## **PRODUCT INFORMATION PACKET**

Model No: SCA2502A1131GAA001 Catalog No: SCA2502A1131GAA001 TerraMAX® Cast Iron Motor, 335 HP, 3 Ph, 50 Hz, 400 V, 1500 RPM, 355M Frame, TEFC



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Product Information Packet: Model No: SCA2502A1131GAA001, Catalog No:SCA2502A1131GAA001 TerraMAX® Cast Iron Motor, 335 HP, 3 Ph, 50 Hz, 400 V, 1500 RPM, 355M Frame, TEFC

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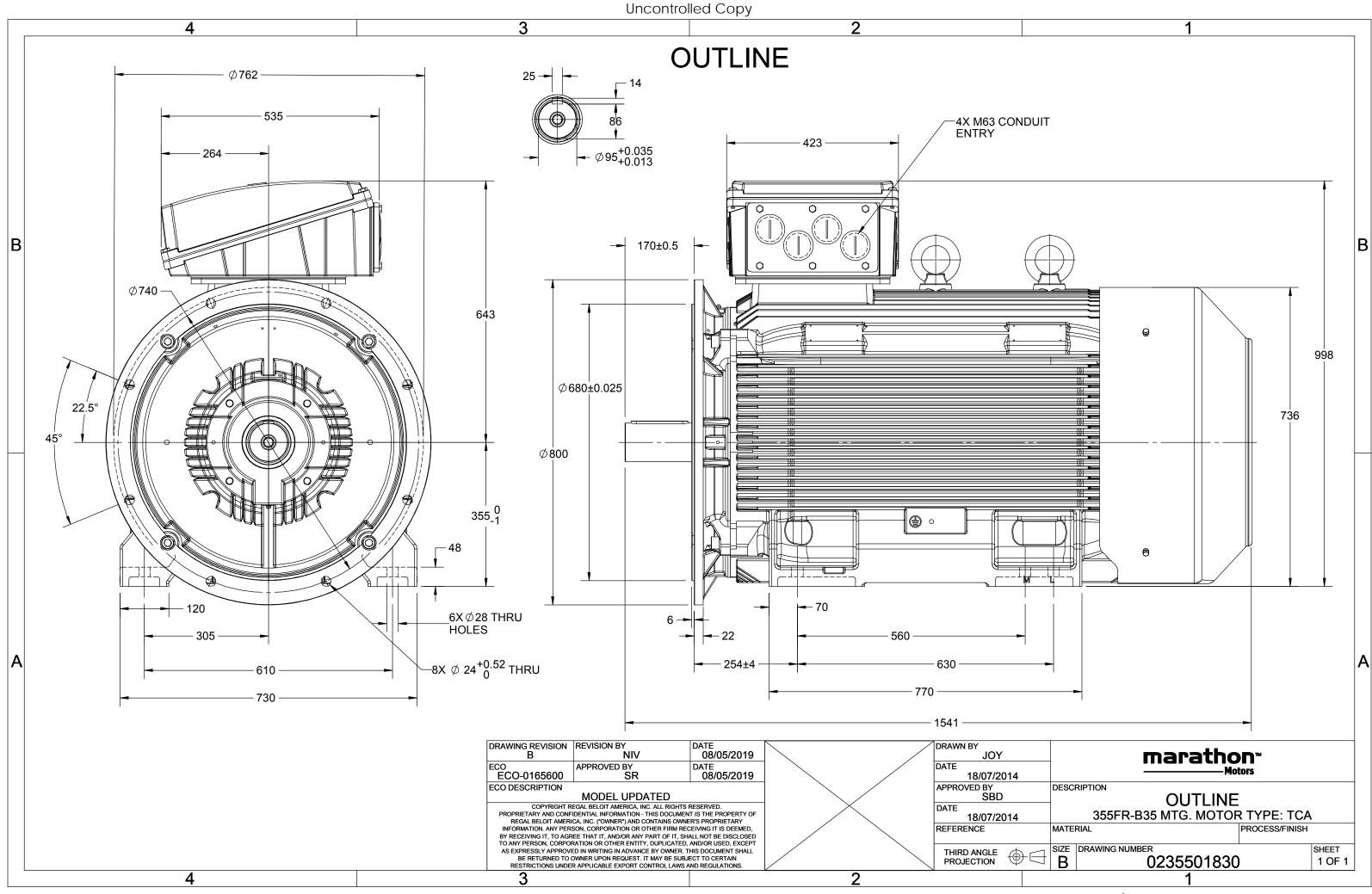
## Nameplate Specifications

Output HP	335 Hp	Output KW	250.0 kW
Frequency	50 Hz	Voltage	400 V
Current	426.3 A	Speed	1490 rpm
Service Factor	1	Phase	3
Efficiency	95.1 %	Power Factor	0.89
Duty	S1	Insulation Class	F
Frame	355M	Enclosure	Totally Enclosed Fan Cooled
Frame Thermal Protection	355M No Protection	Enclosure Ambient Temperature	Totally Enclosed Fan Cooled 40 °C
Thermal Protection	No Protection	Ambient Temperature	40 °C
Thermal Protection Drive End Bearing Size	No Protection 6322	Ambient Temperature Opp Drive End Bearing Size	40 °C 6322

## **Technical Specifications**

Electrical Type	Squirrel Cage	Starting Method	Direct On Line	
Poles	4	Rotation	Bi-Directional	
Mounting	B35	Motor Orientation	Horizontal	
Drive End Bearing	C3	Opp Drive End Bearing	СЗ	
Frame Material	Cast Iron	Shaft Type	Keyed	
Overall Length	1542 mm	Frame Length	1010 mm	
Shaft Diameter	95 mm	Shaft Extension	170 mm	
Assembly/Box Mounting	Тор			
Outline Drawing	0235501830	Connection Drawing	8442000085	

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# **TerraMAX**<sup>®</sup>

### Model No. SCA2502A1131GAA001

U	$\Delta / Y$	f	Р	Р	I	n	Т	IE	9	% EFF a	t load	ł	PF	at lo	ad	I <sub>A</sub> /I <sub>N</sub>	$T_A/T_N$	$T_{\rm K}/T_{\rm N}$
(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[Nm]	Class	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	[pu]	[pu]	[pu]
400	Δ	50	250	335	426.3	1490	1601.35	IE2	-	95.1	95.1	95.7	0.89	0.88	0.83	6.5	1.9	2.5

DutyS1Gross weight - approx.1807kgVoltage variation *± 10%Motor inertia8.4434kgm²Frequency variation *± 5%Load inertiaCustomer to ProvideCombined variation *10%Vibration level2.8mm/sDesignNNoise level ( 1meter distance from motor)82dB(A)Service factor1.0No. of starts hot/cold/Equally spread2/3/4dB(A)Insulation classFStarting methodDOLdD(A)Ambient temperature-20 to +40°CType of couplingDirect						
Frame MaterialCast IronCooling methodIC 411Frame MaterialCast IronCooling methodIC 411Frame Material355MMotor weight - approx.1807kgDutyS1Gross weight - approx.1807kgVoltage variation *± 10%Motor inertia8.4434kgm²Frequency variation *± 10%Load inertiaCustomer to ProvideCombined variation *10%Vibration level2.8mm/sDesignNNo. of starts hot/cold/Equally spread2/3/4dB(A)Service factor1.0No. of starts hot/cold/Equally spread2/3/4dB(A)Insulation classFStarting methodDOLTreperature rise (by resistance)80 [Class B]KLR withstand time (hot/cold)30/15sAltitude above sea level1000meterDirection of rotationBi-directionalsHazardous area classificationNAStandard rotationClockwise form DETZone classificationNAAccessory - 1PTC 150°CTGas groupNAAccessory - 2Rotor typeAluminum Die castAccessory - 3-TDE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Motor type	SCA		Degree of protection	IP 55	
Frame size355MMotor weight - approx.1762kgDutyS1Gross weight - approx.1807kgVoltage variation *± 10%Motor inertia8.4434kgm²Frequency variation *± 5%Load inertiaCustomer to ProvideCombined variation *10%Vibration level2.8mm/sDesignNNoise level ( 1meter distance from motor)82dB(A)Service factor1.0No. of starts hot/cold/Equally spread2/3/4dB(A)Insulation classFStarting methodDOLdB(A)Ambient temperature-20 to +40°CType of couplingDirectsTemperature rise (by resistance)80 [Class B]KLR withstand time (hot/cold)30/15sAltitude above sea level1000meterDirection of rotationBi-directionalsZone classificationNAStandard rotationClockwise form DEETemperature classNAAccessoriesAAccessoriesTemperature classNAAccessory - 1PTC 150°CERotor typeAnti-friction ballAccessory - 3-EDE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPLubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x MG3 x 1.5	Enclosure	TEFC		Mounting type	IM B35	
NotestingS1Recent regionNotestingRecent regionNotestingVoltage variation *± 10%Gross weight - approx.1807kg m²Frequency variation *± 5%Load inertiaCustomer to ProvideCombined variation *10%Vibration level2.8mm/sDesignNNo. of starts hot/cold/Equally spread2/3/4dB(A)Service factor1.0No. of starts hot/cold/Equally spread2/3/4dB(A)Insulation classFStarting methodDOLdB(A)Ambient temperature-20 to +40°CType of couplingDirectdB(A)Temperature rise (by resistance)80 [ Class B ]KLR withstand time (hot/cold)30/15sAltitude above sea level1000meterDirect or of rotationBi-directionalsZone classificationNAPaint shadeRAL 5014GcessoriesGas groupNAAccessoriesAccessory - 1PTC 150°CRotor typeAluminum Die castAccessory - 3-Terminal box positionTOPDE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Frame Material	Cast Iron		Cooling method	IC 411	
Voltage variation *± 10%Customer to provideFrequency variation *± 10%Motor inertia8.4434kgm²Frequency variation *10%Load inertiaCustomer to ProvideCombined variation *10%Vibration level2.8mm/sDesignNNoise level (1meter distance from motor)82dB(A)Service factor1.0No. of starts hot/cold/Equally spread2/3/4dB(A)Insulation classFStarting methodDOLdB(A)Ambient temperature-20 to +40°CType of couplingDirectdB(A)Temperature rise (by resistance)80 [ Class B ]KLR withstand time (hot/cold)30/15sAltitude above sea level1000meterDirection of rotationBi-directionaldHazardous area classificationNAStandard rotationClockwise form DEdZone classificationNAPaint shadeRAL 5014dGas groupNAAccessoriesddTemperature classNAAccessory - 1PTC 150°CdRotor typeAluminum Die castAccessory - 3-dBearing type6322 C3 / 6322 C3Terminal box positionTOPdLubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Frame size	355M		Motor weight - approx.	1762	kg
Frequency variation *± 5%Load inertiaCustomer to ProvideCombined variation *10%Vibration level2.8mm/sDesignNNoise level ( 1meter distance from motor)82dB(A)Service factor1.0No. of starts hot/cold/Equally spread2/3/4dB(A)Insulation classFStarting methodDOLdB(A)Ambient temperature-20 to +40°CType of couplingDirectdB(A)Temperature rise (by resistance)80 [ Class B ]KLR withstand time (hot/cold)30/15sAltitude above sea level1000meterDirection of rotationBi-directionalsHazardous area classificationNAStandard rotationClockwise form DEdGas groupNAAccessoriesdddRotor typeAluminum Die castAccessory - 1PTC 150°CdBearing typeAnti-friction ballAccessory - 3-dDE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPdLubrication methodRegreasableMaximum cable size/conduit size18 x 3C x 300mm²/4 x M63 x 1.5	Duty	S1		Gross weight - approx.	1807	kg
Combined variation *10%Vibration level2.8mm/sDesignNNoise level (1meter distance from motor)82dB(A)Service factor1.0No. of starts hot/cold/Equally spread2/3/4dB(A)Insulation classFStarting methodDOLdB(A)Ambient temperature-20 to +40°CType of couplingDirectdB(A)Temperature rise (by resistance)80 [Class B]KLR withstand time (hot/cold)30/15sAltitude above sea level1000meterDirection of rotationBi-directionaldHazardous area classificationNAStandard rotationClockwise form DEdZone classificationNAAccessoriesddTemperature classNAAccessory - 1PTC 150°CdRotor typeAnti-friction ballAccessory - 3-dDE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPdLubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Voltage variation *	± 10%		Motor inertia	8.4434	kgm <sup>2</sup>
DesignNNoise level (1meter distance from motor)82dB(A)Service factor1.0No. of starts hot/cold/Equally spread2/3/4dB(A)Insulation classFStarting methodDOLdB(A)Ambient temperature-20 to +40°CType of couplingDirectdB(A)Temperature rise (by resistance)80 [ Class B ]KLR withstand time (hot/cold)30/15sAltitude above sea level1000meterDirection of rotationBi-directionaldB(A)Zone classificationNAStandard rotationClockwise form DEdB(A)Gas groupNAAccessoriesdCossory - 1PTC 150°CRotor typeAluminum Die castAccessory - 2Bearing type6322 C3 / 6322 C3Terminal box positionTOPdCossor/24 x M63 x 1.5Lubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Frequency variation *	± 5%		Load inertia	Customer to Provide	
Service factor1.0No. of starts hot/cold/Equally spread2/3/4Insulation classFStarting methodDOLAmbient temperature-20 to +40°CType of couplingDirectTemperature rise (by resistance)80 [ Class B ]KLR withstand time (hot/cold)30/15sAltitude above sea level1000meterDirection of rotationBi-directionalsHazardous area classificationNAStandard rotationClockwise form DEsZone classificationNAPaint shadeRAL 5014sGas groupNAAccessoriesssRotor typeAluminum Die castAccessory - 1PTC 150°CsBearing typeAnti-friction ballAccessory - 3-sDE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Combined variation *	10%		Vibration level	2.8	mm/s
Jost Note NationFNote Nation Note Only Expany OpticalFYInsulation classFStarting methodDOLAmbient temperature-20 to +40°CType of couplingDirectTemperature rise (by resistance)80 [ Class B ]KLR withstand time (hot/cold)30/15sAltitude above sea level1000meterDirection of rotationBi-directionalsHazardous area classificationNAStandard rotationClockwise form DEsZone classificationNAPaint shadeRAL 5014sGas groupNAAccessoriesssTemperature classNAAccessory - 1PTC 150°CsRotor typeAnti-friction ballAccessory - 2DE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPsLubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Design	Ν		Noise level ( 1meter distance from mot	.or) 82	dB(A)
Ambient temperature-20 to +40°CType of couplingDirectTemperature rise (by resistance)80 [ Class B ]KLR withstand time (hot/cold)30/15sAltitude above sea level1000meterDirection of rotationBi-directionalsHazardous area classificationNAStandard rotationClockwise form DEsZone classificationNAPaint shadeRAL 5014sGas groupNAAccessoriesssTemperature classNAAccessory - 1PTC 150°CsRotor typeAluminum Die castAccessory - 2-sDE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPsLubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5s	Service factor	1.0		No. of starts hot/cold/Equally spread	2/3/4	
Temperature rise (by resistance)80 [ Class B ]KLR withstand time (hot/cold)30/15sAltitude above sea level1000meterDirection of rotationBi-directionalHazardous area classificationNAStandard rotationClockwise form DEZone classificationNAPaint shadeRAL 5014Gas groupNAAccessoriesClockwise form DETemperature classNAAccessory - 1PTC 150°CRotor typeAluminum Die castAccessory - 2-DE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPLubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Insulation class	F		Starting method	DOL	
Altitude above sea level1000meterDirection of rotationBi-directionalHazardous area classificationNAStandard rotationClockwise form DEZone classificationNAPaint shadeRAL 5014Gas groupNAAccessoriesClockwise form DETemperature classNAAccessory - 1PTC 150°CRotor typeAluminum Die castAccessory - 2-Bearing typeAnti-friction ballAccessory - 3-DE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPLubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Ambient temperature	-20 to +40	°C	Type of coupling	Direct	
Hatede door set referNAStandard rotationClockwise form DEHazardous area classificationNAPaint shadeRAL 5014Zone classificationNAPaint shadeRAL 5014Gas groupNAAccessoriesCockwise form DETemperature classNAAccessory - 1PTC 150°CRotor typeAluminum Die castAccessory - 2-Bearing typeAnti-friction ballAccessory - 3-DE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPLubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Temperature rise (by resistan	ce) 80 [ Class B ]	К	LR withstand time (hot/cold)	30/15	s
Zone classificationNAPaint shadeRAL 5014Gas groupNAAccessoriesTemperature classNAAccessory - 1PTC 150°CRotor typeAluminum Die castAccessory - 2-Bearing typeAnti-friction ballAccessory - 3-DE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPLubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Altitude above sea level	1000	meter	Direction of rotation	<b>Bi-directional</b>	
Gas groupNAAccessoriesTemperature classNAAccessory - 1PTC 150°CRotor typeAluminum Die castAccessory - 2-Bearing typeAnti-friction ballAccessory - 3-DE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPLubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Hazardous area classification	NA		Standard rotation	Clockwise form DE	
Temperature classNAAccessory - 1PTC 150°CRotor typeAluminum Die castAccessory - 2-Bearing typeAnti-friction ballAccessory - 3-DE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPLubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Zone classification	NA		Paint shade	RAL 5014	
Rotor typeAluminum Die castAccessory - 2Bearing typeAnti-friction ballAccessory - 3DE / NDE bearing6322 C3 / 6322 C3Terminal box positionTOPLubrication methodRegreasableMaximum cable size/conduit size1R x 3C x 300mm²/4 x M63 x 1.5	Gas group	NA		Accessories		
Bearing type     Anti-friction ball     Accessory - 2       DE / NDE bearing     6322 C3 / 6322 C3     Terminal box position     TOP       Lubrication method     Regreasable     Maximum cable size/conduit size     1R x 3C x 300mm²/4 x M63 x 1.5	Temperature class	NA		Accessory - 1	PTC 150°C	
DE / NDE bearing     6322 C3 / 6322 C3     Terminal box position     TOP       Lubrication method     Regreasable     Maximum cable size/conduit size     1R x 3C x 300mm²/4 x M63 x 1.5	Rotor type	Aluminum Die cast		Accessory - 2	-	
Lubrication method     Regreasable       Maximum cable size/conduit size     1R x 3C x 300mm²/4 x M63 x 1.5	Bearing type	Anti-friction ball		Accessory - 3	-	
	DE / NDE bearing	6322 C3 / 6322 C3		Terminal box position	ТОР	
Type of grease     CHEVRON SRI-2 or Equivalent     Auxiliary terminal box     Available on Request	Lubrication method	Regreasable		Maximum cable size/conduit size	1R x 3C x 300mm²/4 x M63 x 1.5	
	Type of grease	CHEVRON SRI-2 or Equivalent		Auxiliary terminal box	Available on Request	

 $I_{\rm A}/I_{\rm N}$  - Locked Rotor Current / Rated Current  $T_{\rm A}/T_{\rm N}$  - Locked Rotor Torque / Rated Torque

T<sub>K</sub>/T<sub>N</sub> - Breakdown Torque / Rated Torque

## NOTE

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

\* Voltage, Frequency and combine variation are as per IEC60034-1

Technical dat	Technical data are subject to change. There may be discrepancies between calculated and name plate values.									
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC				
Standards	IEC: 60034-30	-	-	AS/NZ 1359:5:2004	-	IEC: 60034-30				

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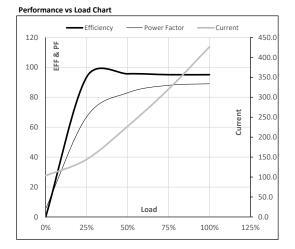


Model No. SCA2502A1131GAA001

Enclosure	U	$\Delta / Y$	f	Р	Р	I	n	Т	Т	IE	Amb	Duty	Elevation	Inertia	Weight
	(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[kgm]	[Nm]	Class	[°C]		[m]	[kg-m <sup>2</sup> ]	[kg]
TEFC	400	Δ	50	250	335	426.3	1490	163.29	1601.35	IE2	40	S1	1000	8.4434	1762

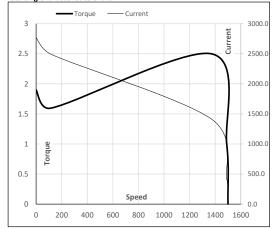
#### Motor Load Data

	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
А	103.5	144.3	227.1	320.2	426.3	
Nm	0.0	398.3	797.8	1198.8	1601.4	
r/min	1500	1498	1495	1493	1490	
%	0.0	93.5	95.7	95.1	95.1	
%	5.5	66.9	83.0	88.0	89.0	
	Nm r/min %	A         103.5           Nm         0.0           r/min         1500           %         0.0	A         103.5         144.3           Nm         0.0         398.3           r/min         1500         1498           %         0.0         93.5	A         103.5         144.3         227.1           Nm         0.0         398.3         797.8           r/min         1500         1498         1495           %         0.0         93.5         95.7	A         103.5         144.3         227.1         320.2           Nm         0.0         398.3         797.8         1198.8           r/min         1500         1498         1495         1493           %         0.0         93.5         95.7         95.1	A         103.5         144.3         227.1         320.2         426.3           Nm         0.0         398.3         797.8         1198.8         1601.4           r/min         1500         1498         1495         1493         1490           %         0.0         93.5         95.7         95.1         95.1



Motor Speed	l Torque Da	ita					
Load Point		LR	P-Up	BD	Rated	NL	
Speed	r/min	0	115	1371	1490	1500	
Current	А	2771.1	2494.0	1414.7	426.3	103.5	
Torque	pu	1.9	1.6	2.5	1	0	





NOTE Refer data sheet for applicable standard and tolerances on performance parameters

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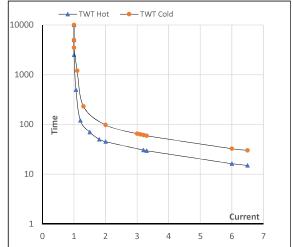
### Model No. SCA2502A1131GAA001

Enclosure	U	$\Delta / Y$	f	Р	Р	Ι	n	т	Т	IE	Amb	Duty	Elevation	Inertia	Weight
	(∨)	Conn	[Hz]	[kW]	[hp]	[A]	[rpm]	[kgm]	[Nm]	Class	[°C]		[m]	[kg-m <sup>2</sup> ]	[kg]
TEFC	400	Δ	50	250	335	426.3	1490	163.29	1601.35	IE2	40	S1	1000	8.4434	1762
TELE				250	555				1001.55					0.4454	-

### Motor Speed Torque Data

Load		FL	$I_1$	l <sub>2</sub>	l <sub>3</sub>	$I_4$	I <sub>5</sub>	LR
TWT Hot	s	10000	45	36	29	25	20	15
TWT Cold	s	10000	63	62	55	45	40	30
Current	pu	1	2	3	4	5	5.5	6.5

### Thermal Characteristics Chart



**NOTE** Refer data sheet for applicable standard and tolerances on performance parameters

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