



Beaver Electrical Machinery Ltd.

Date: August 11, 2022



Technical Documentation

PDH0014

Optim TEFC | AEHH8N

Beaver Electrical Machinery Ltd.

Date: August 11, 2022



Dimensional Drawing

Catalogue	Type	HP	RPM	Voltage	Hz	Frame Size
PDH0014	AEHH8N	1	1800	230 / 460	60	143T

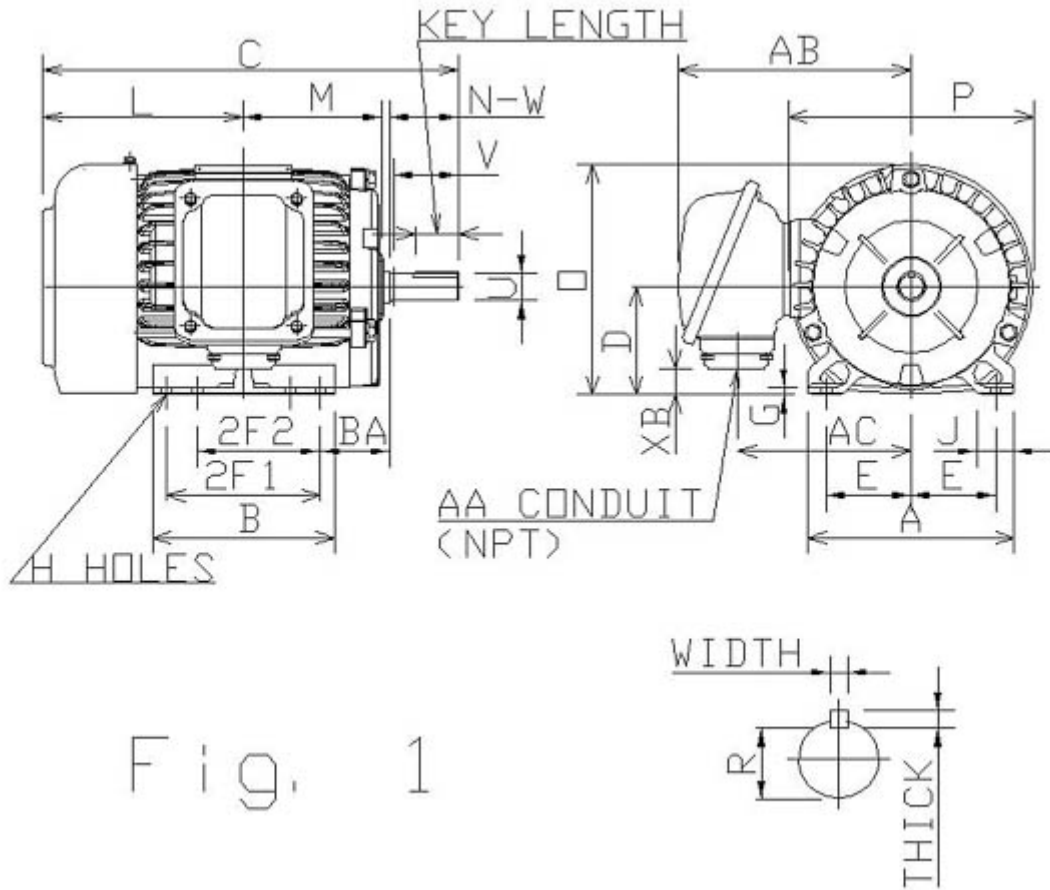


Fig. 1



Mounting					A	B	C	CL1	CL2	D	G
E	2F1	2F2	H	BA							
2.75	4		0.34	2.25	6.7	5.1	12.56			3.5	0.25

J	K	L	M	O	P	T
1.18		6.06	4.03	7.53	8.05	

Terminal Housing			
AA	AB	AC	XB
3/4	7.56	5.63	0.86

Shaft Extension			Key			Keyseat
N-W	U	V	Width	Thick	Length	R
2.25	0.875	2.2	0.188	0.188	1.41	0.771

Bearings		Weight Lbs	Drive Method	Dimensions
DE	NDE			
6205ZZ	6205ZZ	52	Direct Coupling / Belt Drive	Inches

	Beaver Electrical Machinery Ltd.	
	Date: August 11, 2022	

Technical Data Sheet

Motor Type: AEHH8N	Catalogue No: PDH0014
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Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
1	4	1745	143T	230 / 460	60	3
Enclosure	Ins. Class	Service Factor	Time Rating	NEMA Design	Rated Amb.	Rated Altitude
TEFC	F	1.15	Continuous	C	-40 to 40 °C	<1000 m

Typical Performance

Efficiency (%)				Power Factor (%)		
Full Load		3/4 Load	1/2 Load	Full Load	3/4 Load	1/2 Load
Nom.	Min.					
85.5	82.5	84	81.5	73	64.5	51.5
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
3.01	310	280	410	1.9 / 0.9	3.0 / 1.5	30 / 15
NEMA KVA Code	Inertia (WR ²)			Safe Stall Time (s)		Noise Level Sound Press. dB(A)
	Rotor (lb-ft ²)	NEMA Load (lb-ft ²)	Max. Allowable (lb-ft ²)	Cold	Hot	
N	0.086	5.8	50.44	44	31	49

VFD Duty Information

Max HP	Current (A)	Speed Range		VFD		S.F.
		Constant Torque	Variable Torque	Carrier Hz	Type	
1	1.5	6-60Hz	3-60Hz	3-6kHz	VPWM or CPWM	1



Hazardous Locations Information

CSA Certified	Other Certification
Class I, Div 2, Groups B, C & D Class I, Zone 2, Groups IIB+H2, IIB & IIA	
Temp Code (Sinewave / VFD)	T3C / T3C

Additional Certifications

Additional Information

Bearings		Approx. Weight
DE	NDE	lbs
6205ZZ	6205ZZ	52

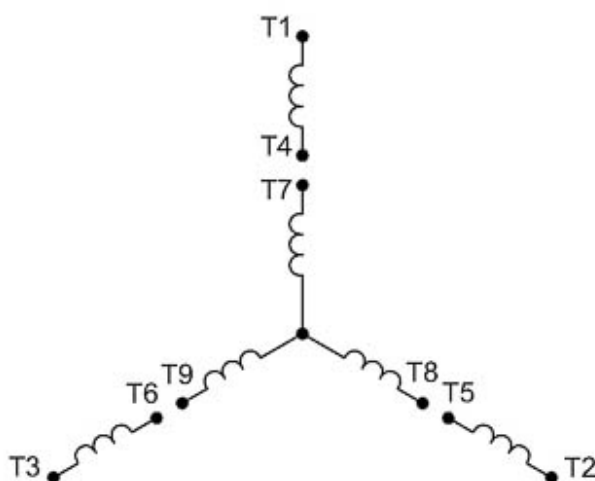
	Beaver Electrical Machinery Ltd.	
	Date: August 11, 2022	

Nameplate Drawing

Optim TEFC					
TYPE	AEHH8N	CAT. NO.	PDH0014		
OUTPUT	1 HP 0.75 kW	FRAME	143T	TEFC	
R.P.M.	1745	POLE	4	INS.	F
VOLTS	230 / 460	PHASE	3	Hz	60
AMPS	3.0 / 1.5	CODE	N	S.F.	1.15
AMBIENT	40 °C	NOM. EFF. 85.5		MIN. EFF. 82.5	
BEARINGS	6205ZZ / 6205ZZ			RATING Cont.	
SER. NO.	TBD	DESIGN	C	WT. 52 LBS	
PWM VFD DUTY	VT	CT	CP	S.F.	
	3-60Hz	6-60Hz	60-120Hz	1	



Connection Diagram



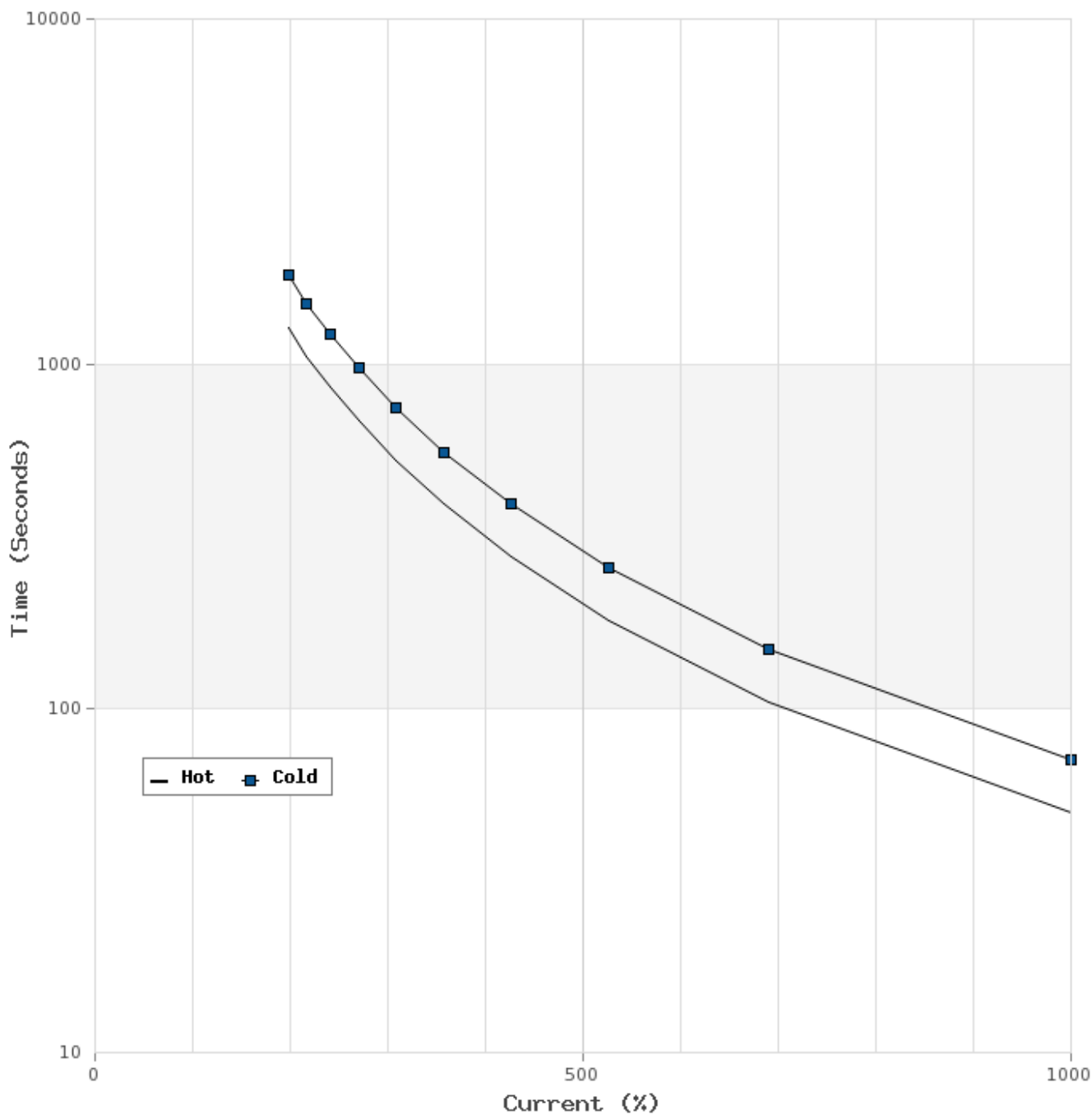
9 LEAD DUAL VOLTAGE WYE					
VOLTAGE	CONN.	L1	L2	L3	JOIN
HIGH	WYE	1	2	3	4&7,5&8,6&9
LOW	2 WYE	1,7	2,8	3,9	4&5&6

WD_9Y



Thermal Limit Curves

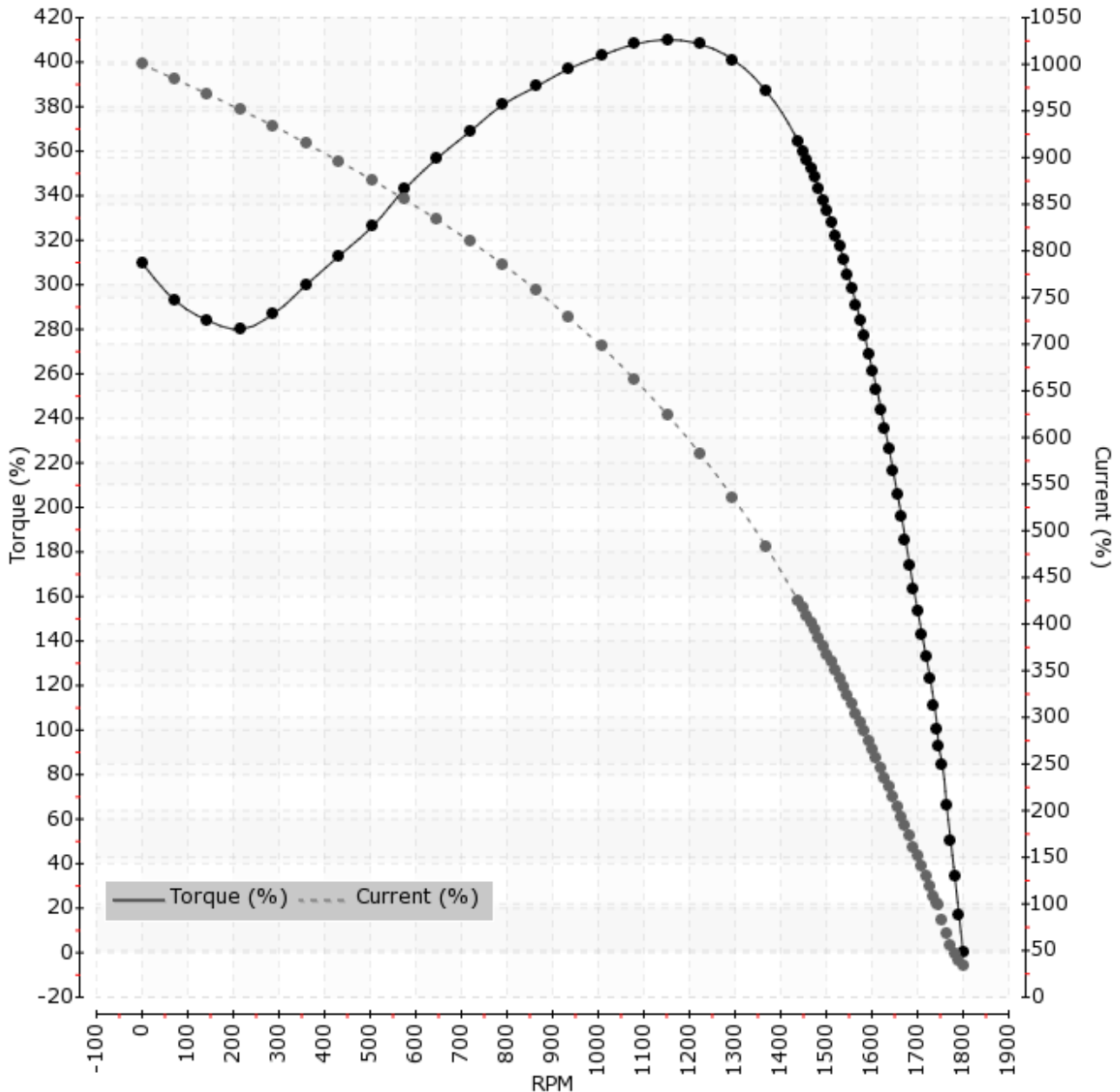
Motor Type: AEHH8N		Catalogue No: PDH0014		Family: Optim TEFC	
HP	1	Safe Stall Time		Full Load A	3.0 / 1.5 A
Voltage	230 / 460V 60Hz	Hot	31 s	% Inrush	1,000 / 1,000 %
RPM	1800	Cold	44 s	Locked Rotor A	30 / 15 A





T-N and I-N Curves

Motor Type: AEHH8N		Catalogue No: PDH0014		Family: Optim TEFC	
HP	1	Full Load T	3.01 lb-ft	Full Load A	3.0 / 1.5 A
Voltage	230 / 460V 60Hz	Locked Rotor T	310 %	Locked Rotor A	30.0 / 15.0 A
RPM	1800	Pull Up T	280 %	Break Down T	410 %





Dimensional Drawing (50 Hz)

Catalogue	Model	HP	Pole	kW	Rating	Voltage	Hz	RPM
PDH0014	AEHH8N	1	4	0.75	Continuous	190 / 380	50	1435

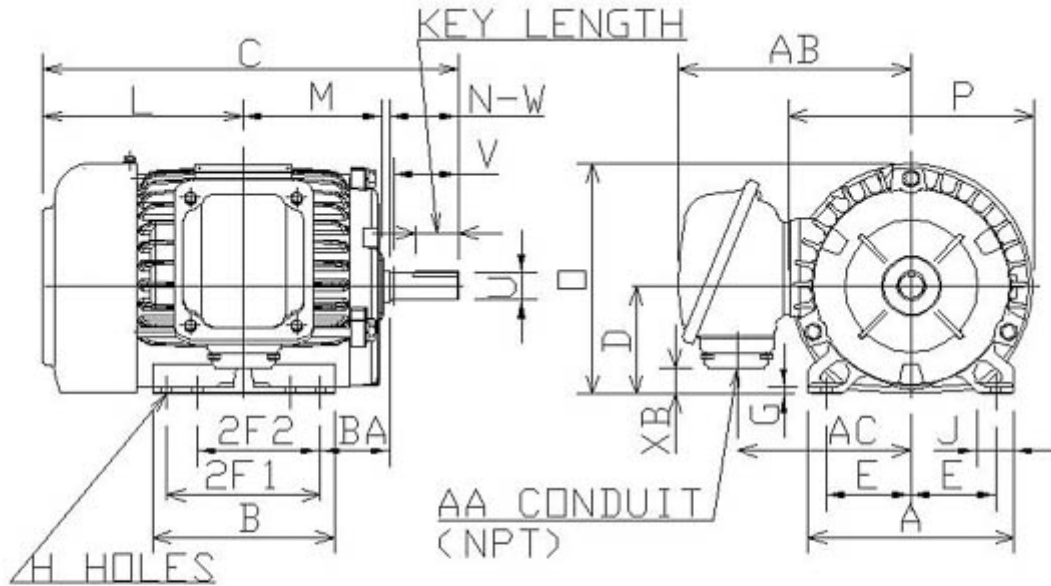




Fig. 1

Frame Size	Mounting					A	B	C	CD	D	
	E	2F	2F2	H	BA						
143T	2.75			0.34	2.25	6.7	5.1	12.56		3.5	
G	J	K	L	M	O	P	T	Key			Keyseat
0.25	1.18		6.06	4.03	7.53	8.05		Width	Thick	Length	R
								0.188	0.188	1.41	0.771
Terminal Housing			Aux Box			C/D Flange					
AA	AB	AC	XB	AE	AX	BB	AH	AK	BD	AJ	BF
3/4	7.56	5.63	0.86								
Shaft Extension			Bearings		Approx. Weight Lbs	SPL dBA/3ft	Ins. Class	S.F.	Drive Method	Dimensions	
N-W	U	V	DE	NDE							
2.25	0.875	2.2	6205ZZ	6205ZZ	52	49	F	1	Direct Coupling / Belt Drive	Inches	

	Beaver Electrical Machinery Ltd.	
	Date: August 11, 2022	

Technical Data Sheet (50 Hz)

Motor Type: AEHH8N	Catalogue No: PDH0014
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Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
1	4	1435	143T	190 / 380	50	3
Enclosure	Ins. Class	Service Factor	Time Rating	NEMA Design	Rated Amb.	Rated Altitude
TEFC	F	1	Continuous	C	-40 to 40 °C	<1000 m

Typical Performance

Efficiency (%)				Power Factor (%)		
Full Load		3/4 Load	1/2 Load	Full Load	3/4 Load	1/2 Load
Nom.	Min.					
84	81.5	85.5	84	83.5	76.50	63.50
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
4	225	195	295	1.8 / 0.9	3.2 / 1.6	40 / 20
NEMA KVA Code	Inertia (WR ²)			Safe Stall Time (s)		Noise Level Sound Press. dB(A)
	Rotor (lb-ft ²)	NEMA Load (lb-ft ²)	Max. Allowable (lb-ft ²)	Cold	Hot	
P	0.086	9	61.65	54	38	49

VFD Duty Information

Speed Range			VFD		S.F.
Constant Torque	Variable Torque	Constant Power	Carrier	Type	
6-50Hz	3-50Hz	50-120Hz	3-6kHz	VPWM or CPWM	1

Hazardous Locations Information

CSA Certified
Class I, Div 2, Groups B, C & D Class I, Zone 2, Groups IIB+H2, IIB & IIA
Temp Code (Sinewave / VFD) T3C / T3C

Additional Certification

Other Certification

Additional Information

Bearings		Approx. Weight
DE	NDE	lbs
6205ZZ	6205ZZ	52