

ABB BALDOR RELIANCE III

Customer information packet

VEM3709T

7.5HP, 3495RPM, 3PH, 60HZ, 213TC, 3646M, TEFC

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	213TC
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	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
Agency Approvals	CURUSEEV NEMA PREMIUM
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	17.600 A @ 230.0 V 18.600 A @ 208.0 V 8.800 A @ 460.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	90.2 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	8.8 a

Part Detail

Revision	D
Type	AC
Mech. spec.	36G843
Base	
Status	PRD/A
Elec. spec.	36WGQ046
Layout	36LYG843
Eff. date	12-31-2024
CD Diagram	CD0005
Poles	02
Leads	9#14
Proprietary	False
Created date	01-04-2021

Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	M
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Quantity/Wire Size	9 @ 14 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3646M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	18.56 IN
Power Factor	89
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	1.15
Shaft Diameter	1.375 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	3495 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.	VEM3709T								
SPEC	36G843Q046G1								
HP	7.5								
VOLTS	230/460								
AMPS	17.6/8.8								
RPM	3495								
FRAME	213TC		HZ	60		PH	3		
SF	1.15	CODE	M	DES	A	CLASS	F		
NEMA NOM. EFF	90.2	PF	89						
RATING	40C AMB-CONT								
CC	010A								
ENCL	TEFC	SER							
DE	6207		ODE	6205					
VPWM INVERTER READY									
CT6-60H(10:1)VT3-60H(20:1									
	50HZ 7.5HP 190/380V 20/10.0A							SF1.0	

AC Induction Motor Performance Data

Record # 85922

Preliminary Data Sheet

Winding: 36WGQ046-R001			Type: 3646M		Enclosure: TEFC		
Nameplate Data				460 V, 60 Hz: High Voltage Connection			
Rated Output (HP)		7.5		Full Load Torque		11.3 LB-FT	
Volts		230/460		Start Configuration		direct on line	
Full Load Amps		17.6/8.8		Breakdown Torque		73 LB-FT	
R.P.M.		3495		Pull-up Torque		49.1 LB-FT	
Hz	60	Phase	3	Locked-rotor Torque		62.3 LB-FT	
NEMA Design Code		A	KVA Code	N		Starting Current	112 A
Service Factor (S.F.)		1.15		No-load Current		3.47 A	
NEMA Nom. Eff.		90.2	Power Factor	89		Line-line Res. @ 25°C	1.24 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		73°C	
S.F. Amps		20/10		Temp. Rise @ S.F. Load		95°C	
				Locked-rotor Power Factor		68.2	
				Rotor inertia		0.206 lb-ft²	

Load Characteristics 460 V, 60 Hz, 7.5 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	52	75	84	89	92	93	91
Efficiency	84.5	89.6	90.5	90.2	89.3	88	89.7
Speed	3574	3549	3522	3494	3463	3431	3476
Line amperes	4.06	5.28	6.94	8.75	10.7	12.9	9.91

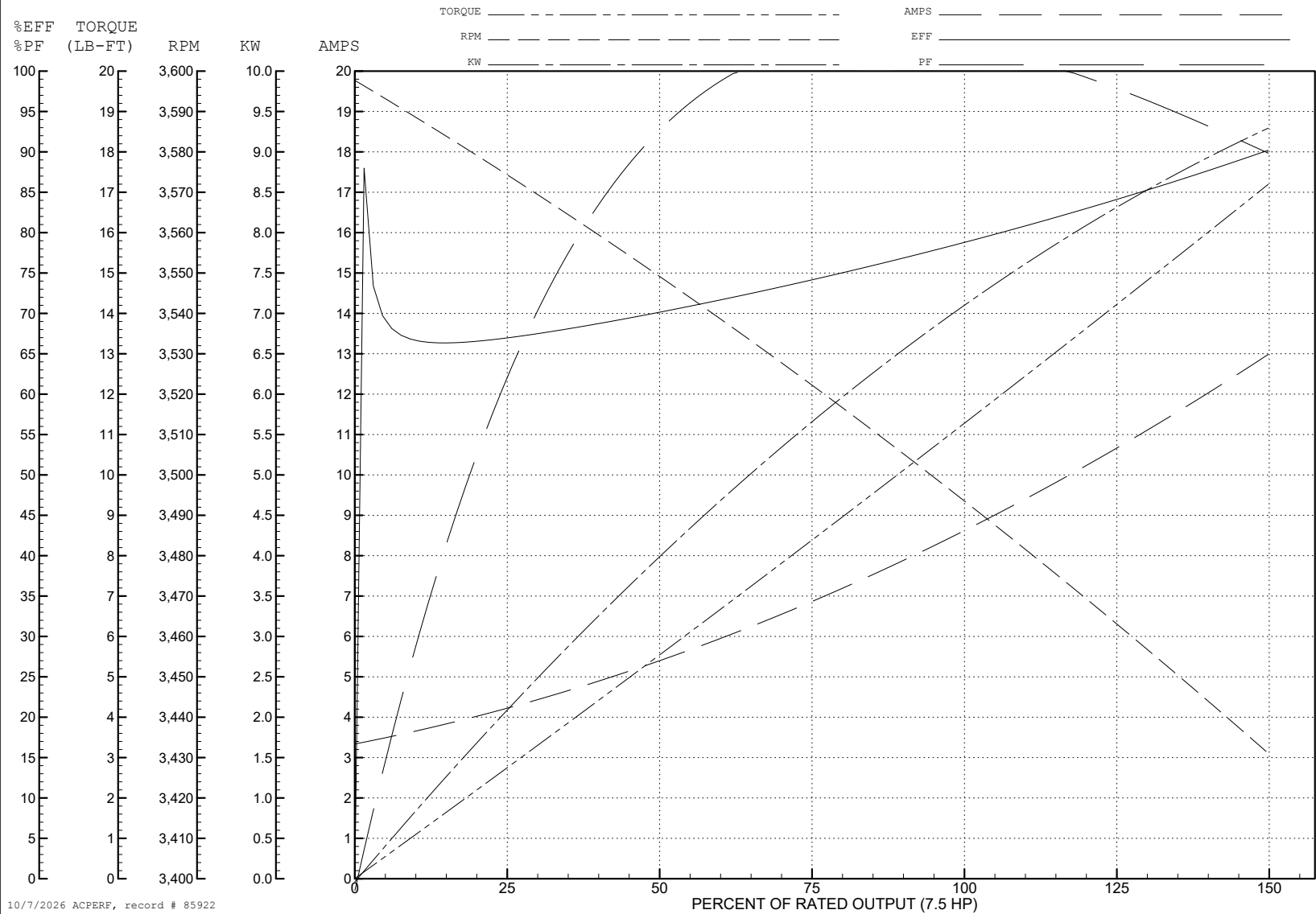
ABB Motors and Mechanical Inc.

WINDING # 36WGQ046

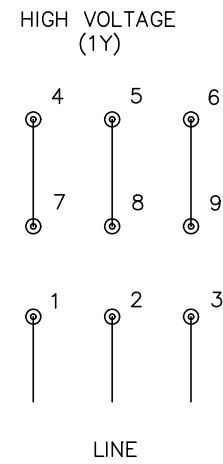
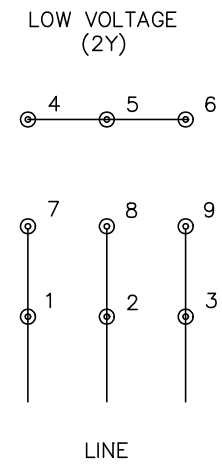
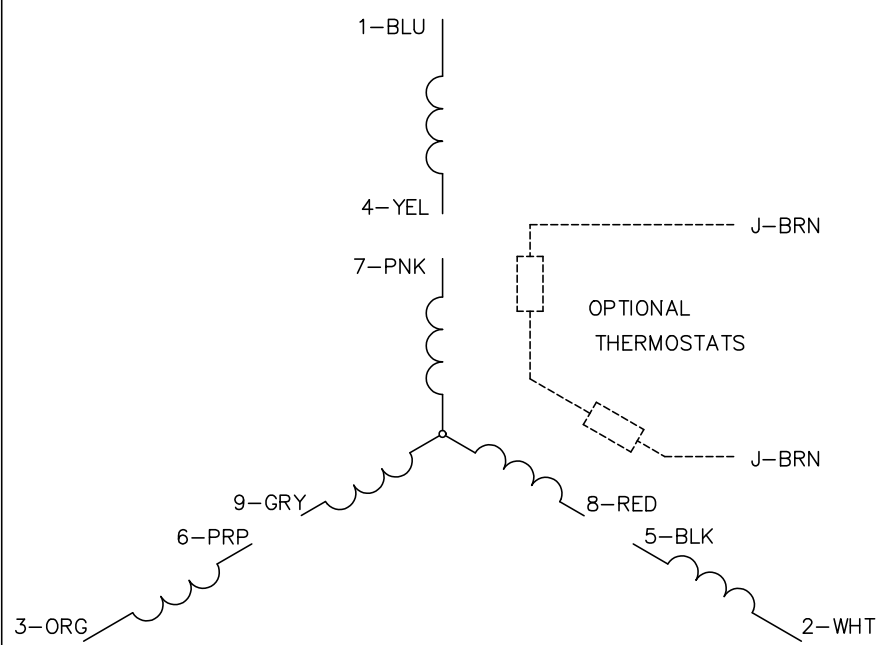
Typical performance - not guaranteed values.

7.5 HP 3 PH 60 HZ 3495 RPM 460 V 3646M

TORQUES (LB-FT): PO=73 PU=49.1 LR=62.3 LRA=112



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
900000		FILE: AAA00005140	MDL: -
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BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS

CD0005