

**BALDOR • RELIANCE**

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# 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	1500 RPM @ 50 HZ
Voltage @ Frequency	380.0 V @ 50 HZ 230.0 V @ 60 HZ 190.0 V @ 50 HZ 460.0 V @ 60 HZ 415.0 V @ 50 HZ
Agency Approvals	UR WEEE CSA EEV NEMA PREMIUM CE NEMA_PREMIUM
Ambient Temperature	40 °C
Auxillary Box	No Auxillary Box
Auxillary 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	H
Type	AC
Mech. spec.	40G48
Base	
Status	PRD/A
Elec. spec.	40WGX806
Layout	40LYG048
Eff. date	07-24-2023
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
<b>Speed Code</b>	Single Speed
<b>Starting Method</b>	Direct on line
<b>Thermal Device - Bearing</b>	None
<b>Thermal Device - Winding</b>	None
<b>Vibration Sensor Indicator</b>	No Vibration Sensor
<b>Winding Thermal 1</b>	None
<b>Winding Thermal 2</b>	None

**Nameplate**

<b>NP4295L</b>									
<b>CAT.NO.</b>	EM2531T								
<b>SPEC.</b>	40G048X806					<b>IP</b>			23
<b>HP</b>	25HP/18.5KW//20HP/15KW								
<b>VOLTS</b>	230/460//190/380-415								
<b>AMPS</b>	60/30//58/29-30								
<b>R.P.M. (1/MIN)</b>	1775//1475								
<b>FRAME</b>	284T		<b>HZ</b>	60//50			<b>PH</b>		3
<b>SER.F.</b>	1.15	<b>CODE</b>	G	<b>DES.</b>	A		<b>CLASS</b>		F
<b>NEMA NOM. EFF.</b>	93.6//92.1		<b>P.F.</b>	82					
<b>RATING</b>	40C AMB-CONT					<b>WT.</b>	171		
<b>CC</b>	010A		<b>USABLE AT 208V</b>				N/A		
<b>ENCL</b>	OPSB	<b>SN</b>							
<b>DE</b>	6311		<b>ODE</b>	6309					
	IE3-60:93.8(75%)93.1(50%)								
	IE3-50:93.2(75%)92.2(50%)								
	IC01 2:1 CT/20:1 VT								

**Accessories**

<b>Part number</b>	<b>Description</b>	<b>Multiplier</b>
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			
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>			
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	3	Locked-rotor Torque	133 LB-FT	
NEMA Design Code	A		KVA Code	G	Starting Current	192 A
Service Factor (S.F.)	1.15		No-load Current	12.6 A		
NEMA Nom. Eff.	93.6	Power Factor	82		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 <sup>2</sup>		

**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

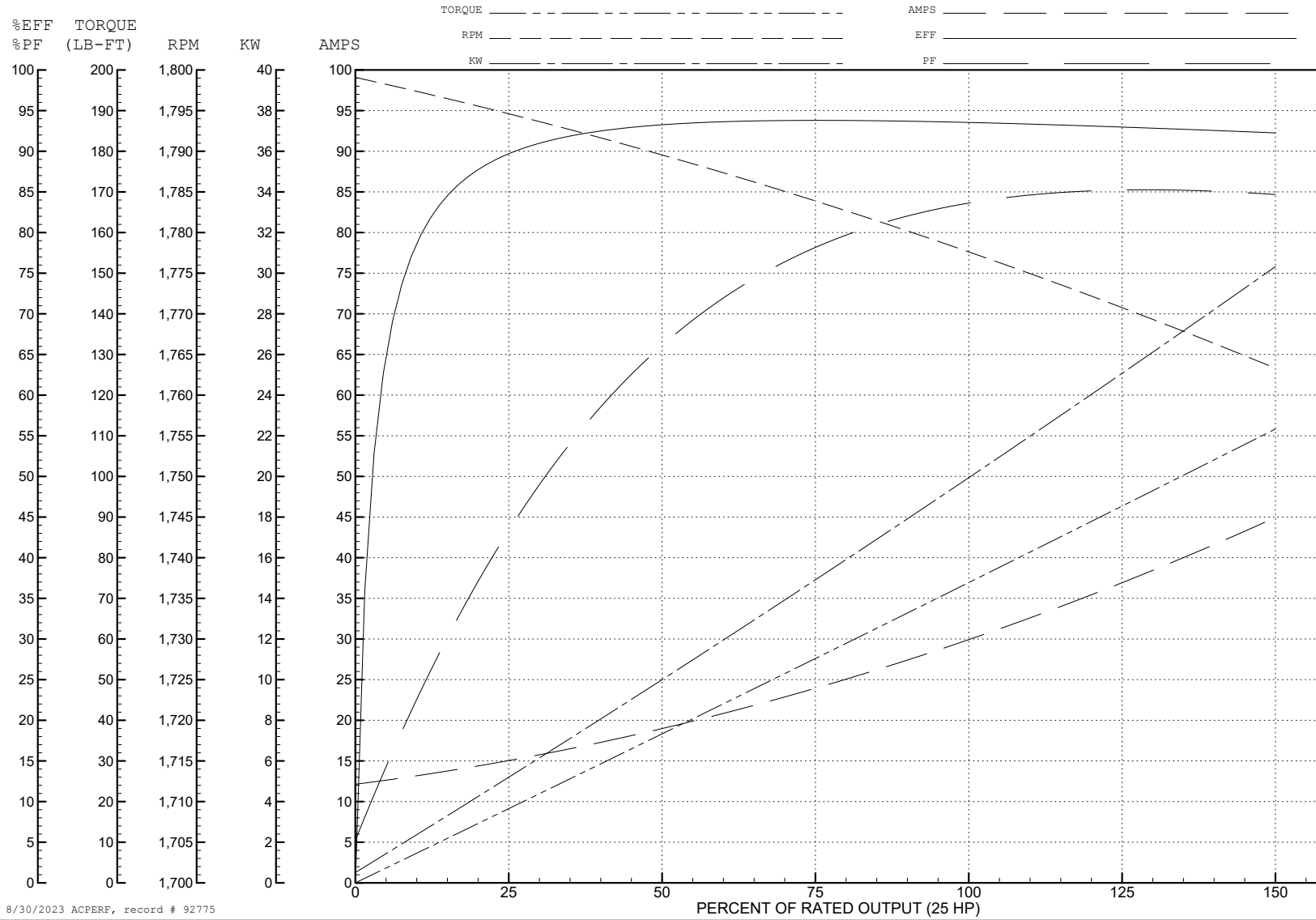
ABB Motors and Mechanical Inc.

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



8/30/2023 ACPERF, record # 92775



**AC Induction Motor Performance Data**

Record # 92776

Typical performance - not guaranteed values

Winding: 40WGX806-R004		Type: 4050M	Enclosure: OPSB			
<b>Nameplate Data</b>			<b>415 V, 50 Hz: High Voltage Connection</b>			
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	3	Locked-rotor Torque	165 LB-FT	
NEMA Design Code	A		KVA Code	G	Starting Current	202 A
Service Factor (S.F.)	1.15		No-load Current	15.76 A		
NEMA Nom. Eff.	93.6	Power Factor	82		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 <sup>2</sup>		

**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

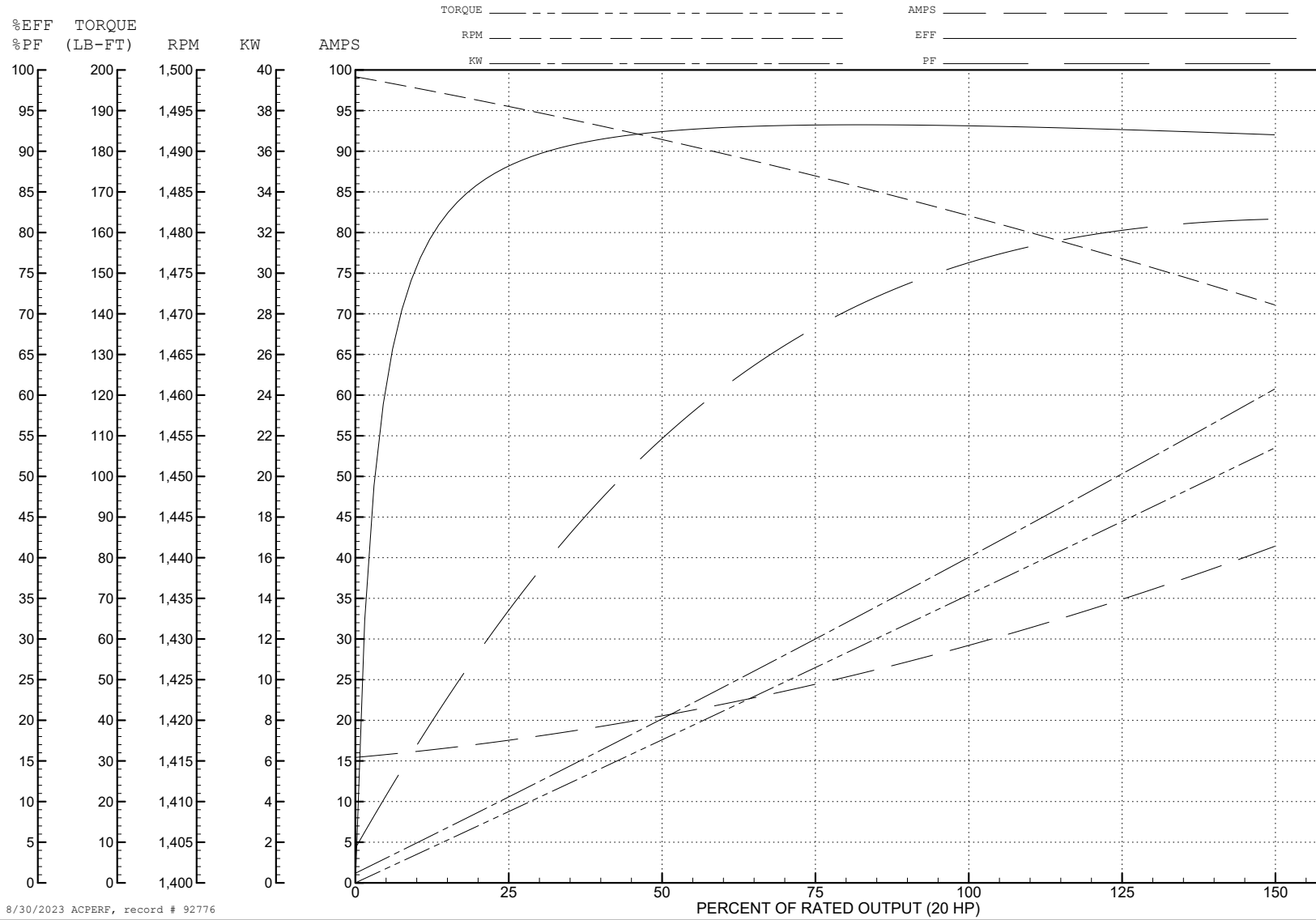
ABB Motors and Mechanical Inc.

WINDING # 40WGx806

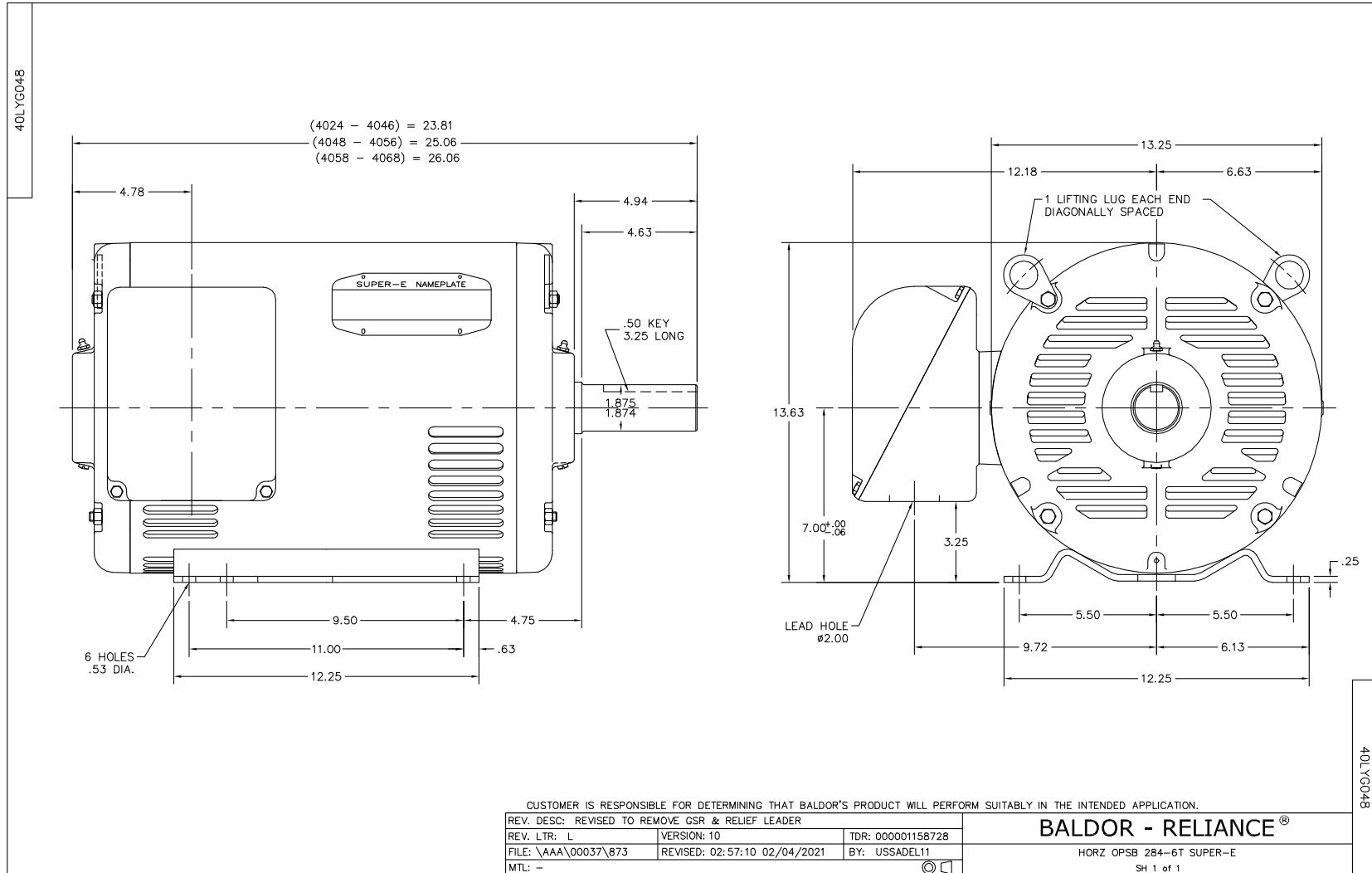
20 HP 3 PH 50 HZ 1482 RPM 415 V 4050M

Typical performance - not guaranteed values.

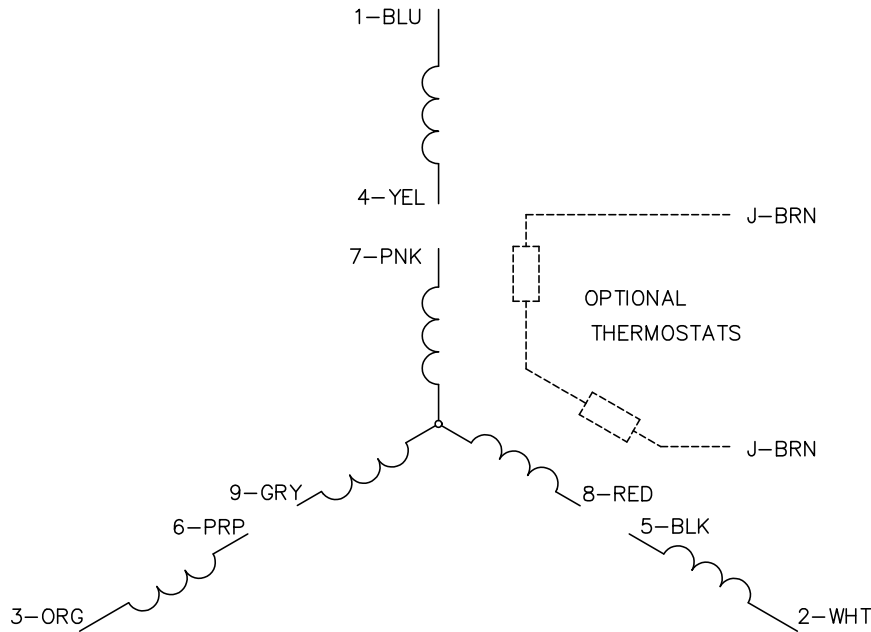
TORQUES (LB-FT): PO=267 PU=144 LR=165 LRA=202



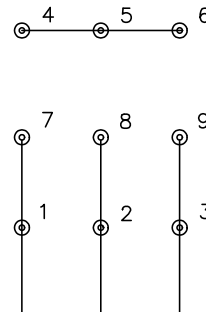
8/30/2023 ACPERF, record # 92776



CD0005

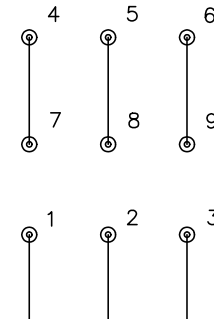


LOW VOLTAGE  
(2Y)



LINE

HIGH VOLTAGE  
(1Y)



LINE

**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.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
S00000		FILE: AAA00005140	MDL: -
		MTL: -	

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS

CD0005