



Customer information packet

EWCM3709T

7.5HP, 3450RPM, 3PH, 60HZ, 213TCZ, 3646M, TEFC

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	213TCZ
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	CSA EEV CURUSEEV NEMA PREMIUM NEMA_PREMIUM 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
Current @ Voltage	19.400 A @ 230.0 V 9.700 A @ 460.0 V 19.400 A @ 208.0 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	H
Type	AC
Mech. spec.	36N536
Base	
Status	PRD/A
Elec. spec.	36WGR431
Layout	36LYN536
Eff. date	03-13-2025
CD Diagram	CD0005
Poles	02
Leads	9#16
Proprietary	False
Created date	05-19-2015

Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	9.7 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	S
Lifting Lugs	Standard 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	23.45 IN
Power Factor	79
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Tapped & Key
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	0.875 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

NP3441L											
CAT.NO.	EWCM3709T										
SPEC.	36N536R431G1										
HP	7.5										
VOLTS	230/460										
AMP	19.4/9.7										
RPM	3450										
FRAME	213TCZ		HZ	60			PH	3			
SER.F.	1.15		CODE	S	DES	A	CL	F			
NEMA-NOM-EFF	89.5		PF	79							
RATING	40C AMB-CONT										
CC	010A										
DE	6307		ODE	6205							
ENCL	TEFC		SN								
VPWM INVERTER READY											
CT6-60H(10:1)VT3-60H(20:1											

AC Induction Motor Performance Data

Record # 65929

Typical performance - not guaranteed values

Winding: 36WGR431-R004			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		19.4/9.7		Breakdown Torque		97.6 LB-FT	
R.P.M.		3450		Pull-up Torque		73.1 LB-FT	
Hz	60	Phase	3	Locked-rotor Torque		88.3 LB-FT	
NEMA Design Code		A	KVA Code	S	Starting Current		155 A
Service Factor (S.F.)		1.15		No-load Current		5.69 A	
NEMA Nom. Eff.		89.5	Power Factor	79	Line-line Res. @ 25°C		0.936 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		72°C	
S.F. Amps				Temp. Rise @ S.F. Load		84°C	
				Locked-rotor Power Factor		48.4	
				Rotor inertia		0.205 LB-FT2	

Load Characteristics 460 V, 60 Hz, 7.5 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	35	58	71	79	85	87	83
Efficiency	82	88.4	90.2	90.3	89.7	88.3	89.9
Speed	3580	3557	3533	3507	3480	3449	3491
Line amperes	6.03	6.89	8.27	9.9	11.6	13.7	10.9

ABB Motors and Mechanical Inc.

WINDING # 36WGR431

Typical performance - not guaranteed values.

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

TORQUES (LB-FT): PO=97.6 PU=73.1 LR=88.3 LRA=155





