

**BALDOR • RELIANCE**

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# Customer information packet

## CEM3616T

7.5HP, 3450RPM, 3PH, 60HZ, 184TC, 3646M, TEFC

Class - None

Division - Not Applicable

## Specifications

Enclosure	TEFC
Frame	184TC
Frame Material	Steel
Frequency	60.00 Hz
Motor Letter Type	Three Phase
Output @ Frequency	7.500 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	3600 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ 460.0 V @ 60 HZ
XP Class and Group	None
XP Division	Not Applicable
Agency Approvals	CSA EEV CURUSEEV NEMA PREMIUM NEMA_PREMIUM UR
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	18.500 A @ 208.0 V 8.400 A @ 460.0 V 16.800 A @ 230.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	89.5 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK

## Part detail

Revision	J
Type	AC
Mech. spec.	36A002
Base	
Status	PRD/A
Elec. spec.	36WGS428
Layout	36LYA002
Eff. date	11-30-2021
CD Diagram	CD0005
Poles	02
Leads	9#16
Proprietary	False
Created date	07-29-2010

Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	8.4 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	L
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 16 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3646M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	18.05 IN
Power Factor	93
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	1.125 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

<b>Vibration Sensor Indicator</b>	<b>No Vibration Sensor</b>
<b>Winding Thermal 1</b>	<b>None</b>
<b>Winding Thermal 2</b>	<b>None</b>

**Nameplate**

**NP3441LUA**

<b>CAT.NO.</b>	CEM3616T						
<b>SPEC</b>	36A002S428G1						
<b>HP</b>	7.5						
<b>VOLTS</b>	230/460						
<b>AMPS</b>	16.8/8.4						
<b>RPM</b>	3450						
<b>FRAME</b>	184TC	<b>HZ</b>	60	<b>PH</b>	3		
<b>SF</b>	1.15	<b>CODE</b>	L	<b>DES</b>	A	<b>CLASS</b>	F
<b>NEMA NOM. EFF</b>	89.5	<b>PF</b>	93				
<b>RATING</b>	40C AMB-CONT						
<b>CC</b>	010A	<b>USABLE AT 208V</b>				N/A	
<b>ENCL</b>	TEFC	<b>SER</b>					
<b>DE</b>	6206	<b>ODE</b>	6205				
<b>VPWM INVERTER READY</b>							
<b>CT6-60H(10:1)VT3-60H(20:1</b>	50Hz 7.5HP 190/380V 21/10.5A						SF1.0

## Parts list

Part number	Description	Quantity
SA200451	SA 36A002S428G1	1.000 ea
RA187764	RA 36A002S428G1	1.000 ea
36CB3004	36 CB CASTING W/1.09 DIA LEAD HOLE @ 6:0	1.000 ea
36GS1000SP	GASKET-CONDUIT BOX, .06 THICK #SV-330 LE	1.000 ea
51XB1016A08	10-16X 1/2HXWSSLD SERTYB	2.000 ea
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	1.000 ea
HW3001B01	BRASS CUP WASHER, FOR #10 SCREW	1.000 ea
36EP3104A01	FREP MACH ASSEMBLY FOR ROUTING	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HW5100A05	WVY WSHR F/205 & 304 BRGS	1.000 ea
36EP3301A23	PUEP ASSEMBLY FOR ROUTING PURPOSES	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
10XN2520A28	1/4-20X 1 3/4 HEX HD	4.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 ea
51XB1214A16	12-14X1.00 HXWSSLD SERTYB	1.000 ea
36FH4009A102	IEC FH GREASER PRIMED	1.000 ea
51XW1032A06	10-32 X .38, TAPTITE II, HEX WSHR SLTD S	3.000 ea
36CB4516	750LIPPED CB LID - GALVANNEAL	1.000 ea
37GS1001	GASKET, CONDUIT BOX LID, .06 THICK LEXID	1.000 ea
51XW0832A07	8-32 X .44, TAPTITE II, HEX WSHR SLTD SE	4.000 ea
HW2501E16	KEY, 1/4 SQ X 1.750	1.000 ea
HA7000A02	KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA	1.000 ea
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
HW3200A01	3/8-16X3/4 EYEBOLT WELDED F/S	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.050 lb
36FN3000C01SP	EXFN, PLASTIC, 5.25 OD, .912 ID	1.000 ea
MG1000Y03	MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20, GOLD	0.022 ga
HA3101A28	THRUBOLT 1/4-20 X 12.500 OHIO ROD	4.000 ea
LC0005	CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING	1.000 ea
NP3441LUA	ALUM SUPER-E VPWM INV READY UL CSA-EEV C	1.000 ea
36PA1001	PKG GRP, PRINT PK1017A06	1.000 ea

PK3082	STYROFOAM CRADLE	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2100bx)4/22	1.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea

**AC Induction Motor Performance Data**

Record # 52145

Typical performance - not guaranteed values

Winding: 36WGS428-R020		Type: 3646M	Enclosure: TEFC	
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>	
Rated Output (HP)	7.5		Full Load Torque	11.4 LB-FT
Volts	230/460		Start Configuration	direct on line
Full Load Amps	16.8/8.4		Breakdown Torque	57.9 LB-FT
R.P.M.	3450		Pull-up Torque	39.9 LB-FT
Hz	60 Phase	3	Locked-rotor Torque	48.2 LB-FT
NEMA Design Code	A KVA Code	L	Starting Current	91 A
Service Factor (S.F.)	1.15		No-load Current	2.33 A
NEMA Nom. Eff.	89.5 Power Factor	93	Line-line Res. @ 25°C	1.43 Ω
Rating - Duty	40C AMB-CONT		Temp. Rise @ Rated Load	74°C
S.F. Amps			Temp. Rise @ S.F. Load	92°C
			Locked-rotor Power Factor	44.4
			Rotor inertia	0.205 LB-FT <sup>2</sup>

**Load Characteristics 460 V, 60 Hz, 7.5 HP**

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	64	85	90	93	94	94	94
Efficiency	86.9	90.6	91	90.1	88.8	86.5	89.3
Speed	3571	3539	3505	3468	3429	3385	3445
Line amperes	3.14	4.59	6.43	8.43	10.5	12.9	9.67



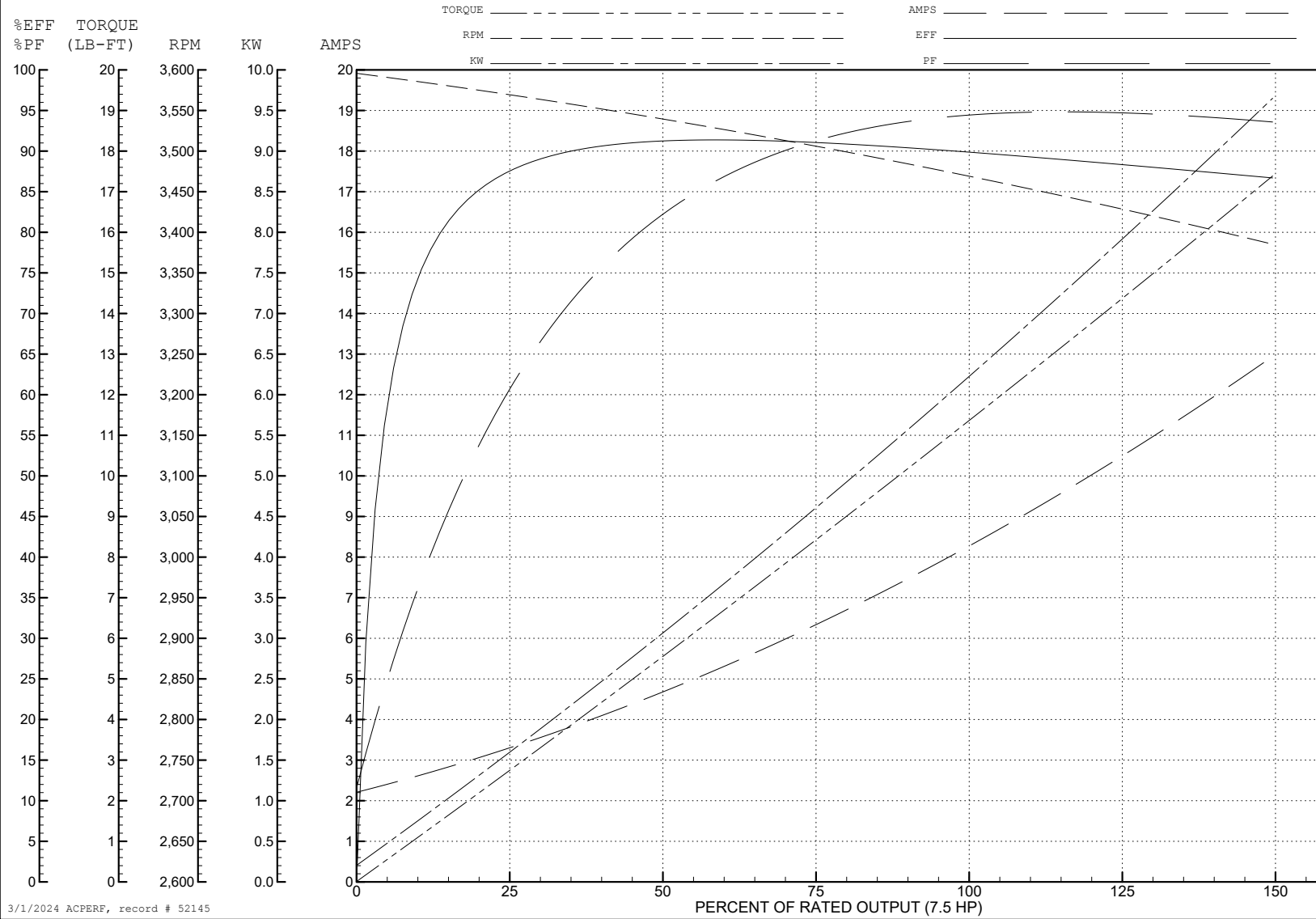
ABB Motors and Mechanical Inc.

WINDING # 36WGS428

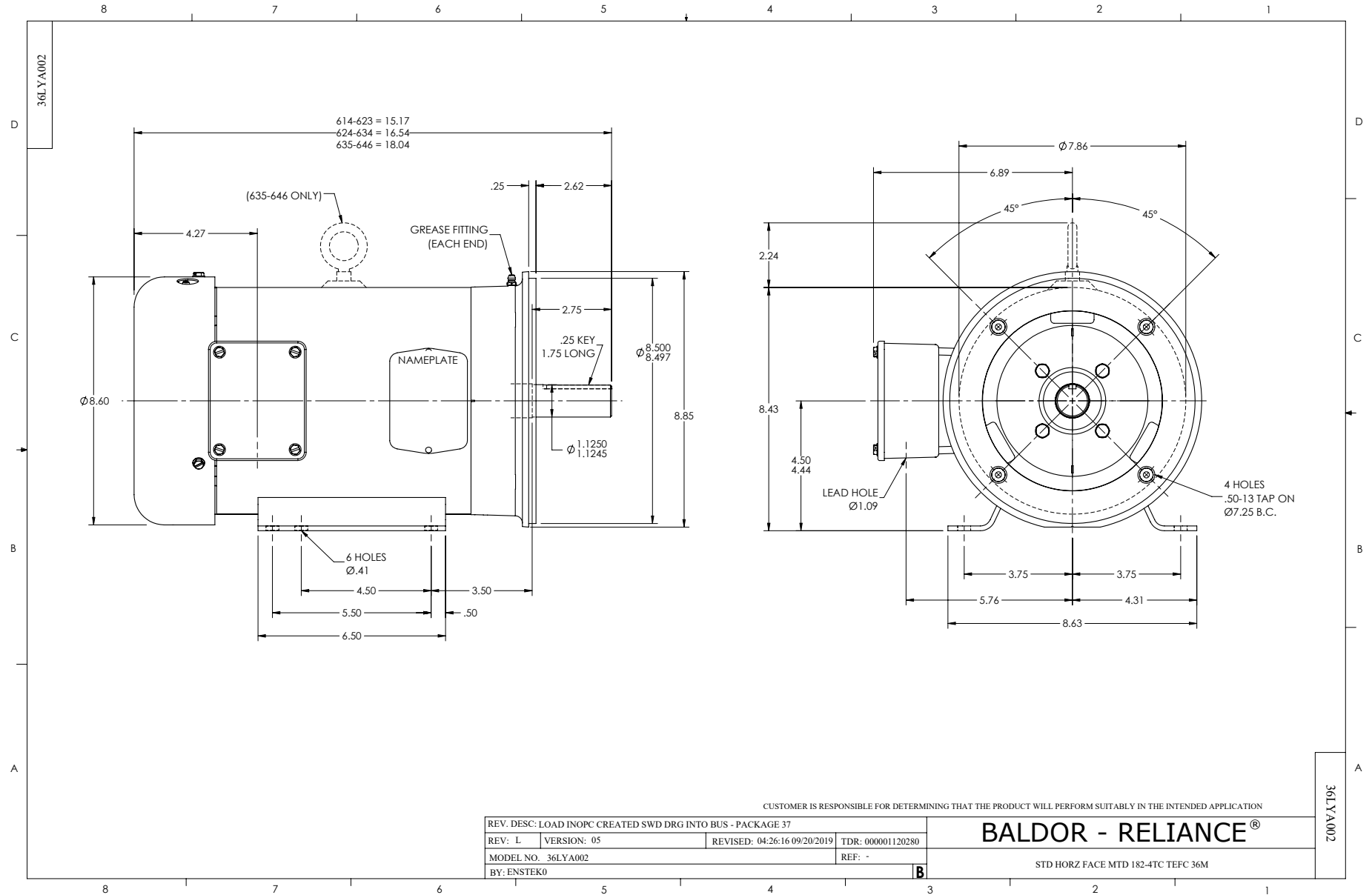
7.5 HP 3 PH 60 HZ 3450 RPM 460 V 3646M

Typical performance - not guaranteed values.

TORQUES (LB-FT): PO=57.9 PU=39.9 LR=48.2 LRA=91



3/1/2024 ACPERF, record # 52145



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.

CD0005

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