



Toase-eh Park Sanati Gohar Ofogh  
Petrochemical Co.  
**CONCEPTUAL, BASIC and DETAIL DESIGN  
ENGINEERING OF STYRENE PARK OFFSITE**



**dttdamafin**  
thermal technology

Document Title: Electrical Motor Data Sheet

Document No.: EI027-DMF-VD-EL-DSH-017-R1

Rev. R1

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# STYRENE PARK OFFSITE

**Document Title:  
Electrical Motor Data Sheet**

Rev.	Issued Date	DESCRIPTION	PREPARED	CHECKED	APPROVED
R1	11-08-2024	IFA	F.Aghaienezhad	J.Beigloo	A.Gholizadeh
R0	22-06-2024	IFA	F.Aghaienezhad	J.Beigloo	A.Gholizadeh



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**REVISION RECORD SHEET**

Page Page	Revisions							Page	Revisions						
	R0	R1	R2	R3	R4	R5	R6		R0	R1	R2	R3	R4	R5	R6
1	X	X						41							
2	X	X						42							
3	X	X						43							
4		X						44							
5		X						45							
6		X						46							
7		X						47							
8		X						48							
9		X						49							
10		X						50							
11		X						51							
12		X						52							
13		X						53							
14		X						54							
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40								80							



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Document Title: Electrical Motor Data Sheet

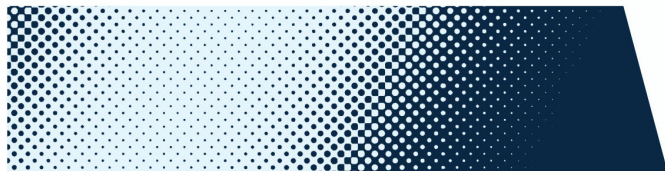
Document No.: EI027-DMF-VD-EL-DSH-017-R1

Rev. R1

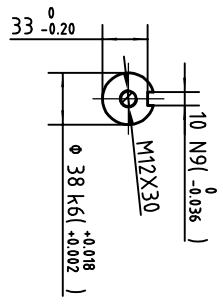
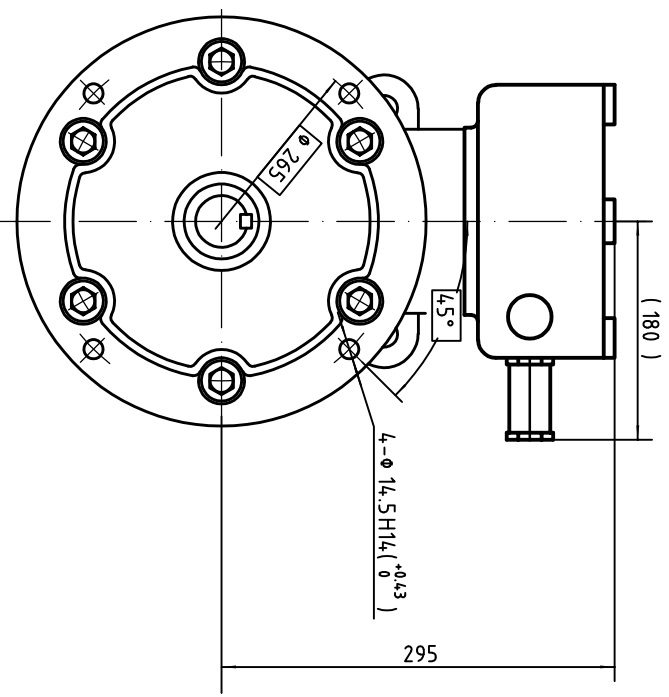
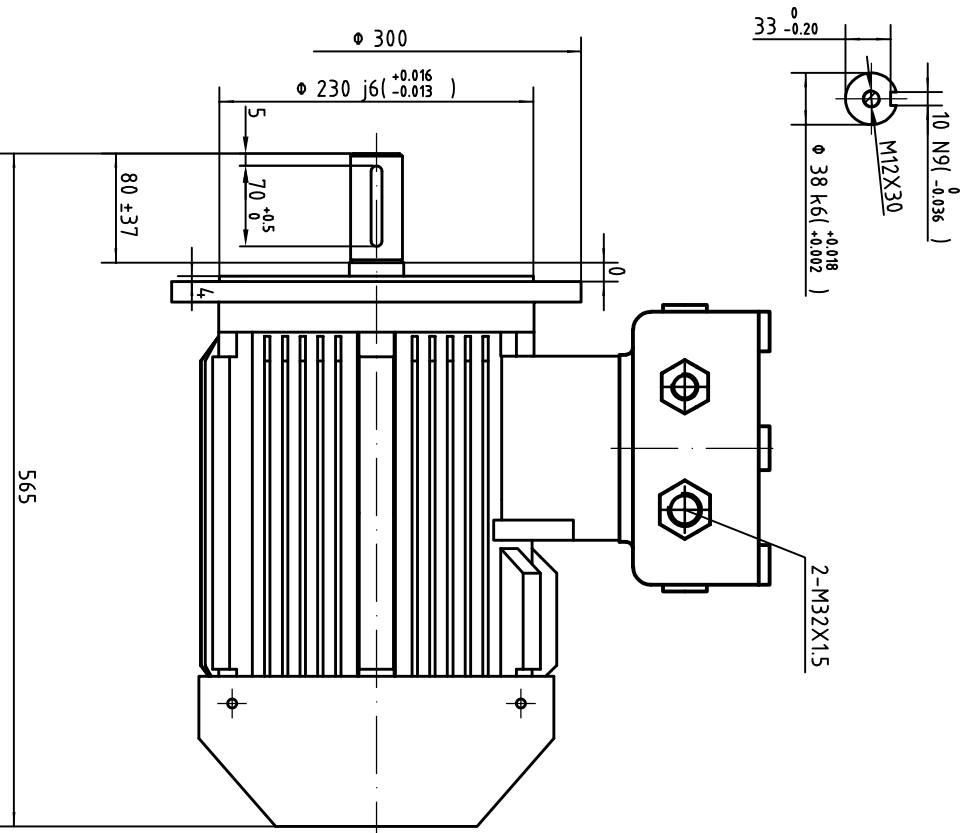
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**MOTOR BASIC DATA (1158)**

INSTALLATION SITE		
QUANTITY	4	
BRAND-MODEL	Will be specified	Marathon is out of AVL. please change the motor. please specify the origin of motor
RATED POWER	7.5 kw	
SUPPLY VOLTS	400±5%	
FREQUENCY	50±2%	
NUMBER OF POLE	4	
WINDING CONNECTIONS/ROTATION	Delta	
COUPLING TYPE	V-Belt(Belt & Pulley)	
NOMIAL SPEED	1500 rpm	
DUTY CATEGORY	S1	
INVERTER DUTY	YES	
ALTITUDE	20 m	
AMBIENT TEMPRATURE MIN/MAX	5/48 C	
RELATIVE HUMIDITY (RH)	65%	
STARTING METHOD	2-DOL /2-VFD	
CABLE GLAND SUPLIED	YES	
DIRECTION OR ROTATION	Both	Discrepancy with sheet 4 to be removed. Alao please refer to TCL before PO for enclosure and terminal box protection. in case of deviation please send an email for review. GA and this data sheet should be the same
ISULATION CLASS/TEMP. RISE	F/B	
COOLING	(IC 411)	
AREA CLASSIFICATION	Exe IIB T3	
WINDING TEMPERATURE . DETECTORS (PTC RELAY)	N.A	
ANTI-CONDANATION HEATER (SPACE HEATER)		Gland size to specified
MOUNTING (TYPE OF INSTALATION)	IMV3	
PROTECTION DEGREE FOR MOTOR/FOR TERMINAL BOX	IP55//IP55	
ROTOR CAGE MATERIAL (AI)	CAST IRON	
P	1-Cooling method to be specified	min. cable sizes shall be specified as per current by vendor (Distance to MCC is approximately 500 m)
C	2-Motor enclosure material	
	3-The cable/s to the main terminal box will rise from the floor	
T		
	MAIN HEATER	PLEASE SPECIFY
	PTC	N.A
	MAIN HEATER	PLEASE SPECIFY
	PTC	N.A
EARTH TERMINALS	IN & EXT	
MAX NOISE LEVEL (AT ONE METER)	< 85	
LIFTING DEVICE	YES	
DRAIN PLUGS	NO	
NO OF PHASE	3	
IE (EFFICIENCY CLASS)	IE=2 (MINIMUM)	Please check this data sheet with offered products. discrepancies to be checked. IE3 specified in motor data sheet
PF (COS &)	0.84	
TYPE TEST	NO	
MOTOR SUITABLE FOR VCDS (Y/N)	NO	
CURVE & OUTLINE & COMPLETE CATALOGUE (Y/N)	YES	

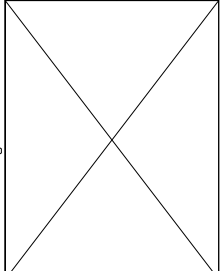


<b>Accreditation (National)</b>	IEC 60079									
<b>Hazardous Classification</b>	Ex db IIB T4									
<b>Series Model Type</b>	E3ABL									
<b>Frame Size</b>	132M									
<b>Rated Output Power</b>	7.5 kW									
<b>Rated Speed</b>	1465 r/min									
<b>Number of Poles</b>	4 Pole									
<b>Number of Phases</b>	3 Phase									
<b>Voltage</b>	400 V									
<b>Frequency</b>	50 Hz									
<b>Duty Cycle</b>	S1									
<b>Service Factor</b>	1.00									
<b>Operating Altitude</b>	1000 masl									
<b>Insulation Class</b>	F (155°C)									
<b>Temperature Rise</b>	80K (B class)									
<b>Ambient Temperature</b>	-15°C ~ 50°C									
<b>Method of Cooling</b>	IC411 (TEFC - Totally Enclosed Fan Cooled)									
<b>Degree of Protection (Ingress Level)</b>	IP55									
<b>Material of Construction</b>	Cast Iron									
<b>Connection</b>	Δ/Y									
<b>Full Load Current [ I<sub>N</sub> ]</b>	14.43									
<b>Locked Rotor Current [ I<sub>L</sub> / I<sub>N</sub> ]</b>	7.50									
<b>Full Load Torque [ T<sub>N</sub> ]</b>	48.89 Nm									
<b>Locked Rotor Torque [ T<sub>L</sub> / T<sub>N</sub> ]</b>	2.0									
<b>Breakdown Torque [ T<sub>B</sub> / T<sub>N</sub> ]</b>	2.3									
<b>Efficiency Class</b>	IE3									
<b>Load</b>										
<b>Efficiency</b>	<table border="1"><thead><tr><th>100% load</th><th>75% load</th><th>50% load</th></tr></thead><tbody><tr><td>90.4%</td><td>90.3%</td><td>89.7%</td></tr><tr><td>0.84</td><td>0.79</td><td>0.69</td></tr></tbody></table>	100% load	75% load	50% load	90.4%	90.3%	89.7%	0.84	0.79	0.69
100% load	75% load	50% load								
90.4%	90.3%	89.7%								
0.84	0.79	0.69								
<b>Power Factor (cos φ)</b>										
<b>Bearing Configuration (DE / NDE)</b>	Ball Bearing / Ball Bearing									
<b>Bearing Series Type</b>	<b>DE:</b> 6208-2Z/C3 <b>NDE:</b> 6208-2Z/C3									
<b>Bearing Lubrication Type</b>	Grease - ESSO UNIREX N2									
<b>Vibration</b>	1.6 mm/sec									
<b>Moment of inertia (kg.m<sup>2</sup>)</b>	0.0488									
<b>Direction of Rotation</b>	CW or CCW									
<b>Sound Pressure Level</b>	75 dB(A)									
<b>Final Colour</b>	RAL 5010									
<b>Paint Specification</b>	2 Pack Epoxy									
<b>Mounting Options</b>	B5 /V3									
<b>Terminal Box Position</b>	Top Terminal Box									



Note: Cable Gland not Included

DRAWING REVISION	REVISION BY	DATE
E00	APPROVED BY	DATE
E00 DESCRIPTION		



DRAWN BY	DATE	DESCRIPTION	MATERIAL	PROCESS/FINISH
APPROVED BY <td>DATE <td>E3ABL 132M B5</td> <td></td> <td></td> </td>	DATE <td>E3ABL 132M B5</td> <td></td> <td></td>	E3ABL 132M B5		
REFERENCE <td></td> <td></td> <td></td> <td></td>				
FIRST ANGLE PROJECTION	SIZE B	DRAWING NUMBER		SHEET

**marathon™**  
Motors

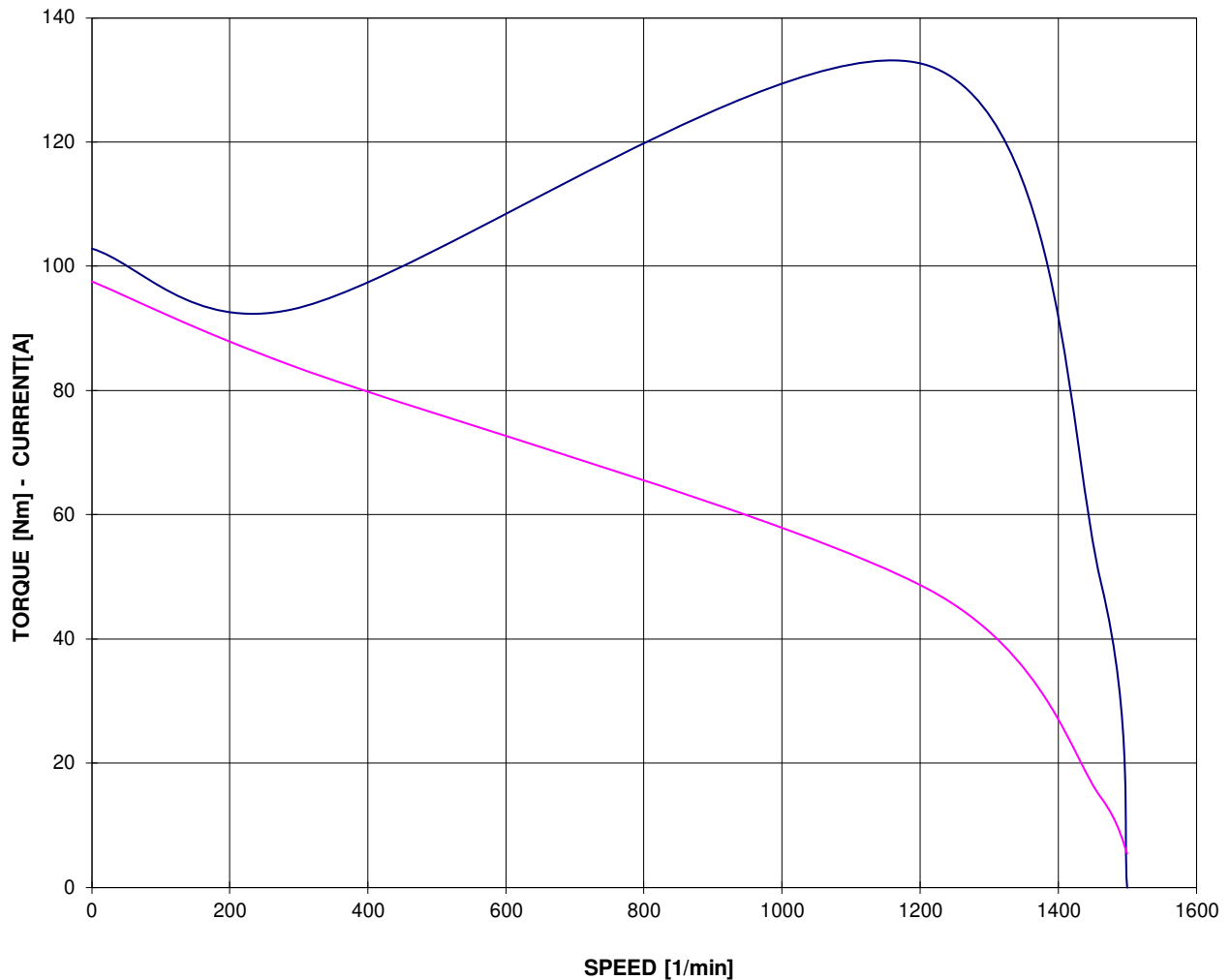
E3ABL 132M B5

4 3 2 1 A B A

**TORQUE/CURRENT-SPEED DIAGRAM**

<b>Motore / Motor</b>	<b>E3ABL 132M 4</b>	
Potenza nominale / Rated power	7.50	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	14.43	A
Velocità / Speed	1462	rpm
Coppia / Torque	48.99	Nm

— COPPIA - TORQUE    — CORRENTE - CURRENT

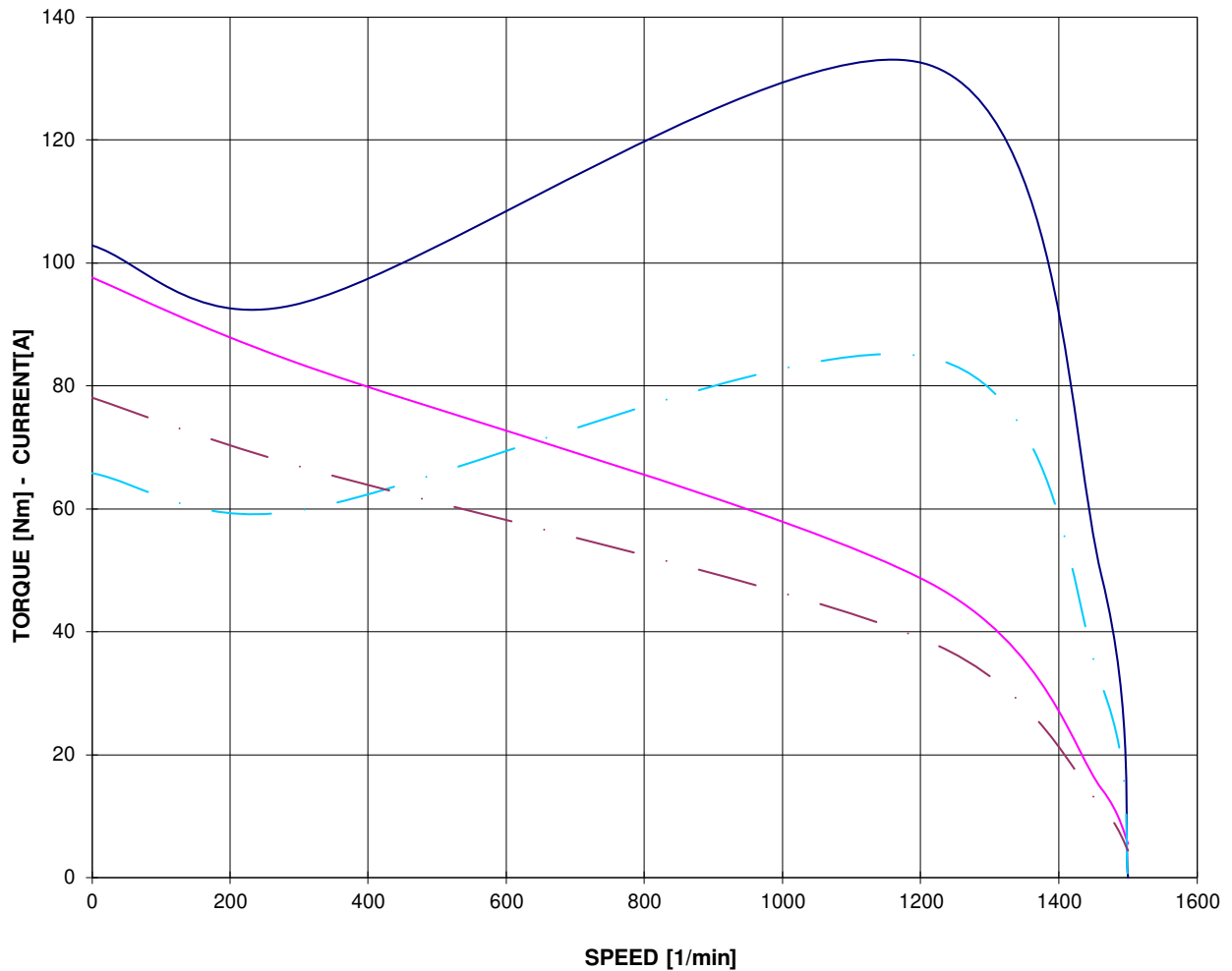


Data obtained by calculation method

**TORQUE/CURRENT-SPEED DIAGRAM (Reduced voltage)**

<b>Motore / Motor</b>	<b>E3ABL 132M 4</b>	
Potenza nominale / Rated power	7.50	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	14.43	A
Velocità / Speed	1462	rpm
Coppia / Torque	48.99	Nm

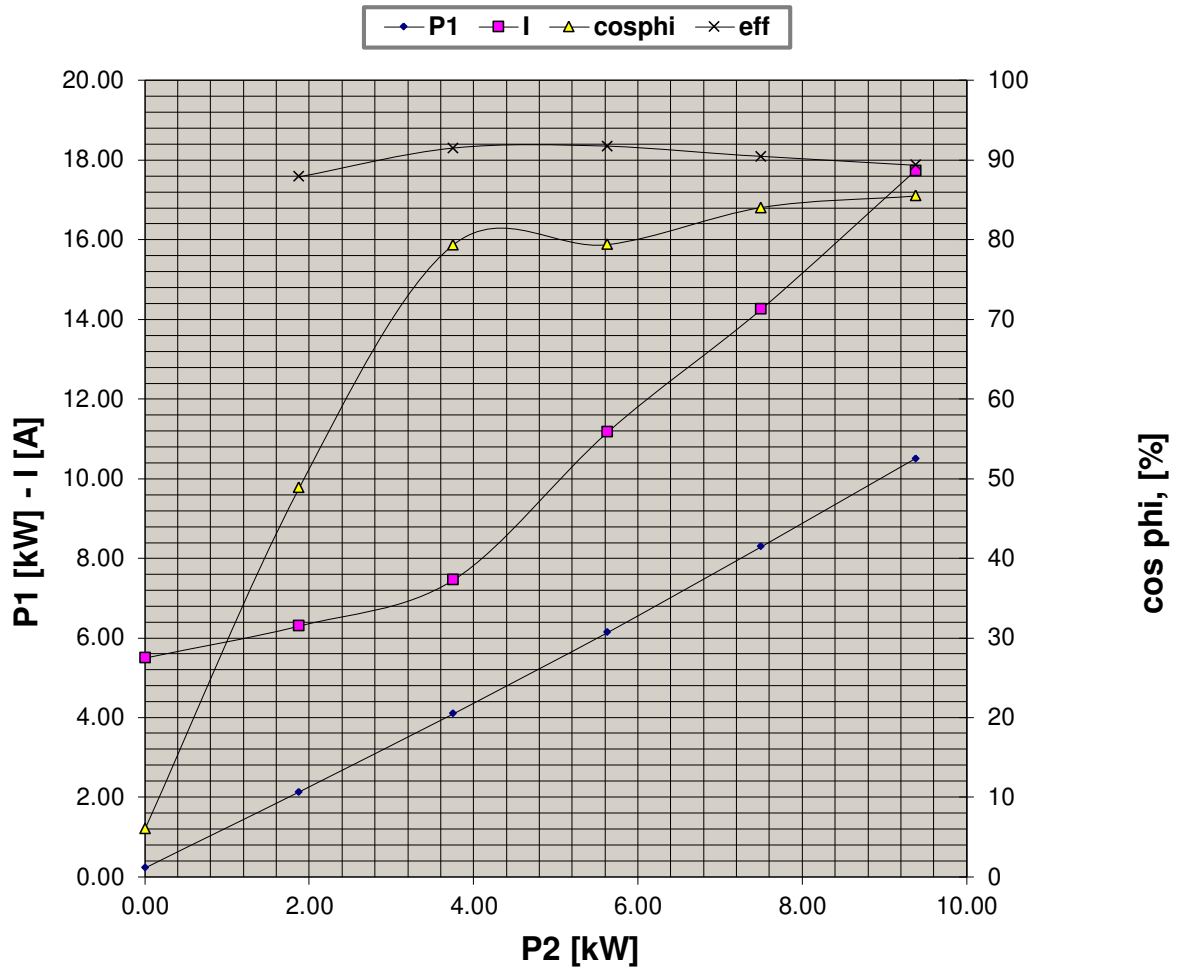
— COPPIA - TORQUE                      — CORRENTE - CURRENT  
— COPPIA - TORQUE 80% Un            — CORRENTE - CURRENT 80% Un



Data obtained by calculation method

**PERFORMANCE CURVES**

<b>Motore / Motor</b>	<b>E3ABL 132M 4</b>	
Potenza nominale / Rated power	7.50	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	14.43	A
Velocità / Speed	1462	rpm
Coppia / Torque	48.99	Nm



Data obtained by calculation method

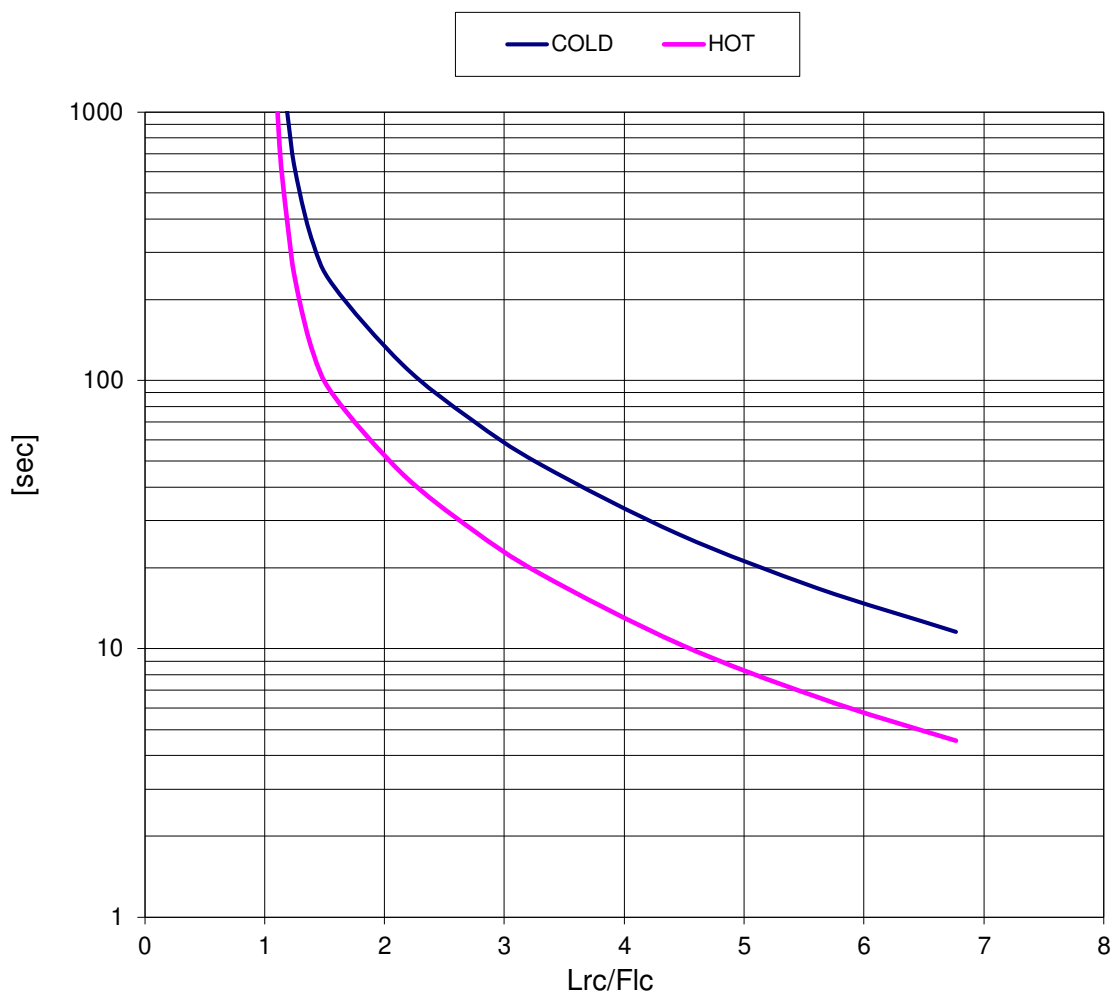
**THERMAL WITHSTAND CURVE**

Cliente / Customer 0

Impianto / Plant -  
ITEM -

Numero d'offerta / Offer Number 2024  
-

**Motore / Motor E3ABL 132M 4**  
 Potenza nominale / Rated power 7.50 kW  
 Poli / Pole 4  
 Tensione - Frequenza / Voltage - Frequency 400 - 50 V - Hz  
 Corrente / Rated current 14.43 A  
 Velocità / Speed 1462 rpm  
 Coppia / Torque 48.99 Nm

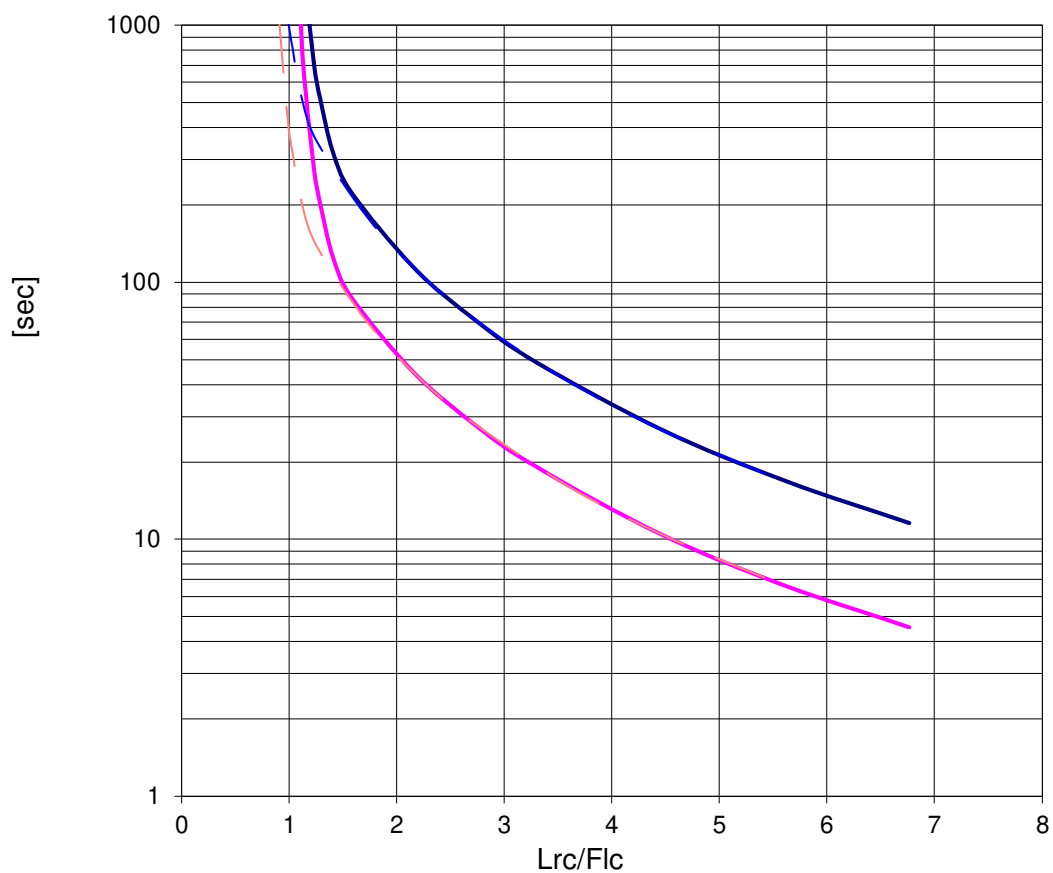


Data obtained by calculation method

**THERMAL WITHSTAND CURVE (Reduced voltage)**

<b>Motore / Motor</b>	<b>E3ABL 132M 4</b>	
Potenza nominale / Rated power	7.50	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	14.43	A
Velocità / Speed	1462	rpm
Coppia / Torque	48.99	Nm

— COLD (100% Un)   
 — HOT (100% Un)   
 — COLD (80% Un)   
 — HOT (80% Un)



Data obtained by calculation method




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 PRODUCT-DETAILS

## ACS880-01-025A-3

### LV AC industrial wall-mounted single drive, IEC: Pn 11 kW, 25 A, 400 V (ACS880-01-025A-3)




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**General Information**

Global Commercial Alias	ACS880-01-025A-3
Product ID	3AUA0000107992
ABB Type Designation	ACS880-01-025A-3
EAN	6438177557197

Catalog Description	LV AC industrial wall-mounted single drive, IEC: Pn 11 kW, 25 A, 400 V (ACS880-01-025A-3)
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The ACS880-01 drives are customized to meet the particular needs of specific industries, such as oil and gas, mining, metals, chemicals, cement, power plants, material handling, pulp and paper, sawmills, marine, water and wastewater, food and beverage, and automotive. They can control a wide range of applications, including cranes, extruders, winches, winders, conveyors, mixers, compressors, centrifuges, test benches, elevators, extruders, pumps and fans.

**Long Description**

The ACS880-01 comes in one compact package for easy installation and commissioning. The drive can be installed on the wall as standard and in a cabinet as an option. The drive offering includes enclosure classes up to IP55, making it suitable for most environments and installations. ACS880-01 drives have all the essential features built-in. These features include as standard a choke for harmonic filtering as well as options like a brake chopper, EMC filter and communication protocol adapter, functional safety, external output filters and I/O extension modules.

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**Ordering**

Country of Origin	Finland (FI)
Customs Tariff Number	85044085
HS Code	850440-- Electrical transformers, static converters (for example, rectifiers) and inductors.- Static converters
Invoice Description	ACS880-01-025A-3 PN: 11.0 kW, IN: 25 A
Made To Order	Yes
Minimum Order Quantity	1 piece
Order Multiple	1 piece
Quote Only	No
Selling Unit of Measure	piece

## Dimensions

Product Net Weight	8.4 kg 18.519 lb
Product Net Depth / Length	249 mm 9.803 in
Product Net Height	409 mm
Product Net Width	155 mm 6.102 in
Package Level 1 Depth / Length	574 mm
Package Level 1 Height	304 mm
Package Level 1 Width	256 mm
Package Level 1 Units	1 carton

## Technical

Number of Phases	3
Degree of Protection	IP21
Enclosure Type NEMA	Type1
Altitude	4000 m 5 ... 95
Sound dB (A)	59 dB(A)
Multiple Battery Information	Lithium Coin, CR2032, 220 mAh, 3 V, 2 pcs, 6 g
Frequency (f)	47.5 ... 63 Hz
Frame Size	R2
Input Voltage ( $U_{in}$ )	380 ... 415 V
Mounting Type	Wall-mounted
Communication Protocol	CAN DeviceNet EtherNet/IP MODBUS Other Bus Systems PROFIsafe PROFIBUS PROFINET IO
Number of Hardware Interfaces	Industrial Ethernet 0 Other 4 Parallel 0 PROFINET 0 RS-232 0 RS-422 0 RS-485 1 Serial TTY 0 USB 1
Includes	Control unit PC connection
Analog Inputs	2
Analog Outputs	2
Number of Digital In/Outputs	6 / 2

Output Current, Heavy-Duty Use ( $I_{HD}$ )	17 A
Output Current, Light-Overload Use ( $I_{LD}$ )	24 A
Output Current, Normal Use ( $I_n$ )	25 A
Output Power, Heavy-Duty Use ( $P_{HD}$ )	7.5 kW
Output Power, Light-Overload Use ( $P_{LD}$ )	11 kW
Output Power, Normal Use ( $P_n$ )	11 kW
Apparent Power Output	17 kV·A
Efficiency Level	IE2
Standby Loss	23 W
Complete Drive Module Efficiency (61800-9-2)	

Operating Point Frequency / Current	Absolute Loss	Relative Loss	Efficiency
0 / 25 %	126 W	0.7 %	87.9 %
0 / 50 %	168 W	1.0 %	91.3 %
0 / 100 %	301 W	1.7 %	92.2 %
50 / 25 %	135 W	0.8 %	93.4 %
50 / 50 %	185 W	1.1 %	95.2 %
50 / 100 %	342 W	2.0 %	95.6 %
90 / 50 %	203 W	1.2 %	97.0 %
90 / 100 %	412 W	2.4 %	97.0 %

Temperature Rating Maximum 40 °C

### Classifications

ETIM 8	EC001857 - Frequency converter =< 1 kV
ETIM 9	EC001857 - Frequency converter =< 1 kV
UNSPSC	39122001

### Environmental

SCIP	090be974-b30f-4eaa-b924-275d6a7f6686 Finland (FI)
Simplified SCIP	05ba9c4c-0f14-4b63-8f0d-9dfe97cea5ce Belgium (BE)
	fe7f4acc-a128-4e0d-bb0e-9401a4fbb99c Netherlands (NL)
	c8260a35-2ae0-4c51-8f1f-f45f223f38d1 Denmark (DK)
	2ba4b589-d362-4a71-960c-db11fa23c371 Spain (ES)
	16d426ed-87d2-41b8-a6a6-becce45ad9b6 Portugal (PT)
	83eb23c1-e520-4509-b458-e0f3f5d3e025 Estonia (EE)

WEEE Category 5. Small Equipment (No External Dimension More Than 50 cm)

### Additional Information

Product Name	Frequency converter
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## Categories

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Drives → Low Voltage AC Drives → Industrial Drives → ACS880 single drives → ACS880-01 - Wall-mounted single drive

