

ABB BALDOR RELIANCE III

Customer information packet

CFSWDM41906T-E

20HP, 3520RPM, 3PH, 60HZ, 256TC, 3960M, TEFC, F

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	256TC
Frame Material	Stainless 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	230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	NEMA PREMIUM NEMA PREMIUM (OLD LOGO) WEEE CURUSEEV
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Auxiliary Box Lead Termination	None
Base Indicator	Rigid
Bearing Grease Type	POLYREX SHC102 EM (-20F +356F)
Blower	None
Current @ Voltage	23.000 A @ 460.0 V 46.000 A @ 230.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	91.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater

Part Detail

Revision	E
Type	AC
Mech. spec.	39E646
Base	
Status	PRD/A
Elec. spec.	39WGY419
Layout	39LYE646
Eff. date	03-25-2026
CD Diagram	CD0005
Poles	02
Leads	9#10
Proprietary	False
Created date	08-03-2023

High Voltage Full Load Amps	23.0 a
Insulation Class	H
Inverter Code	Inverter Duty
KVA Code	K
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	5400 rpm
Motor Lead Quantity/Wire Size	9 @ 10 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3960M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	25.19 IN
Power Factor	90
Product Family	WD All SD Non-Encapsulated
Pulley End Bearing Type	Sealed Bearing
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.00
Shaft Diameter	1.625 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	3520 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

NP4427AAA01													
CAT #	CFSWDM41906T-E					WT	295	LBS					
SPEC	39E646Y419G1					ENCL	TEFC						
SER #						CC	010A	IP	69				
HP	20					MAG CUR	16.6/8.3						
VOLTS	230/460					NEMA NOM. EFF					91		
AMPS	46/23					PF	90						
RATING	40C AMB-CONT												
RPM	3520					MAX RPM		5400					
FRAME	256TC	HZ	60			CODE	K	CLASS		H			
SER.F.	1.00	SF AMP					PH	3	DES	A			
DE	6309		ODE		6309								
LUBRICATION	POLYREX_SHC_102_EM												
ID LOGO	INVERTER TYPE			VPWM		CHP	60	TO	90	1.5:1			
ID LOGO	WK2	1.53	CT	30	TO	60	2:1						
ID LOGO	SL HZ	1.3	VT	6	TO	60	10:1						
							QR						
YR													

AC Induction Motor Performance Data

Record # 80272

Typical performance - not guaranteed values

Winding: 39WGY419-R001				Type: 3960M		Enclosure: TEFC	
Nameplate Data				460 V, 60 Hz: High Voltage Connection			
Rated Output (HP)		20		Full Load Torque		29.8 LB-FT	
Volts		230/460		Start Configuration		direct on line	
Full Load Amps		46/23		Breakdown Torque		161 LB-FT	
R.P.M.		3540		Pull-up Torque		64.7 LB-FT	
Hz	60	Phase	3	Locked-rotor Torque		78.2 LB-FT	
NEMA Design Code		A	KVA Code	K	Starting Current		221 A
Service Factor (S.F.)		1		No-load Current		6.9 A	
NEMA Nom. Eff.		91	Power Factor	90	Line-line Res. @ 25°C		0.30935 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		85°C	
				Locked-rotor Power Factor		26.5	

Load Characteristics 460 V, 60 Hz, 20 HP

% of Rated Load	25	50	75	100	125	150
Power Factor	61	80	87	90	92	92
Efficiency	86.5	91.3	92.5	92.6	92.2	91.5
Speed	3585.8	3572.3	3557.6	3541.8	3525.6	3508.1
Line amperes	8.97	12.8	17.5	22.5	27.8	33.4

ABB Motors and Mechanical Inc.

WINDING # 39WGY419

Typical performance - not guaranteed values.

20 HP 3 PH 60 HZ 3540 RPM 460 V 3960M

TORQUES (LB-FT): PO=161 PU=64.7 LR=78.2 LRA=221





