ABB BALDOR RELIANCE

Customer information packet

VEM3545

1HP, 3450RPM, 3PH, 60HZ, 56C, 3516M, TEFC, F1, N
Class - None
Division - Not Applicable

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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	1.000 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
	CURUSEEV
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Auxiliary Box Lead Termination	None
Base Indicator	No Mounting
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	1.400 A @ 460.0 V
	2.800 A @ 230.0 V
	3.000 A @ 208.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	77.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater

Part Detail

Revision	AC
Type	AC
Mech. spec.	35J302
Base	
Status	PRD/A
Elec. spec.	35WGY474
Layout	35LYJ302
Eff. date	01-12-2026
CD Diagram	CD0005
Poles	02
Leads	9#18
Proprietary	False
Created date	05-05-2010

High Voltage Full Load Amps	1.4 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	K
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 18 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3516M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	12.23 IN
Power Factor	87
Product Family	General Purpose
Pulley End Bearing Type	Ball
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

NP3441LUA										
CAT.NO.	VEM3545									
SPEC	35J302Y474G1									
HP	1									
VOLTS	230/460									
AMPS	2.8/1.4									
RPM	3450									
FRAME	56C	**HZ**	60	**PH**	3					
SF	1.25	**CODE**	K	**DES**	B	**CLASS**	F			
NEMA NOM. EFF	77	**PF**	87							
RATING	40C AMB-CONT									
CC	010A									
ENCL	TEFC	**SER**								
DE	6205	**ODE**	6203							
VPWM INVERTER READY	SFA 3.4/1.7									
CT6-60H(10:1)VT3-60H(20:1										
	50Hz 1HP 190/380V 3.4/1.7A									SF1.0

AC Induction Motor Performance Data
Record # 56197
Typical performance - not guaranteed values

Winding: 35WGY474-R008	**Type:** 3516M	**Enclosure:** TEFC

Nameplate Data			
Rated Output (HP)			1
Volts			230/460
Full Load Amps			2.8/1.4
R.P.M.			3450
Hz	60	**Phase**	3
NEMA Design Code	B	**KVA Code**	K
Service Factor (S.F.)			1.25
NEMA Nom. Eff.	77	**Power Factor**	87
Rating - Duty			40C AMB-CONT
S.F. Amps			3.4/1.7

460 V, 60 Hz: High Voltage Connection	
Full Load Torque	1.47 LB-FT
Start Configuration	direct on line
Breakdown Torque	5.6 LB-FT
Pull-up Torque	2.56 LB-FT
Locked-rotor Torque	4.62 LB-FT
Starting Current	10.5 A
No-load Current	0.585 A
Line-line Res. @ 25ºC	19.5 Ω
Temp. Rise @ Rated Load	41°C
Temp. Rise @ S.F. Load	52°C
Locked-rotor Power Factor	64.1
Rotor inertia	0.0443 LB-FT2

Load Characteristics 460 V, 60 Hz, 1 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	55	72	82	86	90	91	90
Efficiency	57.7	70.5	75.4	77	77	75.8	77
Speed	3564	3533	3500	3460	3418	3366	3418
Line amperes	0.68	0.851	1.08	1.37	1.65	2.01	1.65

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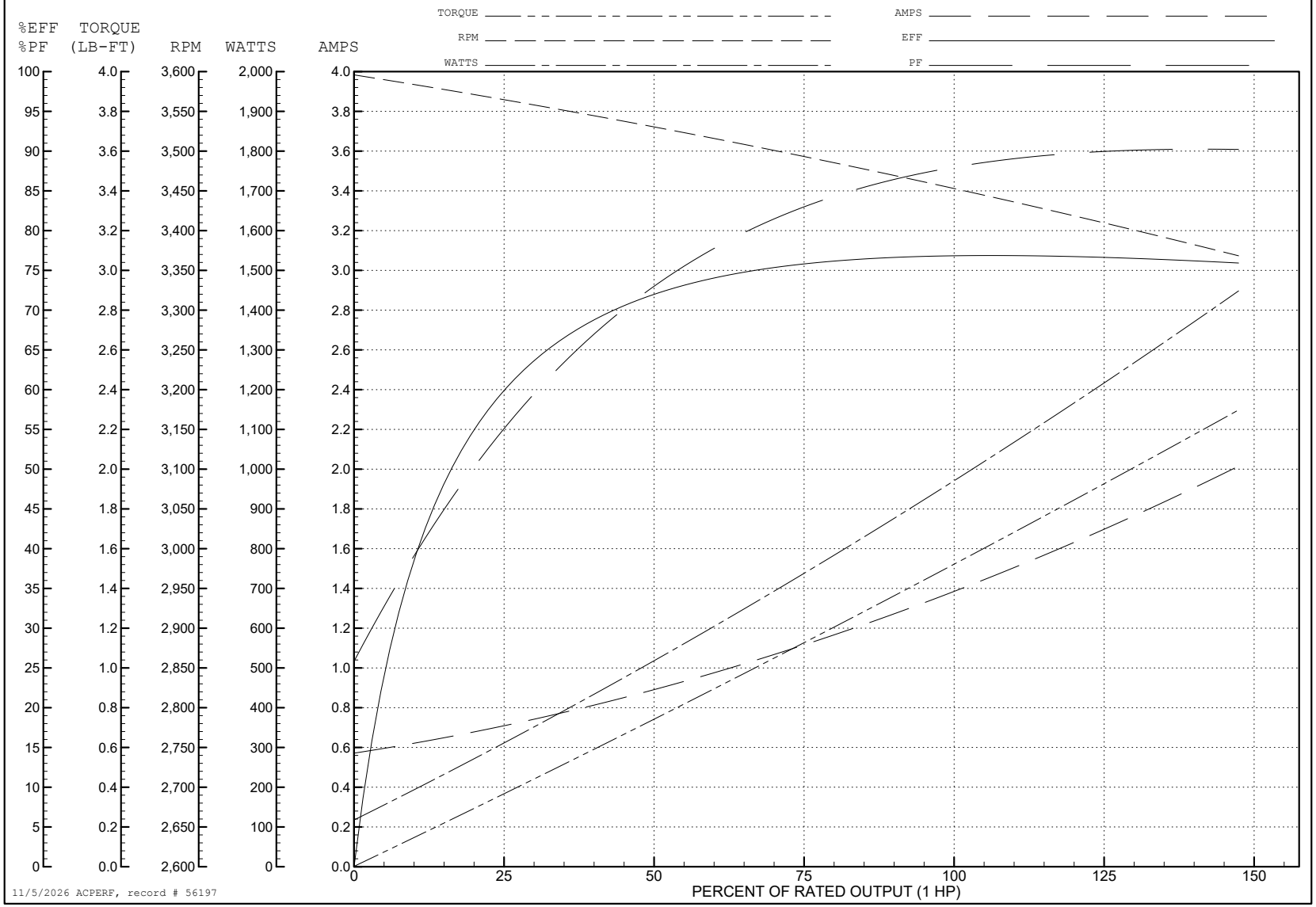
WINDING # 35WGY474

1 HP 3 PH 60 HZ 3450 RPM 460 V 3516M

Typical performance - not guaranteed values.

TORQUES(LB-FT): PO=5.6 PU=2.56 LR=4.62 LRA=10.5



AC Induction Motor Performance Data
Record # 59169
Typical performance - not guaranteed values

Winding: 35WGY474-R008	**Type:** 3516M	**Enclosure:** TEFC

Nameplate Data			**230 V, 60 Hz: Low Voltage Connection**	
Rated Output (HP)		1	**Full Load Torque**	1.5 LB-FT
Volts		230/460	**Start Configuration**	direct on line
Full Load Amps		2.8/1.4	**Breakdown Torque**	5.6 LB-FT
R.P.M.		3450	**Pull-up Torque**	3.9 LB-FT
Hz	60 **Phase**	3	**Locked-rotor Torque**	4 LB-FT
NEMA Design Code	B **KVA Code**	K	**Starting Current**	18 A
Service Factor (S.F.)		1.25	**No-load Current**	1.32 A
NEMA Nom. Eff.	77 **Power Factor**	87	**Line-line Res. @ 25ºC**	4.88 Ω
Rating - Duty		40C AMB-CONT	**Temp. Rise @ Rated Load**	47°C
S.F. Amps		3.4/1.7	**Temp. Rise @ S.F. Load**	60°C
			Locked-rotor Power Factor	64.1
			Rotor inertia	0.0443 LB-FT2

Load Characteristics 230 V, 60 Hz, 1 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	57	74	81	85	87	87	87
Efficiency	54	67.8	73.5	75.1	75.6	74.6	75.6
Speed	3549	3513	3474	3432	3384	3330	3384
Line amperes	1.54	1.88	2.34	2.86	3.44	4.12	3.44

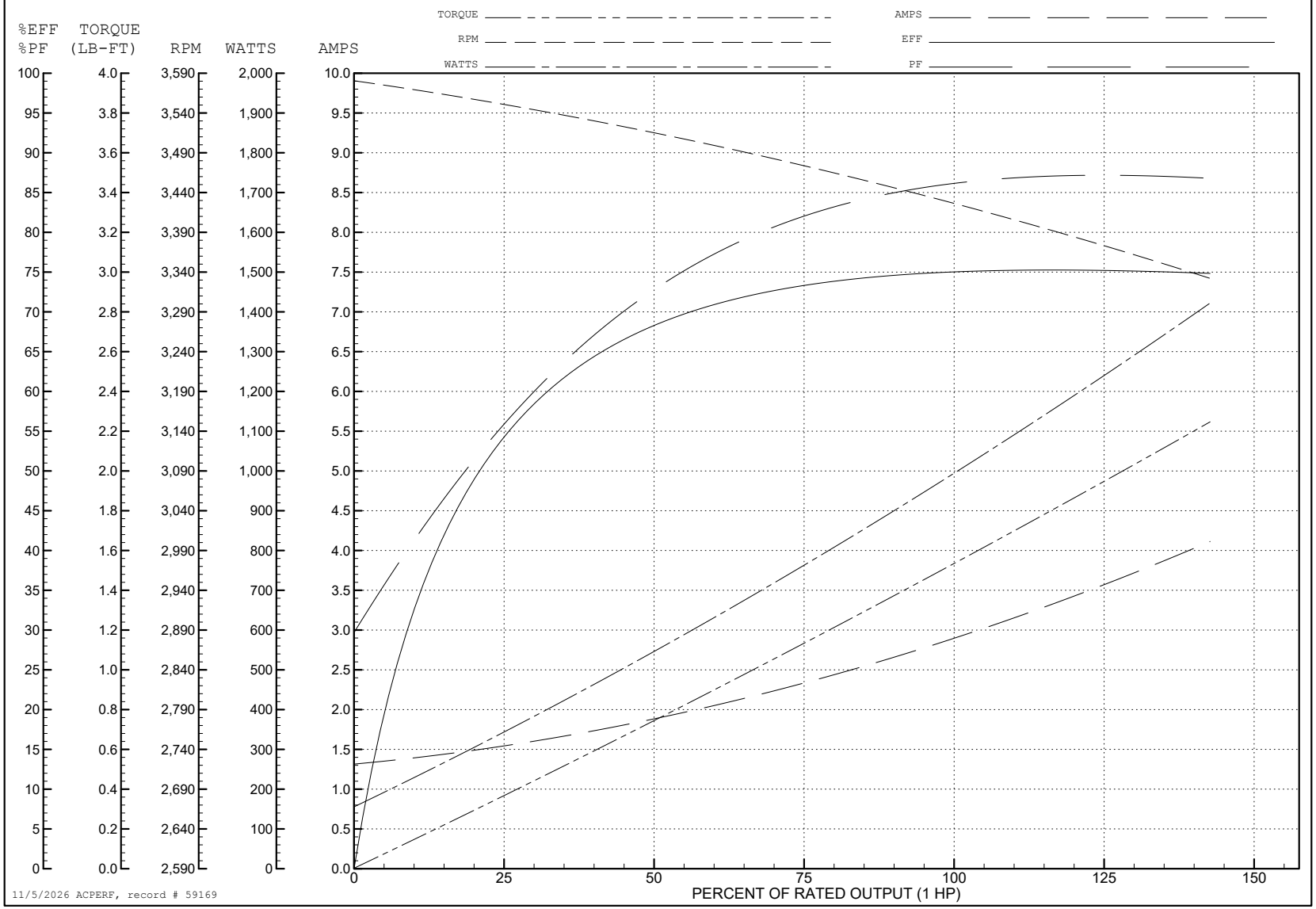
ABB Motors and Mechanical Inc.

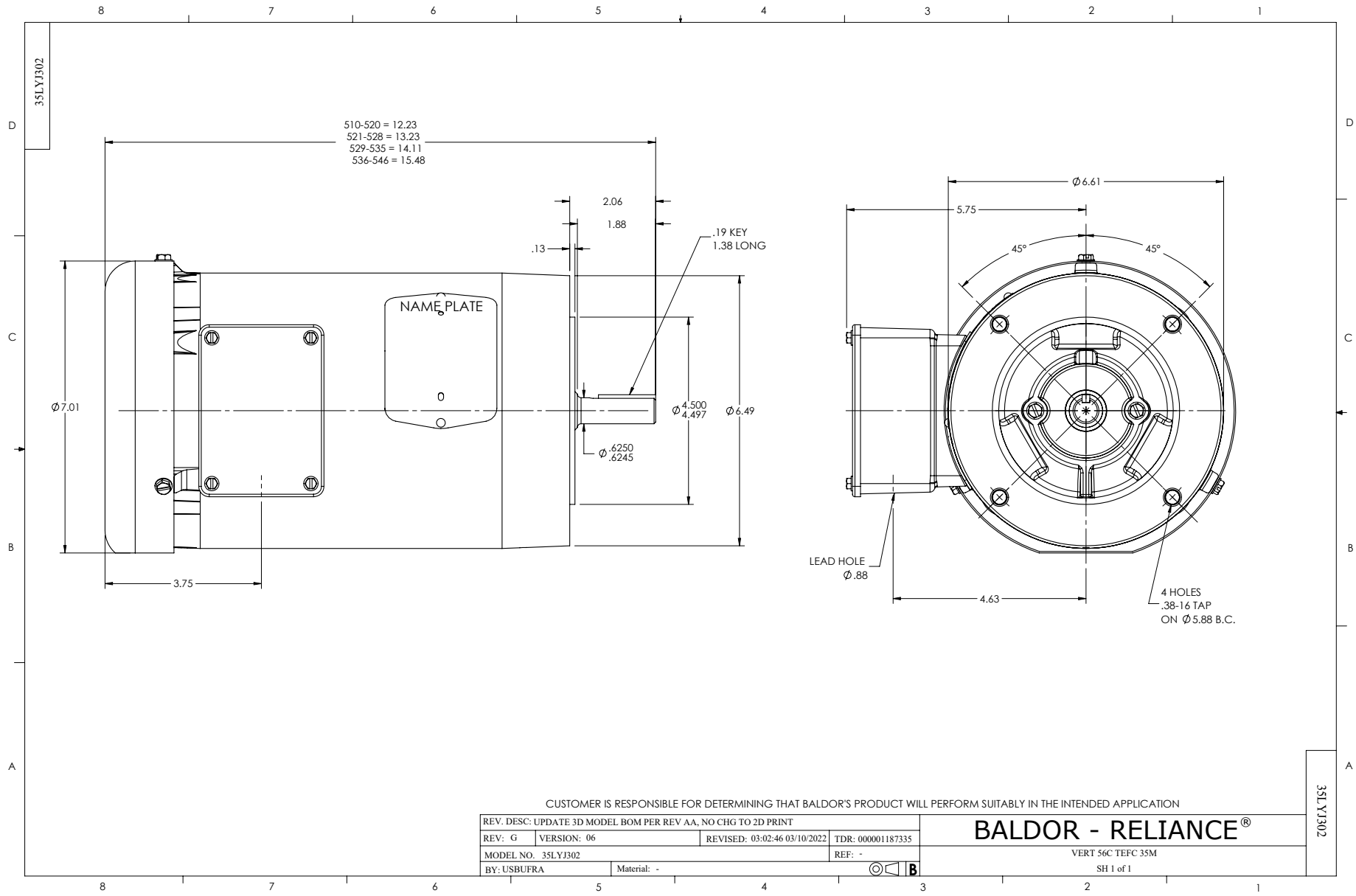
WINDING # 35WGY474

1 HP 3 PH 60 HZ 3450 RPM 230 V 3516M

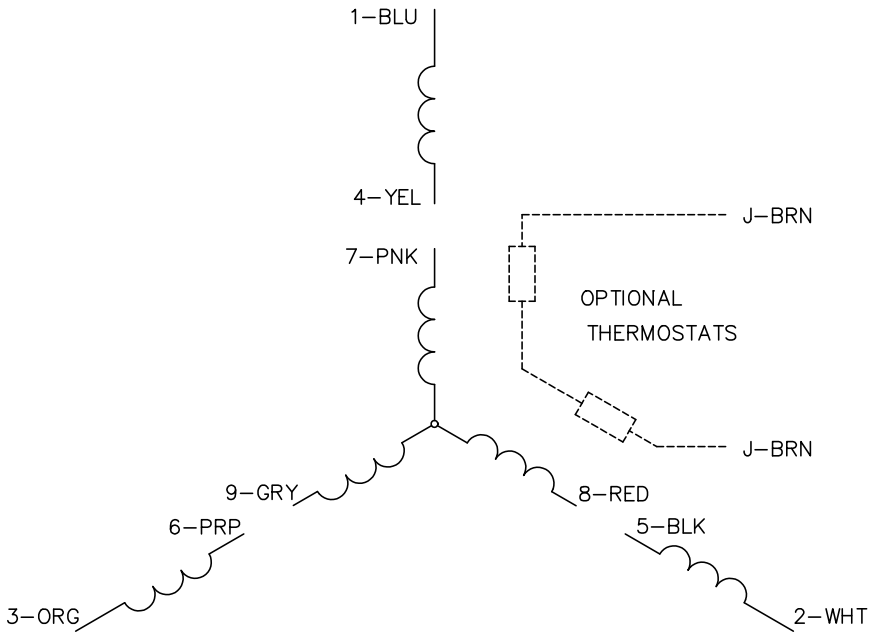
Typical performance - not guaranteed values.

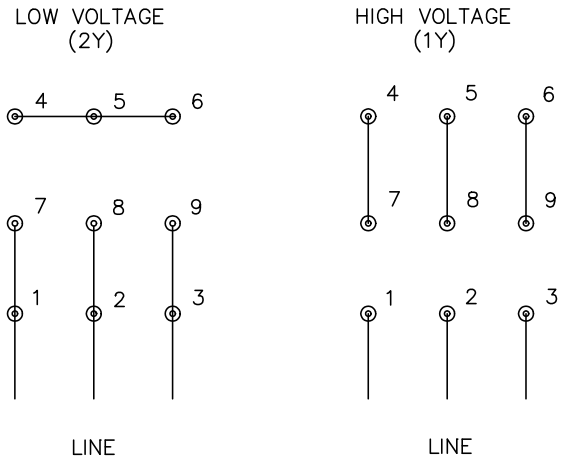
TORQUES(LB-FT): PO=5.6 PU=3.9 LR=4 LRA=18




35LYJ302
510-520 = 12.23
521-528 = 13.23
529-535 = 14.11
536-546 = 15.48
2.06
1.88
.13
.19 KEY
1.38 LONG
NAME PLATE
Ø7.01
Ø4.500
4.497
Ø6.49
Ø.6250
.6245
3.75
Ø6.61
5.75
45°
45°
LEAD HOLE
Ø.88
4.63
4 HOLES
.38-16 TAP
ON Ø5.88 B.C.
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: UPDATE 3D MODEL BOM PER REV AA, NO CHG TO 2D PRINT
REV: G
VERSION: 06
REVISED: 03:02:46 03/10/2022
TDR: 000001187335
MODEL NO. 35LYJ302
REF: -
BY: USBUFRA
Material: -
B
BALDOR - RELIANCE®
VERT 56C TEFC 35M
SH 1 of 1
35LYJ302

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.

CD0005

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			BALDOR ELECTRIC Co.
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
CD0005		FILE: AAA00005140	MDL: –
		MTL: –	3PH, DV, 9 LEADS