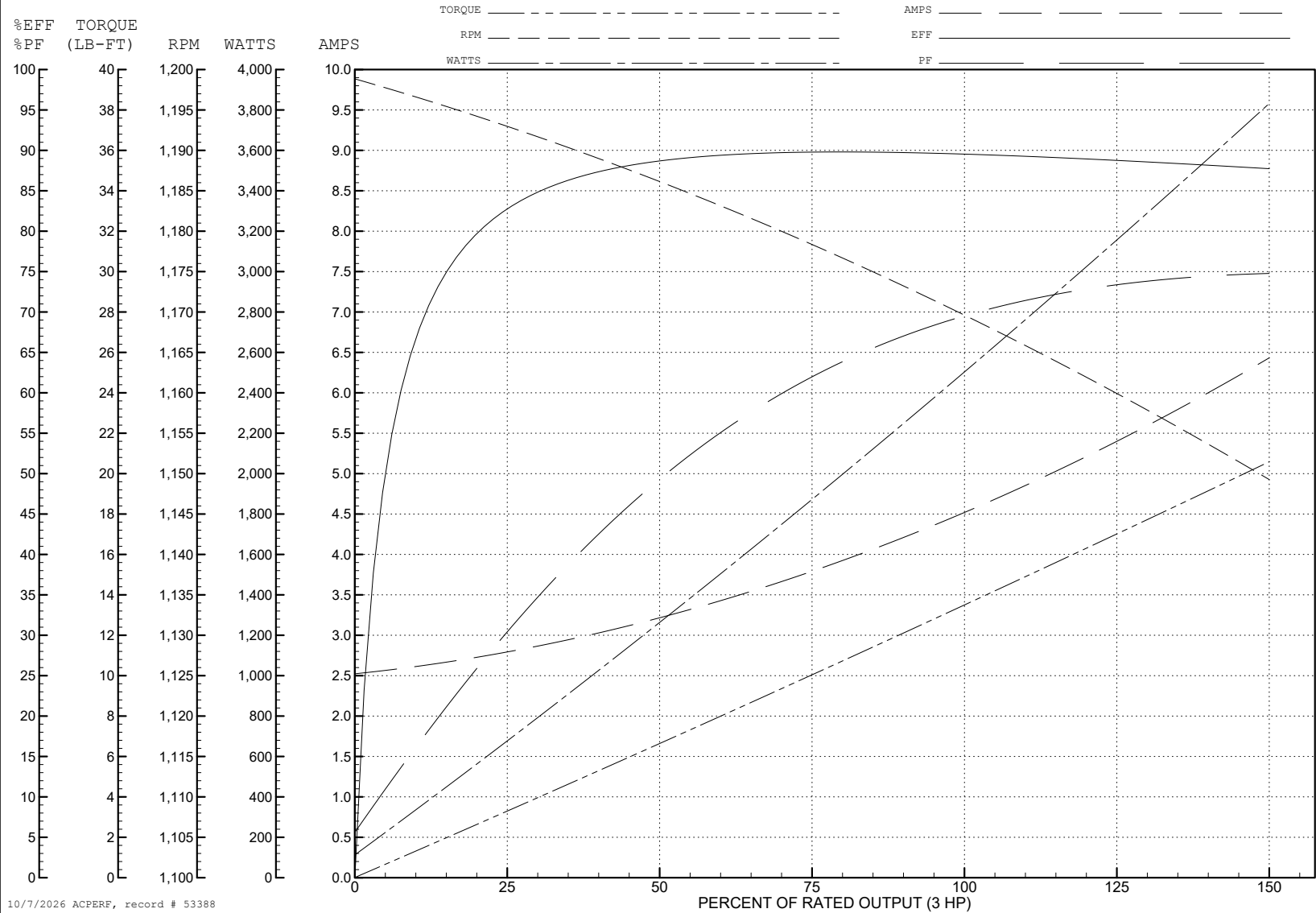
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WINDING # 37WGS519

Typical performance - not guaranteed values.

3 HP 3 PH 60 HZ 1160 RPM 460 V 3738M

TORQUES (LB-FT): PO=50.4 PU=31.8 LR=33.9 LRA=34



AC Induction Motor Performance Data

Record # 60478

Typical performance - not guaranteed values

Winding: 37WGS519-R032			Type: 3738M		Enclosure: TEFC		
Nameplate Data			208 V, 60 Hz: Low Voltage Connection				
Rated Output (HP)		3	Full Load Torque		13.5 LB-FT		
Volts		208-230/460	Start Configuration		direct on line		
Full Load Amps		9.5-9.2/4.6	Breakdown Torque		41 LB-FT		
R.P.M.		1160	Pull-up Torque		25.7 LB-FT		
Hz	60	Phase	3	Locked-rotor Torque		27.3 LB-FT	
NEMA Design Code		B	KVA Code	L	Starting Current		61 A
Service Factor (S.F.)		1.15	No-load Current		4.52 A		
NEMA Nom. Eff.		89.5	Power Factor	68	Line-line Res. @ 25°C		0.668 Ω
Rating - Duty		40C	AMB-CONT		Temp. Rise @ Rated Load		39°C
S.F. Amps					Temp. Rise @ S.F. Load		49°C
					Locked-rotor Power Factor		22.9
					Rotor inertia		0.945 LB-FT2

Load Characteristics 208 V, 60 Hz, 3 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	36	57	68	73	76	76	75
Efficiency	84.3	89.5	90.1	89.6	88	86.1	88.6
Speed	1192	1183	1173	1163	1150	1134	1155
Line amperes	4.98	6.11	7.69	9.46	11.7	14.3	10.8

ABB Motors and Mechanical Inc.

WINDING # 37WGS519

Typical performance - not guaranteed values.

3 HP 3 PH 60 HZ 1160 RPM 208 V 3738M

TORQUES (LB-FT): PO=41 PU=25.7 LR=27.3 LRA=61

