

ABB BALDOR RELIANCE III

Customer information packet

SPM3914T

20HP, 1775RPM, 3PH, 60HZ, 256T, 3976M, TEFC, F1

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	256T
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	1800 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	CURUSEEV NEMA PREMIUM 4 WEEE
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Auxiliary Box Lead Termination	None
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	24.000 A @ 460.0 V 48.000 A @ 230.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	94.1 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	24.0 a

Part Detail

Revision	C
Type	AC
Mech. spec.	39E762
Base	
Status	PRD/A
Elec. spec.	39WGY451
Layout	39LYE762
Eff. date	12-18-2025
CD Diagram	CD0180
Poles	04
Leads	9#10 Y
Proprietary	False
Created date	10-24-2023

Insulation Class	F
Inverter Code	Inverter Duty
KVA Code	J
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	2700 rpm
Motor Lead Quantity/Wire Size	9 @ 10 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3976M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	27.57 IN
Power Factor	84
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
RoHS Status	ROHS COMPLIANT
Service Factor	1.25
Shaft Diameter	1.625 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1775 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

NP4423A01A05L														
CAT #	SPM3914T					WGT	436		LBS					
SPEC	39E762Y451					ENCL	TEFC							
SER #						CC	010A		IP	54				
HP	20		MAG CUR			19.6/9.8								
VOLTS	230/460					NEMA NOM. EFF					94.1			
AMPS	48/24					PF	84							
RATING	40C AMB-CONT													
RPM	1775					MAX RPM		2700						
FRAME	256T		HZ	60		CODE	J		CLASS	F				
SER.F.	1.25		SF AMP	58/29			PH	3		DES	A			
DE	6309			ODE		6208								
LUBRICATION	POLYREX EM													
ID LOGO	INVERTER TYPE				VPWM		CHP	60		TO	90		1.5:1	
ID LOGO	WK2	3.32		CT	6		TO	60		10:1				
ID LOGO	SL HZ	0.8		VT	3		TO	60		20:1				

AC Induction Motor Performance Data

Record # 109527

Typical performance - not guaranteed values

Winding: 39WGY451-R003			Type: 3976M		Enclosure: TEFC	
Nameplate Data				460 V, 60 Hz: High Voltage Connection		
Rated Output (HP)		20		Full Load Torque		59.21 LB-FT
Volts		230/460		Start Configuration		direct on line
Full Load Amps		48/24		Breakdown Torque		247 LB-FT
R.P.M.		1775		Pull-up Torque		125 LB-FT
Hz	60	Phase	3	Locked-rotor Torque		141 LB-FT
NEMA Design Code		A	KVA Code	Starting Current		215 A
Service Factor (S.F.)		1.25		No-load Current		10.3 A
NEMA Nom. Eff.		94.1	Power Factor	Line-line Res. @ 25°C		0.287 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		57°C
S.F. Amps		58.2/29.1		Temp. Rise @ S.F. Load		75°C
				Locked-rotor Power Factor		29.4
				Rotor inertia		3.32 lb-ft²

Load Characteristics 460 V, 60 Hz, 20 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	44	67	78	83	86	87	86
Efficiency	90.9	94	94.6	94.5	94	93.3	94
Speed	1793	1788	1782	1775	1768	1761	1768
Line amperes	11.8	14.9	19.1	23.8	28.9	34.4	28.9

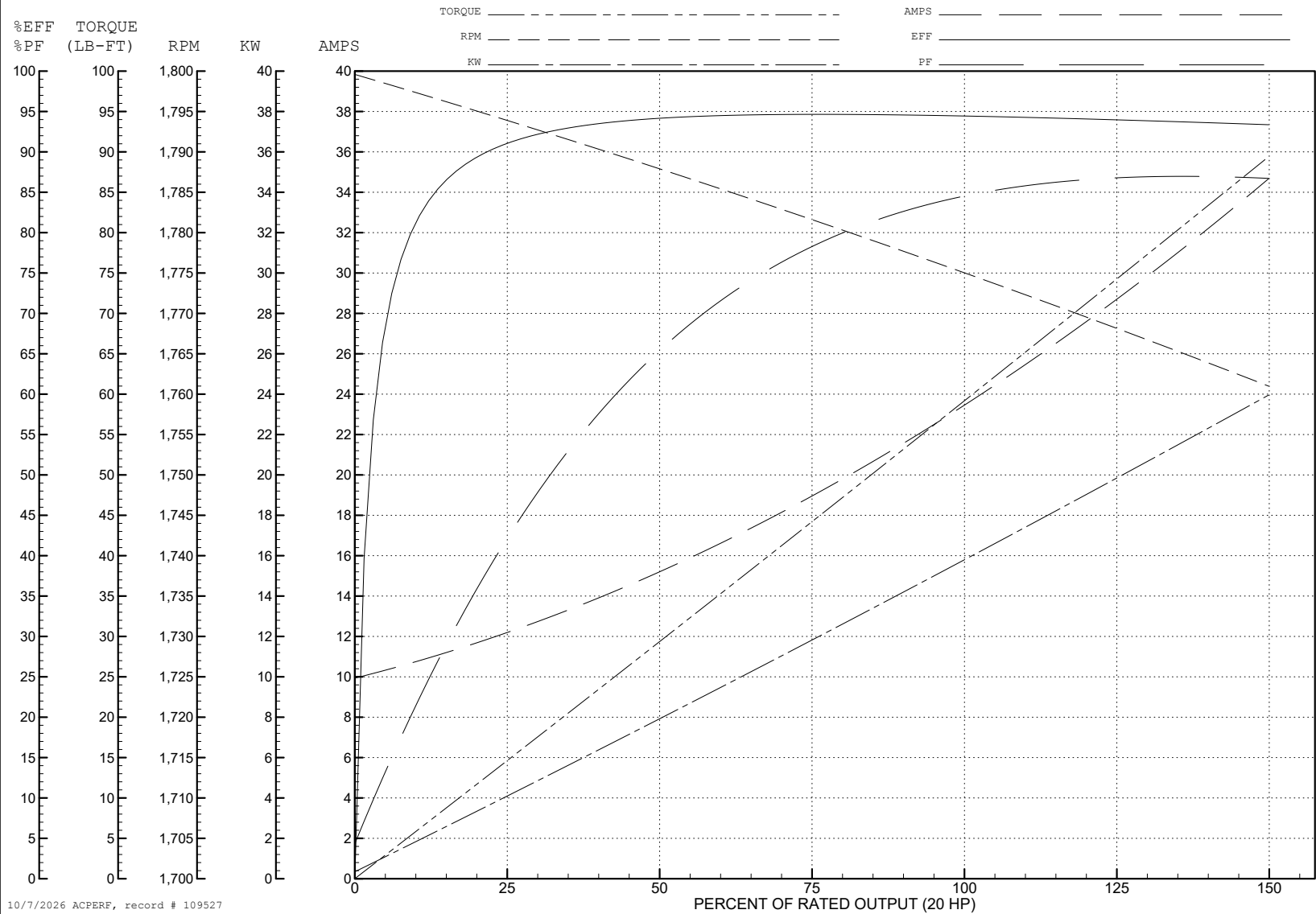
ABB Motors and Mechanical Inc.

WINDING # 39WGY451

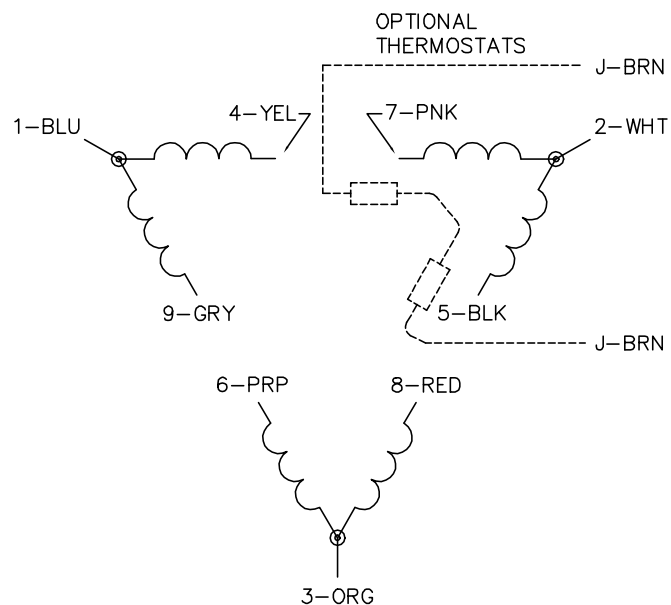
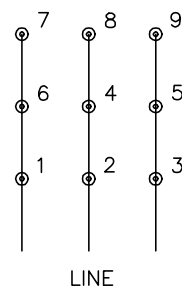
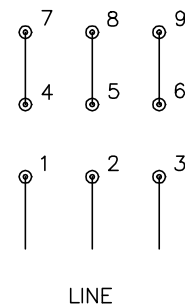
Typical performance - not guaranteed values.

20 HP 3 PH 60 HZ 1775 RPM 460 V 3976M

TORQUES (LB-FT): PO=247 PU=125 LR=141 LRA=215



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.

CD0180

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

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