

ABB BALDOR RELIANCE III

Customer information packet

CDM3537

.5HP, 3450RPM, 3PH, 60HZ, 56C, 3414M, TEFC, F1

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	56C
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	.500 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	3600 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ 230.0 V @ 60 HZ
Agency Approvals	CCSA US UR
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
Constant Torque Speed Range	6
Current @ Voltage	1.700 A @ 208.0 V 1.800 A @ 230.0 V .900 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	68.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None

Part Detail

Revision	M
Type	AC
Mech. spec.	34M848
Base	
Status	PRD/A
Elec. spec.	34WGR421
Layout	34LYM848
Eff. date	12-01-2025
CD Diagram	CD0005
Poles	02
Leads	9#18
Proprietary	False
Created date	07-27-2016

Heater Indicator	No Heater
High Voltage Full Load Amps	0.9 a
Insulation Class	F
Inverter Code	Not Inverter
KVA Code	P
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	5400 rpm
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 18 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3414M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	11.35 IN
Power Factor	75
Product Family	Dirty Duty Plus
Pulley End Bearing Type	Sealed Bearing
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
RoHS Status	ROHS COMPLIANT
Service Factor	1.25
Shaft Diameter	0.625 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	3450 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

NP3659									
CAT.NO.	CDM3537								
SPEC.	34M848R421G1				ENCL		TEFC		
FRAME	56C	H.P.		.5					
VOLTS	230/460								
AMPS	1.8/.9				IP		56		
R.P.M.	3450								
HZ.	60	PH.	3	CLASS		F			
SER.F.	1.25	DES.	B	CC					
NEMA NOM. EFF.	68								
RATING	40C AMB-CONT								
DE	6203	ODE	6203						
GREASE	POLYREX EM								
SN									
	50C AT 1.0 SF								
	SFA 2/1								

Parts List

Part number	Description	Quantity
SA324702	SA 34M848R421G1	1.000 ea
RA312542	RA 34M848R421G1	1.000 ea
NS2512A01	INSULATOR, CONDUIT BOX X	1.000 ea
34CB1000A01E	CONDUIT BOX, WASHDOWN, W/E-COATED	1.000 ea
34GS1017	GASKET, CONDUIT BOX MODEL 34 (BLACK NEOP	1.000 ea
51XB1016A07	10-16 X 7/16 HXWSSLD SERTYB	2.000 ea
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	1.000 ea
34EP1100A137LP2	FRONT EP TEFC 203 BRG W/ SEAL	1.000 ea
HW4601A23	INPRO SEAL, 203 BRG, VBX	1.000 ea
HW4500S33	1/8 NPT STAINLESS #304 SS PLUG	3.000 ea
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 ea
HW5100A03	WAVY WASHER (W1543-017)	1.000 ea
34EP1300A35E	ENDPLATE, MACH W/E-COAT	1.000 ea
HW4606A01	JM CLIPPER/SEAL (WDE-0667-1064-BH49)	1.000 ea
HW4500S33	1/8 NPT STAINLESS #304 SS PLUG	3.000 ea
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 ea
12XN1032S20	10-32 X 1-1/4 HEX M.S. , STAINLESS STEEL	2.000 ea
34FN3002A01SP	EXTERNAL FAN, PLASTIC, .637/.639 HUB W/	1.000 ea
34FH4002A01LP2	IEC FH NO GREASER	1.000 ea
11XW1032S06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	3.000 ea
34CB4500E	CONDUIT BOX LID, E-COAT	1.000 ea
34GS1007	GASKET, CONDUIT BOX LID MODEL 34 (BLACK	1.000 ea
59XW0832S07	TAPTITE II,HEX WSHR UNSLTD SER,410 S.S.,	4.000 ea
HW2502D13	SS KEY, 3/16 SQ X 1.375	1.000 ea
HA7000A04	KEY RETAINER 0.625 DIA SHAFTS	1.000 ea
MJ5001A02	732 CL SEALANT 3 OZ DIXIE BEARING 289100	0.001 ea
LB1164	LABEL,WARNING AND DRAIN	1.000 ea
MJ5001A23	P.D. GEORGE B-276 AIR DRY VARNISH	0.001 ga
LB1000	LABEL, DIRTY DUTY	1.000 ea
HW3001B02	BRASS CUP WASHER W/GROUND SYMBOL TAB,	1.000 ea
WD1000D21	TRM,T&B #B71M,RING,18-14,.25,NON-INSL	9.000 ea

85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
MG2000A17	RUST INHIBITOR PART # SRPO #20	0.001 ga
MG1025L01	WILKOFAS FD, 786.04, BLACK	0.014 ga
MG1500Y02	WILKOPON PRIMER YELLOW	0.014 ga
HA3100S08	THRUBOLT 7.375LG SS	4.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
LC0005	CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING	1.000 ea
NP3659	SS DIRTY DUTY PLUS UL CSA-C US EEV CC	1.000 ea
35PA1066	PKG GRP, PRINT PK1008A07	1.000 ea

AC Induction Motor Performance Data

Record # 58290

Typical performance - not guaranteed values

Winding: 34WGR421-R001			Type: 3414M		Enclosure: TEFC	
Nameplate Data			460 V, 60 Hz: High Voltage Connection			
Rated Output (HP)		.5	Full Load Torque		0.763 LB-FT	
Volts		230/460	Start Configuration		direct on line	
Full Load Amps		1.8/.9	Breakdown Torque		4.6 LB-FT	
R.P.M.		3450	Pull-up Torque		3.07 LB-FT	
Hz	60 Phase	3	Locked-rotor Torque		3.86 LB-FT	
NEMA Design Code		B KVA Code	Starting Current		8.39 A	
Service Factor (S.F.)		1.25	No-load Current		0.626 A	
NEMA Nom. Eff.		68 Power Factor	Line-line Res. @ 25°C		26.14 Ω	
Rating - Duty		40C AMB-CONT	Temp. Rise @ Rated Load		51°C	
S.F. Amps		2/1	Temp. Rise @ S.F. Load		59°C	
			Locked-rotor Power Factor		69.4	

Load Characteristics 460 V, 60 Hz, 0.5 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	45	58	67	75	80	84	80
Efficiency	39.7	56.1	64.1	69.1	70.6	72.3	70.6
Speed	3536.7	3517.5	3497.4	3469	3451.9	3427.2	3452
Line amperes	0.674	0.731	0.817	0.915	1.04	1.15	1.04

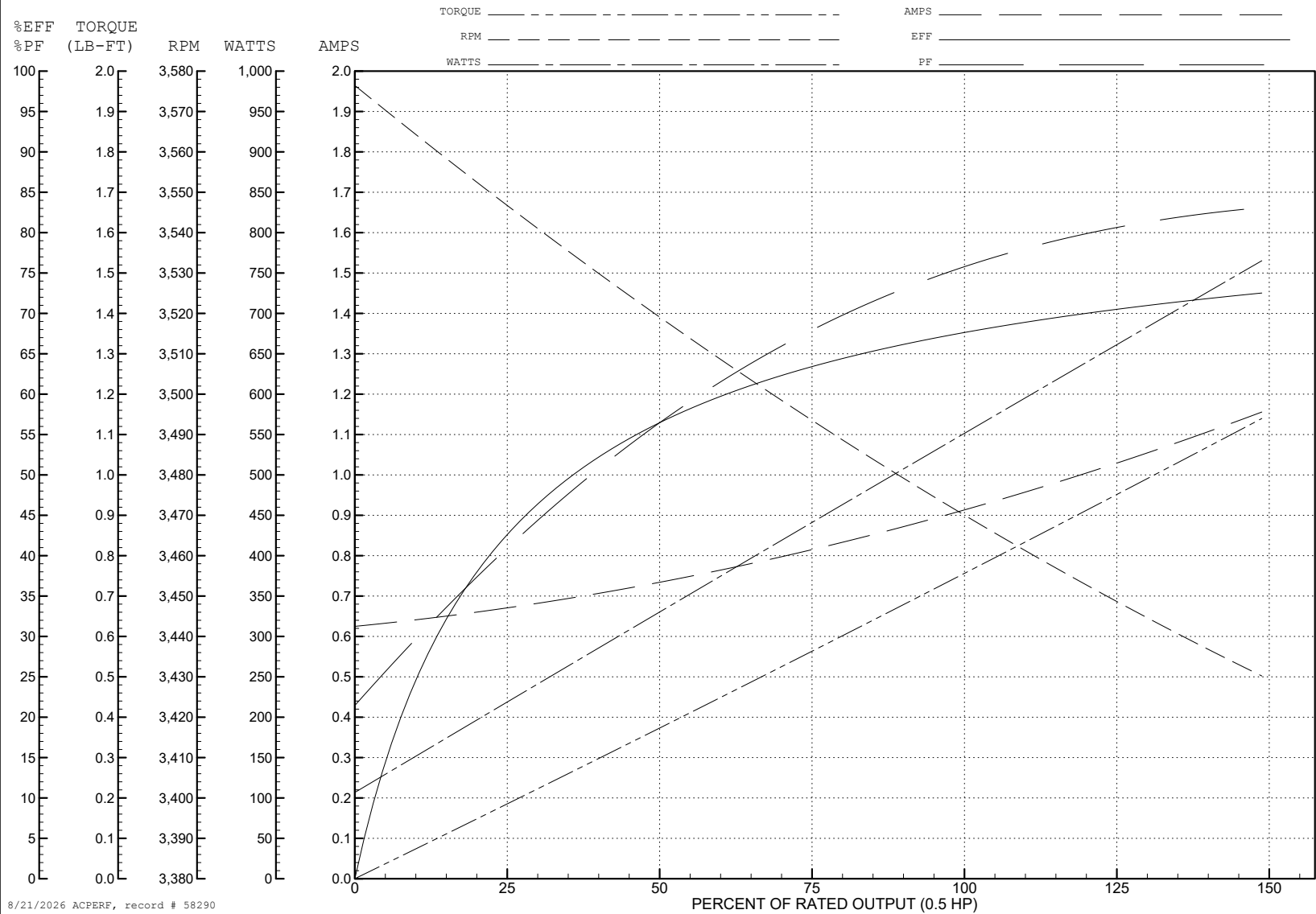
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WINDING # 34WGR421

Typical performance - not guaranteed values.

0.5 HP 3 PH 60 HZ 3450 RPM 460 V 3414M

TORQUES (LB-FT): PO=4.6 PU=3.07 LR=3.86 LRA=8.39



AC Induction Motor Performance Data

Record # 73819

Typical performance - not guaranteed values

Winding: 34WGR421-R001			Type: 3414M		Enclosure: TEFC	
Nameplate Data			230 V, 60 Hz: Low Voltage Connection			
Rated Output (HP)		.5	Full Load Torque		0.763 LB-FT	
Volts		230/460	Start Configuration		direct on line	
Full Load Amps		1.8/.9	Breakdown Torque		4.6 LB-FT	
R.P.M.		3450	Pull-up Torque		3.07 LB-FT	
Hz	60 Phase	3	Locked-rotor Torque		3.86 LB-FT	
NEMA Design Code		B	KVA Code		P	
Starting Current		16.78 A	No-load Current		1.25 A	
Service Factor (S.F.)		1.25	Line-line Res. @ 25°C		6.46 Ω	
NEMA Nom. Eff.		68	Power Factor		75	
Temp. Rise @ Rated Load		51°C	Temp. Rise @ S.F. Load		57°C	
Rating - Duty		40C AMB-CONT	Locked-rotor Power Factor		69.4	
S.F. Amps		2/1	Rotor inertia		0.013 LB-FT2	

Load Characteristics 230 V, 60 Hz, 0.5 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	45	58	68	75	80	84	80
Efficiency	39.6	56.2	64.1	69.1	70.6	71.9	70.6
Speed	3537	3518	3497	3469	3452	3427	3452
Line amperes	1.35	1.46	1.63	1.83	2.08	2.3	2.08

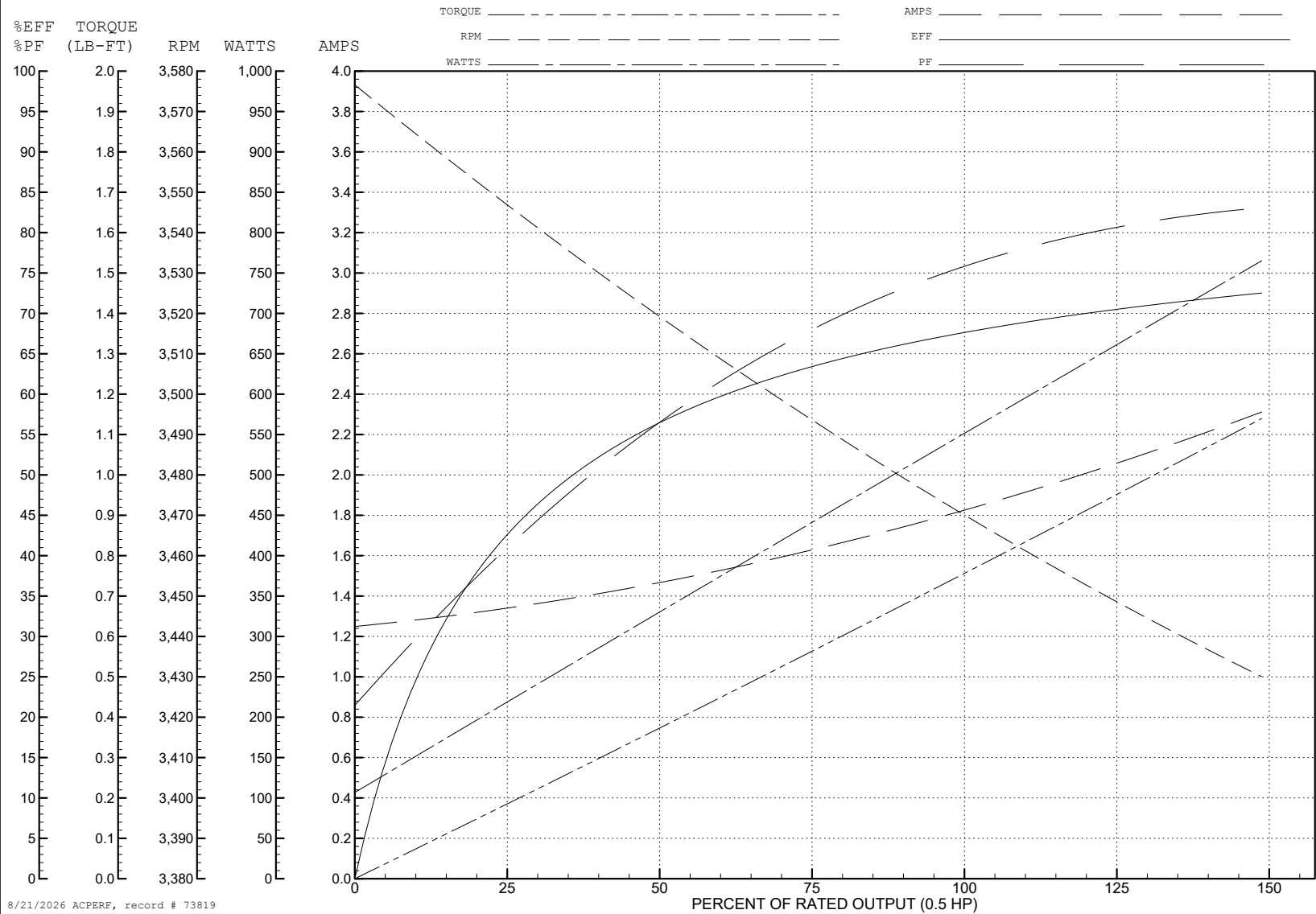
ABB Motors and Mechanical Inc.

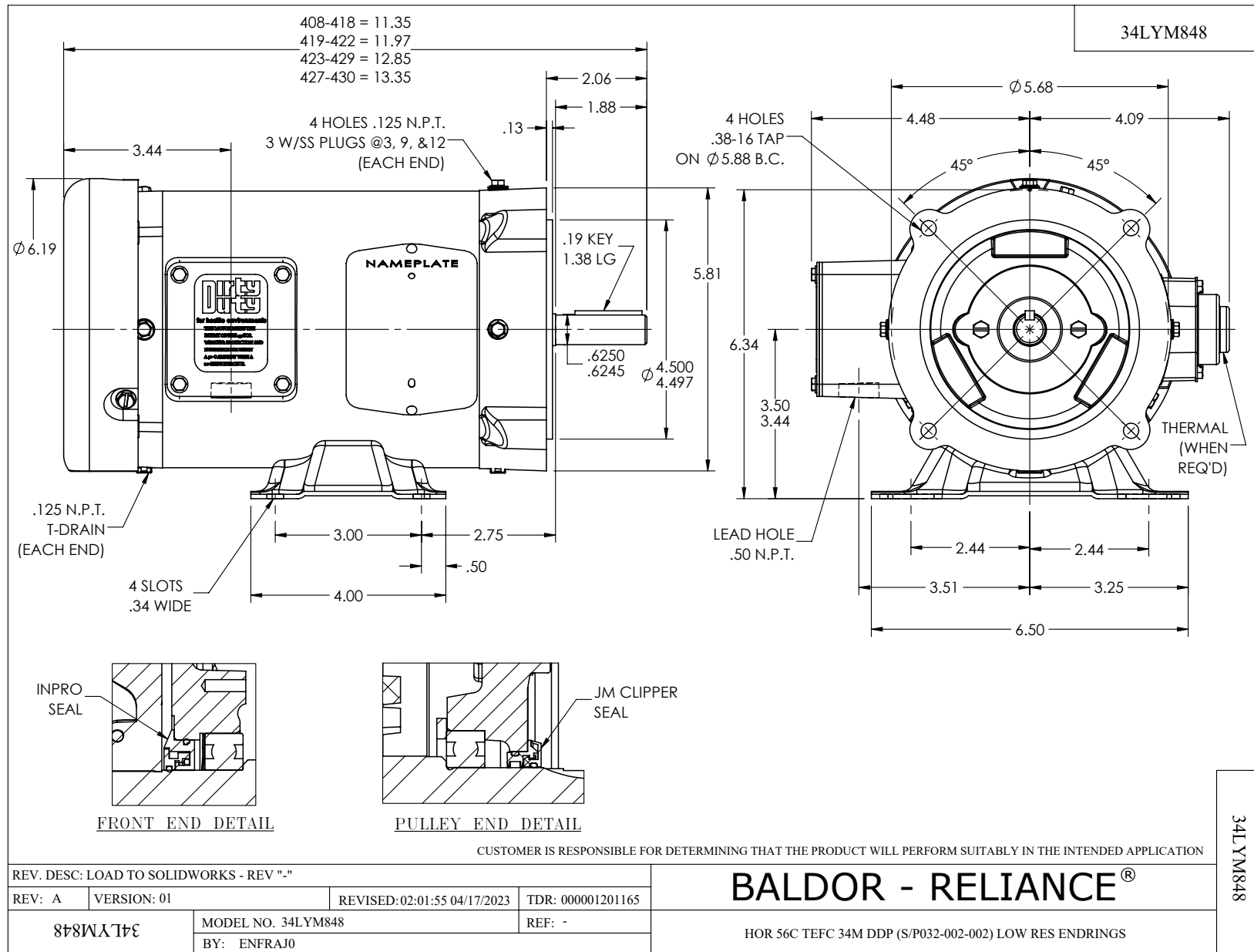
WINDING # 34WGR421

Typical performance - not guaranteed values.

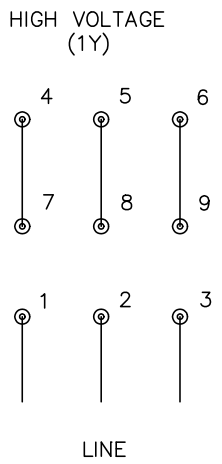
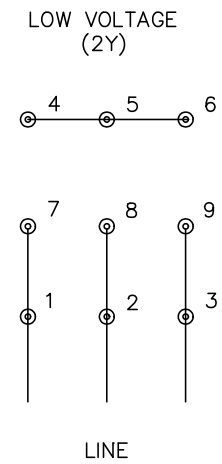
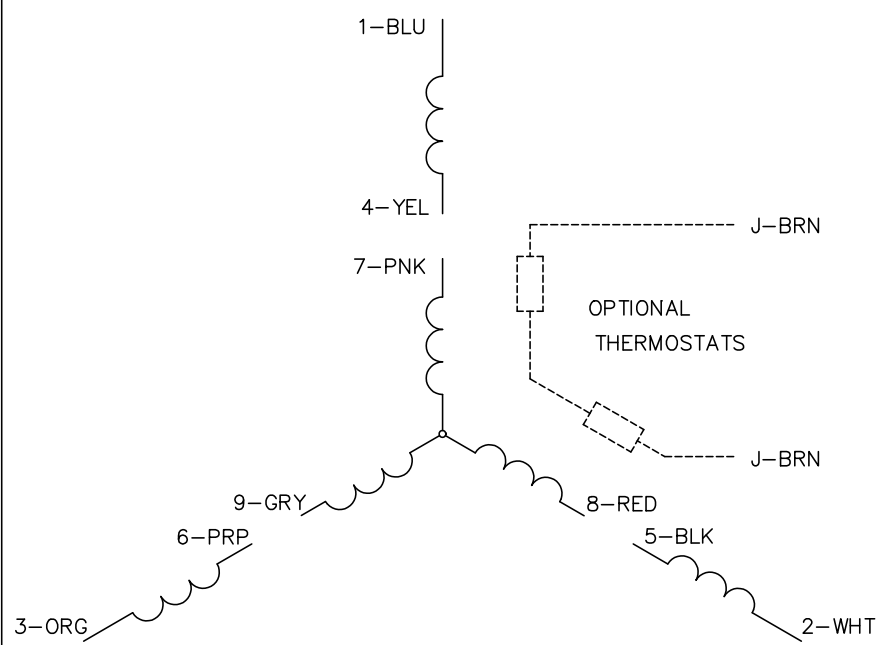
0.5 HP 3 PH 60 HZ 3450 RPM 230 V 3414M

TORQUES (LB-FT): PO=4.6 PU=3.07 LR=3.86 LRA=16.78





CD0005



- 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
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BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS

CD0005