

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :		14371274
			Catalog # :		00156XT3E143TC
Frame		: 143/5TC	Cooling method		: IC411 - TEFC
Insulation class		: F	Mounting		: F-1
Duty cycle		: Cont.(S1)	Rotation ¹		: Both (CW and CCW)
Ambient temperature		: -20°C to +40°C	Starting method		: Direct On Line
Altitude		: 1000 m.a.s.l.	Approx. weight ²		: 72.0 lb
Protection degree		: IP55	Moment of inertia (J)		: 0.0413 sq.ft.lb
Design		: B			
Output [HP]	1.5	1.5	1.5	1.5	1.5
Poles	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	4.10/2.05	2.36	2.32	2.29	2.29
L. R. Amperes [A]	37.7/18.9	18.9	19.5	19.9	19.9
LRC [A]	9.2x(Code M)	8.0x(Code K)	8.4x(Code L)	8.7x(Code L)	8.7x(Code L)
No load current [A]	2.00/1.00	0.900	1.00	1.10	1.10
Rated speed [RPM]	3500	2860	2885	2895	2895
Slip [%]	2.78	4.67	3.83	3.50	3.50
Rated torque [ft.lb]	2.25	2.75	2.73	2.72	2.72
Locked rotor torque [%]	340	280	320	360	360
Breakdown torque [%]	440	300	330	360	360
Service factor	1.15	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	36s (cold) 20s (hot)	19s (cold) 11s (hot)	19s (cold) 11s (hot)	19s (cold) 11s (hot)	19s (cold) 11s (hot)
Noise level ²	68.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)
Efficiency (%)	25%	76.9	79.0	79.6	82.4
	50%	78.5	79.5	80.0	81.5
	75%	82.5	82.5	82.5	84.0
	100%	84.0	82.5	82.5	82.5
Power Factor	25%	0.38	0.46	0.42	0.38
	50%	0.62	0.70	0.66	0.63
	75%	0.73	0.81	0.77	0.74
	100%	0.80	0.86	0.83	0.81
Bearing type		Drive end : 6205 2RS	Non drive end : 6204 2RS	Foundation loads	
Sealing		: Oil Seal	: Lip Seal	Max. traction : 49 lb	
Lubrication interval		: -	: -	Max. compression : 121 lb	
Lubricant amount		: -	: -		
Lubricant type		: Mobil Polyrex EM			
Notes					
USABLE @208V 4.53A SF 1.15 SFA 5.21A					
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.		
Rev.	Changes Summary		Performed	Checked	Date
Performed by					
Checked by				Page	Revision
Date	12/04/2022			1 / 22	

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Customer : _____

Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	12/04/2022		2 / 22	

TORQUE AND CURRENT VS SPEED CURVE



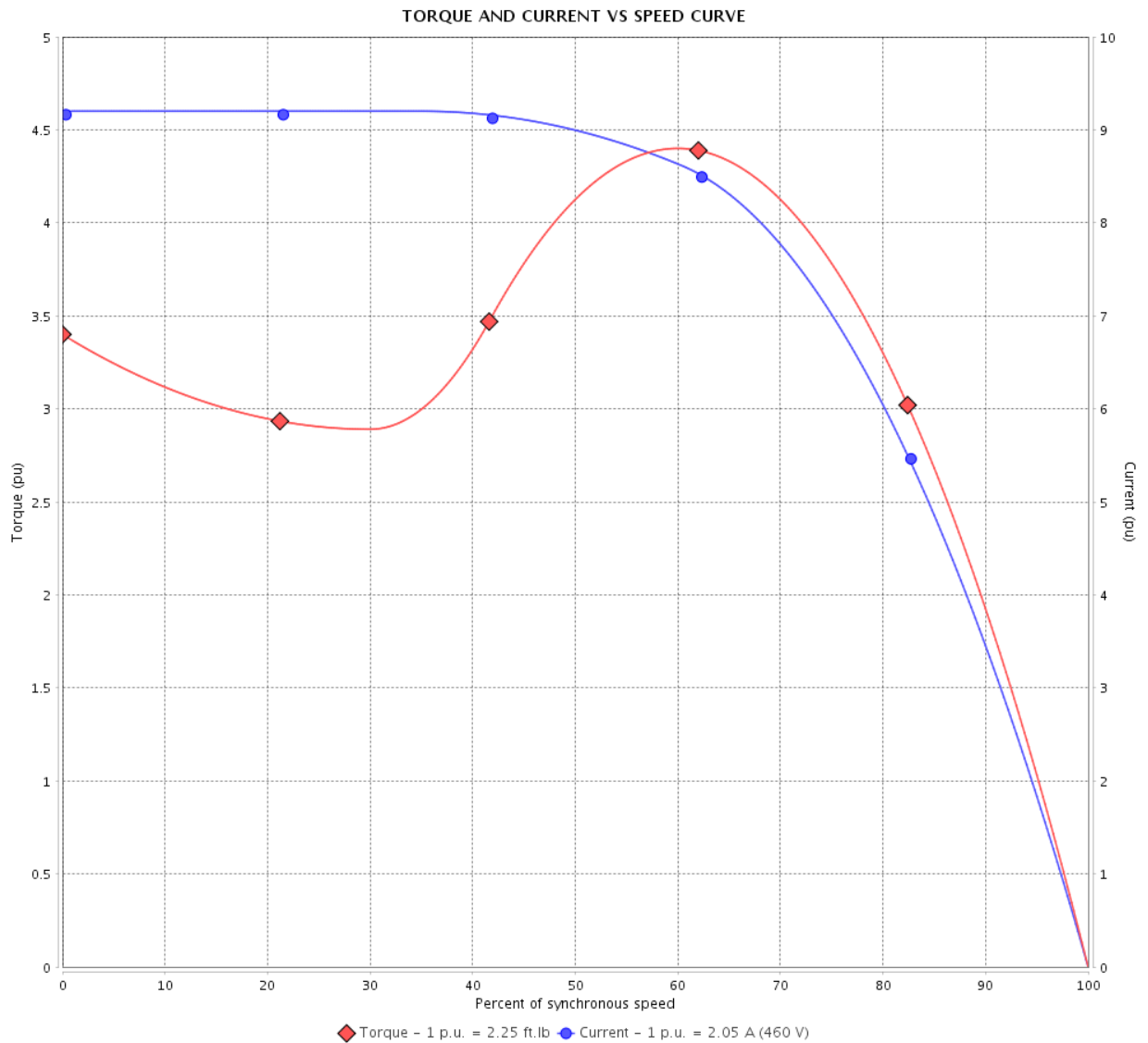
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14371274

Catalog # : 00156XT3E143TC



Performance : 230/460 V 60 Hz 2P

Rated current : 4.10/2.05 A
 LRC : 9.2
 Rated torque : 2.25 ft.lb
 Locked rotor torque : 340 %
 Breakdown torque : 440 %
 Rated speed : 3500 rpm

Moment of inertia (J) : 0.0413 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 36s (cold) 20s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		3 / 22		
Date	12/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

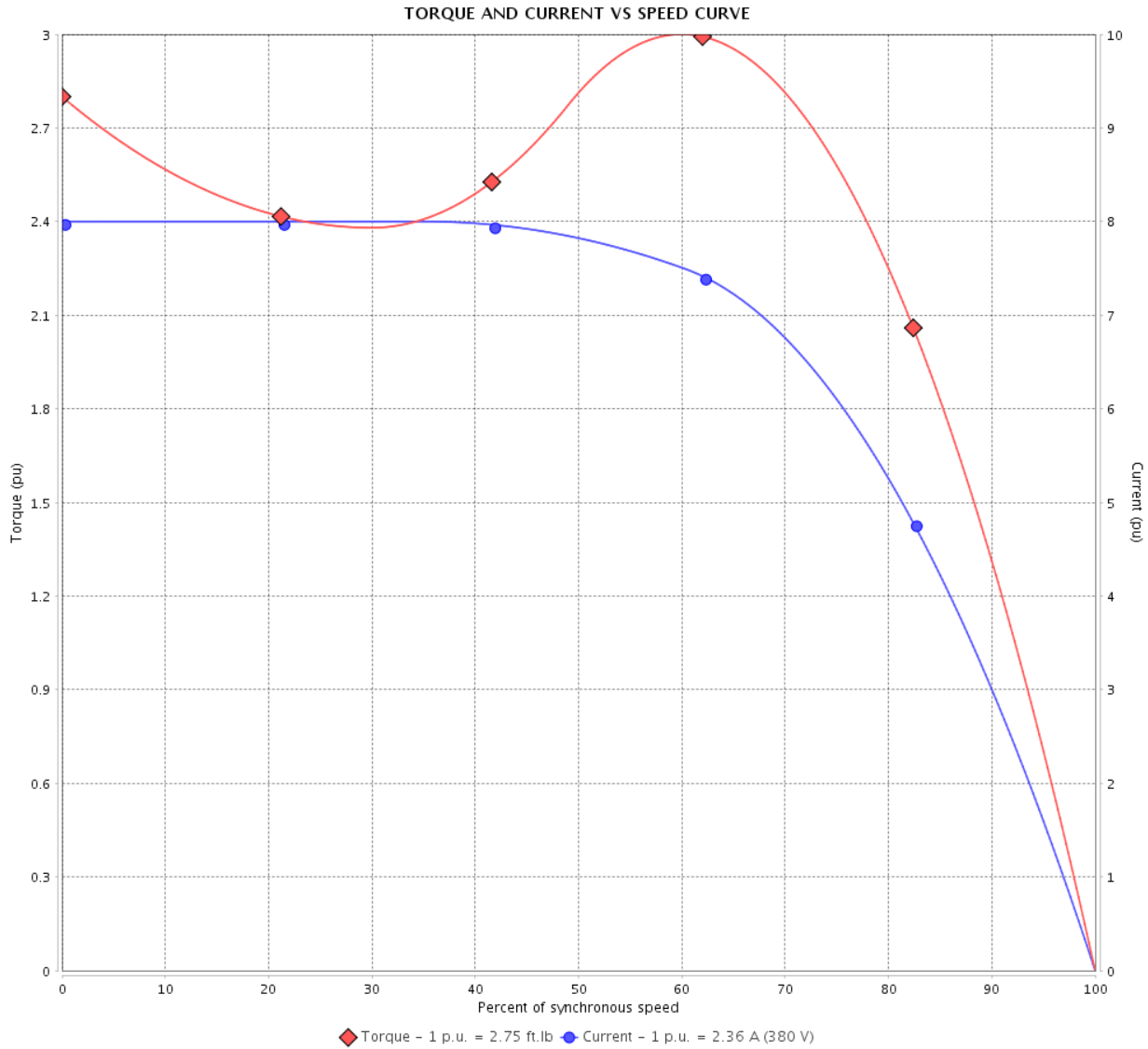


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14371274

Catalog # : 00156XT3E143TC



Performance : 380 V 50 Hz 2P IE2

Rated current	: 2.36 A	Moment of inertia (J)	: 0.0413 sq.ft.lb
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 2.75 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2860 rpm	Design	: B

Locked rotor time : 19s (cold) 11s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 22	Revision
Checked by				
Date	12/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



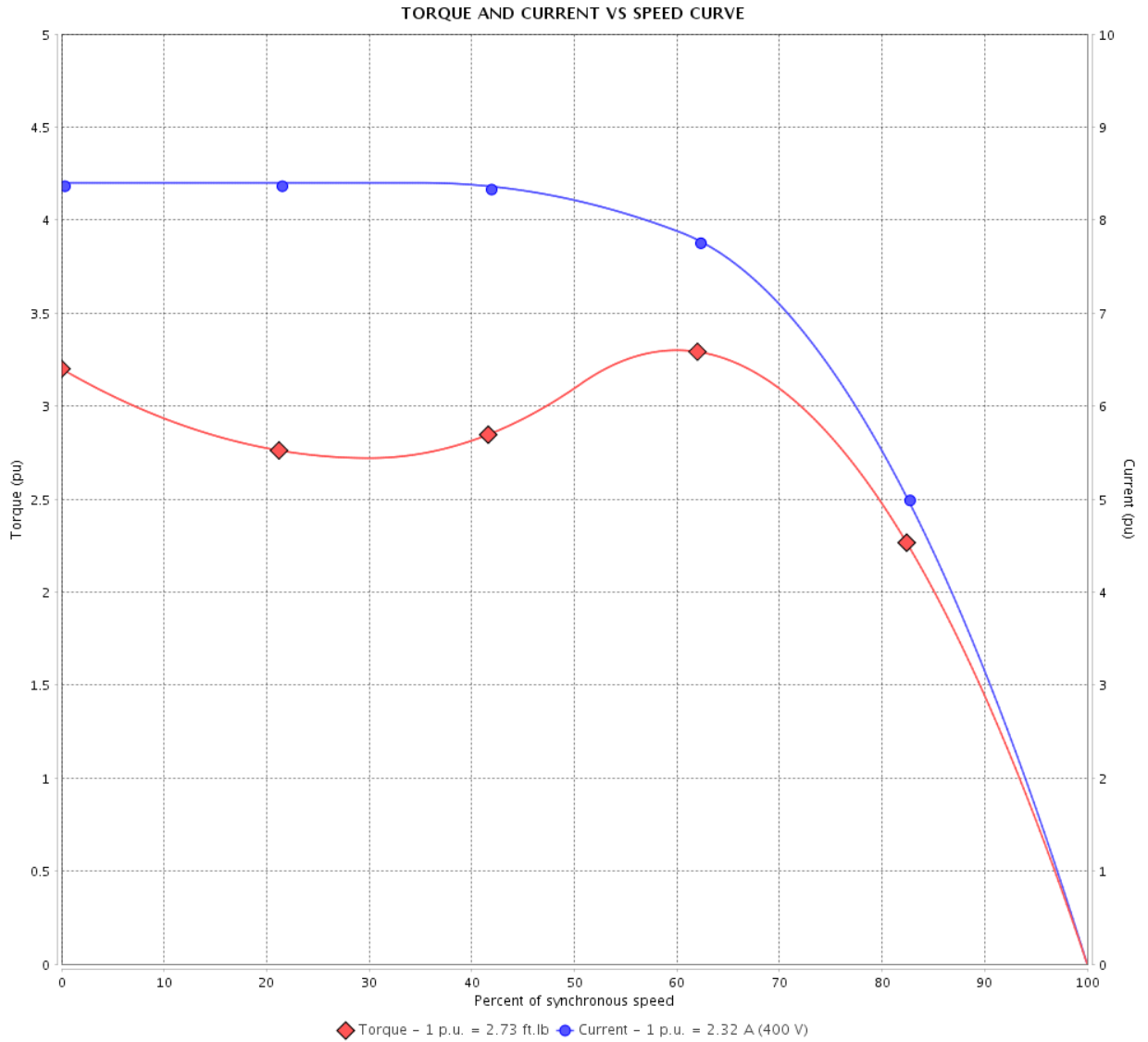
Three Phase Induction Motor - Squirrel Cage

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Performance : 400 V 50 Hz 2P IE2

Rated current : 2.32 A
 LRC : 8.4
 Rated torque : 2.73 ft.lb
 Locked rotor torque : 320 %
 Breakdown torque : 330 %
 Rated speed : 2885 rpm

Moment of inertia (J) : 0.0413 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Locked rotor time : 19s (cold) 11s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 22	Revision
Checked by				
Date	12/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



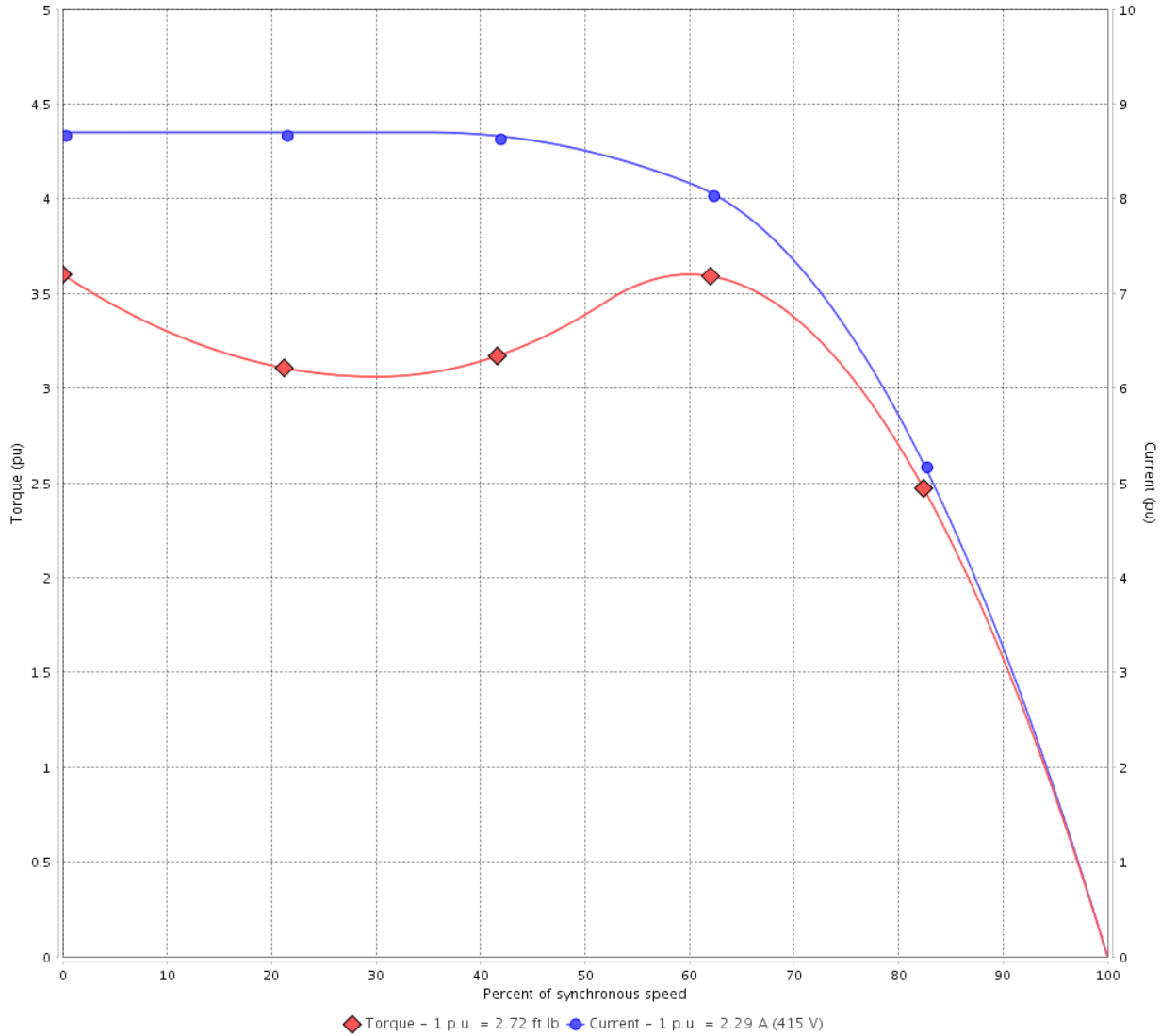
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 2P IE2

Rated current	: 2.29 A	Moment of inertia (J)	: 0.0413 sq.ft.lb
LRC	: 8.7	Duty cycle	: Cont.(S1)
Rated torque	: 2.72 ft.lb	Insulation class	: F
Locked rotor torque	: 360 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 2895 rpm	Design	: B

Locked rotor time : 19s (cold) 11s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 22	Revision
Checked by				
Date	12/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

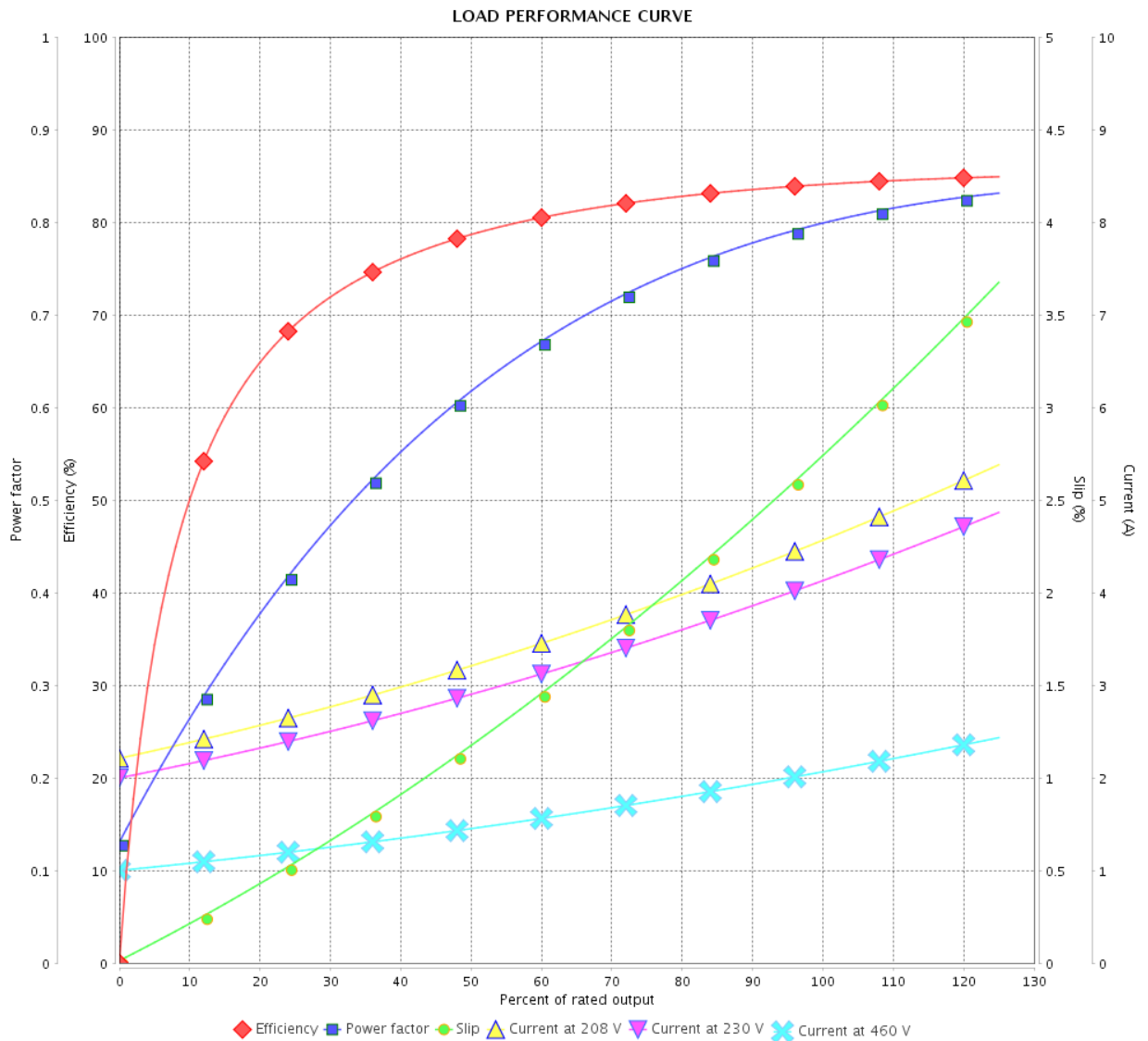


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Performance : 230/460 V 60 Hz 2P

Rated current : 4.10/2.05 A
 LRC : 9.2
 Rated torque : 2.25 ft.lb
 Locked rotor torque : 340 %
 Breakdown torque : 440 %
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Performed by			Page	Revision
Checked by				
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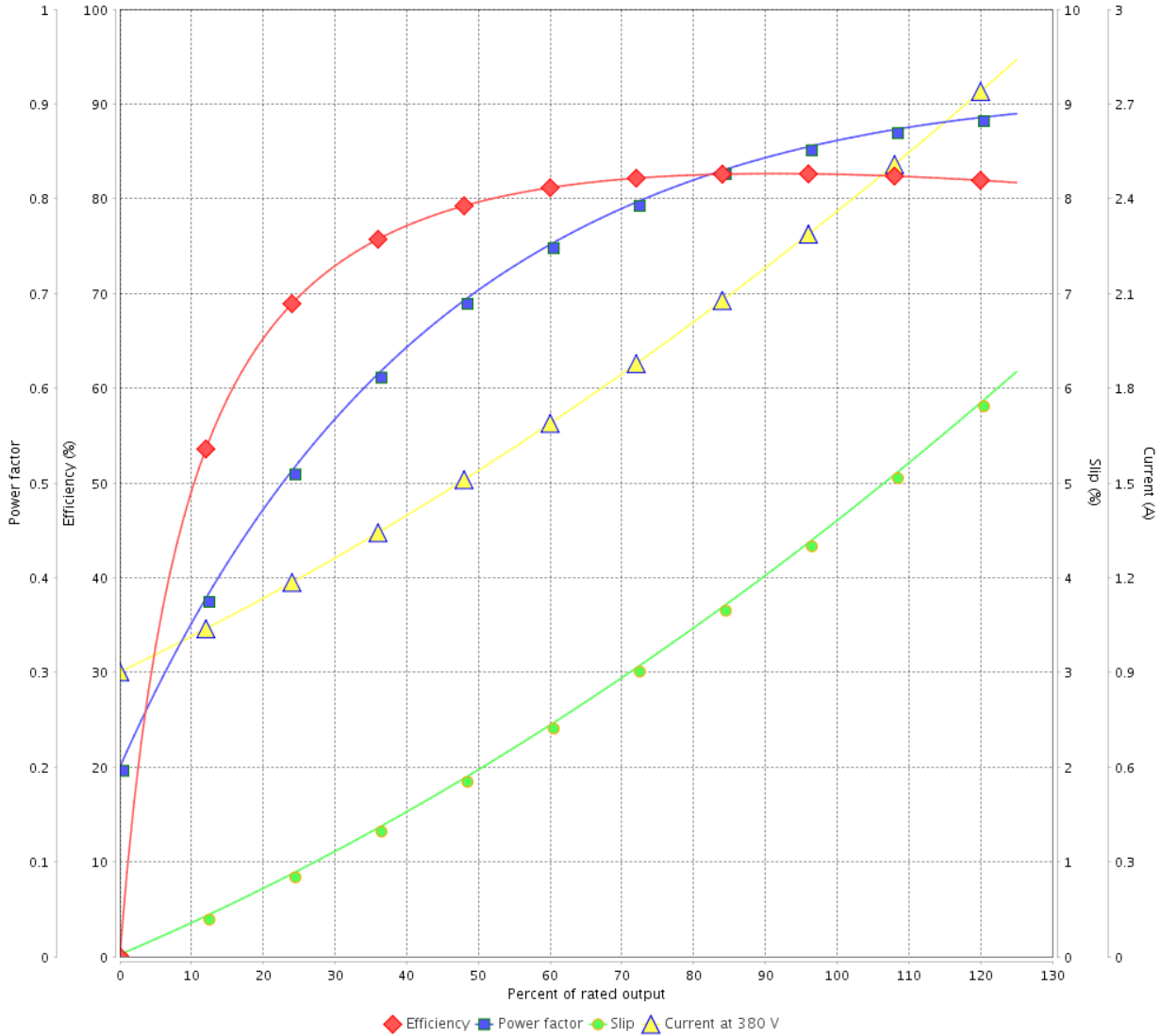
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Performance : 380 V 50 Hz 2P IE2

Rated current : 2.36 A
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 Rated torque : 2.75 ft.lb
 Locked rotor torque : 280 %
 Breakdown torque : 300 %
 Rated speed : 2860 rpm

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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		8 / 22		
Date	12/04/2022			

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Three Phase Induction Motor - Squirrel Cage

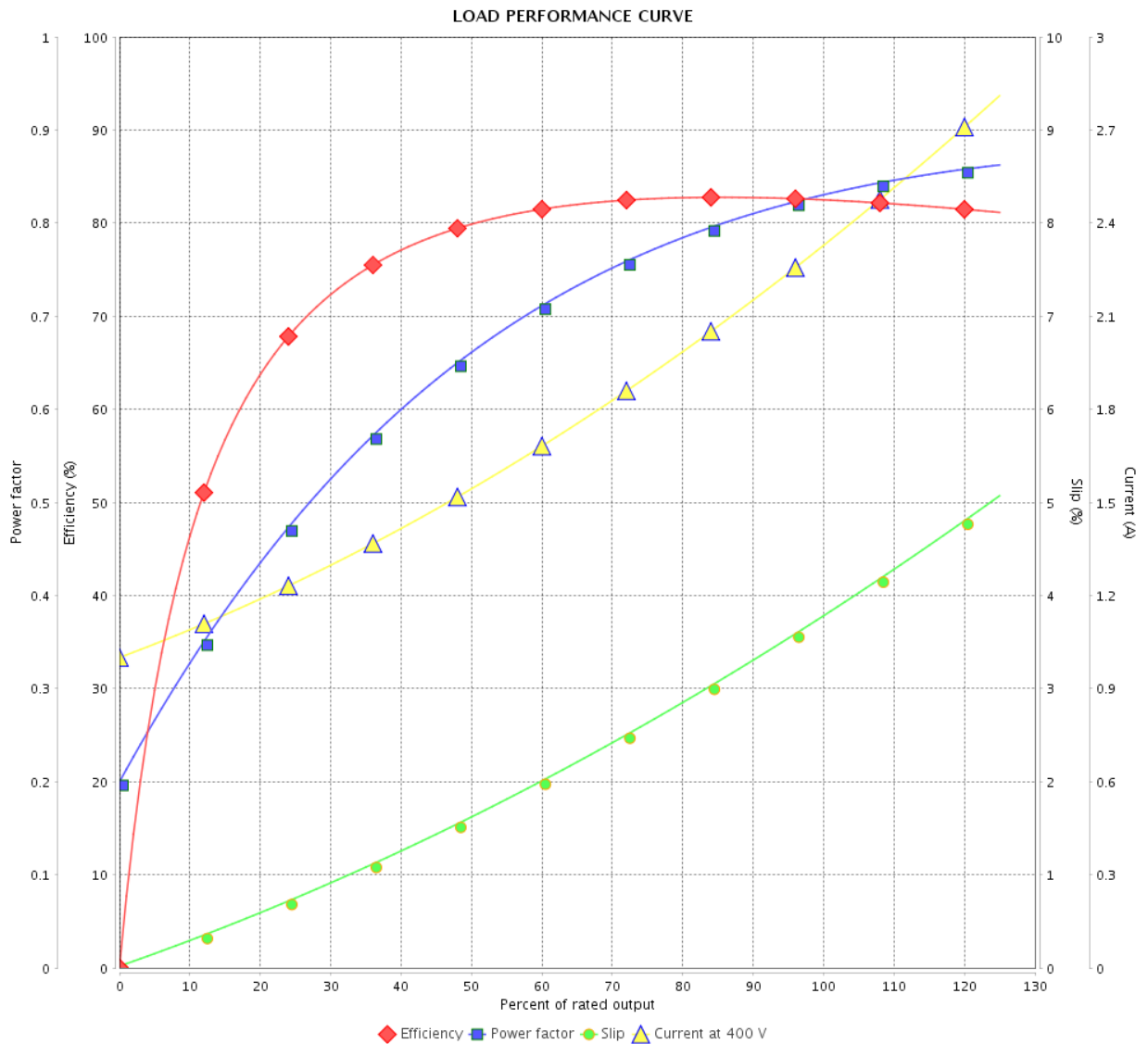


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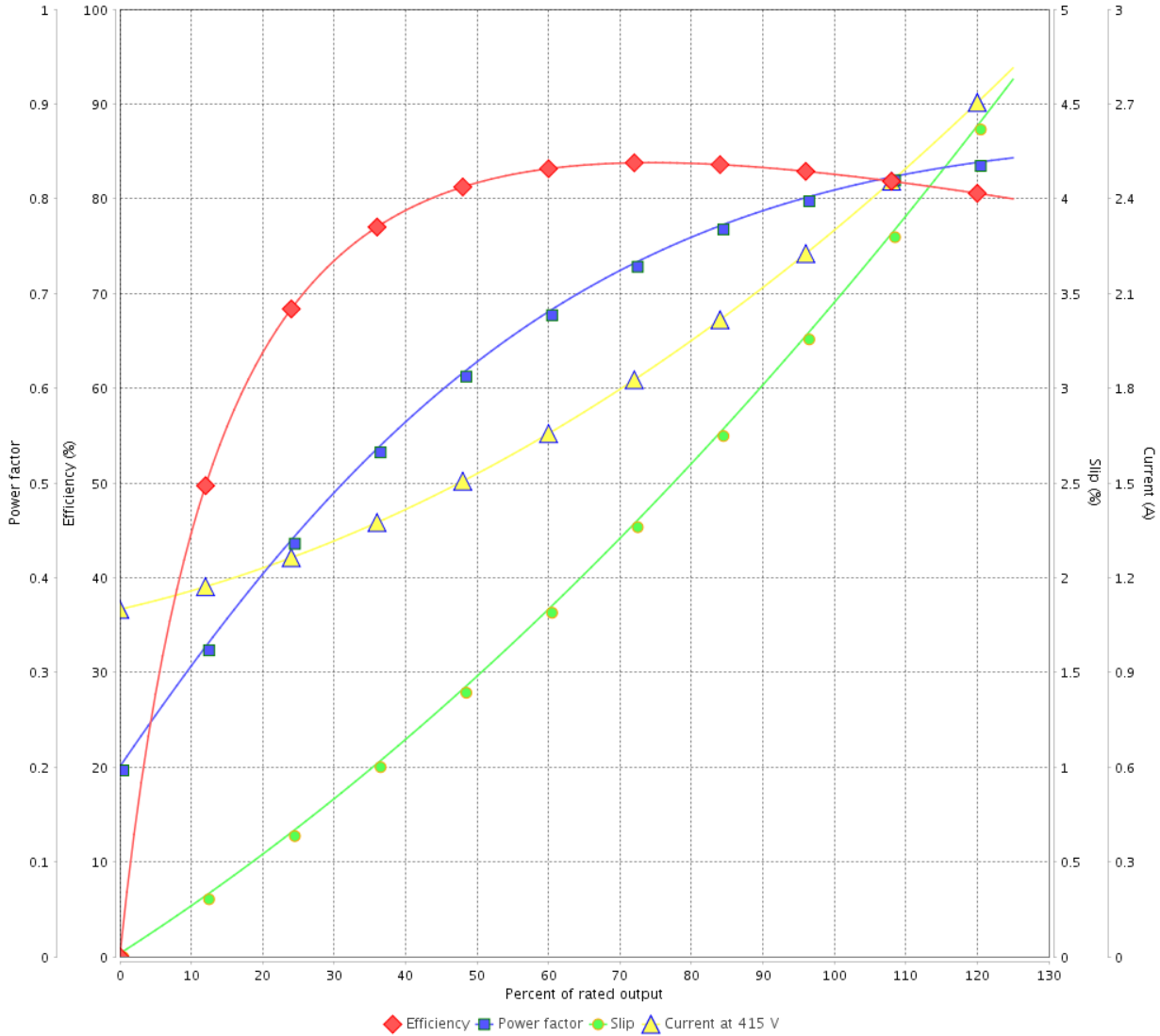
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 Insulation class : F
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 22	Revision
Checked by				
Date	12/04/2022			

THERMAL LIMIT CURVE



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Rated speed : 3500 rpm	Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 11 / 22	Revision
Checked by				
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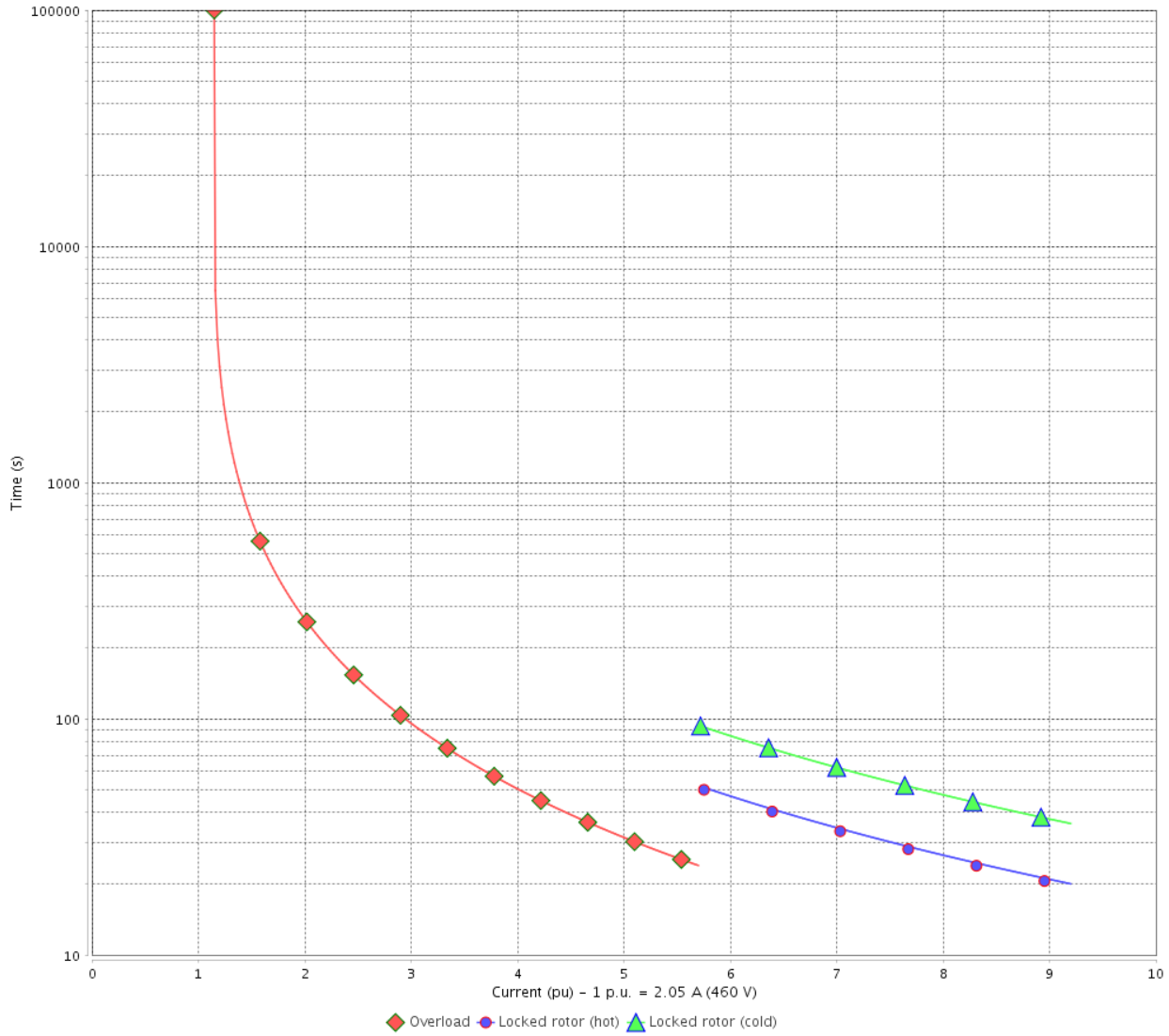
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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THERMAL LIMIT CURVE



Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 12 / 22	Revision
Checked by				
Date	12/04/2022			

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Rated current : 2.36 A	Moment of inertia (J) : 0.0413 sq.ft.lb
LRC : 8.0	Duty cycle : Cont.(S1)
Rated torque : 2.75 ft.lb	Insulation class : F
Locked rotor torque : 280 %	Service factor : 1.00
Breakdown torque : 300 %	Temperature rise : 80 K
Rated speed : 2860 rpm	Design : B

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Cooling constant

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Performed by			Page 13 / 22	Revision
Checked by				
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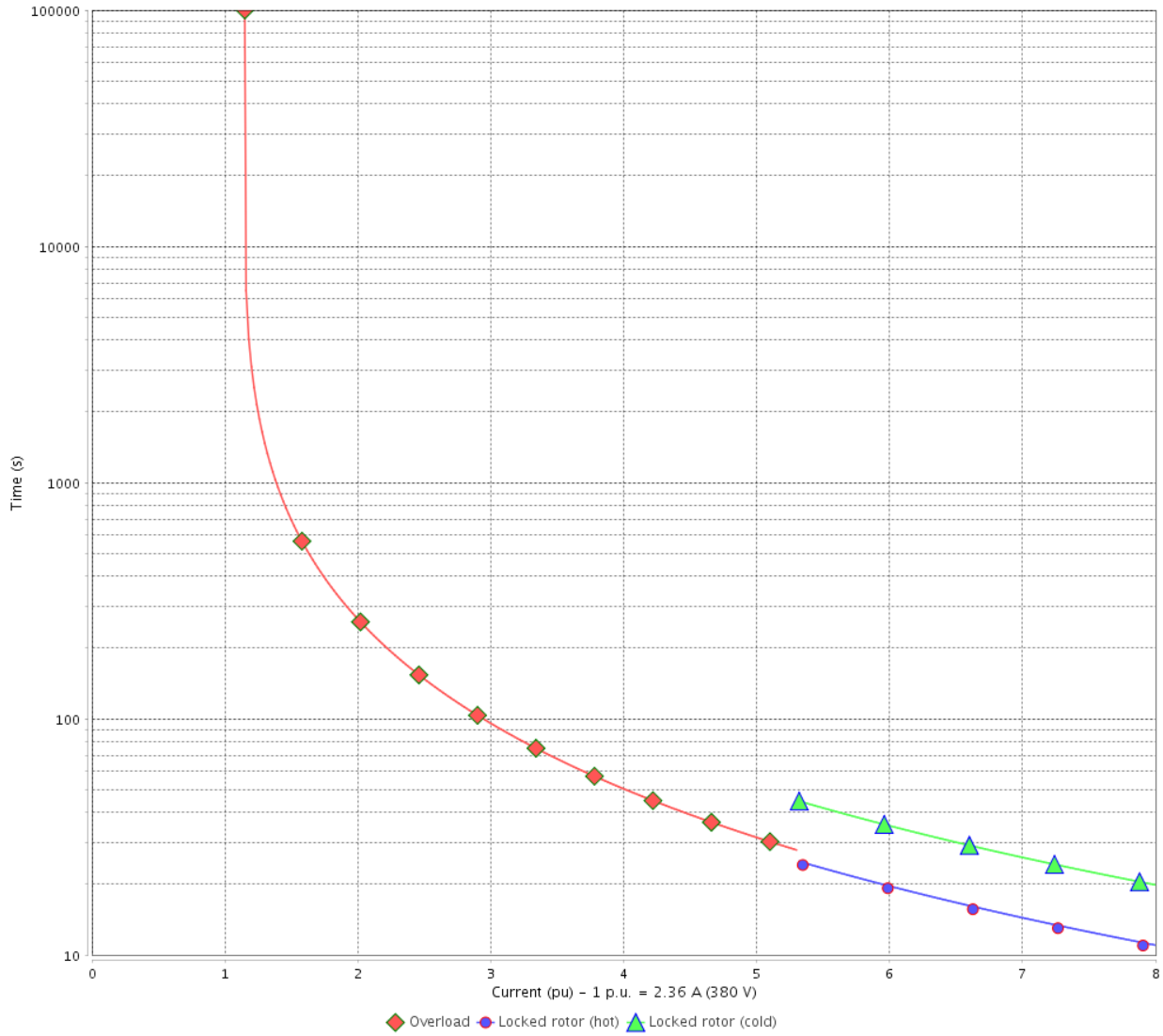
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Three Phase Induction Motor - Squirrel Cage



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THERMAL LIMIT CURVE



Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 22	Revision
Checked by				
Date	12/04/2022			

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LRC : 8.4	Duty cycle : Cont.(S1)
Rated torque : 2.73 ft.lb	Insulation class : F
Locked rotor torque : 320 %	Service factor : 1.00
Breakdown torque : 330 %	Temperature rise : 80 K
Rated speed : 2885 rpm	Design : B

Heating constant

Cooling constant

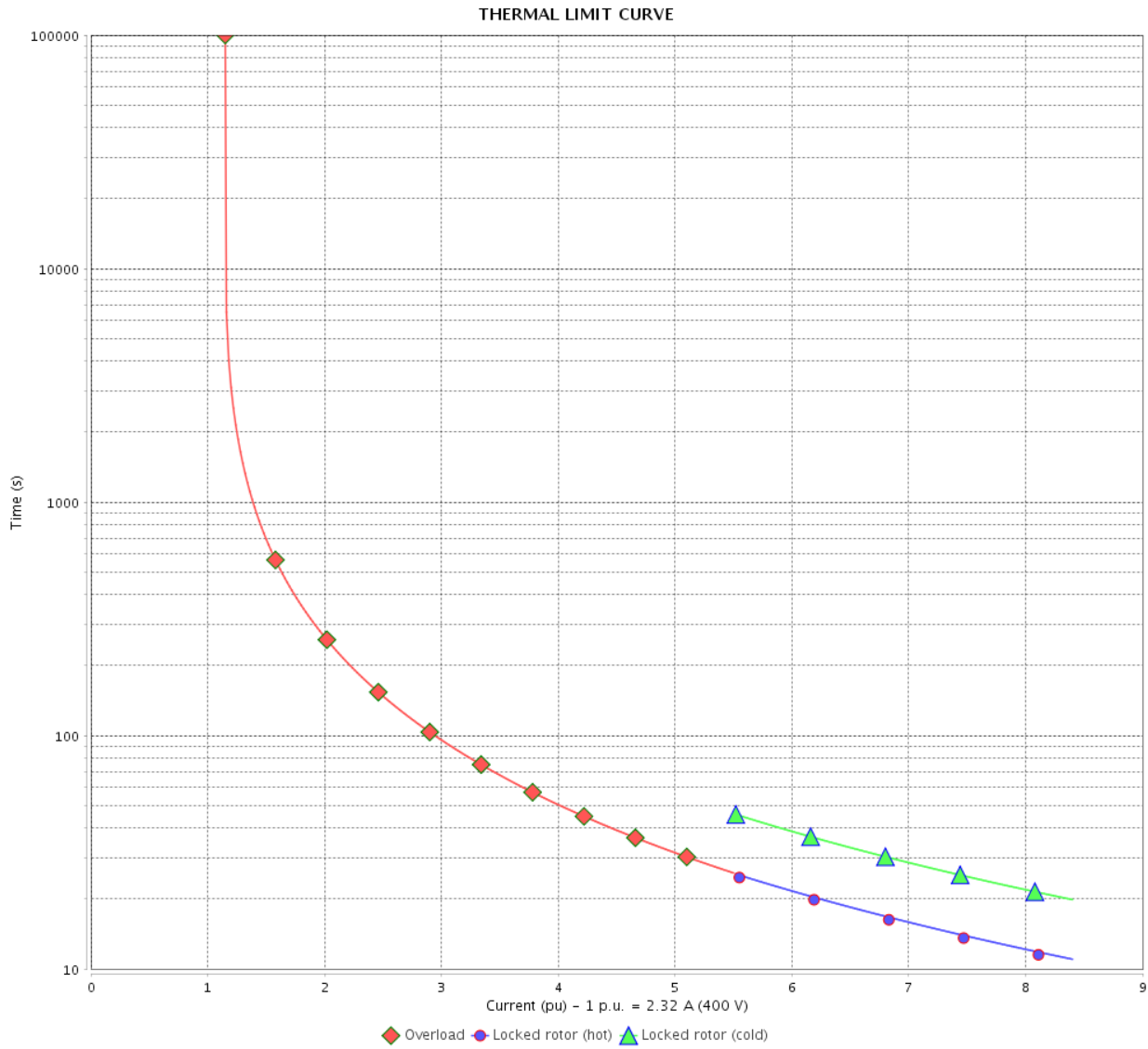
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 15 / 22	Revision
Checked by				
Date	12/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 16 / 22		Revision
Checked by				
Date				

THERMAL LIMIT CURVE



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 Product code : 14371274
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Rated current : 2.29 A	Moment of inertia (J) : 0.0413 sq.ft.lb
LRC : 8.7	Duty cycle : Cont.(S1)
Rated torque : 2.72 ft.lb	Insulation class : F
Locked rotor torque : 360 %	Service factor : 1.00
Breakdown torque : 360 %	Temperature rise : 80 K
Rated speed : 2895 rpm	Design : B

Heating constant

Cooling constant

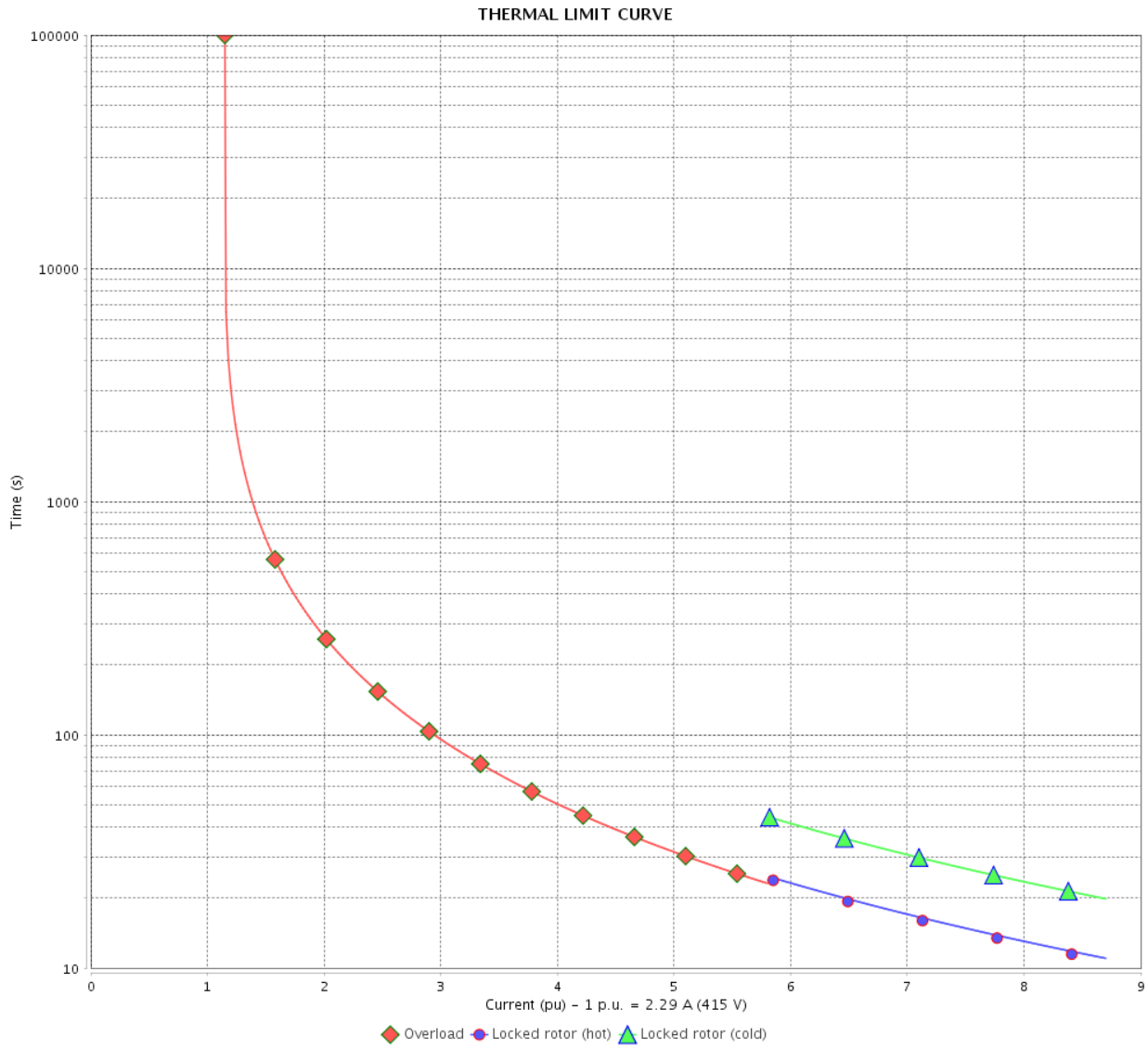
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 17 / 22	Revision
Checked by				
Date	12/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 18 / 22		Revision
Checked by				
Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

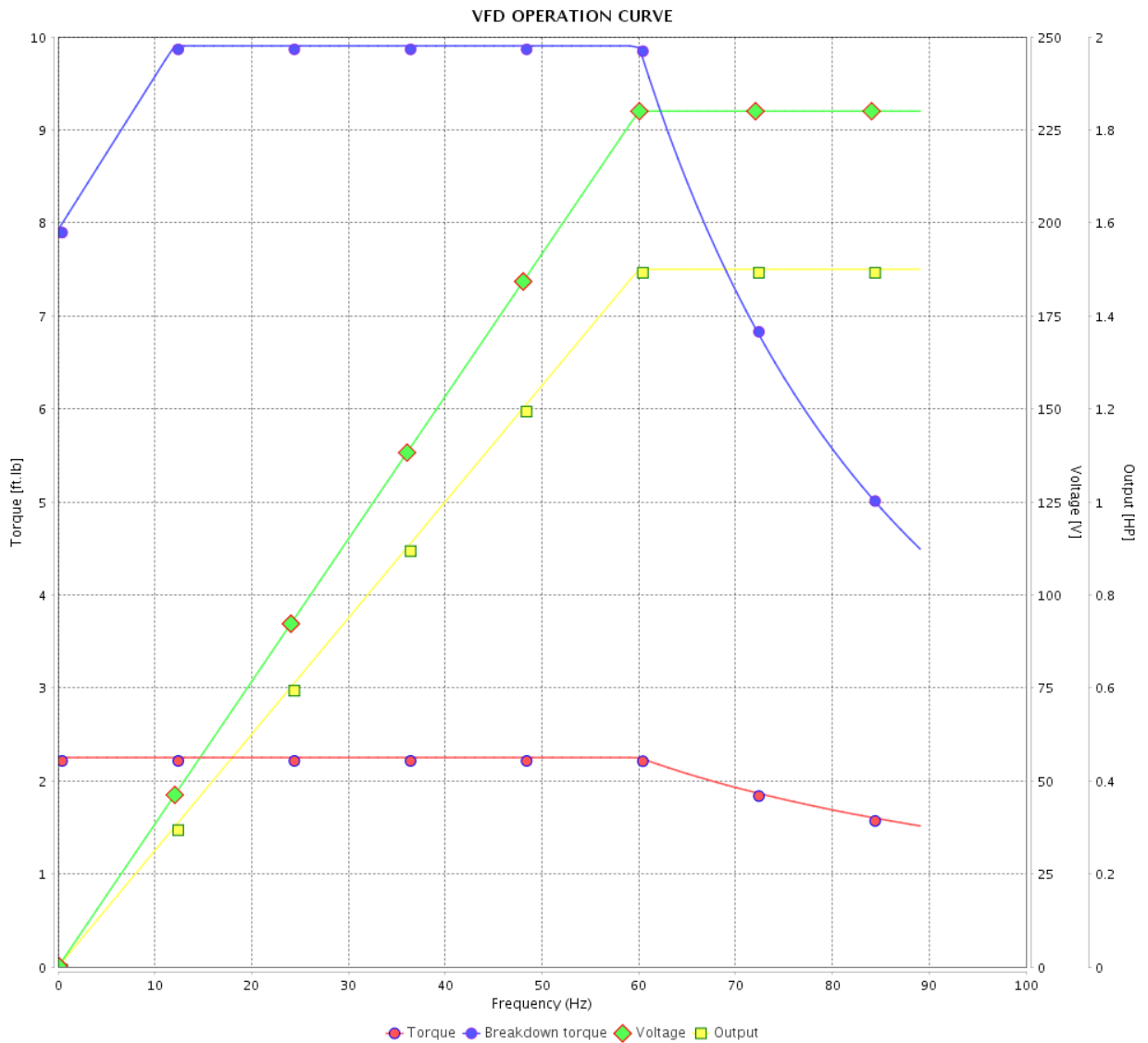


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Performance : 230/460 V 60 Hz 2P

Rated current : 4.10/2.05 A
 LRC : 9.2
 Rated torque : 2.25 ft.lb
 Locked rotor torque : 340 %
 Breakdown torque : 440 %
 Rated speed : 3500 rpm

Moment of inertia (J) : 0.0413 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		19 / 22		
Date		12/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



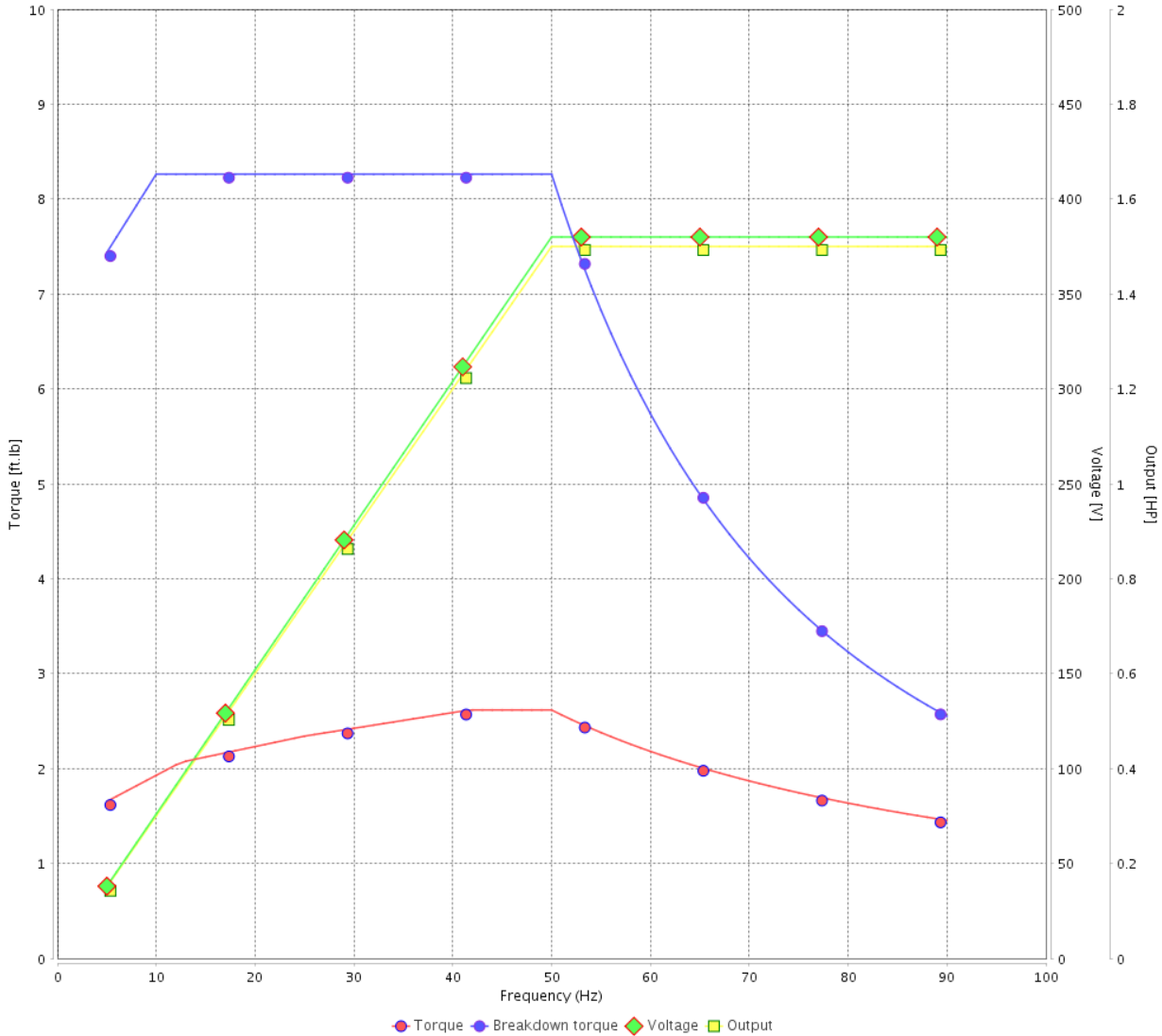
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VFD OPERATION CURVE



Performance : 380 V 50 Hz 2P IE2

Rated current : 2.36 A
 LRC : 8.0
 Rated torque : 2.75 ft.lb
 Locked rotor torque : 280 %
 Breakdown torque : 300 %
 Rated speed : 2860 rpm

Moment of inertia (J) : 0.0413 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Performed by			Page	Revision
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

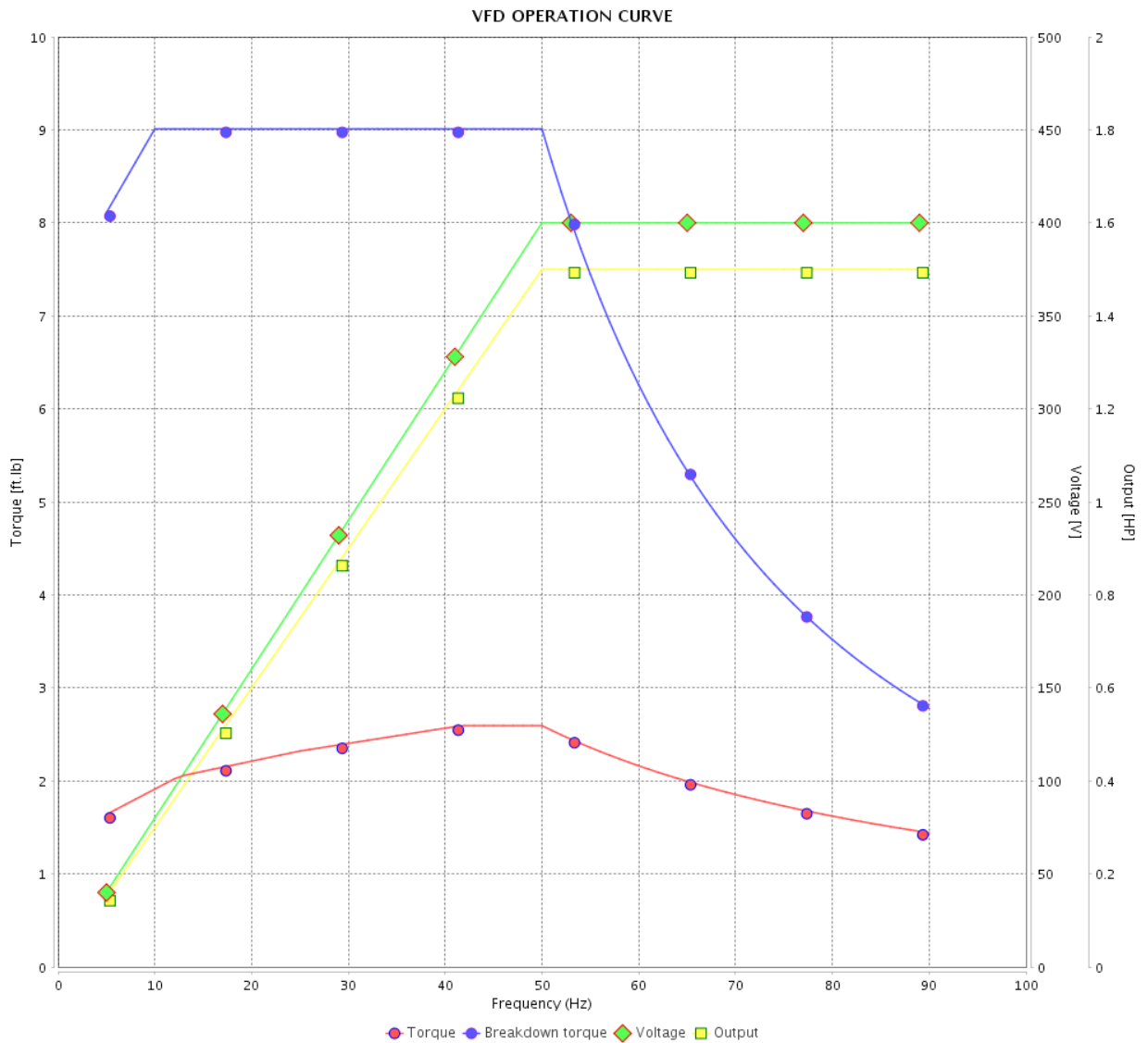


Customer :

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Performance : 400 V 50 Hz 2P IE2

Rated current : 2.32 A
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 Rated torque : 2.73 ft.lb
 Locked rotor torque : 320 %
 Breakdown torque : 330 %
 Rated speed : 2885 rpm

Moment of inertia (J) : 0.0413 sq.ft.lb
 Duty cycle : Cont.(S1)
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 Service factor : 1.00
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Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 21 / 22
Checked by				
Date	12/04/2022			
				Revision

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

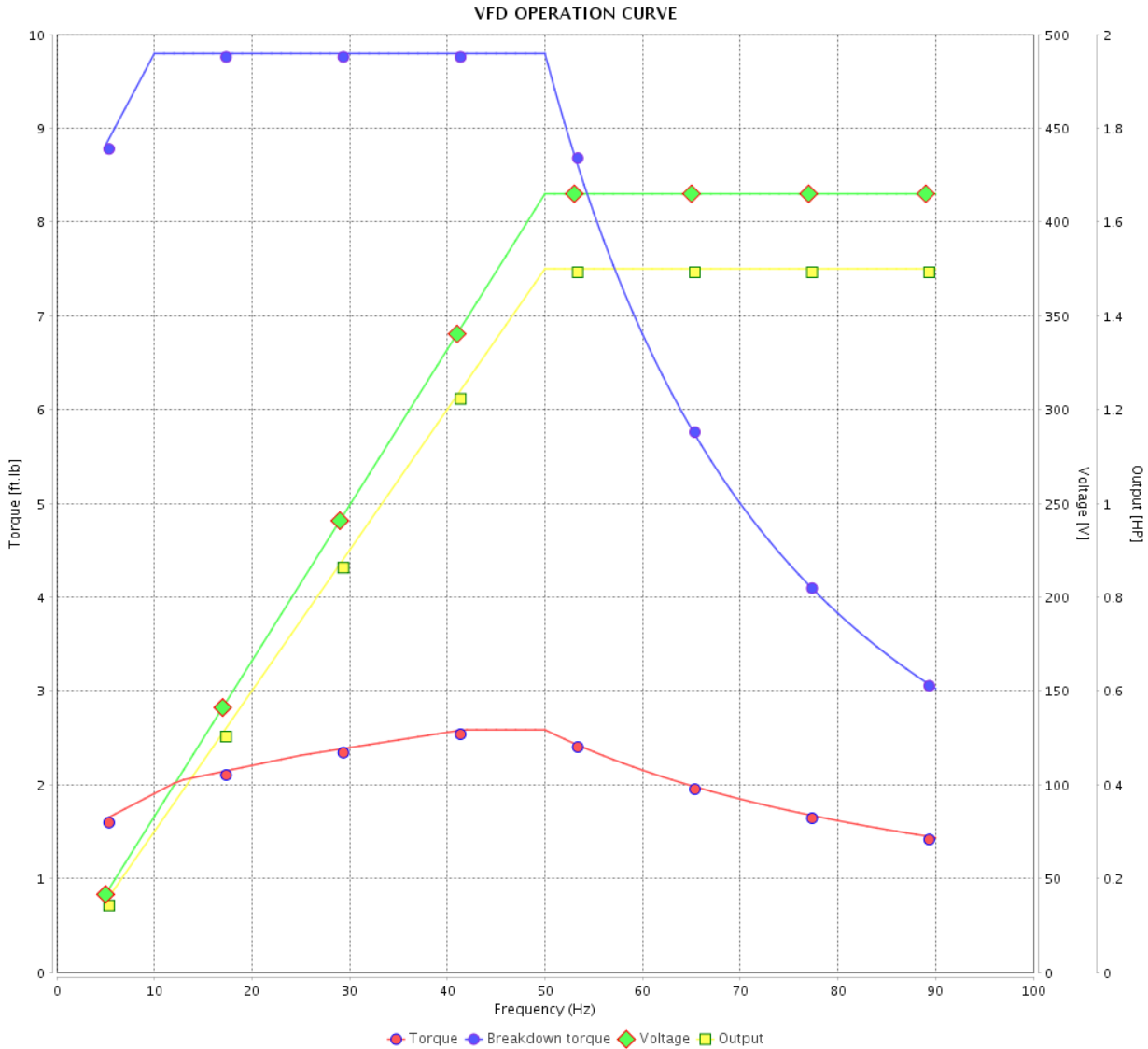


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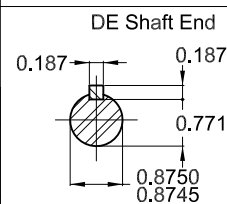
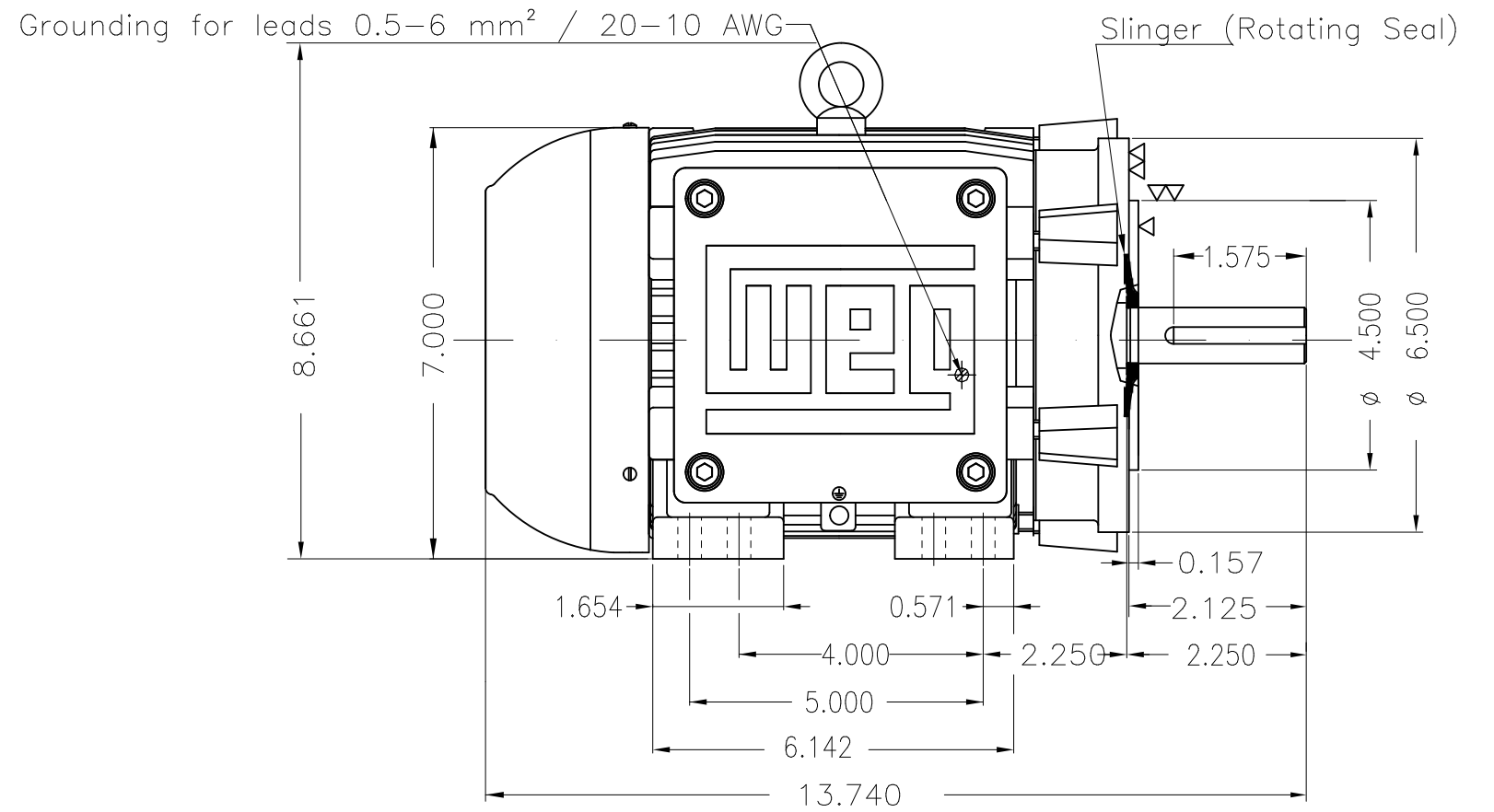
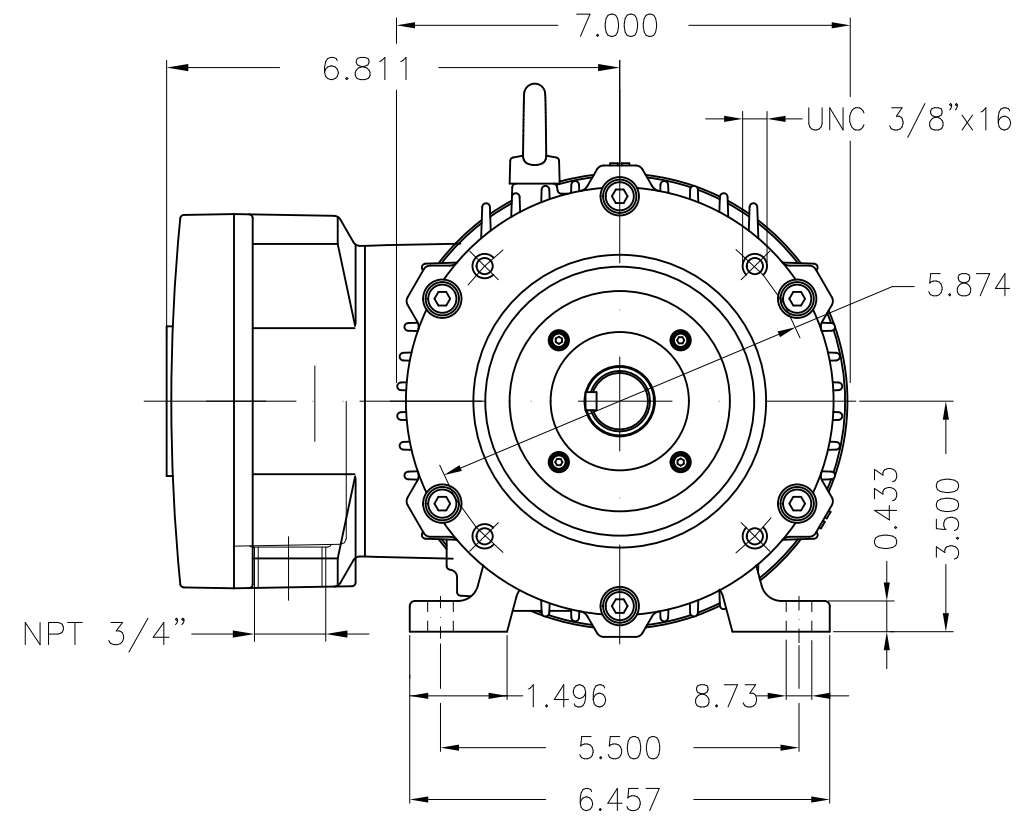


Performance : 415 V 50 Hz 2P IE2

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 Locked rotor torque : 360 %
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Performed by			Page	Revision
Checked by				
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Color RAL 5009
Painting plan 202P
Mounting NEMA F-1
Mounting B34R(D)

1.5 HP 02 Poles 60 Hz

Dimensions in inches

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 143/5TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
WDD



SHEET 1 / 1

MADE IN BRAZIL

**W21X NEMA**
Premium

14371274

CC029A

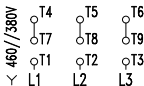
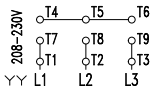
Inverter Duty Motor
Severe Duty

LISTED

MODEL 00156XT3E143TC

PH 3	FR 143/5TC		
HP(kW) 1.5(1.1)		HZ 60	IP55
V 230/460		A 4.10/2.05	
RPM 3500		NEMA NOM EFF 84.0%	
PF 0.80		SFA 4.71/2.36	DES B
INS CL F Δ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE M	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	4.53 A	SF 1.15 SFA 5.21
AMB 55°C SF1.0			

1.5HP 1.1kW 50Hz 380V 2.36A 2860RPM SF1.00 EFF 82.5% (IE2)



→ 6205-2RS MOBIL POLYREX EM
→ 6204-2RS

73 Lbs



TEMP CODE T3C
CSA/UL: Class I - Div. 1 - Groups C and D
CSA: Class II - Div. 1 - Groups F and G
CSA: Class I - Zone 1 - IIB

EXPLOSION PROOF MOTOR

FOR USE ON VPWM VFD 1000:1VT, 20:1CT, 1.0SF, T3C, AMB 40°C.