

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: IE3 Three-Phase			
Product code :	12867528			
Frame : 132S Insulation class : F Duty cycle : S1 Ambient temperature : -20°C to +40°C Altitude : 1000 m.a.s.l. Protection degree : IP55 Design : N	Cooling method : IC411 - TEFC Mounting : B3T Rotation <sup>1</sup> : Both (CW and CCW) Starting method : Direct On Line Approx. weight <sup>2</sup> : 64.6 kg Moment of inertia (J) : 0.0491 kgm <sup>2</sup>			
Output [kW]	5.5			
Poles	4			
Frequency [Hz]	50			
Rated voltage [V]	380/660			
Rated current [A]	10.8/6.22			
L. R. Amperes [A]	81.0/46.6			
LRC [A]	7.5			
No load current [A]	4.70/2.71			
Rated speed [RPM]	1460			
Slip [%]	2.67			
Rated torque [Nm]	36.0			
Locked rotor torque [%]	210			
Breakdown torque [%]	300			
Service factor	1.00			
Temperature rise	80 K			
Locked rotor time	25s (cold) 14s (hot)			
Noise level <sup>2</sup>	56.0 dB(A)			
Efficiency (%)	25%			
	50%			
	75%			
	100%			
Power Factor	25%			
	50%			
	75%			
	100%			
Bearing type : Drive end 6308 ZZ Non drive end 6207 ZZ Sealing : V'Ring V'Ring Lubrication interval : - - Lubricant amount : - - Lubricant type : Mobil Polyrex EM	Foundation loads Max. traction : 1827 N Max. compression : 2461 N			
Notes				
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 IEC 60034-1.			
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	07/04/2022		1 / 18	

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

### Thermal protection

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	07/04/2022		2 / 18	

# TORQUE AND CURRENT VS SPEED CURVE

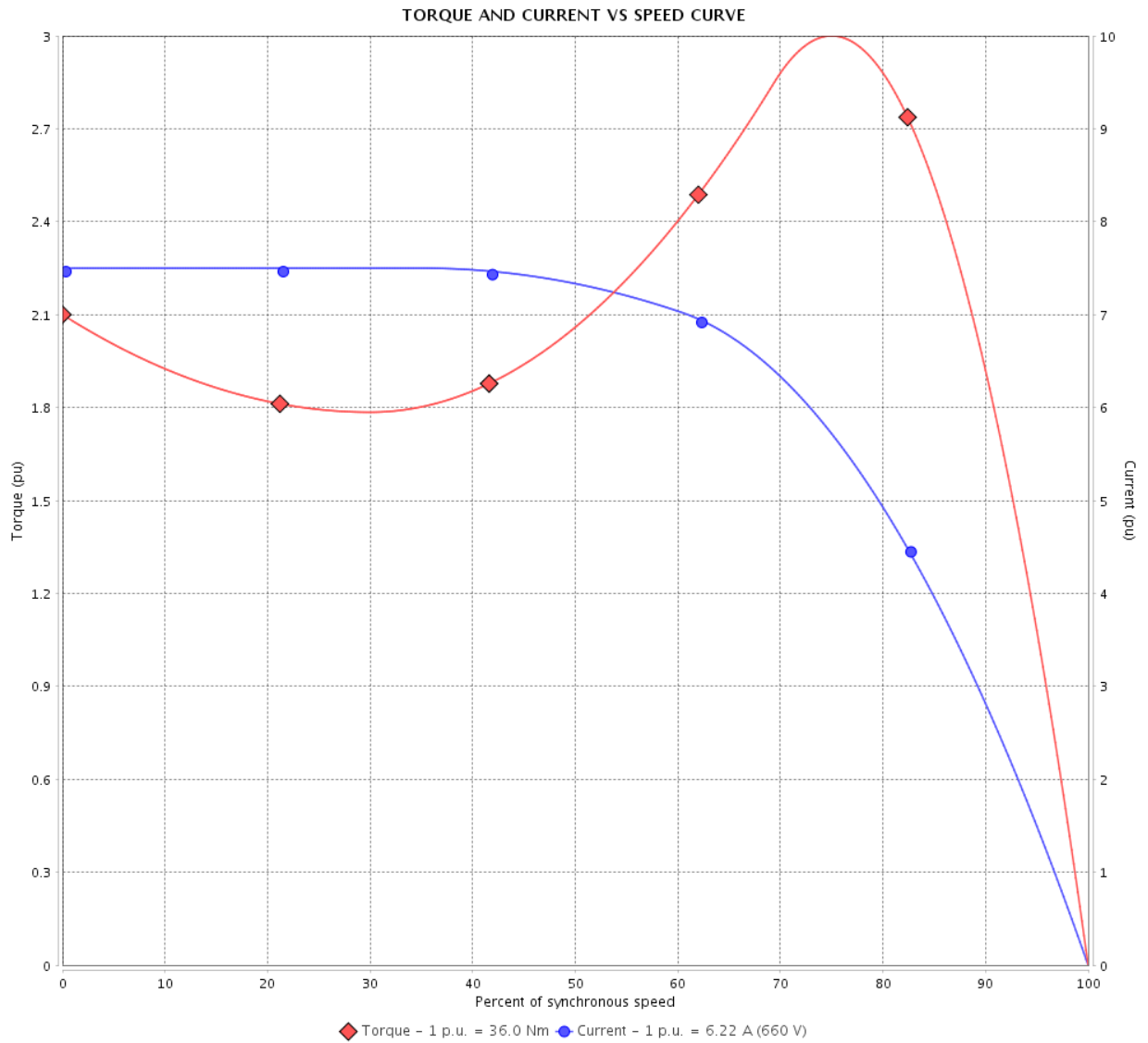


## Three Phase Induction Motor - Squirrel Cage

Customer : \_\_\_\_\_

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 380/660 V 50 Hz 4P

Rated current : 10.8/6.22 A  
 LRC : 7.5  
 Rated torque : 36.0 Nm  
 Locked rotor torque : 210 %  
 Breakdown torque : 300 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.0491 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Locked rotor time : 25s (cold) 14s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 18	Revision
Checked by				
Date	07/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

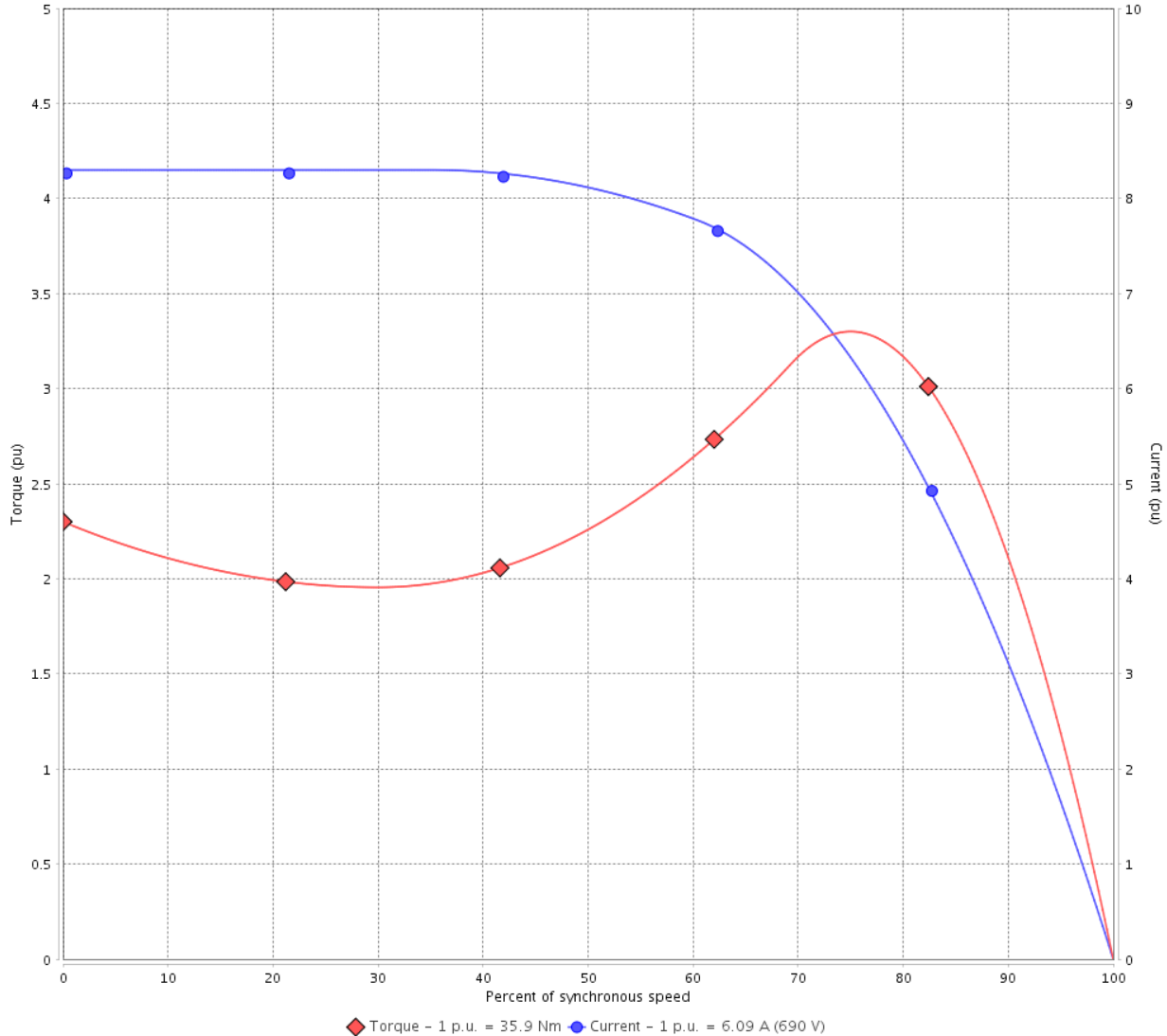


Customer :

Product line : IE3 Three-Phase

Product code : 12867528

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400/690 V 50 Hz 4P

Rated current	: 10.5/6.09 A	Moment of inertia (J)	: 0.0491 kgm <sup>2</sup>
LRC	: 8.3	Duty cycle	: S1
Rated torque	: 35.9 Nm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: N

Locked rotor time : 21s (cold) 12s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 18	Revision
Checked by				
Date	07/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

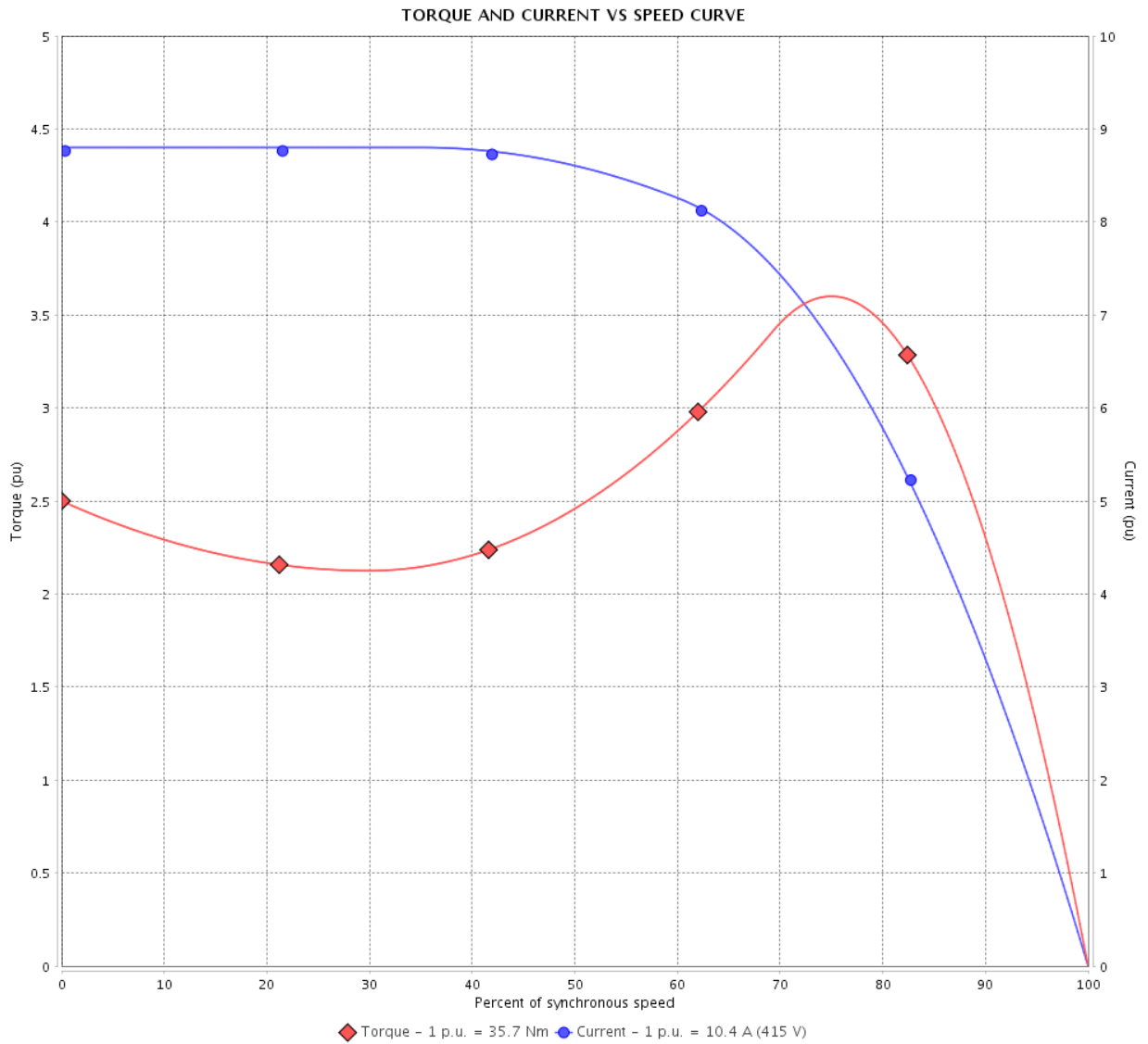
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 415 V 50 Hz 4P

Rated current	: 10.4 A	Moment of inertia (J)	: 0.0491 kgm <sup>2</sup>
LRC	: 8.8	Duty cycle	: S1
Rated torque	: 35.7 Nm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 360 %	Temperature rise	: 80 K
Rated speed	: 1470 rpm	Design	: N

Locked rotor time : 21s (cold) 12s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		5 / 18		
Date	07/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

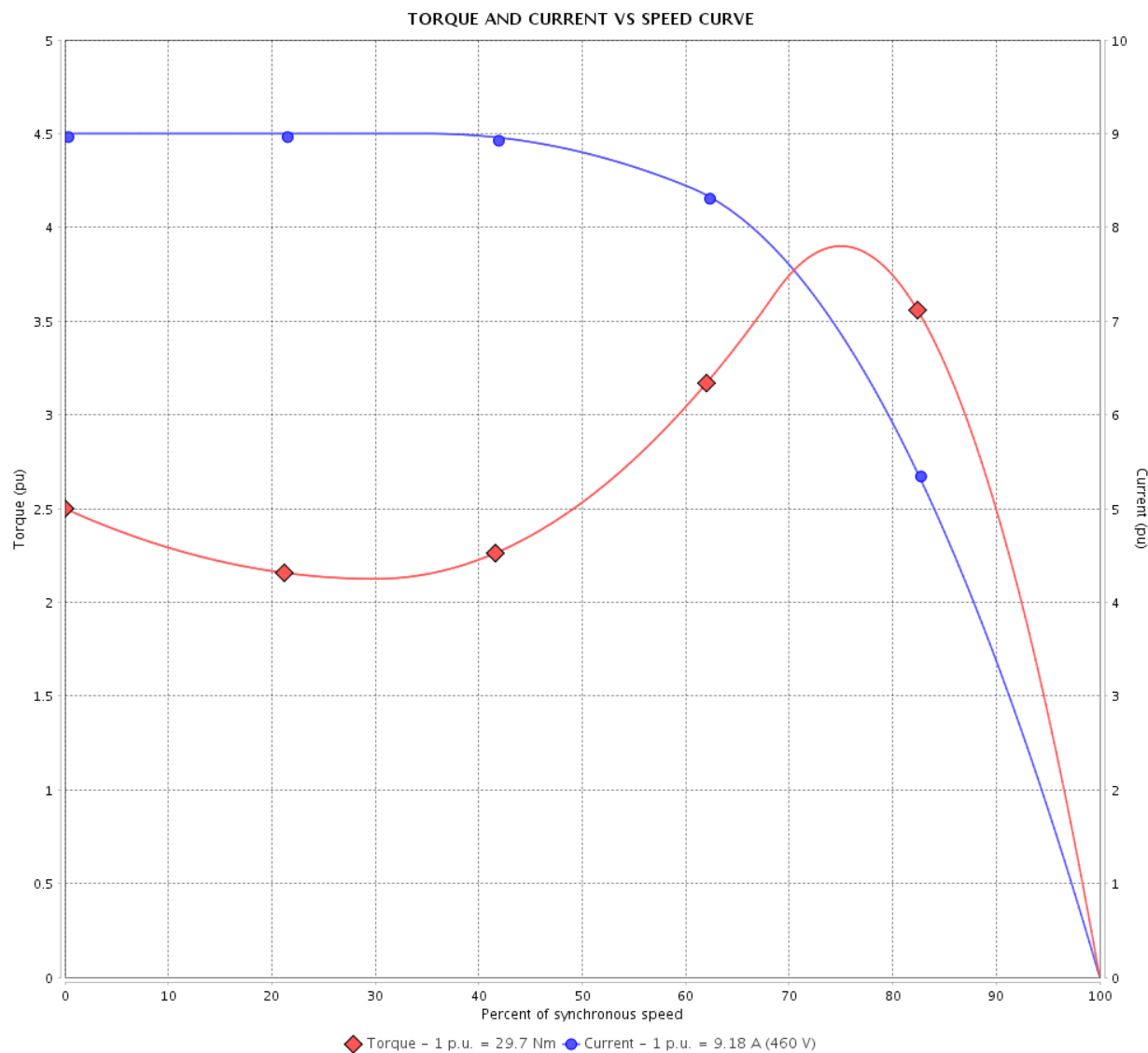
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 460 V 60 Hz 4P

Rated current	: 9.18 A	Moment of inertia (J)	: 0.0491 kgm <sup>2</sup>
LRC	: 9.0	Duty cycle	: S1
Rated torque	: 29.7 Nm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 390 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: N

Locked rotor time : 28s (cold) 16s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 18	Revision
Checked by				
Date	07/04/2022			

# LOAD PERFORMANCE CURVE

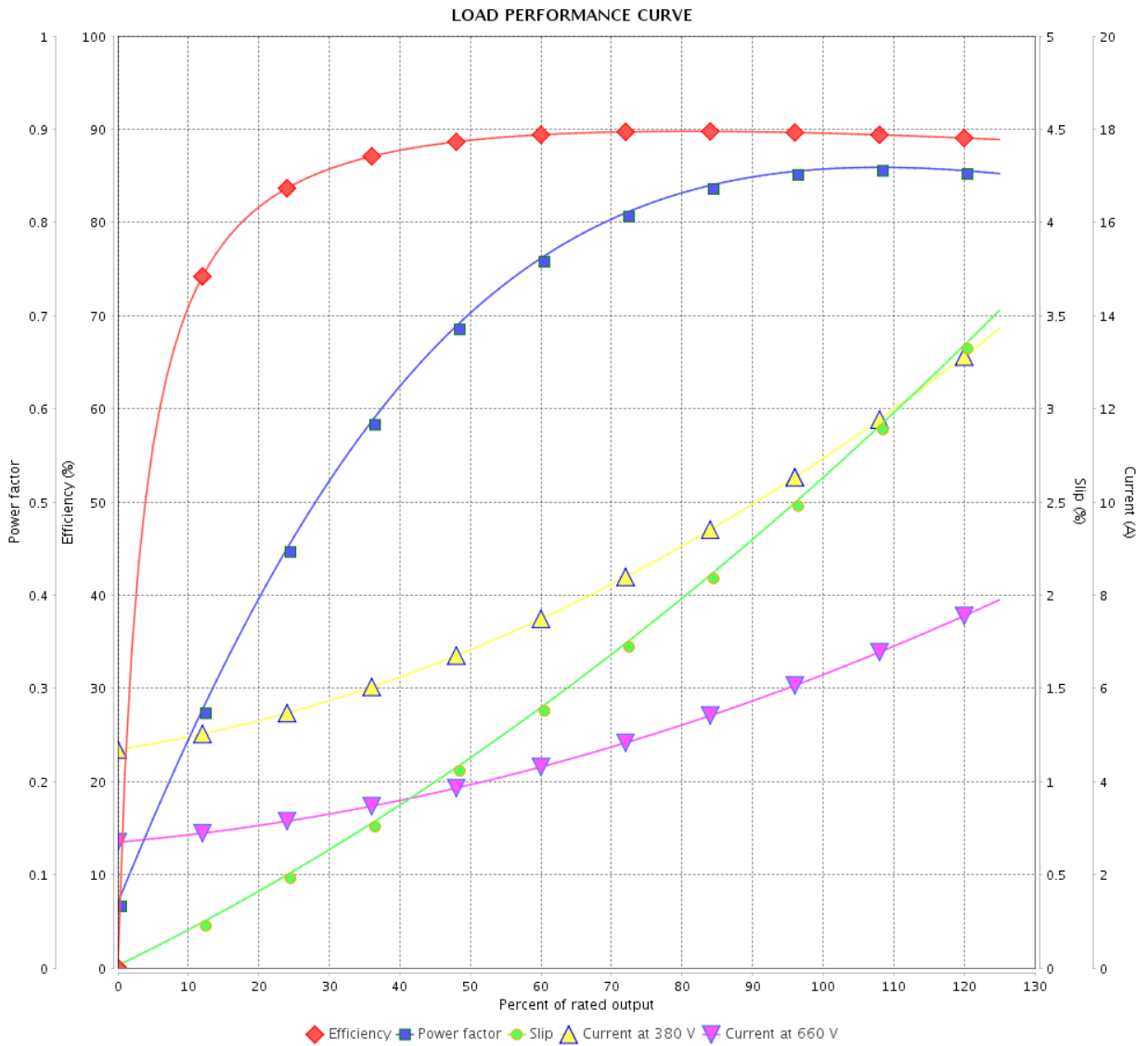
Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 380/660 V 50 Hz 4P

Rated current : 10.8/6.22 A  
 LRC : 7.5  
 Rated torque : 36.0 Nm  
 Locked rotor torque : 210 %  
 Breakdown torque : 300 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.0491 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

# LOAD PERFORMANCE CURVE

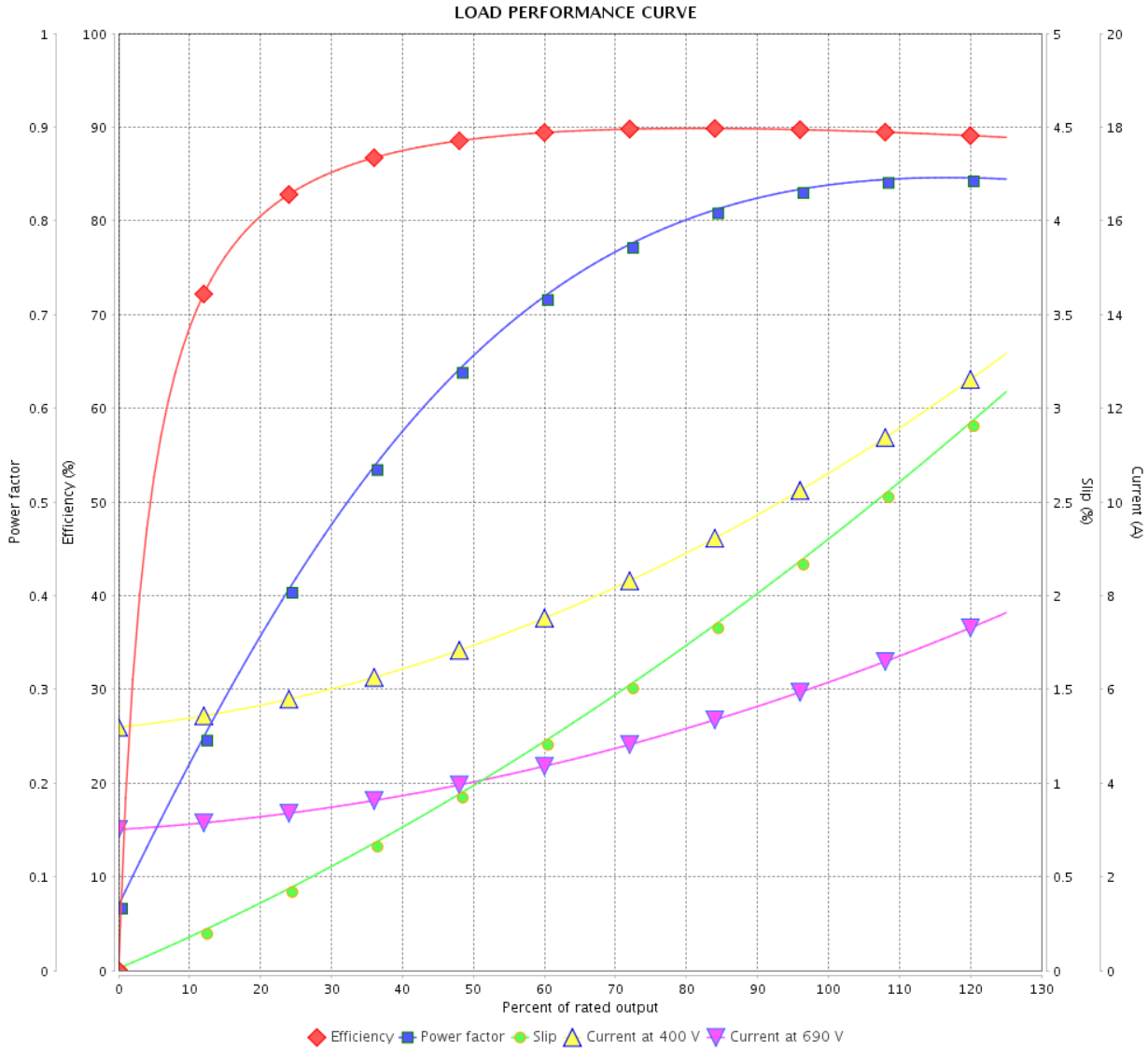
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 400/690 V 50 Hz 4P

Rated current : 10.5/6.09 A  
 LRC : 8.3  
 Rated torque : 35.9 Nm  
 Locked rotor torque : 229 %  
 Breakdown torque : 330 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0491 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 8 / 18	Revision
Checked by				
Date	07/04/2022			

# LOAD PERFORMANCE CURVE

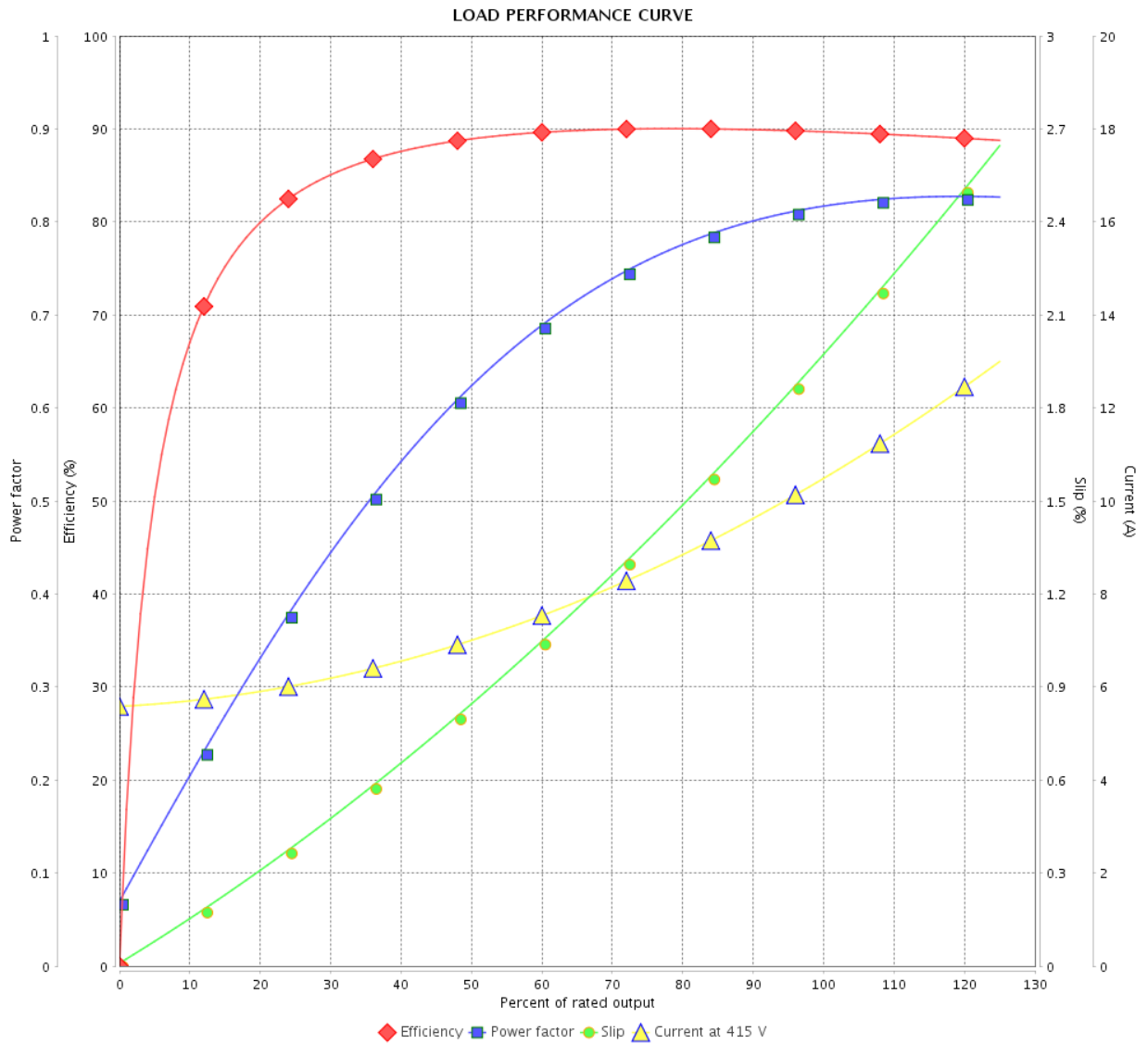
Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 415 V 50 Hz 4P

Rated current : 10.4 A  
 LRC : 8.8  
 Rated torque : 35.7 Nm  
 Locked rotor torque : 250 %  
 Breakdown torque : 360 %  
 Rated speed : 1470 rpm

Moment of inertia (J) : 0.0491 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

# LOAD PERFORMANCE CURVE

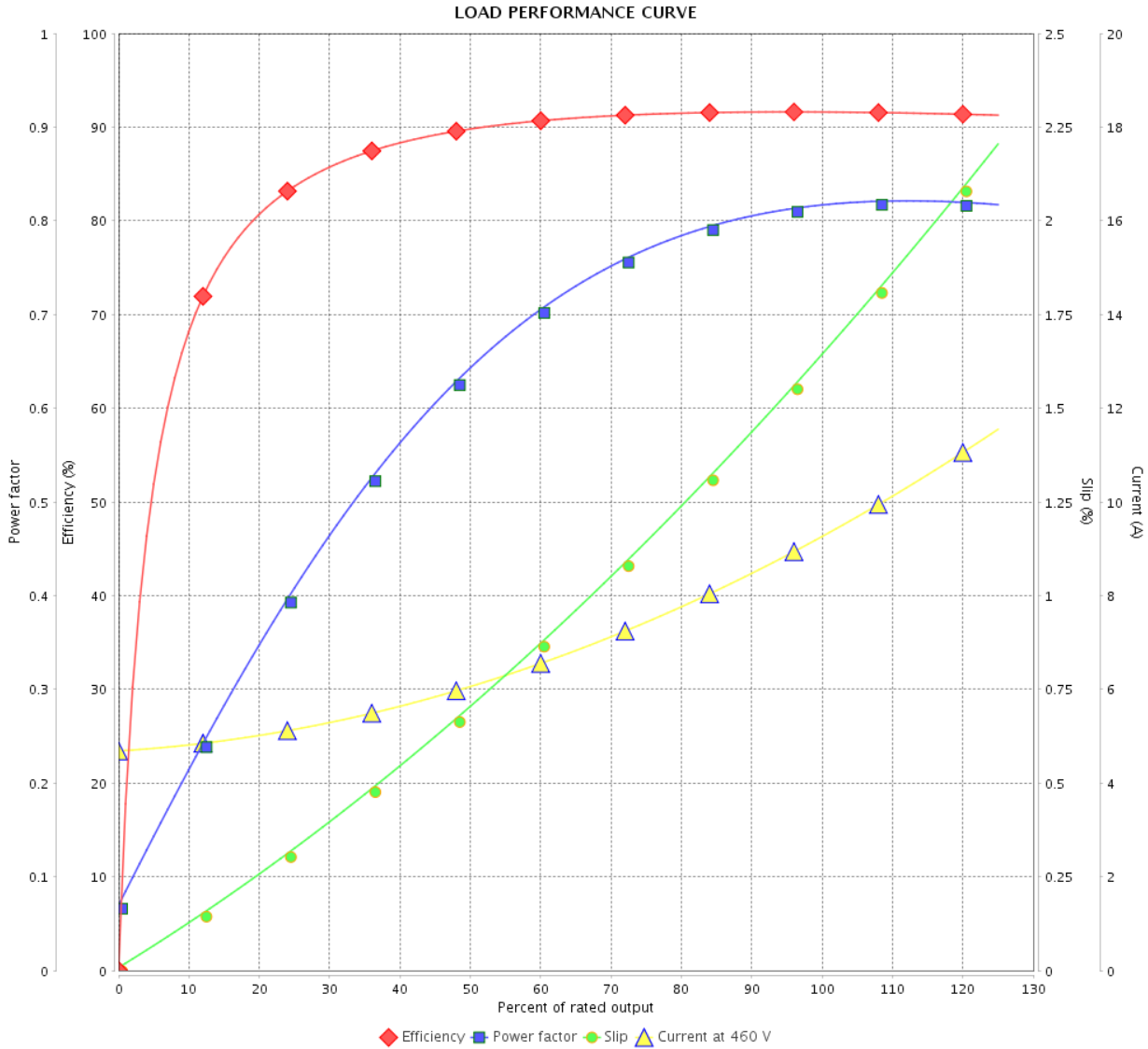
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 460 V 60 Hz 4P

Rated current : 9.18 A  
 LRC : 9.0  
 Rated torque : 29.7 Nm  
 Locked rotor torque : 250 %  
 Breakdown torque : 390 %  
 Rated speed : 1770 rpm

Moment of inertia (J) : 0.0491 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 18	Revision
Checked by				
Date	07/04/2022			

# THERMAL LIMIT CURVE

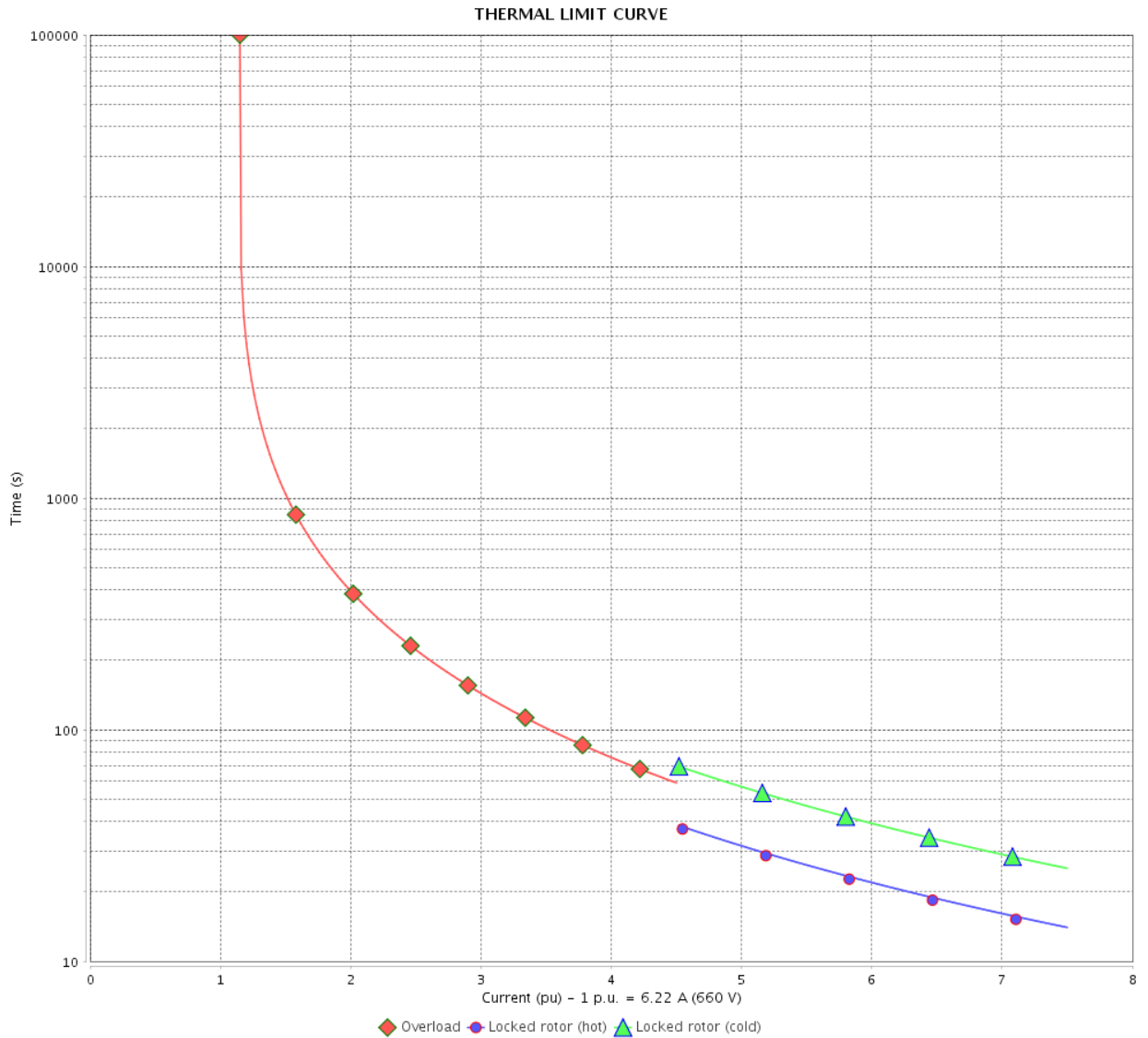
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 380/660 V 50 Hz 4P

Rated current : 10.8/6.22 A  
 LRC : 7.5  
 Rated torque : 36.0 Nm  
 Locked rotor torque : 210 %  
 Breakdown torque : 300 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.0491 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		11 / 18		

# THERMAL LIMIT CURVE

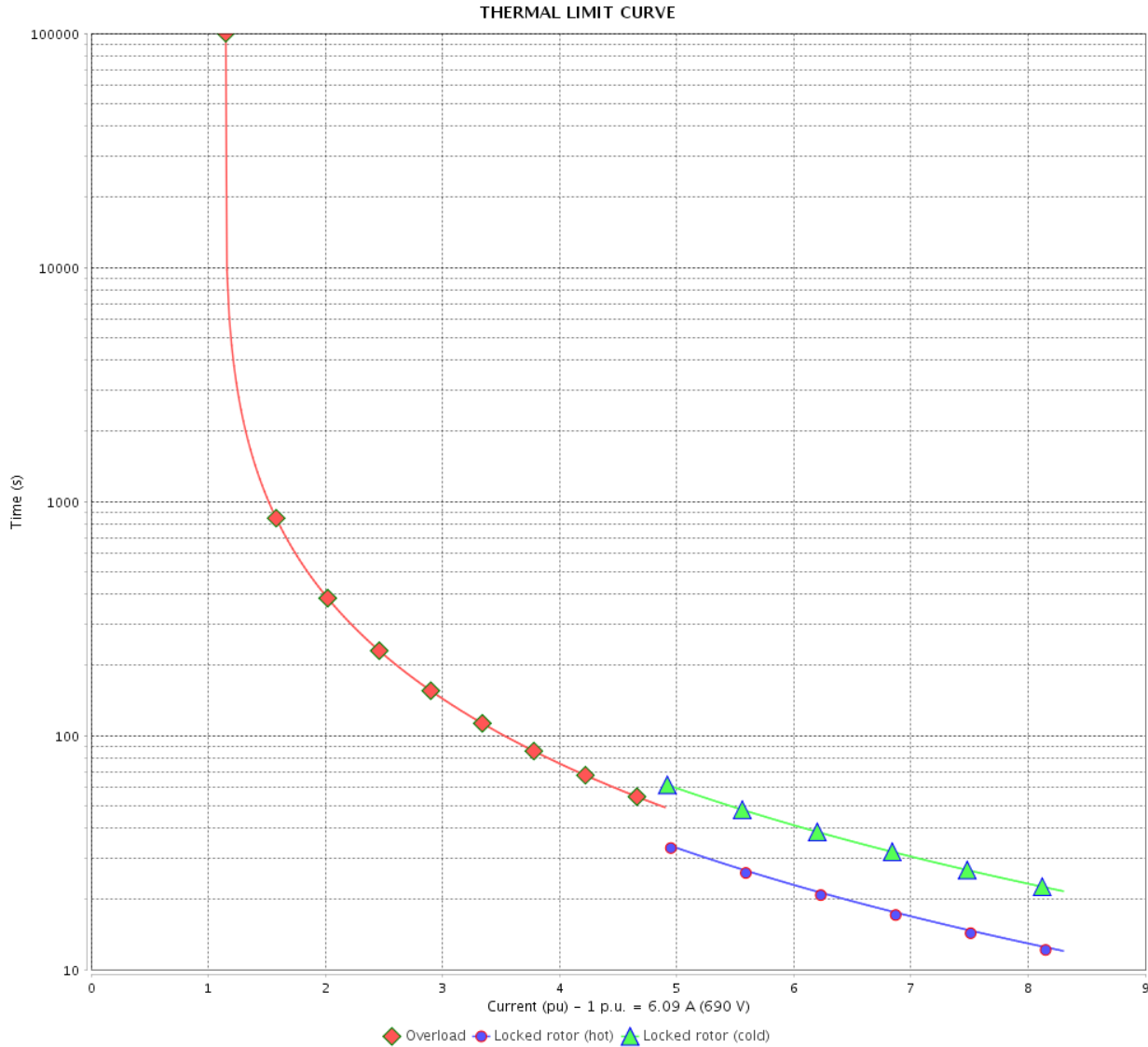
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 400/690 V 50 Hz 4P

Rated current : 10.5/6.09 A  
 LRC : 8.3  
 Rated torque : 35.9 Nm  
 Locked rotor torque : 229 %  
 Breakdown torque : 330 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0491 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by				
Date				

# THERMAL LIMIT CURVE

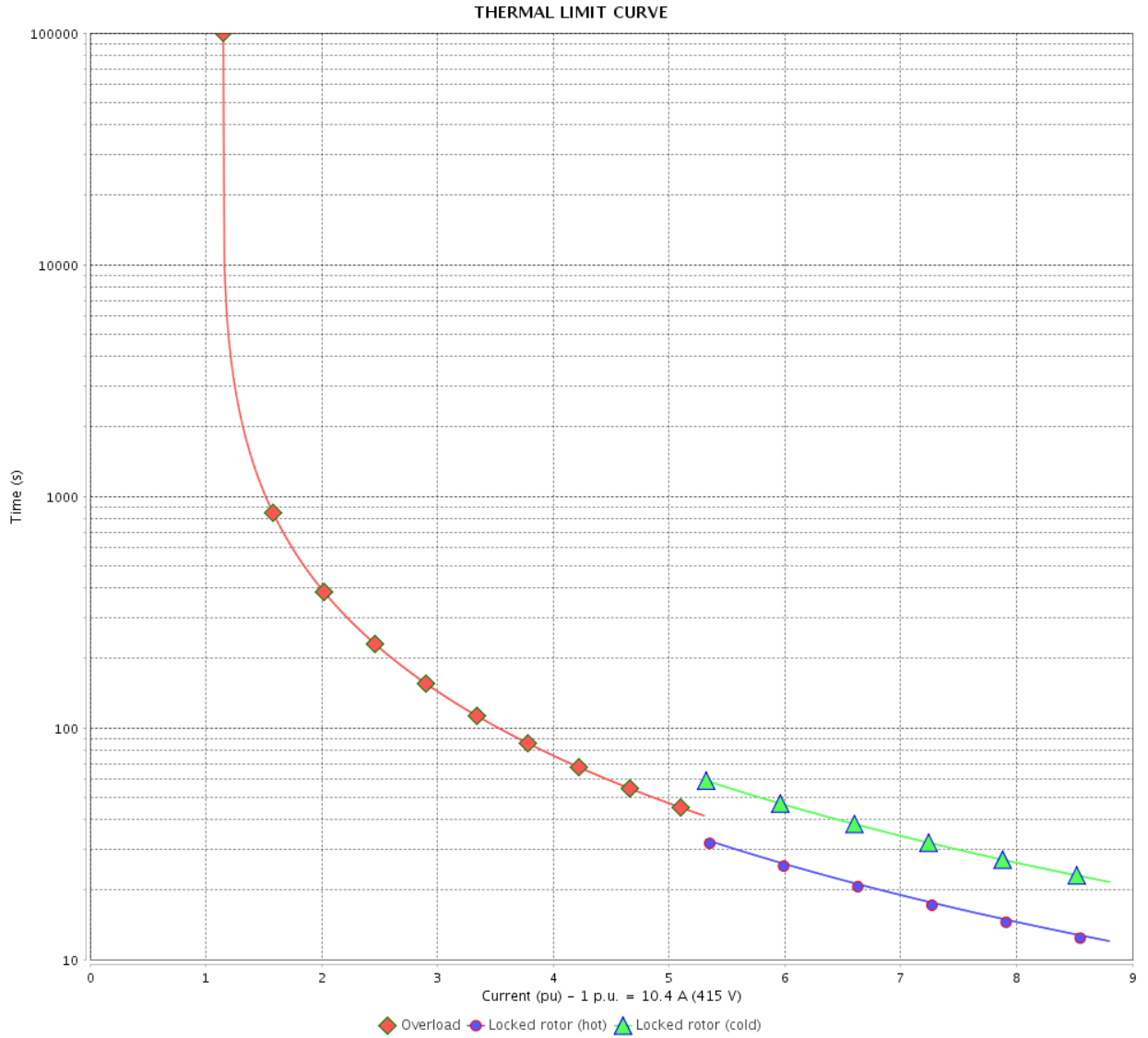
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 415 V 50 Hz 4P

Rated current : 10.4 A  
 LRC : 8.8  
 Rated torque : 35.7 Nm  
 Locked rotor torque : 250 %  
 Breakdown torque : 360 %  
 Rated speed : 1470 rpm

Moment of inertia (J) : 0.0491 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		13 / 18		

# THERMAL LIMIT CURVE

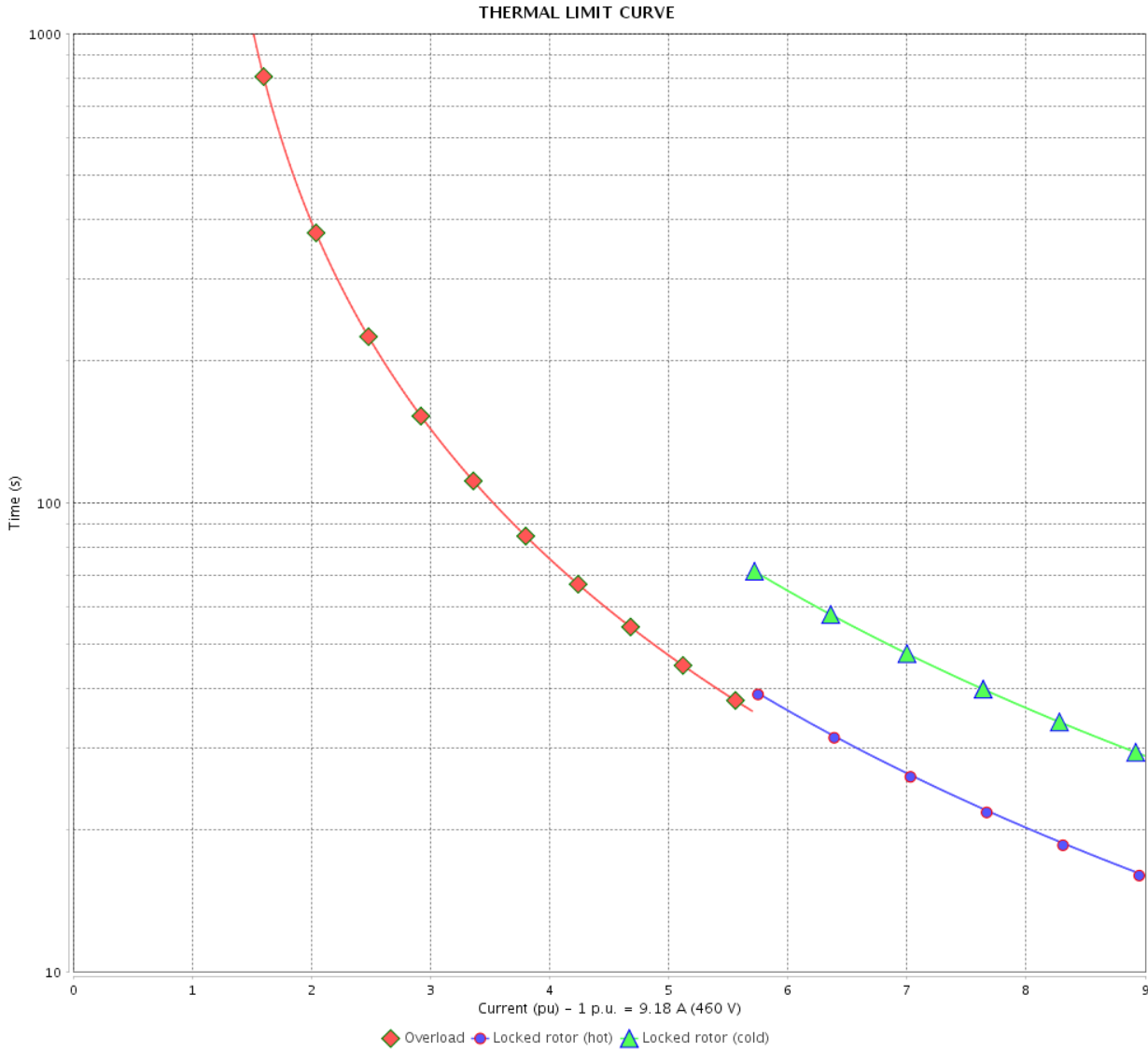
Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 460 V 60 Hz 4P

Rated current	: 9.18 A	Moment of inertia (J)	: 0.0491 kgm <sup>2</sup>
LRC	: 9.0	Duty cycle	: S1
Rated torque	: 29.7 Nm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 390 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 18	Revision
Checked by				
Date	07/04/2022			

# VFD OPERATION CURVE

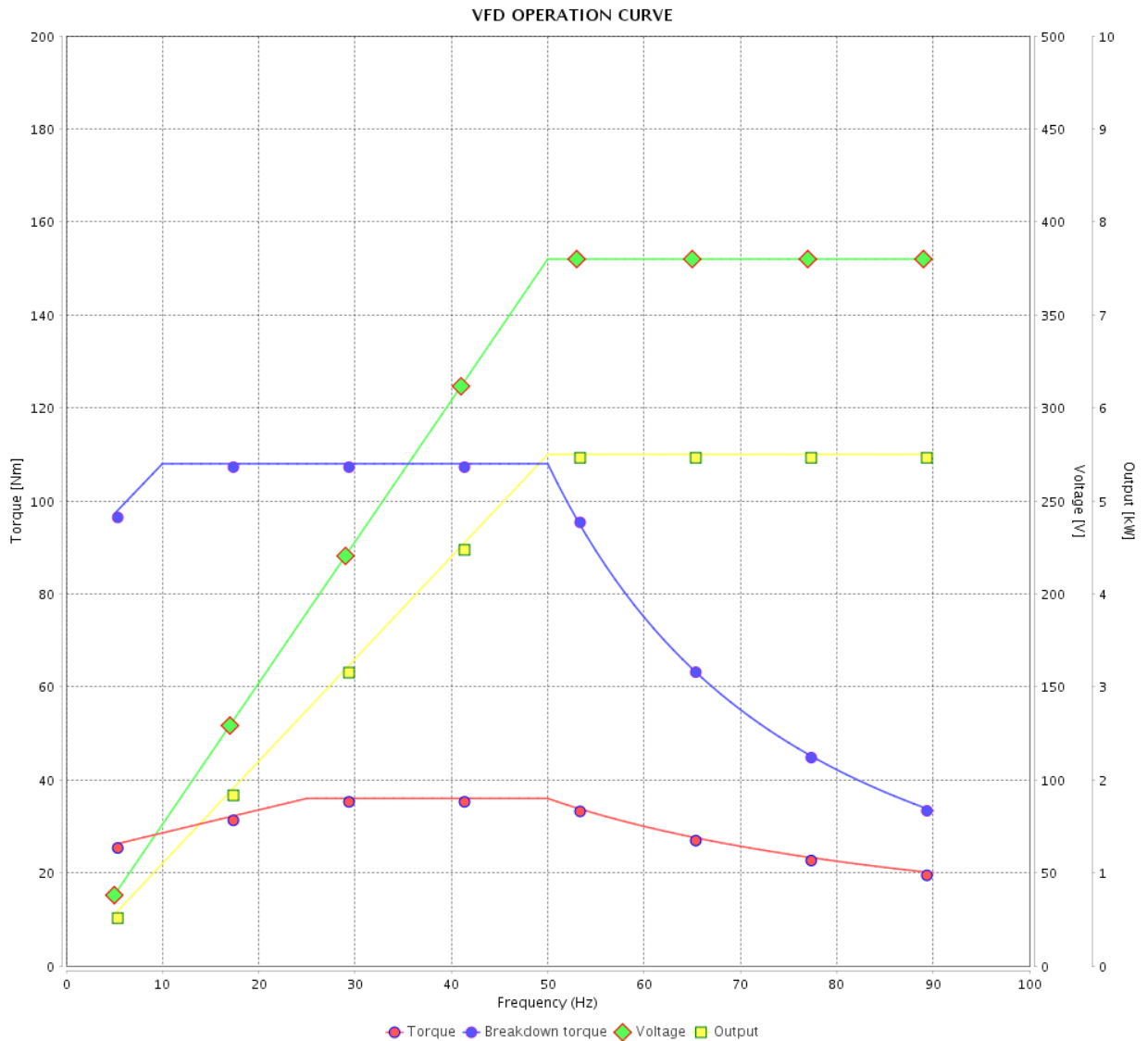
Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 380/660 V 50 Hz 4P

Rated current : 10.8/6.22 A  
 LRC : 7.5  
 Rated torque : 36.0 Nm  
 Locked rotor torque : 210 %  
 Breakdown torque : 300 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.0491 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 15 / 18	Revision
Checked by				
Date	07/04/2022			

# VFD OPERATION CURVE

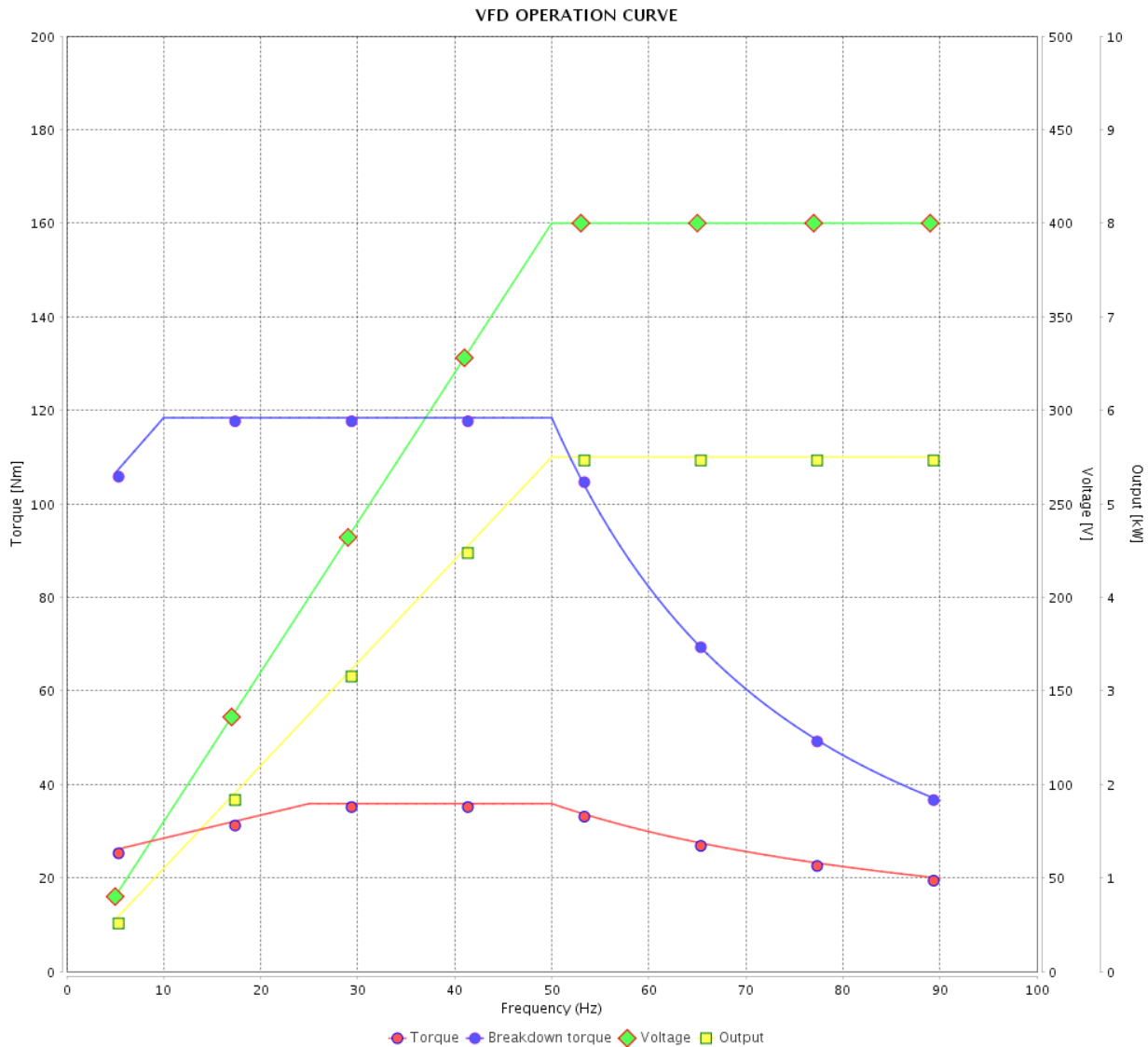
Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 400/690 V 50 Hz 4P

Rated current : 10.5/6.09 A  
 LRC : 8.3  
 Rated torque : 35.9 Nm  
 Locked rotor torque : 229 %  
 Breakdown torque : 330 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0491 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 16 / 18	Revision
Checked by				
Date	07/04/2022			

# VFD OPERATION CURVE

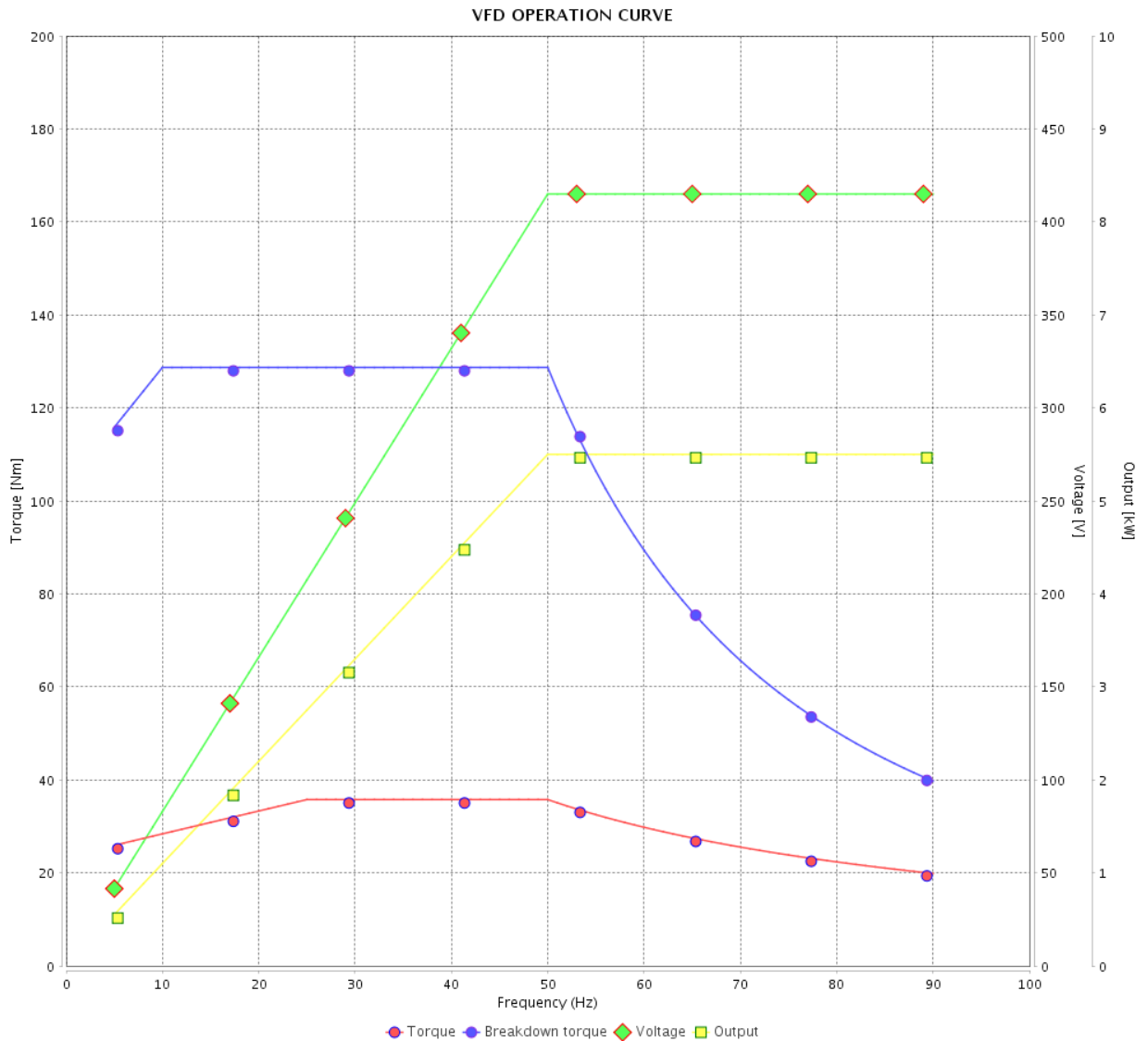
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 415 V 50 Hz 4P

Rated current : 10.4 A  
 LRC : 8.8  
 Rated torque : 35.7 Nm  
 Locked rotor torque : 250 %  
 Breakdown torque : 360 %  
 Rated speed : 1470 rpm

Moment of inertia (J) : 0.0491 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 17 / 18	Revision
Checked by				
Date	07/04/2022			

# VFD OPERATION CURVE

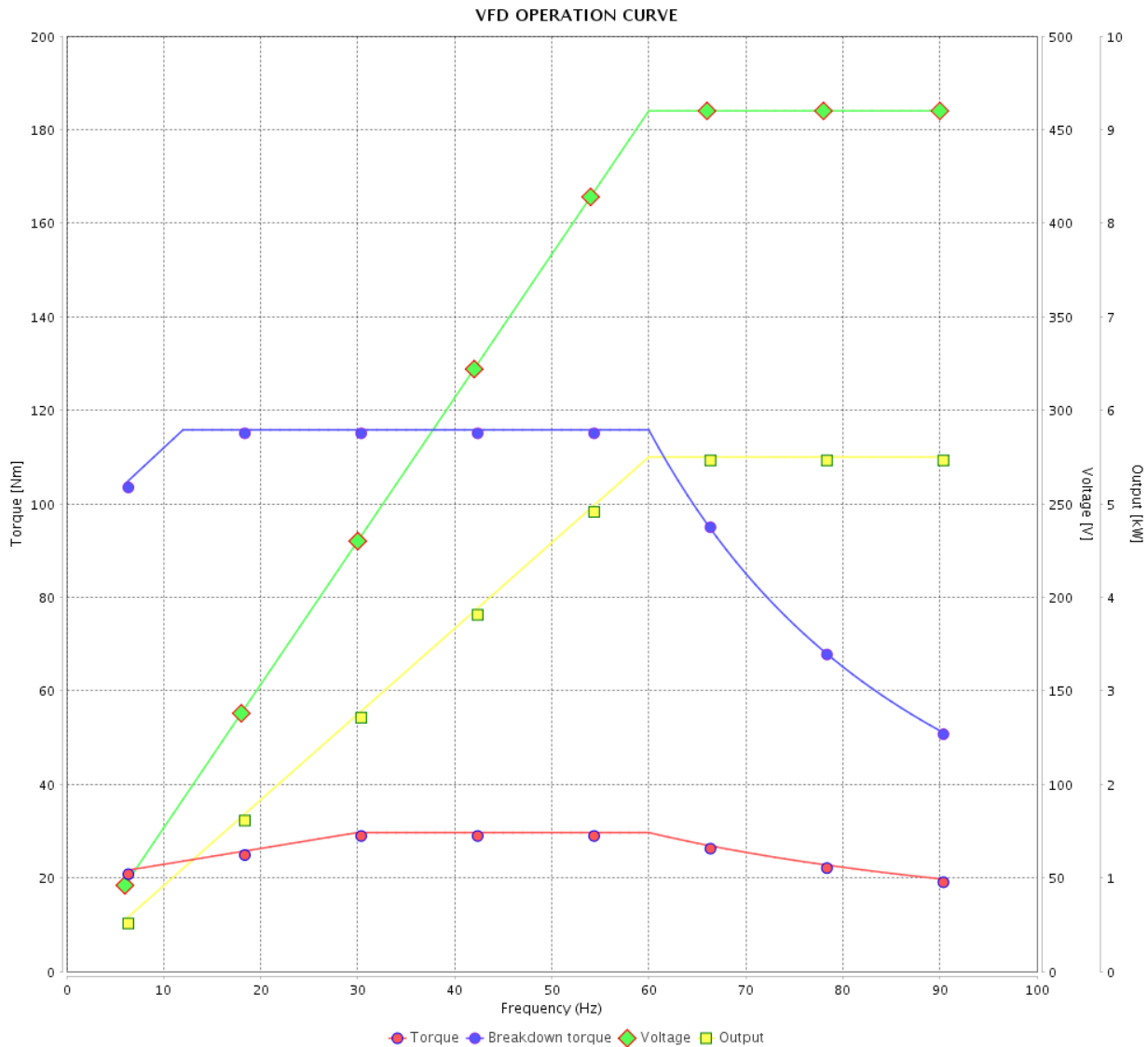
Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : IE3 Three-Phase

Product code : 12867528



Performance : 460 V 60 Hz 4P

Rated current : 9.18 A  
 LRC : 9.0  
 Rated torque : 29.7 Nm  
 Locked rotor torque : 250 %  
 Breakdown torque : 390 %  
 Rated speed : 1770 rpm

Moment of inertia (J) : 0.0491 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

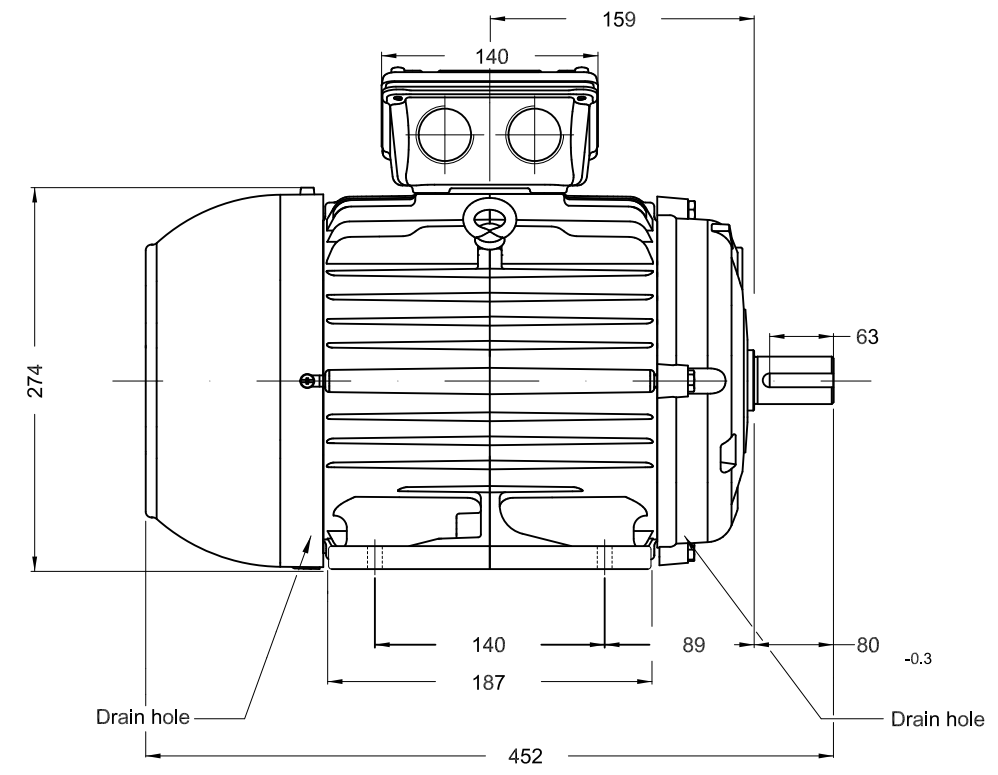
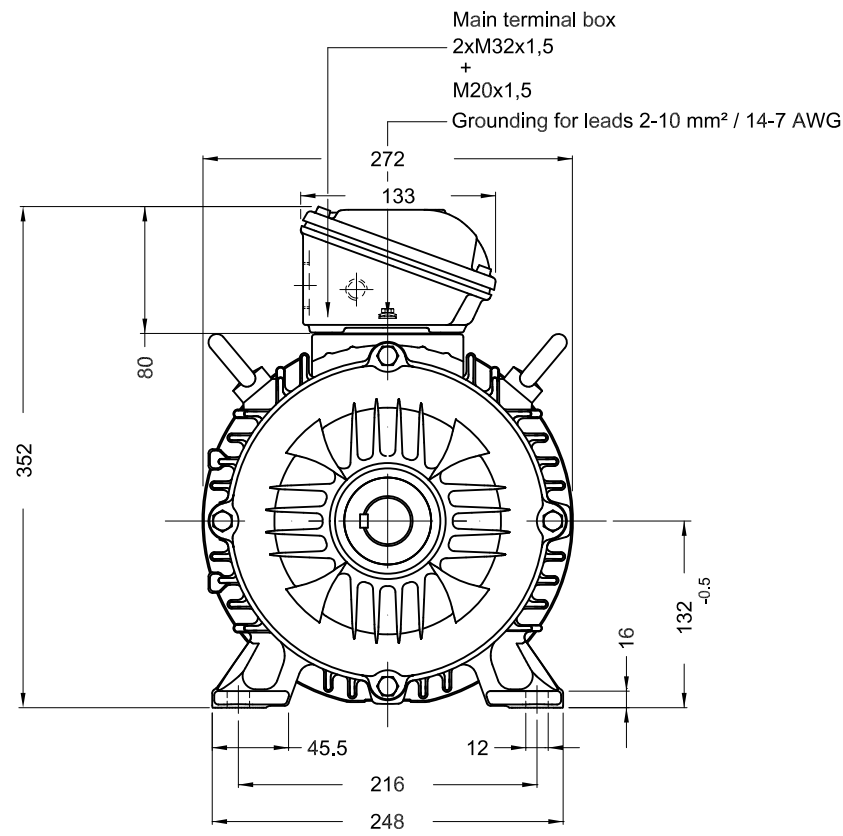
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 18 / 18	Revision
Checked by				
Date	07/04/2022			

1 2 3 4 5 6

A

B

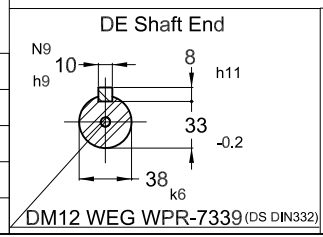
C



D

E

Thermal protection to switch off - thermistors 155°C  
Color RAL 5009  
Painting plan 207A  
Mounting NEMA F-3  
Mounting B3T



5.5 kW 04 Poles 50 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 IE3					
CHECKED		FRAME 132S IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW  
WDD

