DATA SHEET

Three Phase Induction Motor - Squirrel Cage



3

Customer :

Product line : NEMA Premium Efficiency Three- Product code : 12821974

Phase

Catalog #: 00312ET3ER213TC-W22

Frame : 213TC Cooling method : IC411 - TEFC

Insulation class : F Mounting : W-6

Duty cycle : Cont.(S1) Rotation¹ : Both (CW and CCW)

Ambient temperature : -20°C to +40°C Starting method : Direct On Line
Altitude : 1000 m.a.s.l. Approx. weight³ : 147 lb

Altitude : 1000 m.a.s.l. Approx. weight³ : 147 lb
Protection degree : IP55 Moment of inertia (J) : 1.20 sq.ft.lb

Design : B

Output [HP] 3 3 3

Output [FIF]		3	J	٥	٦ -
Poles		6	6	6	6
Frequency [Hz]		60	50	50	50
Rated voltage [V]		230/460	380	400	415
Rated current [A]		8.83/4.41	5.09	4.92	4.87
L. R. Amperes [A]		61.8/30.9	29.5	31.5	33.1
LRC [A]		7.0x(Code K)	5.8x(Code H)	6.4x(Code J)	6.8x(Code J)
No load current [A	.]	5.50/2.75	2.72	2.91	3.05
Rated speed [RPI	Л]	1175	965	970	970
Slip [%]		2.08	3.50	3.00	3.00
Rated torque [ft.lb]	Rated torque [ft.lb]		16.3	16.2	16.2
Locked rotor torqu	Locked rotor torque [%]		170	200	220
Breakdown torque	Breakdown torque [%]		210	240	270
Service factor		1.25	1.00	1.00	1.00
Temperature rise		80 K	80 K	80 K	80 K
Locked rotor time		104s (cold) 58s (hot)	72s (cold) 40s (hot)	72s (cold) 40s (hot)	72s (cold) 40s (hot)
Noise level ²		55.0 dB(A)	53.0 dB(A)	53.0 dB(A)	53.0 dB(A)
	25%	85.4	88.0	86.1	86.1
Efficiency (%)	50%	86.5	87.5	86.5	86.5
Elliciency (70)	75%	88.5	88.5	88.5	88.5
	100%	89.5	87.5	88.5	88.5
	25%	0.28	0.33	0.30	0.28
Power Factor	50%	0.50	0.57	0.53	0.50
1 OWELL ACIO	75%	0.63	0.70	0.66	0.64
	100%	0.70	0.75	0.73	0.71

<u>Drive end</u> <u>Non drive end</u> Foundation loads

Bearing type : 6308 ZZ 6207 ZZ Max. traction : 173 lb Sealing : V'Ring V'Ring Max. compression : 321 lb

Lubrication interval : - - - Lubricant amount : - - - Lubricant type : Mobil Polyrex EM

Notes

USABLE @208V 9.76A SF 1.15 SFA 11.2A

This revision replaces and cancel the previous one, which must be eliminated.

- (1) Looking the motor from the shaft end.
- (2) Measured at 1m and with tolerance of +3dB(A).
- (3) Approximate weight subject to changes after manufacturing process.
- (4) At 100% of full load.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.

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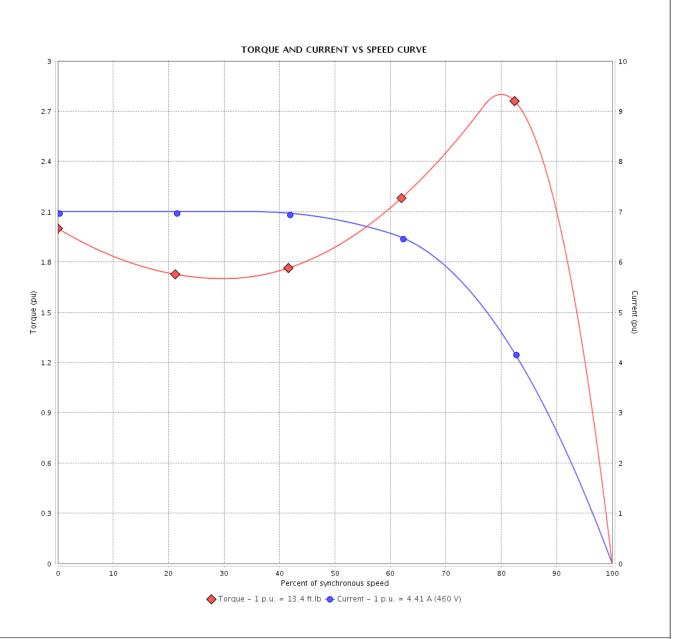
Customer :

Product line : NEMA Premium Efficiency Three-

Phase

Product code: 12821974

Catalog #: 00312ET3ER213TC-W22



Performance : 230/460 V 60 Hz 6P Rated current : 8.83/4.41 A Moment of inertia (J) : 1.20 sq.ft.lb **LRC** : 7.0 Duty cycle : Cont.(S1) : 13.4 ft.lb Insulation class Rated torque : F Locked rotor torque : 200 % Service factor : 1.25 Breakdown torque : 280 % Temperature rise : 80 K Rated speed : 1175 rpm Design : B

Locked rotor time : 104s (cold) 58s (hot)

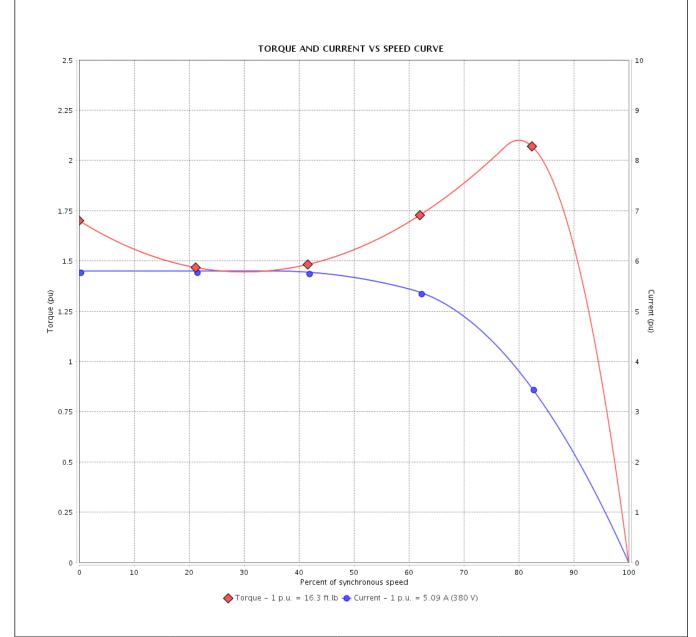
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Customer :

Product line : NEMA Premium Efficiency Three-Product code : 12821974
Phase Catalog # : 00312ET3ER213TC-W22



Performance : 380 V 50 Hz 6P IE4 Rated current : 5.09 A Moment of inertia (J) : 1.20 sq.ft.lb **LRC** : 5.8 Duty cycle : Cont.(S1) Insulation class Rated torque : 16.3 ft.lb : F : 170 % Locked rotor torque Service factor : 1.00 Breakdown torque : 210 % Temperature rise : 80 K Rated speed : 965 rpm Design : B Locked rotor time : 72s (cold) 40s (hot)

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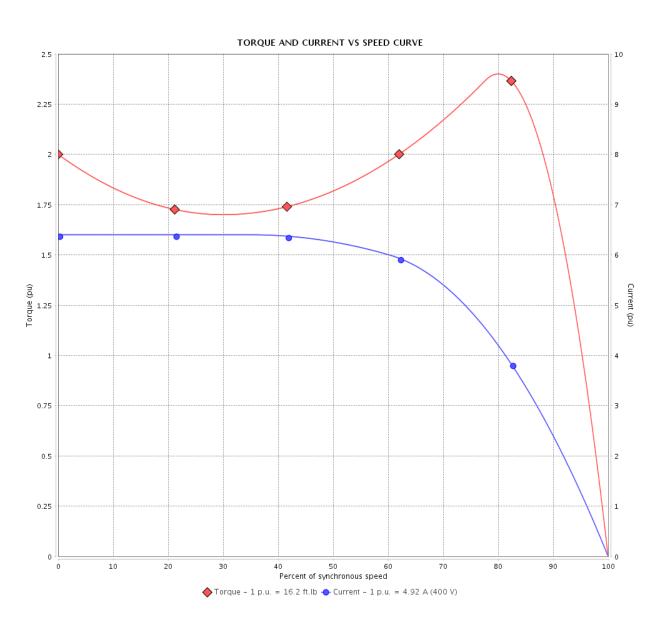
Customer :

Product line : NEMA Premium Efficiency Three- Product code :

Phase

Catalog #: 00312ET3ER213TC-W22

12821974



Performance	: 400 V 50 Hz 6P IE4			
Rated current LRC Rated torque	: 4.92 A : 6.4 : 16.2 ft.lb	Moment of inertia (J) Duty cycle Insulation class	: 1.20 sq.ft.lb : Cont.(S1) : F	
Locked rotor torque Breakdown torque Rated speed	: 200 % : 240 % : 970 rpm	Service factor Temperature rise Design	: 1.00 : 80 K : B	
Locked rotor time	· 72s (cold) 40s (hot)			

Locked rotor time : 72s (cold) 40s (hot)

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Three Phase Induction Motor - Squirrel Cage Customer Product line : NEMA Premium Efficiency Three-Product code: 12821974 Catalog #: 00312ET3ER213TC-W22 TORQUE AND CURRENT VS SPEED CURVE 2.7 2.1 1.8 Torque (pu) 1.2 0.6 40 50 -Percent of synchronous speed ♦ Torque – 1 p.u. = 16.2 ft.lb ♦ Current – 1 p.u. = 4.87 A (415 V) Performance : 415 V 50 Hz 6P IE4

Rated current LRC Rated torque Locked rotor torque Breakdown torque Rated speed		87 A 8 .2 ft.lb 0 % 0 % 0 rpm	Duty cycle Insulation Service fac	Moment of inertia (J) Duty cycle Insulation class Service factor Temperature rise Design		
Locked rotor time	e : 72	2s (cold) 40s (hot	t)			
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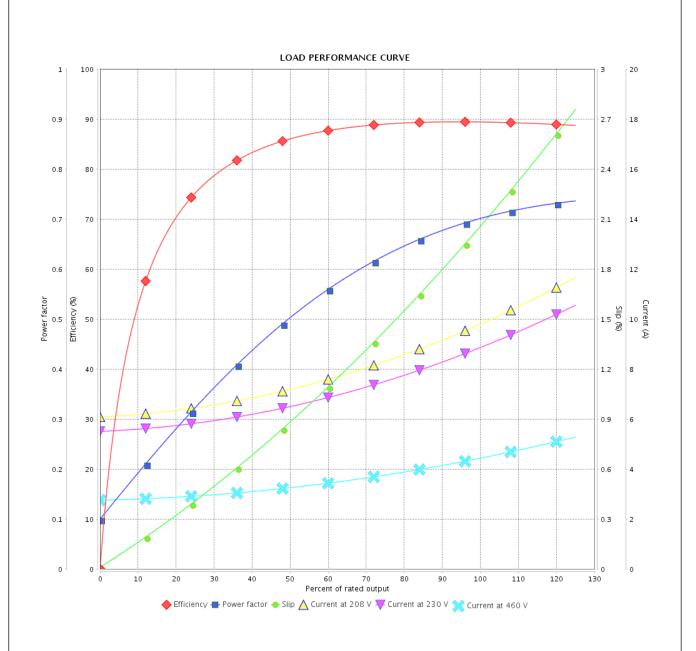
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Product line : NEMA Premium Efficiency Three- Product code : 12821974

Phase

Catalog #: 00312ET3ER213TC-W22



Performance : 230/460 V 60 Hz 6P Rated current : 8.83/4.41 A Moment of inertia (J) : 1.20 sq.ft.lb **LRC** Duty cycle : 7.0 : Cont.(S1) Insulation class Rated torque : 13.4 ft.lb : F Locked rotor torque : 200 % Service factor : 1.25 Breakdown torque : 280 % Temperature rise : 80 K Rated speed : 1175 rpm Design : B Rev. Performed Checked Date **Changes Summary** Performed by

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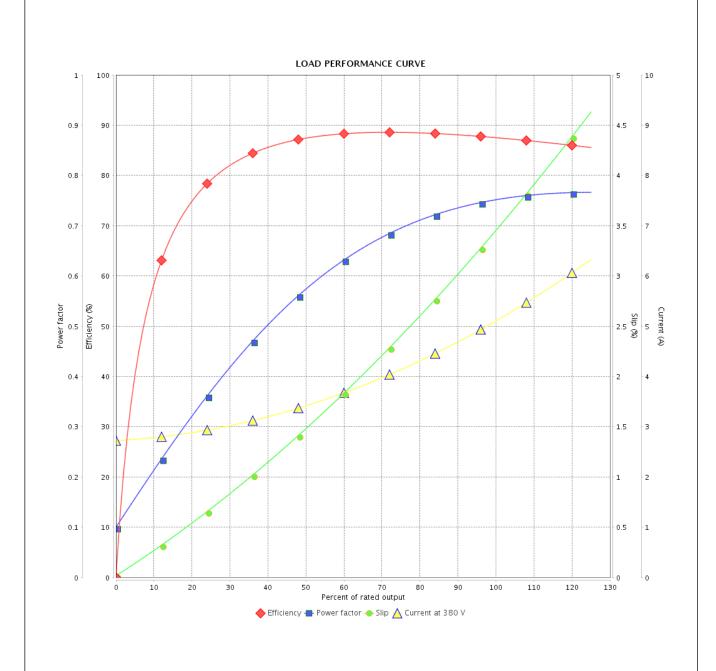
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Product line : NEMA Premium Efficiency Three- Product code : 12821974

Phase

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Performance	: 380 V 50 Hz 6P IE4				
Rated current : 5.09 A		Moment of inertia (J)		: 1.20 sq.ft.lb	
LRC	: 5.8	Duty cycle		: Cont.(S1)	
Rated torque	: 16.3 ft.lb	Insulation class	SS	: F	
Locked rotor torque	: 170 %	Service factor		: 1.00	
Breakdown torque	: 210 %	Temperature rise		: 80 K	
Rated speed	: 965 rpm	Design		: B	
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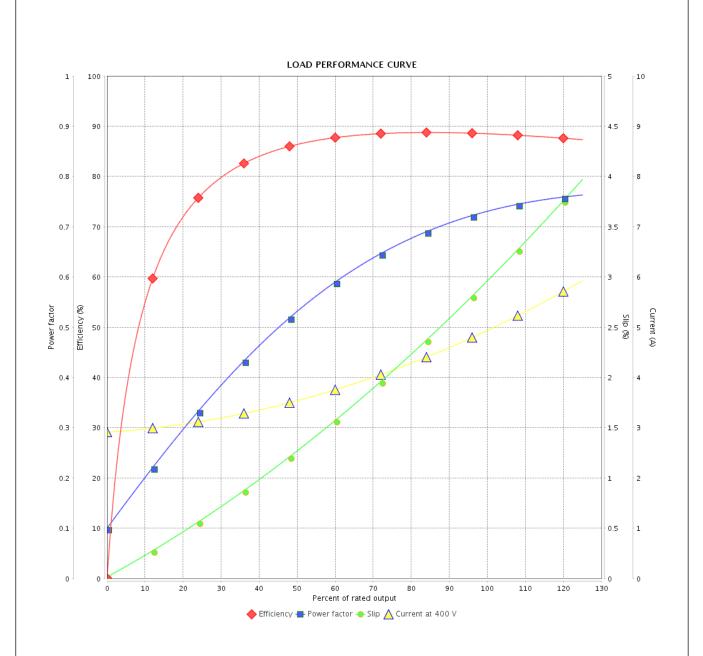
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Phase

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: 400 V 50 Hz 6P IE4				
: 4.92 A : 6.4 : 16.2 ft.lb : 200 % : 240 % : 970 rpm	Duty cycle Insulation Service fa	class ctor	: 1.20 sq.ft.lb : Cont.(S1) : F : 1.00 : 80 K : B	
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	: 4.92 A : 6.4 : 16.2 ft.lb : 200 % : 240 % : 970 rpm	: 4.92 A Moment or 5 and	: 4.92 A : 6.4 : 16.2 ft.lb : 200 % : 240 % : 970 rpm Moment of inertia (J) Duty cycle Insulation class Service factor Temperature rise Design	: 4.92 A Moment of inertia (J) : 1.20 sq.ft.lb : 6.4 Duty cycle : Cont.(S1) : 16.2 ft.lb Insulation class : F : 200 % Service factor : 1.00 : 240 % Temperature rise : 80 K : 970 rpm Design : B Changes Summary Performed Checked

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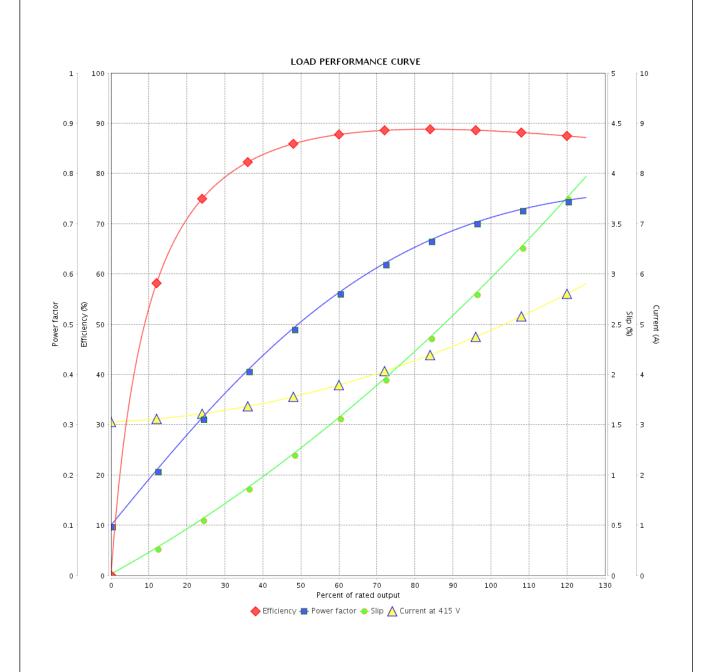
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Product line : NEMA Premium Efficiency Three- Product code :

Phase

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Performance	: 4	: 415 V 50 Hz 6P IE4				
Rated current	ated current : 4.87 A		Moment o	f inertia (J)	: 1.20 sq.ft.lb	
LRC	: 6	.8	Duty cycle	;	: Cont.(S1)	
Rated torque	: 1	6.2 ft.lb	Insulation	class	: F	
Locked rotor torqu	ue : 2:	20 %	Service fa	ctor	: 1.00	
Breakdown torque : 2		70 %	Temperati	Temperature rise		
Rated speed		70 rpm	Design	Design		
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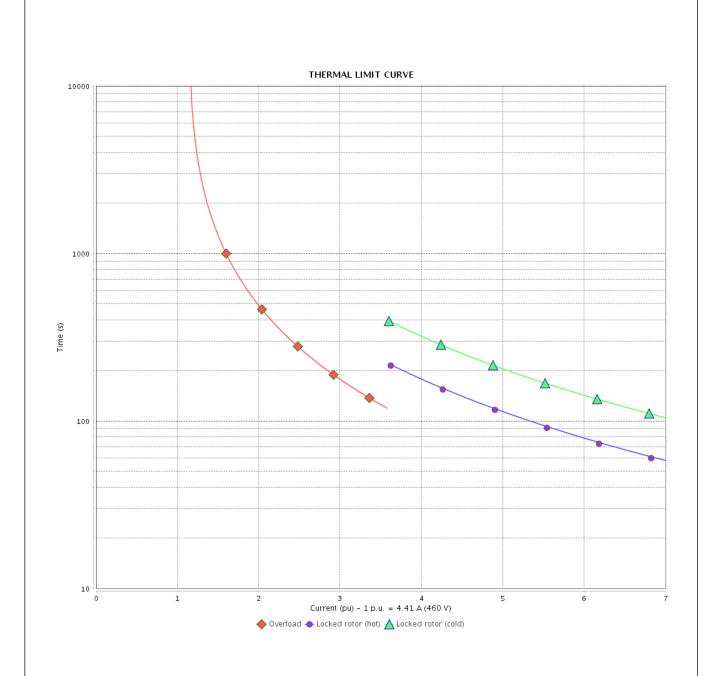


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Product line	: I P	NEMA Premium Efficiency l hase	inree- i	Product code :	12821974	
			(Catalog # :	00312ET3ER	213TC-W22
Performance		30/460 V 60 Hz 6P				
Rated current LRC	: 8. : 7.	.83/4.41 A .0	Moment of Duty cycle	f inertia (J)	: 1.20 sq.ft.lb : Cont.(S1)	
Rated torque	: 13	3.4 ft.lb	Insulation	class	: F	
Locked rotor tord Breakdown torqu		00 % 80 %	Service fac Temperatu		: 1.25 : 80 K	
Rated speed		175 rpm	Design	II C 1135	: B	
Heating constant	t					
Cooling constant						
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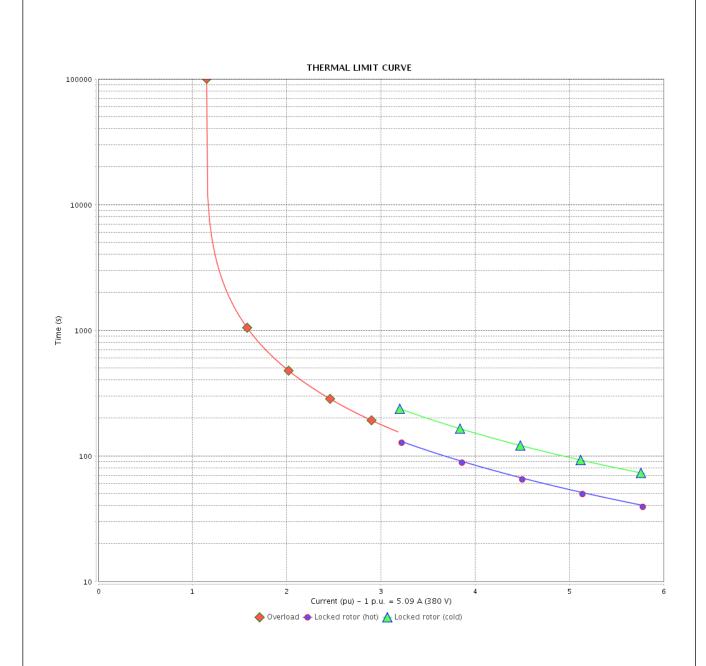


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Product line		: NEMA Premium Efficiency [*] Phase		Product code :	12821974 00312ET3EF	R213TC-W22
Performance Rated current LRC Rated torque Locked rotor toro Breakdown torqu	: : : que :	380 V 50 Hz 6P IE4 5.09 A 5.8 16.3 ft.lb 170 % 210 %	Moment o Duty cycle Insulation Service fa Temperati	class ctor	: 1.20 sq.ft.lb : Cont.(S1) : F : 1.00 : 80 K	
Rated speed Heating constant	: t	965 rpm	Design		: B	
Cooling constant Rev.		Changes Summary		Performed	Checked	Date
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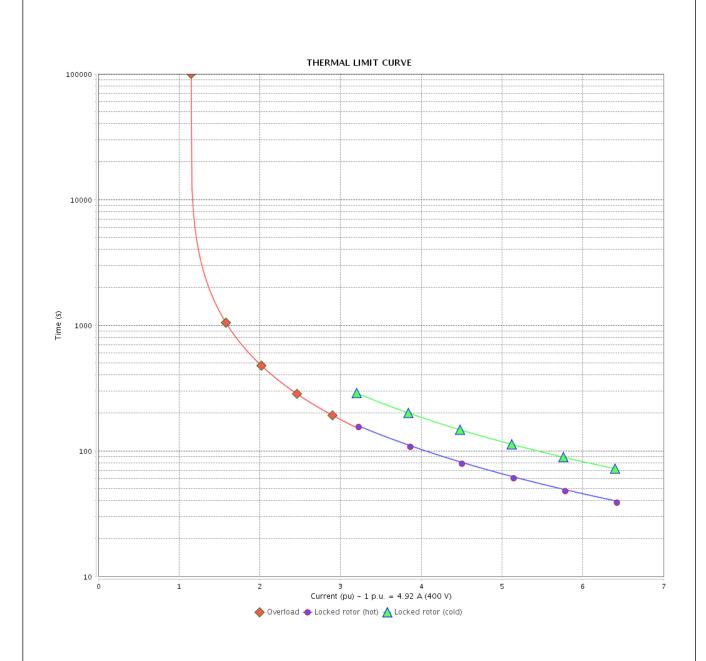


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Product line		NEMA Premium Efficiency	Three-	Product code :	12821974	
	P	hase		Catalog # :	00312ET3ER	213TC-W22
Performance	: 40	00 V 50 Hz 6P IE4				
Rated current	: 4.	.92 A	Moment of	f inertia (J)	: 1.20 sq.ft.lb	
LRC Rated torque	: 6. : 10	.4 6.2 ft.lb	Duty cycle Insulation	!	: Cont.(S1) : F	
Locked rotor torg	jue : 20	00 %	Service fa	ctor	. F : 1.00	
Breakdown torqu	ie : 24	40 %	Temperatu		: 80 K	
Rated speed		70 rpm	Design		: B	
Heating constant						
Cooling constant		Changas Summani		Performed	Charles	Doto
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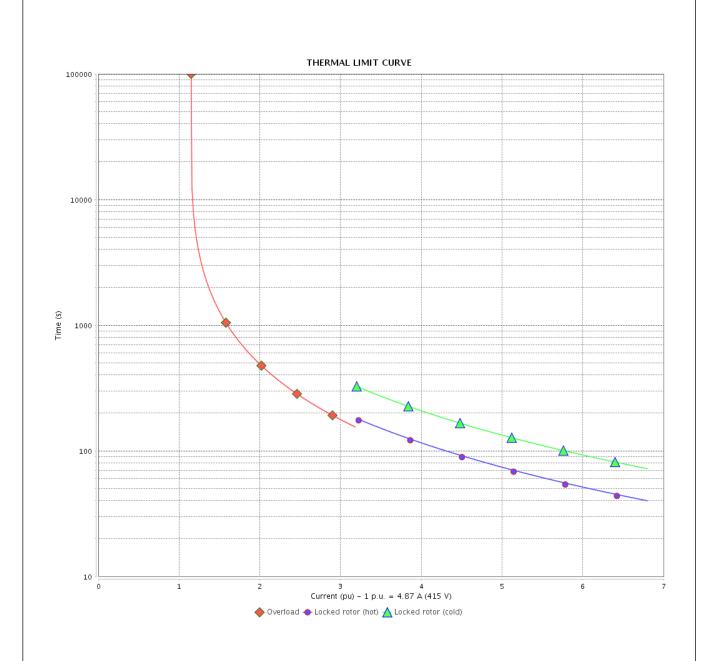


Customer	:				
Product line	: NEMA Premium Efficiency ⁻ Phase		Product code :	12821974	
		(Catalog # :	00312ET3EF	R213TC-W22
	: 415 V 50 Hz 6P IE4	T			
LRC Rated torque Locked rotor torque Breakdown torque	: 4.87 A : 6.8 : 16.2 ft.lb : 220 % : 270 % : 970 rpm	Moment o Duty cycle Insulation Service fa Temperatu Design	class ctor	: 1.20 sq.ft.lb : Cont.(S1) : F : 1.00 : 80 K : B	
	- I				
Heating constant					
Cooling constant	Changas Summani		Dorformed	Chackad	Doto
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Product line : NEMA Premium Efficiency Three-

Phase

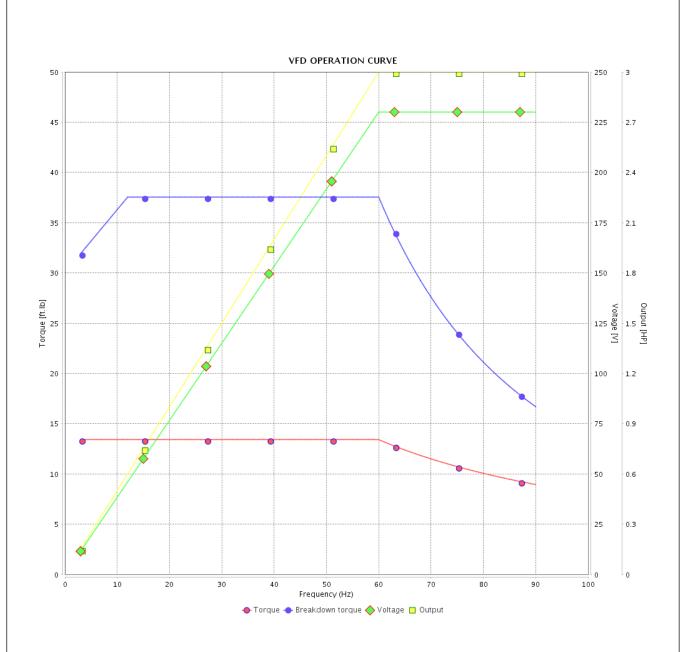
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Performance : 230/460 V 60 Hz 6P Rated current : 8.83/4.41 A Moment of inertia (J) : 1.20 sq.ft.lb **LRC** Duty cycle : Cont.(S1) : 7.0 : 13.4 ft.lb Insulation class : F Rated torque Locked rotor torque : 200 % Service factor : 1.25 Breakdown torque : 280 % Temperature rise : 80 K Rated speed : 1175 rpm Design : B Rev. Performed Checked Date **Changes Summary** Performed by

Three Phase Induction Motor - Squirrel Cage

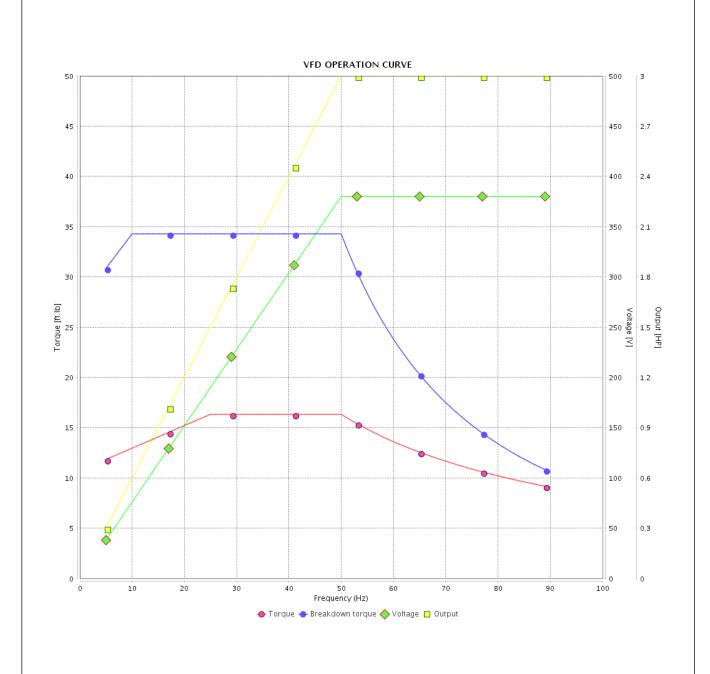


Customer

Product line : NEMA Premium Efficiency Three- Product code : 12821974

Phase

Catalog #: 00312ET3ER213TC-W22



Performance	:	380 V 50 Hz 6P IE4					
Rated current		5.09 A	Moment of	Moment of inertia (J)			
LRC : 5.8		5.8	Duty cycle	Duty cycle		: Cont.(S1)	
Rated torque		16.3 ft.lb	Insulation	Insulation class		: F ` ´	
Locked rotor torg	que :	170 %	Service fa	actor	: 1.00		
Breakdown torqu	ie :	210 %	Temperat	Temperature rise			
Rated speed	:	965 rpm	Design		: B		
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Product line : NEMA Premium Efficiency Three- F

Phase

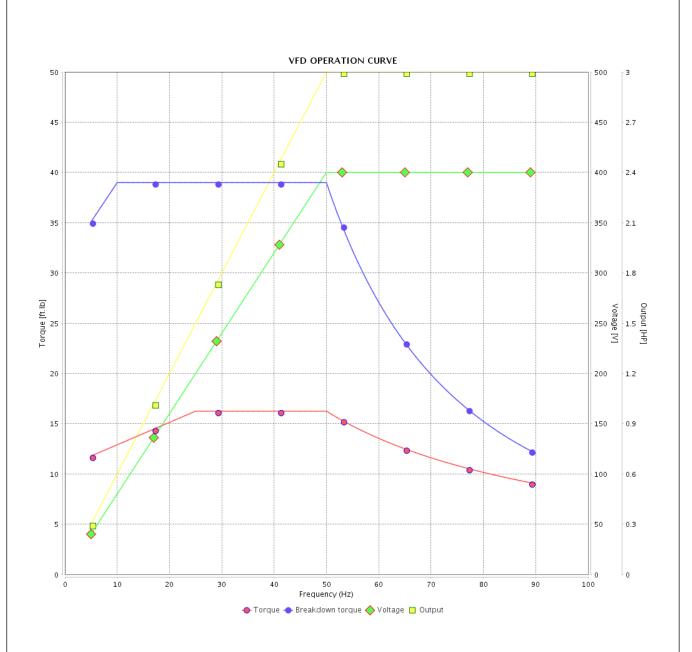
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Revision



Performance : 400 V 50 Hz 6P IE4 Rated current : 4.92 A Moment of inertia (J) : 1.20 sq.ft.lb **LRC** : 6.4 Duty cycle : Cont.(S1) : 16.2 ft.lb Insulation class : F Rated torque Locked rotor torque : 200 % Service factor : 1.00 Breakdown torque : 240 % Temperature rise : 80 K Rated speed : 970 rpm Design : B Rev. Performed Checked Date **Changes Summary** Performed by

Three Phase Induction Motor - Squirrel Cage

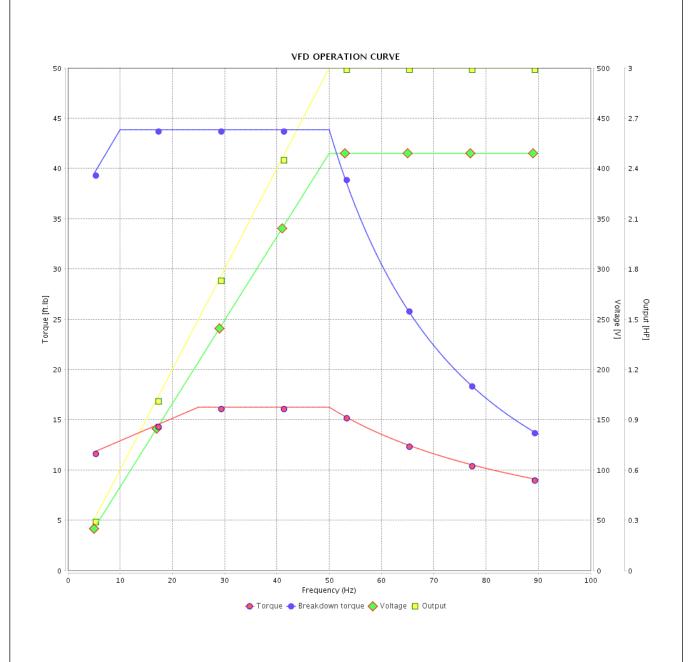


Customer

Product line : NEMA Premium Efficiency Three- Product code : 12821974

Phase

Catalog #: 00312ET3ER213TC-W22



Performance : 4		415 V 50 Hz 6P IE4					
Rated current : 4		.87 A	Moment of inertia (J)		: 1.20 sq.ft.lb		
LRC : 6.8		.8	Duty cycle	Duty cycle		: Cont.(S1)	
Rated torque : 16		6.2 ft.lb	Insulation	class	: F		
Locked rotor torque : 22		20 %	Service fa	ctor	: 1.00		
Breakdown torque		70 %	Temperatu	Temperature rise		: 80 K	
Rated speed		70 rpm	Design	Design			
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