

ABB BALDOR RELIANCE III

Customer information packet

EM2531T

25HP, 1775RPM, 3PH, 60HZ, 284T, 4050M, OPSB, F1

Specifications

Enclosure	OPSB
Frame	284T
Frame Material	Steel
Frequency	50.00 Hz 60.00 Hz
Motor Letter Type	Three Phase
Output @ Frequency	20.000 HP @ 50 HZ 25.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ 190.0 V @ 50 HZ 380.0 V @ 50 HZ 460.0 V @ 60 HZ 415.0 V @ 50 HZ
Agency Approvals	WEEE CURUSEEV NEMA PREMIUM CE NEMA PREMIUM (OLD LOGO)
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	64.000 A @ 208.0 V 60.000 A @ 230.0 V 58.000 A @ 190.0 V 30.000 A @ 460.0 V 30.000 A @ 415.0 V 29.000 A @ 380.0 V

Part Detail

Revision	M
Type	AC
Mech. spec.	40G48
Base	
Status	PRD/A
Elec. spec.	40WGX806
Layout	40LYG048
Eff. date	09-02-2025
CD Diagram	CD0005
Poles	04
Leads	9#10
Proprietary	False
Created date	11-19-2020

Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	93.6 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	29.0 a
Insulation Class	F
Inverter Code	Inverter Ready
IP Rating	NONE
KVA Code	G
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	No Locked Bearing
Motor Lead Quantity/Wire Size	9 @ 10 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	4050M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	25.06 IN
Power Factor	82
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	1.875 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1475 rpm

	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

NP4295L									
CAT.NO.	EM2531T								
SPEC.	40G048X806						IP	23	
HP	25HP/18.5KW//20HP/15KW								
VOLTS	230/460//190/380-415								
AMPS	60/30//58/29-30								
R.P.M. (1/MIN)	1775//1475								
FRAME	284T		HZ	60//50			PH	3	
SER.F.	1.15	CODE	G	DES.	A	CLASS	F		
NEMA NOM. EFF.	93.6//92.1		P.F.	82					
RATING	40C AMB-CONT						WT.	171	
CC	010A								
ENCL	OPSB	SN							
DE	6311		ODE	6309					
	IE3-60:93.8(75%)93.1(50%)								
	IE3-50:93.2(75%)92.2(50%)								
	IC01 2:1 CT/20:1 VT								

Parts List

Part number	Description	Quantity
SA388179	SA 40G048X806	1.000 ea
RA378528	RA 40G048X806	1.000 ea
HA6361A01	LIFTING LUG FOR 37, 39 & 40 FRAME ZINC	2.000 ea
HA6017	CAST ADAPTER, 40,42 KOBX	1.000 ea
19XW3118A12	.31-18 X .75 HEX WASHER HEAD TAPTITE II	2.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	2.000 ea
10CB3000SP	KOBX, CAST W/2.00 LEAD HOLE	1.000 ea
19XW3118A12	.31-18 X .75 HEX WASHER HEAD TAPTITE II	4.000 ea
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 ea
51XF2520A08	SCREW, HEX SER SLT HD, ZN 1/4-20 X .50 L	1.000 ea
40EP3200A02	STD FREP OPEN 309 BRG	1.000 ea
HW5100A11	W3917-042 WVY WSHR (WB)	1.000 ea
40EP3200B05	STD PUEP OPEN 311 BRG	1.000 ea
XY3816A12	3/8-16 FINISHED NUT W/SERRATIONS	8.000 ea
10CB3500SP	CONDUIT BOX LID, CAST	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	4.000 ea
HW2501H28	KEY, 1/2 SQ X 3.250	1.000 ea
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
MG1050Y01	CELEROL BALDOR GOLD *5 GALLON BUCKET*	0.070 ga
MJ1000A02	GREASE, POLYREX EM EXXON	0.050 lb
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 ea
40AD2002A01	LEXAN BAFFLE 40 FR OPEN	1.000 ea
40AD2002A01	LEXAN BAFFLE 40 FR OPEN	1.000 ea
HA3154A04	THRUBOLT STUD 3/8-16 X 18.750	4.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0005	CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING	1.000 ea

NP4295L	SS SUPER-E UL EEV CE CC PREM	1.000 ea
40PA1000	PACKAGING GROUP	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea

Accessories

Part number	Description	Multiplier
40-1400	C FACE KIT	A8

AC Induction Motor Performance Data

Record # 92775

Typical performance - not guaranteed values

Winding: 40WGX806-R004		Type: 4050M	Enclosure: OPSB
Nameplate Data		460 V, 60 Hz: High Voltage Connection	
Rated Output (HP)	25//20	Full Load Torque	73.81 LB-FT
Volts	230/460//190/380-415	Start Configuration	direct on line
Full Load Amps	60/30//58/29-30	Breakdown Torque	232 LB-FT
R.P.M.	1775//1475	Pull-up Torque	116 LB-FT
Hz	60//50 Phase	Locked-rotor Torque	133 LB-FT
NEMA Design Code	A KVA Code	Starting Current	192 A
Service Factor (S.F.)	1.15	No-load Current	12.6 A
NEMA Nom. Eff.	93.6 Power Factor	Line-line Res. @ 25°C	0.35407 Ω
Rating - Duty	40C AMB-CONT	Temp. Rise @ Rated Load	28°C
S.F. Amps		Temp. Rise @ S.F. Load	34°C
		Locked-rotor Power Factor	34.7
		Rotor inertia	3.96 lb-ft ²

Load Characteristics 460 V, 60 Hz, 25 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	45	67	78	82	85	85	84
Efficiency	89.4	93.1	93.8	93.6	93	92.1	93.2
Speed	1794.8	1789.5	1783.7	1777.6	1771	1763.2	1774
Line amperes	14.5	18.6	24.1	30.3	37.2	44.6	34.4

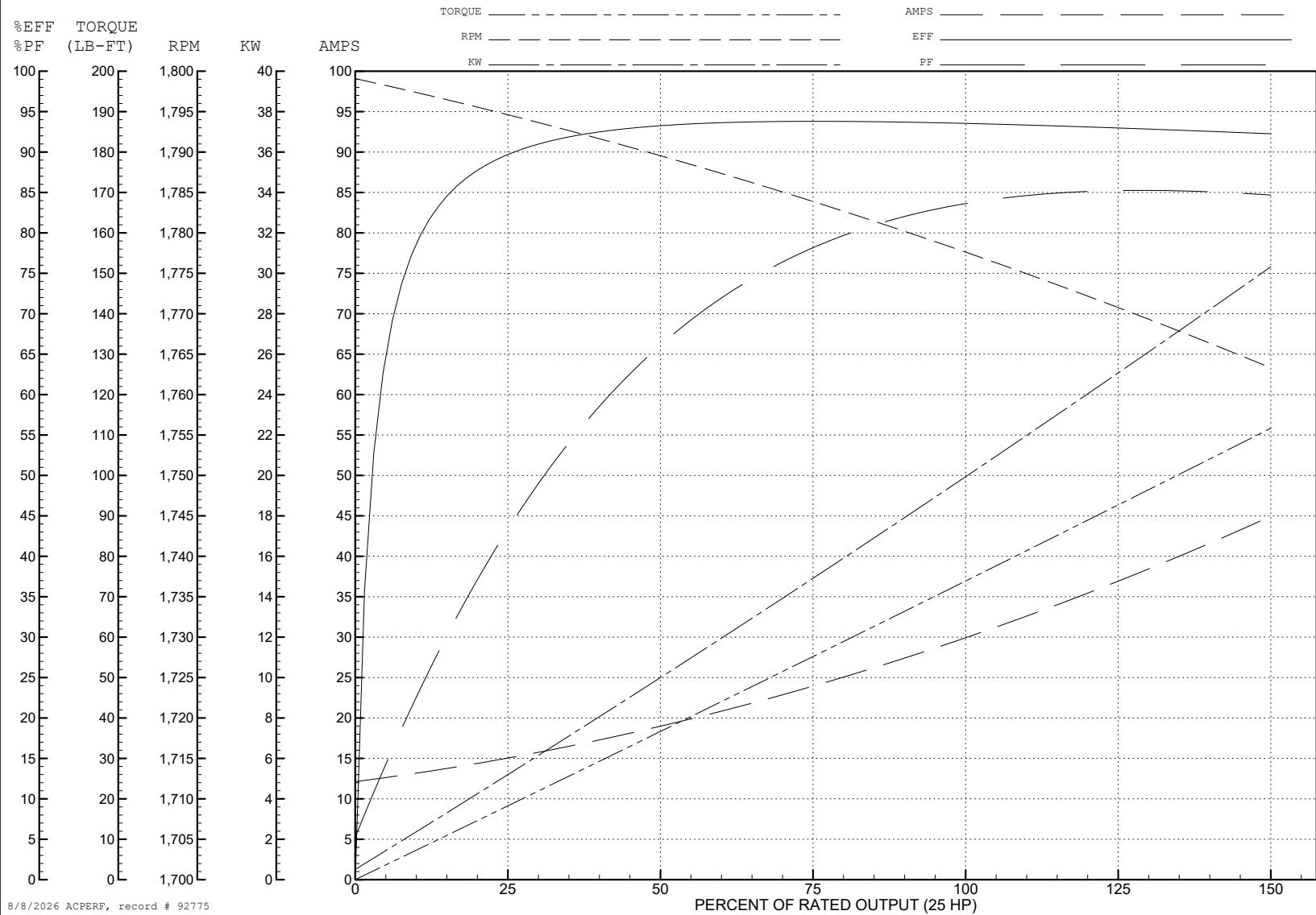
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WINDING # 40WGX806

Typical performance - not guaranteed values.

25 HP 3 PH 60 HZ 1777.6 RPM 460 V 4050M

TORQUES (LB-FT): PO=232 PU=116 LR=133 LRA=192



AC Induction Motor Performance Data

Record # 92776

Typical performance - not guaranteed values

Winding: 40WGX806-R004		Type: 4050M	Enclosure: OPSB
Nameplate Data		415 V, 50 Hz: High Voltage Connection	
Rated Output (HP)	25//20	Full Load Torque	70.85 LB-FT
Volts	230/460//190/380-415	Start Configuration	direct on line
Full Load Amps	60/30//58/29-30	Breakdown Torque	267 LB-FT
R.P.M.	1775//1475	Pull-up Torque	144 LB-FT
Hz	60//50 Phase	Locked-rotor Torque	165 LB-FT
NEMA Design Code	A KVA Code	Starting Current	202 A
Service Factor (S.F.)	1.15	No-load Current	15.76 A
NEMA Nom. Eff.	93.6 Power Factor	Line-line Res. @ 25°C	0.335 Ω
Rating - Duty	40C AMB-CONT	Temp. Rise @ Rated Load	27°C
S.F. Amps		Temp. Rise @ S.F. Load	32°C
		Locked-rotor Power Factor	38.7
		Rotor inertia	3.96 lb-ft ²

Load Characteristics 415 V, 50 Hz, 20 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	35	56	68	75	80	82	78
Efficiency	87.8	92.2	93.2	93.1	92.7	92	92.9
Speed	1496	1491	1487	1482	1477	1471	1479
Line amperes	17.19	20.25	24.53	29.5	35.11	41.13	32.9

ABB Motors and Mechanical Inc.

WINDING # 40WGX806

Typical performance - not guaranteed values.

20 HP 3 PH 50 HZ 1482 RPM 415 V 4050M

TORQUES (LB-FT): PO=267 PU=144 LR=165 LRA=202

