

Product offering



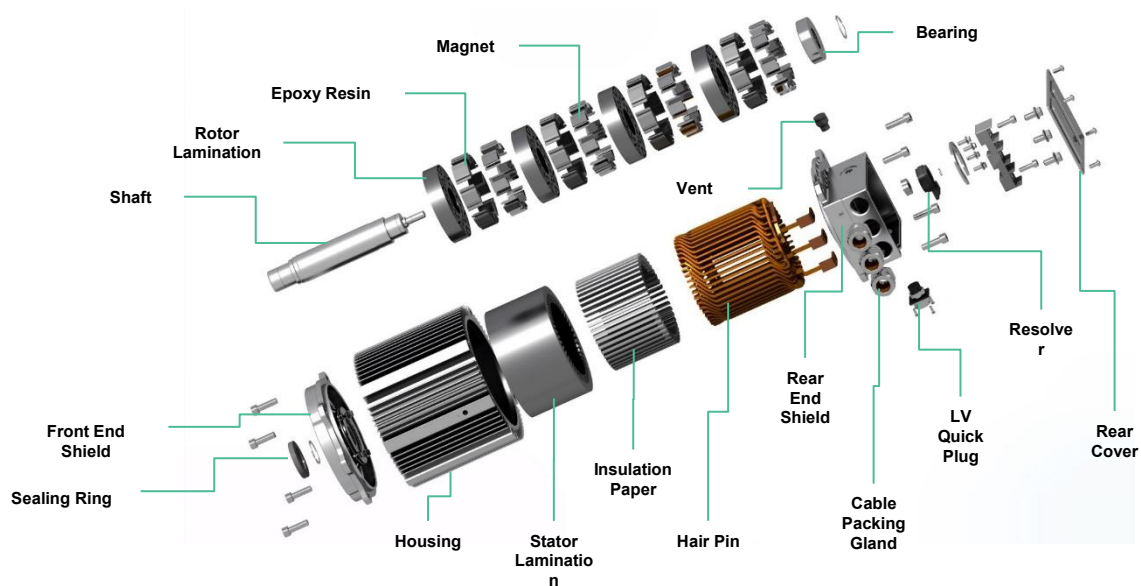
Industries served

- Construction
- Material handling
- Commercial Vehicle
- Mining
- Marine
- AC Compressor
- E-motorcycles



Proyaka specializes in High and Low Voltage e-Motor, Converter, System Solutions for electrifying mobile machines. Products are widely used in new energy vehicles, engineering vehicles, electric motorcycles, electric bicycles and other E- drive systems, also in industrial servos, robots, marine, AGV, UTV and other fields.

Proyaka Inc.
Energizing the Future of e-Mobility
www.proyaka.com
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High efficiency *Permanent Magnet Synchronous Motor Design*
15-20% higher than *Asynchronous Induction Motor*

Flat Wire Winding Stator Technology – The Future Engine for Cars

- **Higher Performance & reduced Weight**

- Slot Fill Factor increased by ~25% ,Power Density increased by 20-30% compared to Round wire

- **Efficiency improve**

- Effective Contact Area between. Increased Flat copper wire and stator core, 15-20% Better Heat Dissipation, 10-15% higher Continuous Power increased



Flat vs Round Wire Performance comparison

Winding type	Round Wire	Flat wire
Slot fill factor	Medium	Good
Heat conductivity	Bad	Good
End winding height	Medium	Medium
Electromagnetic noise	Bad	Good
Copper loss and AC loss	Bad	Medium
Torque density	Medium	Good
Automation production	Bad	Good
Production investment	Medium	High

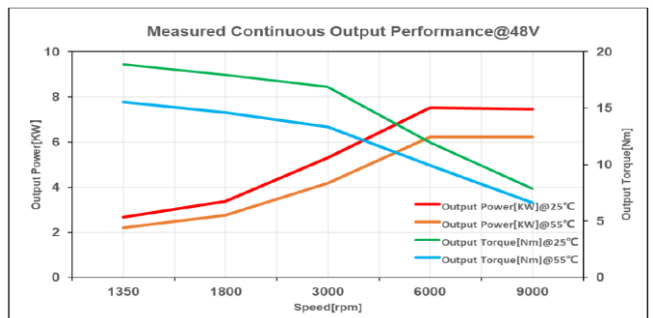
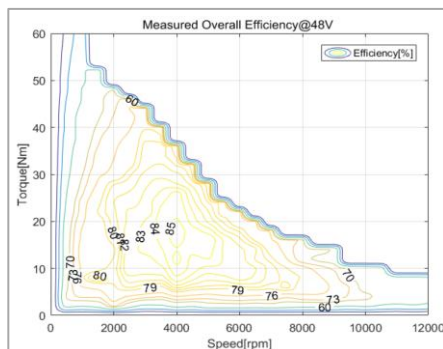
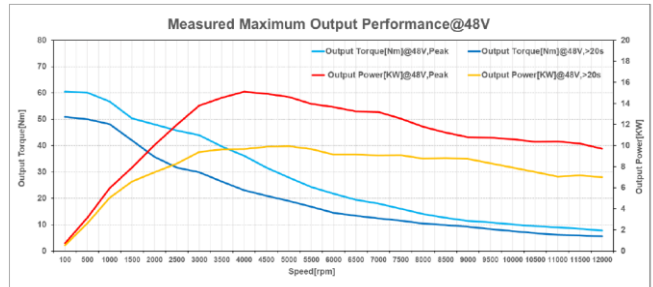
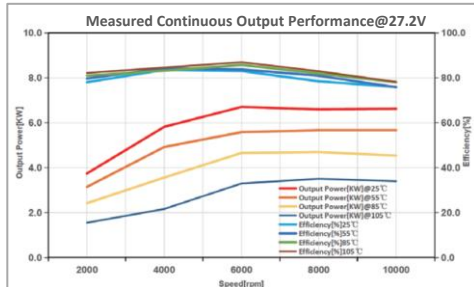
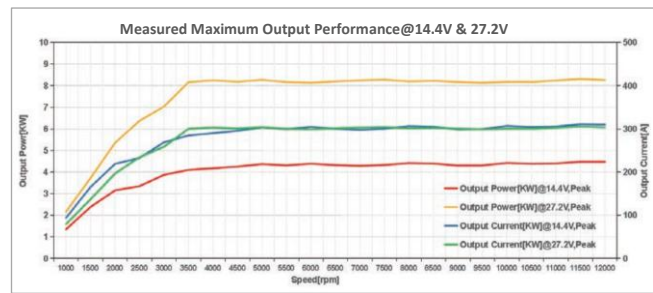
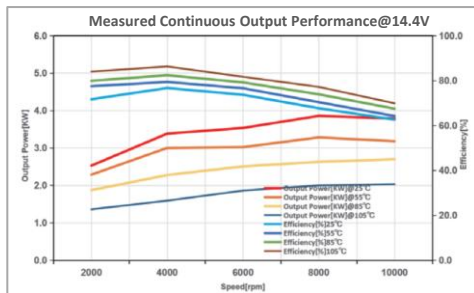


Intelligent Inverter-Based Generator Motor + Controller 2in1

Application: RV, Truck, Yacht, Lawn Mower, Wind Turbine



BLM12/24/48	Unit	Parameters		
Operating voltage range	V	9-16	20-30	32-60
Rated Voltage	V	14.4	27.2	51.2
Operating Temperature	°C	-40 ~ 110		
Max AC Output	Arms	300		
Peak Power >20s	Kw	6	8	15
Continuous Power @10000RPM	Kw	3.8 @ 25°C	6.6 @ 25°C	11.3 @ 25°C
		3.2 @ 55°C	5.7 @ 55°C	10.0 @ 55°C
		2.7 @ 85°C	4.5 @ 85°C	7.5 @ 85°C
		2.0 @ 105°C	3.4 @ 105°C	6.0 @ 105°C
Max Speed	Rpm	16000 Continuous 18000 Intermittent		
Max Efficiency	%	85%		
Motor Type	/	Hybrid Excitation Synchronous Motor		
Position Sensor	/	TMR		
CAN communication Protocol	/	Customer specific (e.g. CAN2.0B 500kbps or J1939 500kbps)		
Operation mode	/	Torque control /Speed Control/ Regenerative Mode		
Temperature protection	/	Yes		
Voltage Protection	/	Load dump protection		
Weight	Kg	10		
Diameter	mm	164 L x150 D		
Cooling	/	Integrated Duo Fan cooling		
Transmission Interface	/	Customer specific		
Case Construction	/	Cast Aluminum Alloy		
Connector	/	Molex 0.64 USCAR connector sealed		
Isolation Level	/	H		
IP Level	/	Motor: IP25 Inverter: IP69K		



PROYAKA GENERATOR

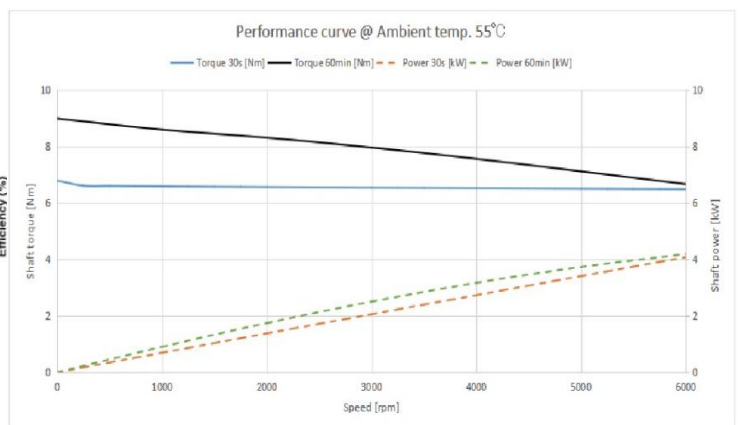
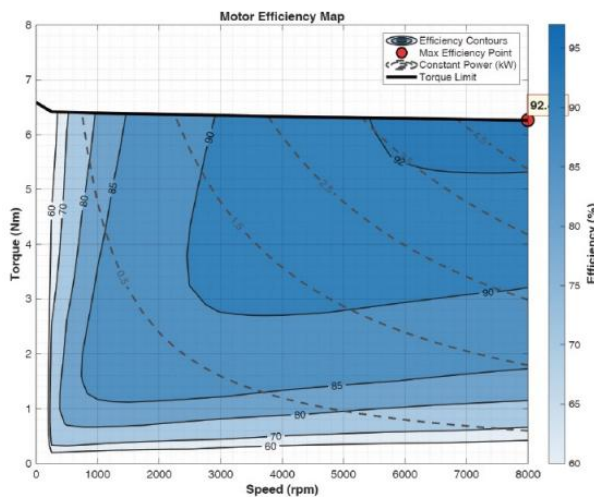
PMOD12035S - 48V

Application: RV Pump system



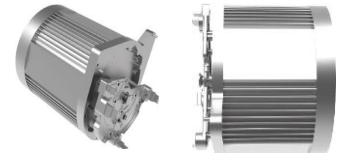
PMOD12035S	Unit	Parameters
Rated Voltage	Vdc	48
Peak Torque(30s)	Nm	6.5
Peak Power(30s)	kW	5.5 kW[30s] @ 8000rpm
Conts. Torque(S2-60min)	Nm	/
Conts. Torque(S2-2min)	Nm	/
Conts. Power(S2-60min)	kW	/
Max. Efficiency	%	95%
Max. Speed	Rpm	8000
Cooling	/	Passive cooling
IP Level	/	IP67
Weight	Kg	4.7
Dimension W x L x H	mm	170x180x206
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	2Pin, a=2, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	120
Length of Stator Core	mm	35
Torque Ripple(Peak-Peak)	%	/
Cogging Torque(Peak-Peak)	mNm	/
Others	/	/
Max Current		/

PROYAKA E-MOTOR



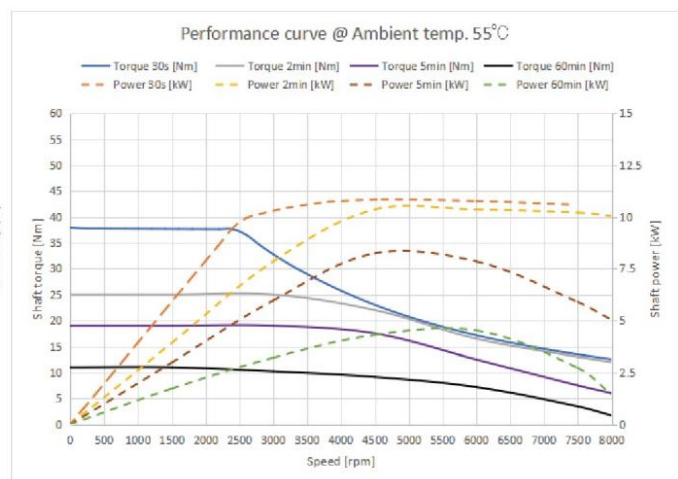
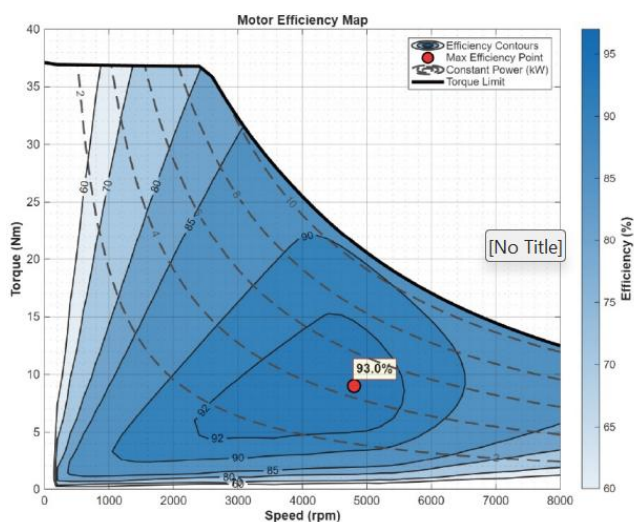
PMOD13840S – 48V

Application: AGV



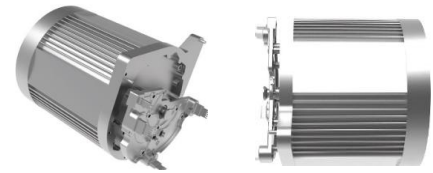
PMOD13840S	Unit	Parameters
Rated Voltage	Vdc	48
Peak Torque(30s)	Nm	37
Peak Power(30s)	kW	10.5
Conts. Torque(S2-60min)	Nm	11Nm [60min]@ 1500rpm
Conts. Torque(S2-2min)	Nm	25Nm [2min]@ 1000rpm
Conts. Power(S2-60min)	kW	1.7kW [60min]@ 1500rpm
		3.2kW [60min]@ 3000rpm
		4.3kW [60min]@ 4500rpm
Max. Efficiency	%	93%
Max. Speed	Rpm	8000
Cooling	/	Passive cooling
IP Level	/	IP67
Weight	Kg	8
Dimension W x L x H	mm	185x165x185
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	2Pin, a=1, Short-pitch, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	138
Length of Stator Core	mm	40
Torque Ripple(Peak-Peak)	%	5.5%
Cogging Torque(Peak-Peak)	mNm	200
Others	/	EM Brake (optional)
Max Current		AC: 330Arms [30s], 120Arms [60min] DC: 250A [30s], 100A [60min]

PROYAKA E-MOTOR



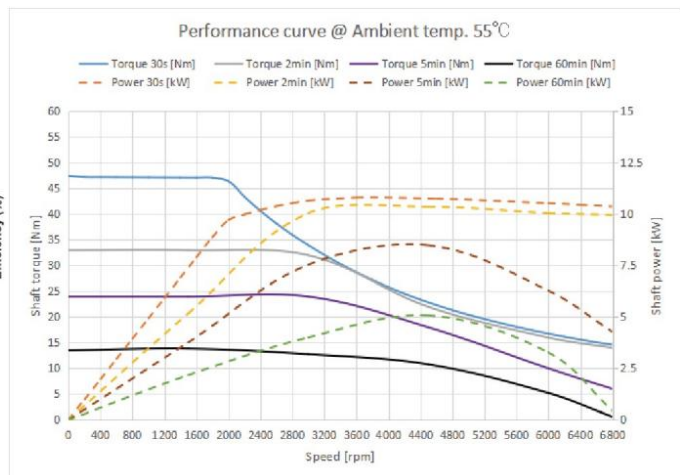
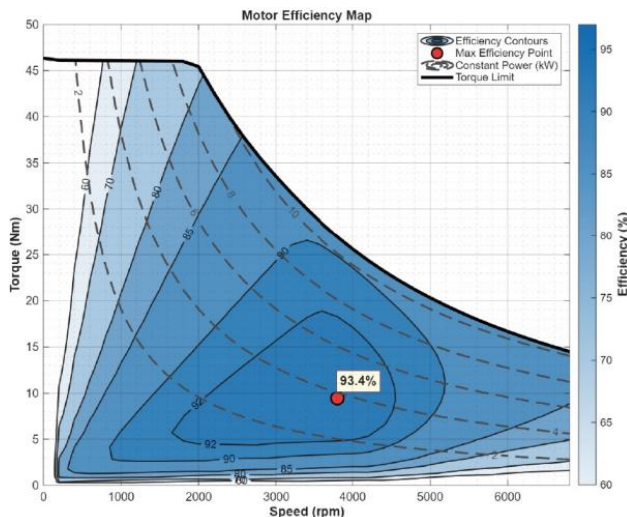
PMOD13850S - 48V

Application: AGV



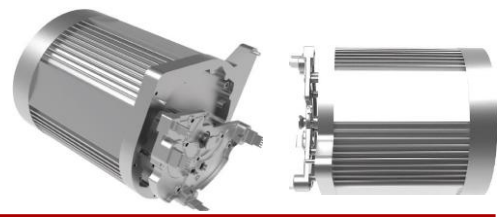
PMOD13850S	Unit	Parameters
Rated Voltage	Vdc	48
Peak Torque(30s)	Nm	46
Peak Power(30s)	kW	10.5
Conts. Torque(S2-60min)	Nm	13.5Nm [60min]@ 1500rpm
Conts. Torque(S2-2min)	Nm	33Nm [2min]@ 1000rpm
Conts. Power(S2-60min)	kW	2.1kW [60min]@ 1500rpm 4kW [60min]@ 3000rpm 5kW [60min]@ 4500rpm
Max. Efficiency	%	93.4%
Max. Speed	Rpm	7000
Cooling	/	Passive cooling
IP Level	/	IP67
Weight	Kg	8.5
Dimension W x L x H	mm	185x165x195
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	2Pin, a=1, Short-pitch, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	138
Length of Stator Core	mm	50
Torque Ripple(Peak-Peak)	%	3%
Cogging Torque(Peak-Peak)	mNm	150
Others	/	EM Brake (optional)
Max Current		AC: 330Arms [30s], 120Arms [60min] DC: 250A [30s], 120A [60min]

PROYAKA E-MOTOR



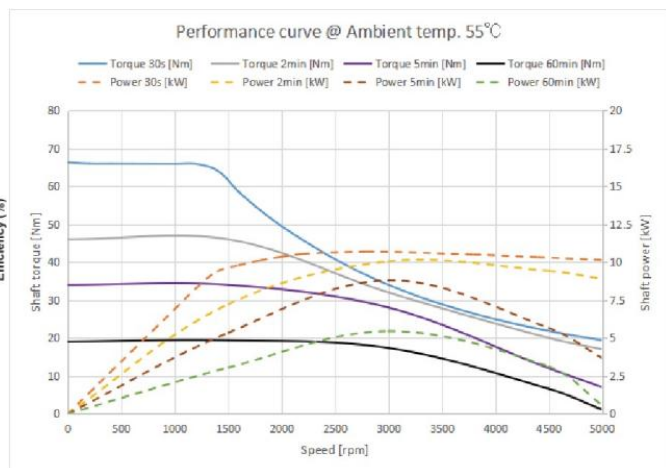
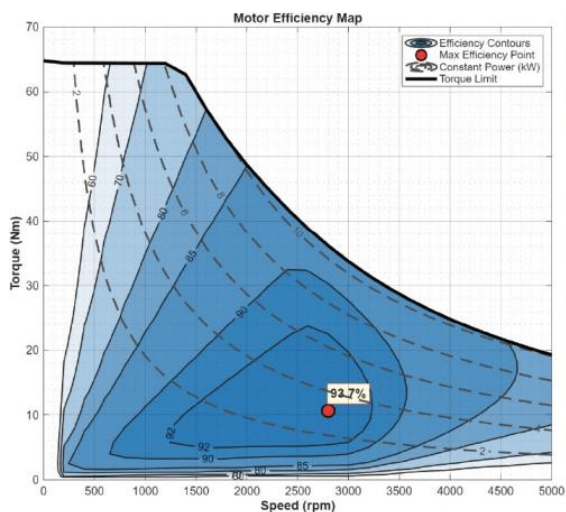
PMOD13870S - 48V

Application: AGV/Golf cart/ATV/Kart



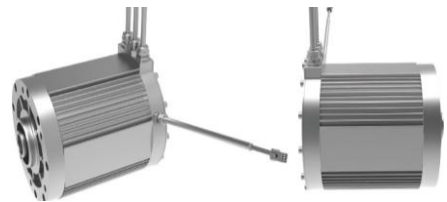
PMOD13870S	Unit	Parameters
Rated Voltage	Vdc	48
Peak Torque(30s)	Nm	66
Peak Power(30s)	kW	10.5
Conts. Torque(S2-60min)	Nm	19Nm [60min]@ 1500rpm
Conts. Torque(S2-2min)	Nm	46Nm [2min]@ 1000rpm
Conts. Power(S2-60min)	kW	3kW [60min]@ 1500rpm
		5.4kW [60min]@ 3000rpm
		3.1kW [60min]@ 4500rpm
Max. Efficiency	%	93.7%
Max. Speed	Rpm	5000
Cooling	/	Passive cooling
IP Level	/	IP67
Weight	Kg	9.5
Dimension W x L x H	mm	185x165x215
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	2Pin, a=1, Short-pitch, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	138
Length of Stator Core	mm	70
Torque Ripple(Peak-Peak)	%	5%
Cogging Torque(Peak-Peak)	mNm	150
Others	/	EM Brake (optional)
Max Current		AC: 330Arms [30s], 120Arms [60min] DC: 250A [30s], 130A [60min]

PROYAKA E-MOTOR



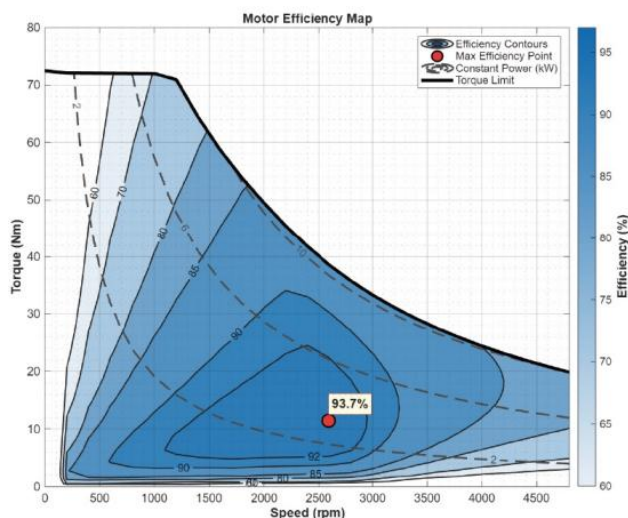
PMOD13880S - 48V

Application: AGV/Golf cart/ATV/
Kart/E-tricycle



PMOD13880S	Unit	Parameters
Rated Voltage	Vdc	48
Peak Torque(30s)	Nm	73
Peak Power(30s)	kW	10.5
Conts. Torque(S2-60min)	Nm	22Nm [60min]@ 1500rpm
Conts. Torque(S2-2min)	Nm	52Nm [2min]@ 1000rpm
Conts. Power(S2-60min)	kW	3.5kW [60min]@ 1500rpm
		5.7kW [60min]@ 3000rpm
		2.7kW [60min]@ 4500rpm
Max. Efficiency	%	93.7%
Max. Speed	Rpm	5000
Cooling	/	Passive cooling
IP Level	/	IP67
Weight	Kg	10
Dimension W x L x H	mm	185x165x225
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	2Pin, a=1, Short-pitch, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	138
Length of Stator Core	mm	80
Torque Ripple(Peak-Peak)	%	5%
Cogging Torque(Peak-Peak)	mNm	350
Others	/	EM Brake (optional)
Max Current		AC: 330Arms [30s], 125Arms [60min] DC: 250A [30s], 125A [60min]

PROYAKA E-MOTOR



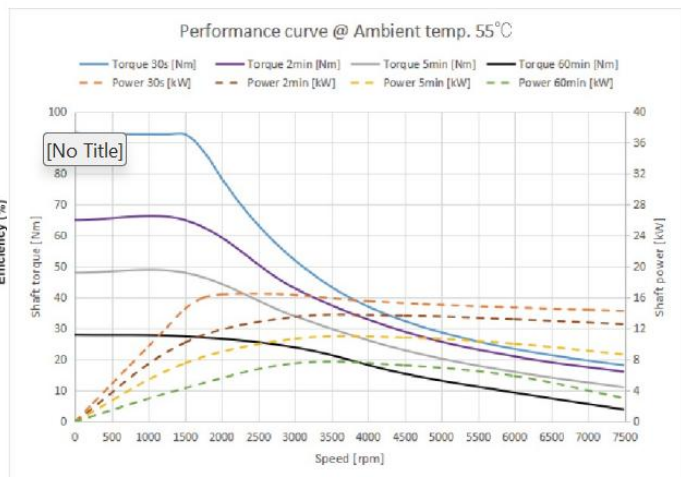
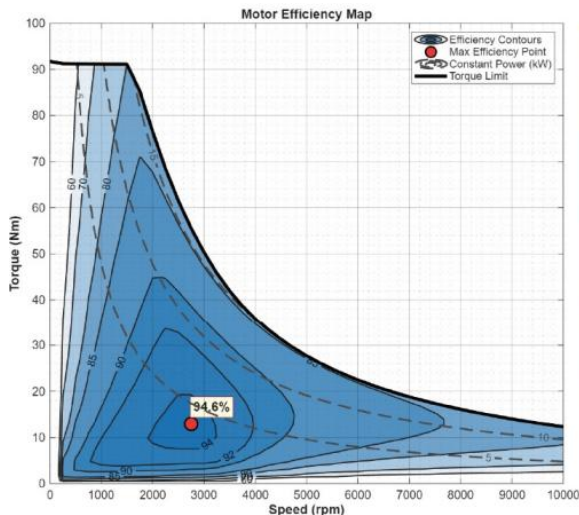
PMOD15569S - 48V

Application: Golf cart/ATV/E-tricycle
Small logistics vehicle



PMOD15569S	Unit	Parameters
Rated Voltage	Vdc	48
Peak Torque(30s)	Nm	92
Peak Power(30s)	kW	16
Conts. Torque(S2-60min)	Nm	27Nm [60min]@ 1500rpm
Conts. Torque(S2-2min)	Nm	65Nm [2min]@ 1000rpm
Conts. Power(S2-60min)	kW	4.3kW [60min]@ 1500rpm
		7.2kW [60min]@ 3000rpm
		6.9kW [60min]@ 4500rpm
Max. Efficiency	%	94.8%
Max. Speed	Rpm	12000
Cooling	/	Passive cooling
IP Level	/	IP67
Weight	Kg	12
Dimension W x L x H	mm	220x200x212
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	4Pin, a=2, Short-pitch, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	155
Length of Stator Core	mm	69
Torque Ripple(Peak-Peak)	%	2%
Cogging Torque(Peak-Peak)	mNm	260
Others	/	EM Brake (optional)
Max Current		AC: 400Arms [30s], 150Arms [60min] DC: 420A [30s], 160A [60min]

PROYAKA E-MOTOR



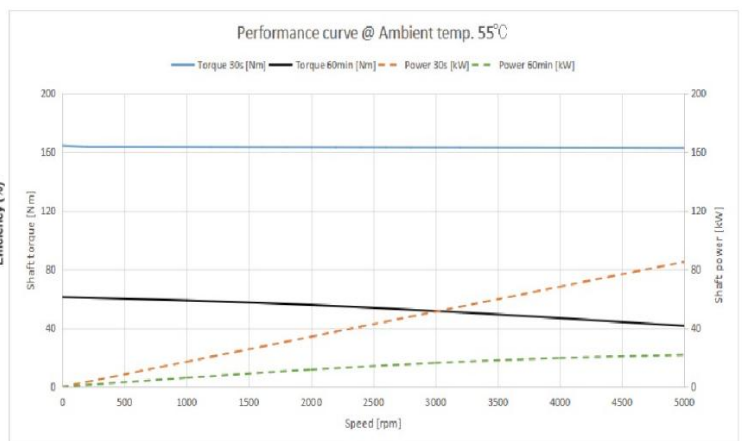
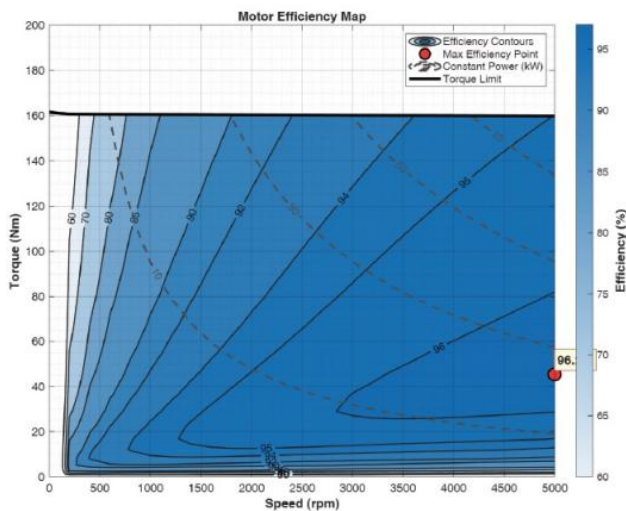
PMOD18030S - 48V

Application: Pump System
Specialty vehicle



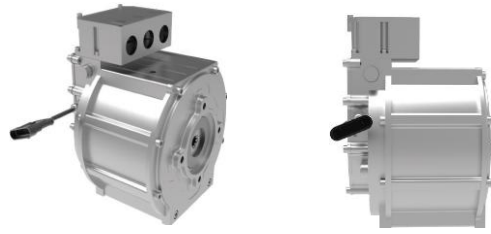
PMOD18030S	Unit	Parameters
Rated Voltage	Vdc	48
Peak Torque(30s)	Nm	54
Peak Power(30s)	kW	6.3
Conts. Torque(S2-60min)	Nm	15Nm [60min]@ 1500rpm
Conts. Torque(S2-2min)	Nm	37Nm [2min]@ 1000rpm
Conts. Power(S2-60min)	kW	2.4kW [60min]@ 1500rpm
		3.6kW [60min]@ 3000rpm
		3.2kW [60min]@ 4800rpm
Max. Efficiency	%	90.9%
Max. Speed	Rpm	4800
Cooling	/	Passive cooling
IP Level	/	IP67
Weight	Kg	15.5
Dimension W x L x H	mm	210x209x210
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	4Pin, a=1, Short-pitch, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	180
Length of Stator Core	mm	30
Torque Ripple(Peak-Peak)	%	11%
Cogging Torque(Peak-Peak)	mNm	1300
Others	/	EM Brake (optional)
Max Current		AC: 240Arms [30s], 80Arms [60min] DC: 170A [30s], 90A [60min]

PROYAKA E-MOTOR



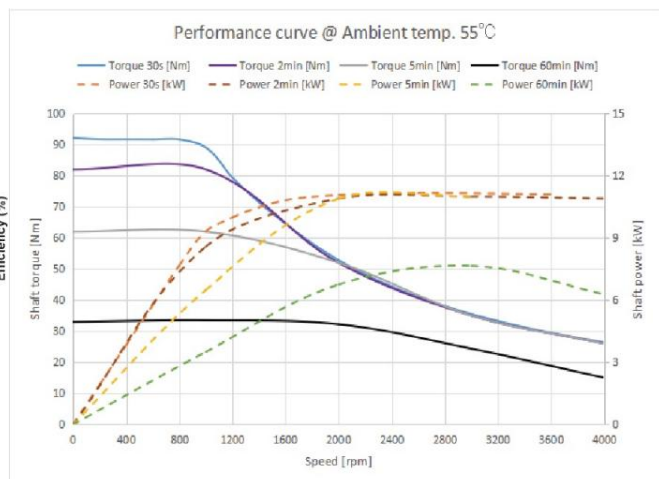
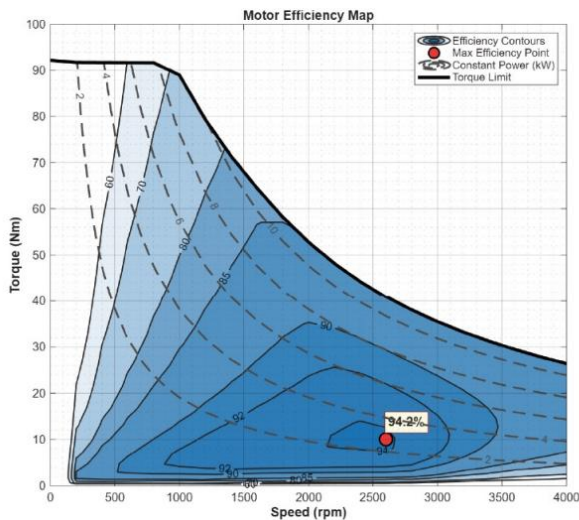
PMOD18060S - 48V

Application: Pump system
Specialty vehicle



PMOD18060S	Unit	Parameters
Rated Voltage	Vdc	48
Peak Torque(30s)	Nm	90
Peak Power(30s)	kW	11
Conts. Torque(S2-60min)	Nm	30Nm [60min]@ 1500rpm
Conts. Torque(S2-2min)	Nm	62Nm [2min]@ 1000rpm
Conts. Power(S2-60min)	kW	3.5kW [60min]@ 1500rpm
		7.7kW [60min]@ 3000rpm
		6.3kW [60min]@ 4000rpm
Max. Efficiency	%	94.2%
Max. Speed	Rpm	4000
Cooling	/	Passive cooling
IP Level	/	IP67
Weight	Kg	22
Dimension W x L x H	mm	212x184x252
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	4Pin, a=1, Short-pitch, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	180
Length of Stator Core	mm	60
Torque Ripple(Peak-Peak)	%	13%
Cogging Torque(Peak-Peak)	mNm	2500
Others	/	EM Brake (optional)
Max Current		AC: 350Arms [30s], 16Arms [60min] DC: 270A [30s], 180A [60min]

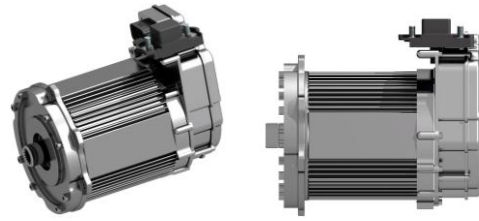
PROYAKA E-MOTOR



PMBAZ4810D - 48V

Motor + controller 2in1

Application: AGVs, Golf carts

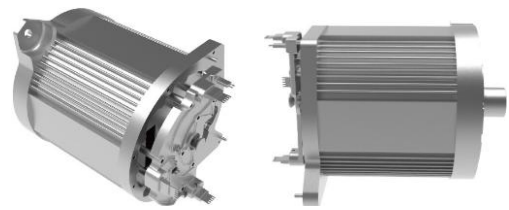


PMBAZ4810D	Unit	Parameters
Operation Voltage	Vdc	48V (36-60V)
Peak Torque(30s)	Nm	77 Nm
Peak Power(30s)	kW	11 kW
Conts. Torque (S2-60min)	Nm	22Nm [60min] @ 1500rpm
Conts. Torque (S2-2min)	Nm	50.5Nm [2min] @ 1000rpm
Conts. Power (S2-60min)	kW	3.5kW [60min] @ 1500rpm 5.7kW [60min] @ 3000rpm 4.1kW [60min] @ 4500rpm
Ambient Temperature	°C	-40~65°C
Max. Efficiency	%	94.1%
Max. Speed	rpm	6000
Cooling	/	Passive cooling
IP Level	/	IP67
Insulation level	/	H
Weight	Kg	15kg
Dimension	mm	Φ160 Dx 235 L
Installation interface	/	Flange positioning and installation
Transmission Interface	/	Customized
Motor Type	/	PMSM inner Rotor Motor
Platform	/	Infineon AURIX™ MCU
IoT device	/	BLT+APP
I/O Connector	/	23pin, DI/AI/PWM/ HB/HSD+LSD/5V-OUT/ 12V-OUT supported by MCU TC367
Communication	/	Customer Specific
Functionality	/	Torque control/Speed control/ Regen mode /Anti -Rolling Control/Hill Descent Control
Logic Voltage supply	Vdc	INT/EXT. 9-16V
Dielectric Withstand	Vdc	1000 Vdc, 1min, leakage current<20mA
Discharge	-	Discharged to 60Vdc in 2mins
Vibration	/	Max.5g, refer to GB/T 18488:2024(IEC60068-2:2019)
Safety	/	Designed to the requirements of EN ISO13849-1:2015;EN 1175:2020
EMC	/	Designed to the requirements of EN12895:2015+A1:2019
Design Life	/	8000h,Continuous operation w/o any fault

PROYAKA E-MOTOR

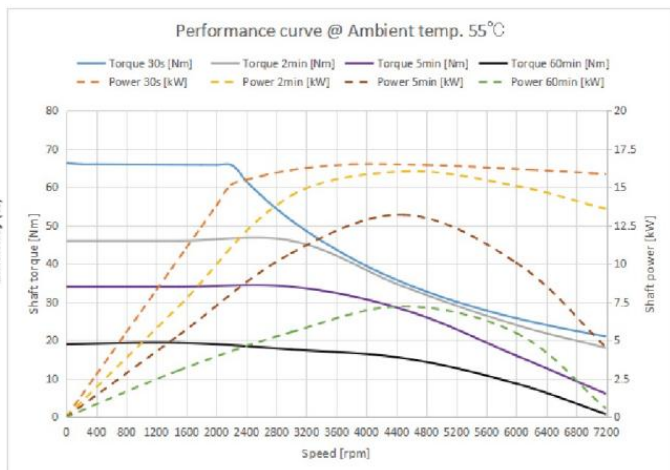
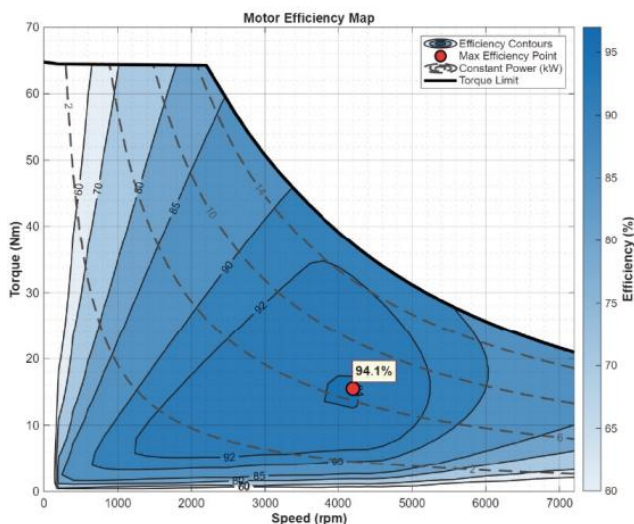
PMOD13870S - 72V

Application: AGV/Golf cart/ATV/Kart



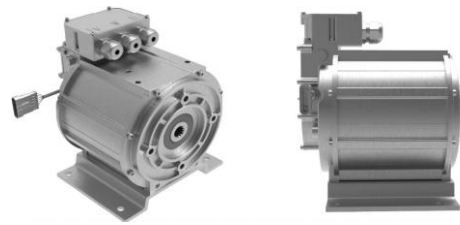
PMOD13870S	Unit	Parameters
Rated Voltage	Vdc	72
Peak Torque(30s)	Nm	66
Peak Power(30s)	kW	16
Conts. Torque(S2-60min)	Nm	19Nm [60min]@ 1500rpm
Conts. Torque(S2-2min)	Nm	46Nm [2min]@ 1000rpm
Conts. Power(S2-60min)	kW	3kW [60min]@ 1500rpm
		5.5kW [60min]@ 3000rpm
		7.2kW [60min]@ 4500rpm
Max. Efficiency	%	94.1%
Max. Speed	Rpm	7000
Cooling	/	Passive cooling
IP Level	/	IP67
Weight	Kg	9.5
Dimension W x L x H	mm	185x165x215
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	2Pin, a=1, Short-pitch, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	138
Length of Stator Core	mm	70
Torque Ripple(Peak-Peak)	%	5%
Cogging Torque(Peak-Peak)	mNm	300
Others	/	EM Brake (optional)
Max Current		AC: 330Arms [30s], 120Arms [60min] DC: 250A [30s], 110A [60min]

PROYAKA E-MOTOR



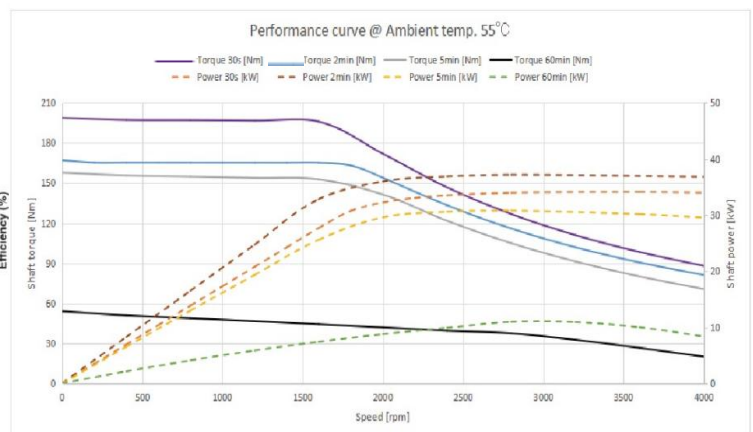
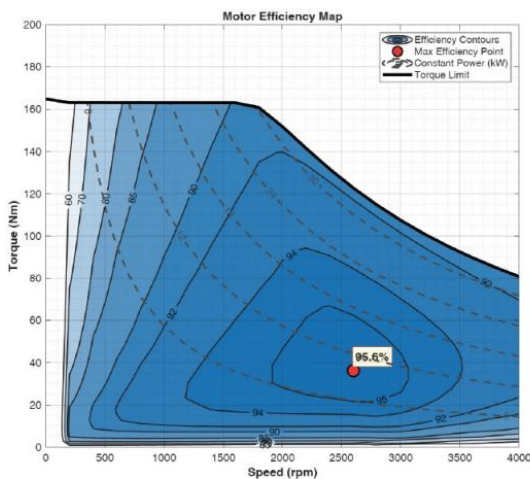
PMOD20090S - 80V

Application: Pump system
Specialty vehicle, Logistics vehicle



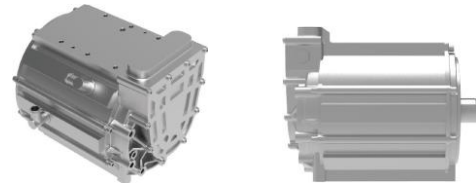
PMOD20090S	Unit	Parameters
Rated Voltage	Vdc	64-96
Peak Torque(30s)	Nm	200
Peak Power(30s)	kW	30.5
Conts. Torque(S2-60min)	Nm	63
Conts. Torque(S2-2min)	Nm	160
Conts. Power(S2-60min)	kW	16.5 (@500A)
Max. Efficiency	%	95.6%
Max. Speed	Rpm	4000
Cooling	/	Nature cooling
IP Level	/	IP67
Weight	Kg	47
Dimension W x L x H	mm	236x306.4x231
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	4Pin, a=2, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	200
Length of Stator Core	mm	90
Torque Ripple(Peak-Peak)	%	/
Cogging Torque(Peak-Peak)	mNm	/
Others	/	/
Max Current	A	500

PROYAKA E-MOTOR



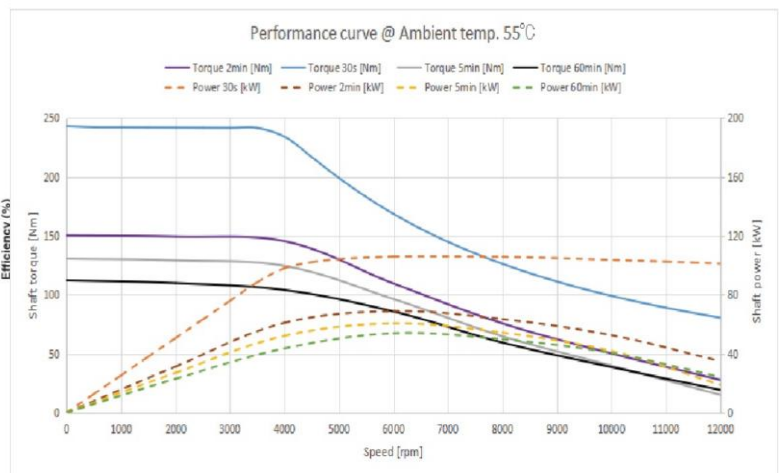
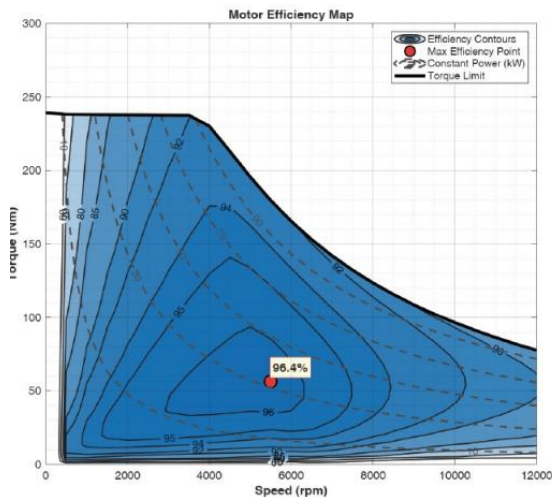
PMOD180110S - 330V

Application: Logistics vehicle



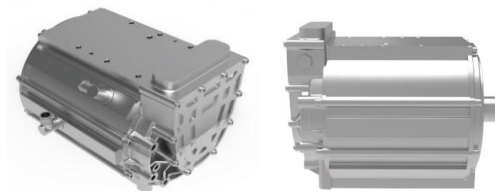
PMOD180110S	Unit	Parameters
Rated Voltage	Vdc	330
Peak Torque(30s)	Nm	220 [60s]
Peak Power(30s)	kW	75kw[60s]
Conts. Torque(S2-60min)	Nm	/
Conts. Torque(S2-2min)	Nm	/
Conts. Power(S2-60min)	kW	/
Max. Efficiency	%	95%
Max. Speed	Rpm	9000
Cooling	/	Liquid cooling 55dgC, 12L/min
IP Level	/	IP68
Weight	Kg	38 +/-1
Dimension W x L x H	mm	227x234x288
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	4Pin, a=1, Y
Phases	/	/
Slots	/	/
Poles	/	/
Diameter of Stator Core	mm	180
Length of Stator Core	mm	110
Torque Ripple(Peak-Peak)	%	/
Cogging Torque(Peak-Peak)	mNm	/
Others	/	/
Max Current	/	/

PROYAKA E-MOTOR



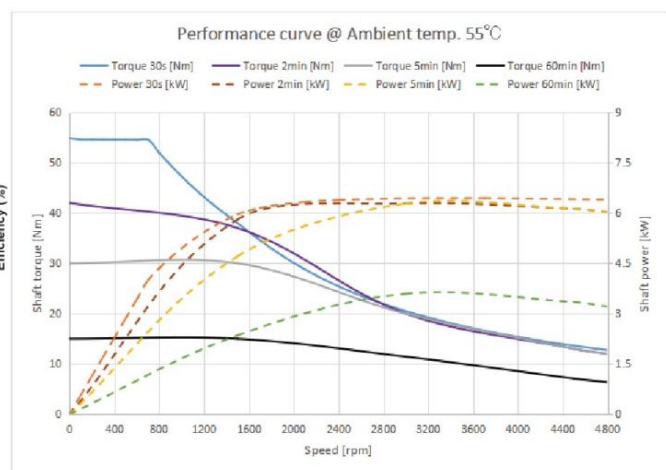
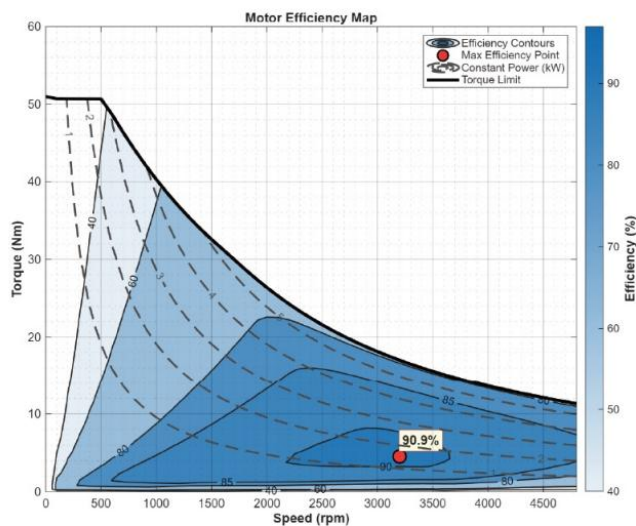
PMOD180130S - 350V

Application: AC compressor



PMOD180130S	Unit	Parameters
Rated Voltage	Vdc	350
Peak Torque(30s)	Nm	161[60s]
Peak Power(30s)	kW	90[60s]
Conts. Torque(S2-60min)	Nm	/
Conts. Torque(S2-2min)	Nm	/
Conts. Power(S2-60min)	kW	/
Max. Efficiency	%	96%
Max. Speed	Rpm	13000
Cooling	/	Natural cooling
IP Level	/	IP68
Weight	Kg	34
Dimension W x L x H	mm	227x234x308
Installation interface	/	Flange positioning and installation
Transmission Interface	/	Spline
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	4Pin, a=1, S Y
Phases	/	/
Slots	/	/
Poles	/	/
Diameter of Stator Core	mm	180
Length of Stator Core	mm	130
Torque Ripple(Peak-Peak)	%	/
Cogging Torque(Peak-Peak)	mNm	/
Others	/	/
Max Current		/

PROYAKA E-MOTOR



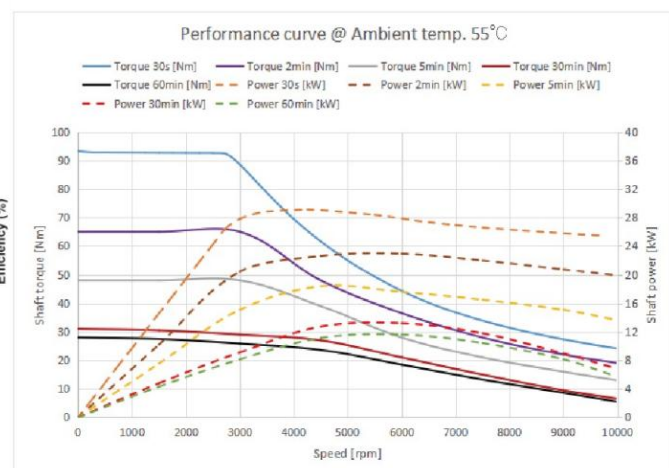
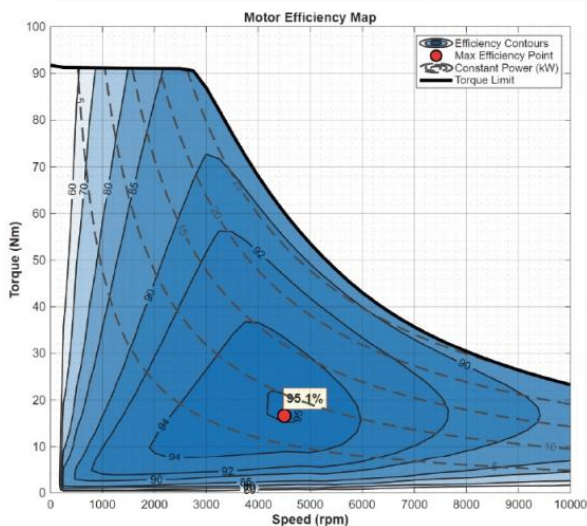
PMOD15569S - 80V

Application: Golf cart/ATV/E-tricycle
Small logistics vehicle



PMOD15569S	Unit	Parameters
Rated Voltage	Vdc	80
Peak Torque(30s)	Nm	92
Peak Power(30s)	kW	29
Conts. Torque(S2-60min)	Nm	28Nm [60min]@ 1500rpm
Conts. Torque(S2-2min)	Nm	65Nm [2min]@ 1000rpm
Conts. Power(S2-60min)	kW	4.3kW [60min]@ 1500rpm 8.1kW [60min]@ 3000rpm 11.0kW [60min]@ 4500rpm 11.1kW [60min]@ 6000rpm
Max. Efficiency	%	95.3%
Max. Speed	Rpm	12000
Cooling	/	Passive cooling
IP Level	/	IP67
Weight	Kg	12
Dimension W x L x H	mm	220x200x212
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	4Pin, a=2, Short-pitch, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	155
Length of Stator Core	mm	69
Torque Ripple(Peak-Peak)	%	2%
Cogging Torque(Peak-Peak)	mNm	260
Others	/	EM Brake (optional)
Max Current		AC: 400Arms [30s], 150Arms [60min] DC: 420A [30s], 150A [60min]

PROYAKA E-MOTOR



PMOD13880S - 72V

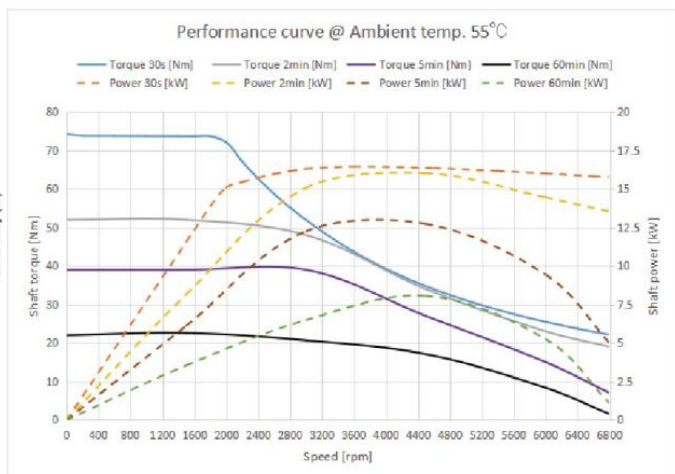
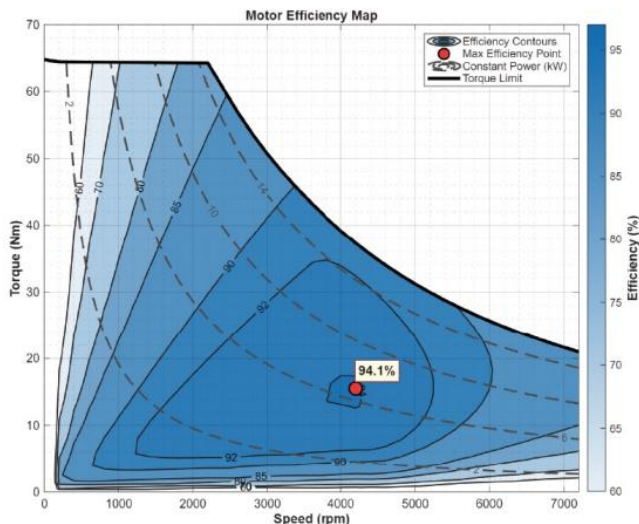
Motor + Transmission

Application: AGV/Golf cart/ATV
Kart/E-tricycle/Auto-Rickshaws



PMOD13880S	Unit	Parameters
Rated Voltage	Vdc	72
Peak Torque(30s)	Nm	73
Peak Power(30s)	kW	10.5
Conts. Torque(S2-60min)	Nm	22Nm [60min]@ 1500rpm
Conts. Torque(S2-2min)	Nm	52Nm [2min]@ 1000rpm
Conts. Power(S2-60min)	kW	3.5kW [60min]@ 1500rpm
		6.5kW [60min]@ 3000rpm
		8.0kW [60min]@ 4500rpm
Max. Efficiency	%	94.1%
Max. Speed	Rpm	7000
Cooling	/	Passive cooling
IP Level	/	IP67
Weight	Kg	10
Dimension W x L x H	mm	185x165x225
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	2Pin, a=1, Short-pitch, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	138
Length of Stator Core	mm	80
Torque Ripple(Peak-Peak)	%	5%
Cogging Torque(Peak-Peak)	mNm	350
Others	/	EM Brake (optional)
Max Current		AC: 330Arms [30s], 125Arms [60min] DC: 250A [30s], 125A [60min]

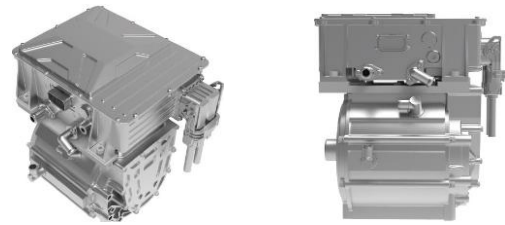
PROYAKA E-DRIVE SYSTEM



PMOD18080S - 350V

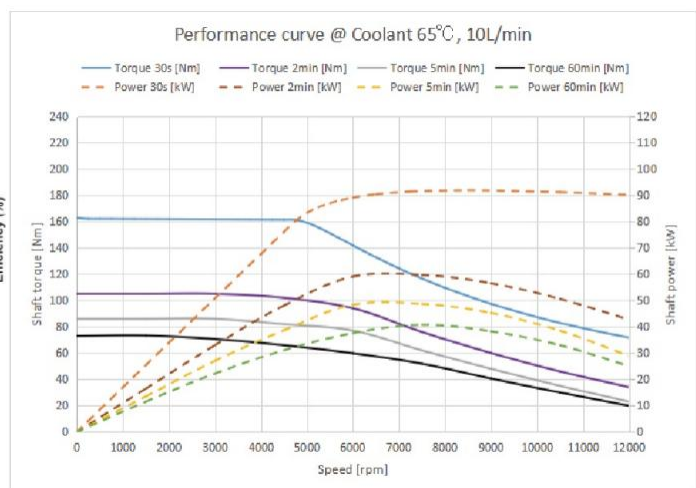
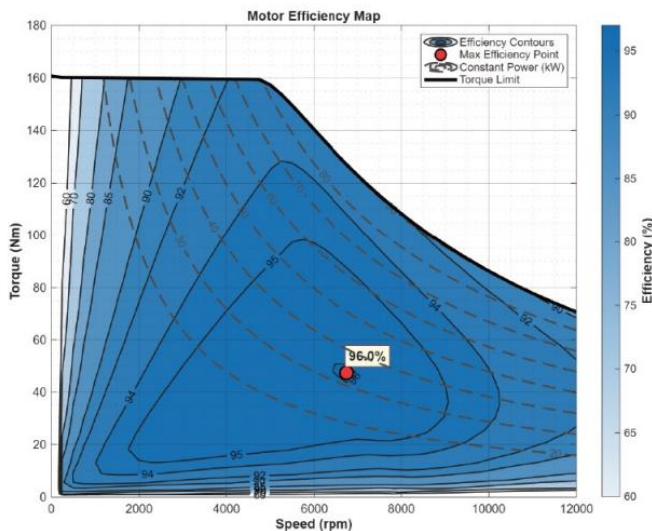
Motor + Converter

Application: EV, Boat/Logistics vehicle



PMOD18080S	Unit	Parameters
Rated Voltage	Vdc	350
Peak Torque(30s)	Nm	161
Peak Power(30s)	kW	91
Conts. Torque(S2-60min)	Nm	73Nm [60min]@ 1500rpm
Conts. Torque(S2-2min)	Nm	105Nm [2min]@ 1000rpm
Conts. Power(S2-60min)	kW	11.5kW [60min]@ 1500rpm
		22.2kW [60min]@ 3000rpm
		40.7kW [60min]@ 7500rpm
Max. Efficiency	%	96%
Max. Speed	Rpm	12000
Cooling	/	Liquid cooling
IP Level	/	IP68
Weight	Kg	25
Dimension W x L x H	mm	254x262x234
Installation interface	/	Flange positioning and installation
Transmission Interface	/	Spline
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2. Encoder sin/cos 3. Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire
Three-phase Connection	/	4Pin, a=1, Short-pitch, Y
Phases	/	3
Slots	/	48
Poles	/	8
Diameter of Stator Core	mm	180
Length of Stator Core	mm	80
Torque Ripple(Peak-Peak)	%	3.5%
Cogging Torque(Peak-Peak)	mNm	800
Others	/	EM Brake (optional)
Max Current		AC: 260Arms [30s], 140Arms [60min] DC: 290A [30s], 125A [60min]

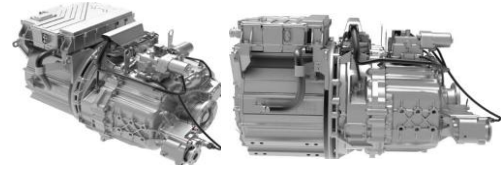
PROYAKA E-DRIVE SYSTEM



PMOD400190S - 630V

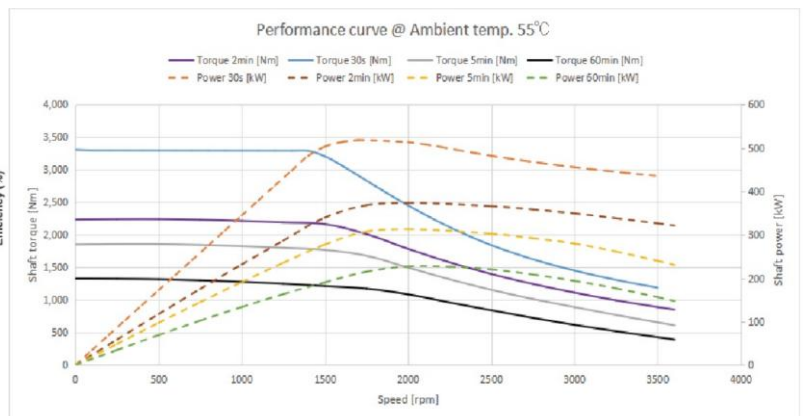
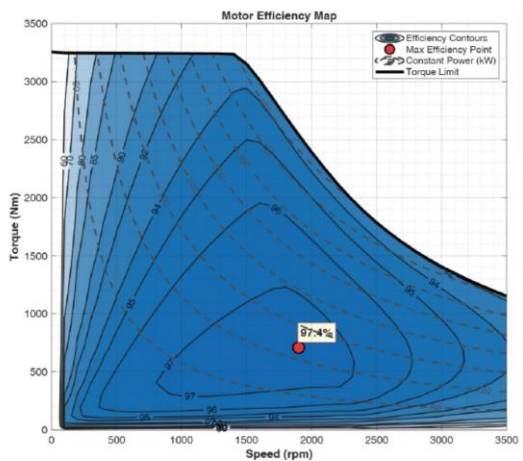
Motor + Converter + Transmission

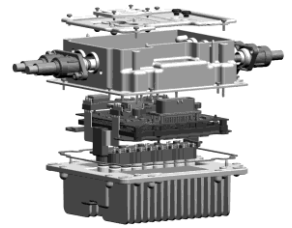
Application: Heavy truck



PMOD400190S	Unit	Parameters
Rated Voltage	Vdc	630
Peak Torque(30s)	Nm	2400 [60s]
Peak Power(30s)	kW	410kw [60s]
Conts. Torque(S2-60min)	Nm	/
Conts. Torque(S2-2min)	Nm	/
Conts. Power(S2-60min)	kW	/
Max. Efficiency	%	97.4%
Max. Speed	Rpm	3600
Cooling	/	Liquid cooling, 65dgC, 20L/min
IP Level	/	IP67
Weight	Kg	93
Dimension W x L x H	mm	457x457x565
Installation interface	/	Flange positioning and installation
Transmission Interface	/	1.Spline 2.Belt 3.Customized
Temperature sensor	/	1 X NTC
Position sensor	/	1. Resolver 2.Encoder sin/cos 3.Eddy Current Sensor
Motor Type	/	PMSM inner Rotor Motor
Stator winding	/	Flat Wire ▲
Three-phase Connection	/	6Pin, a=2,
Phases	/	3
Slots	/	108
Poles	/	12
Diameter of Stator Core	mm	400
Length of Stator Core	mm	190
Torque Ripple(Peak-Peak)	%	/
Cogging Torque(Peak-Peak)	mNm	/
Others	/	/
Max Current	/	/

PROYAKA E-DRIVE SYSTEM





MOTOR CONTROLLERS & POWER ELECTRONICS

Product offering



On-board Charger

AC <-> DC Converter

AC Motor Controller

Integrated Motor Controller

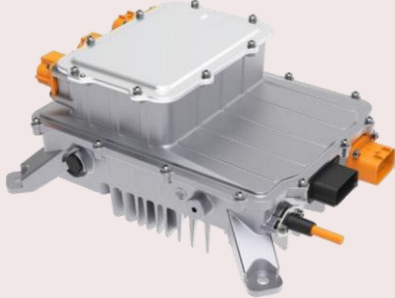
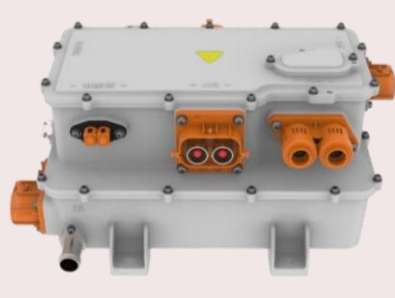
DC Brushed & Brushless Motor Controller



Proyaka Inc.
Energizing the Future of e-Mobility
www.proyaka.com
info@proyaka.com

3-in-1 On board Charger

Application: EV and machinery; converts High voltage battery power to Low voltage power, supplies LV systems, and charges LV batteries

Model	3.3OBC3-1	11DCDC2-1
Function	OBC+DCDC+PDU 3in1	OBC+DCDC 2in1
Inverter DC to AC power	3.3KW	11KW
DCDC Power	1.0-2.0kw	3.0-6.0kw
Input Voltage	220-450v 440v/800v	220-450v 440v/800v
Cooling	Air/Liquid	Liquid
		

PROYAKA CHARGER

Compact, light, high efficiency



3 in 1 combo

- On Board Charger (OBC)
- DCDC Converter (DC-DC)
- Power Distribution Unit (PDU) - Optional

High power off-highway HV-LV converter platform for 220-800 V machines, delivering robust 24 V / 12 V auxiliary power with lower integration effort, higher uptime.
3 series available, classified by the peak power output:

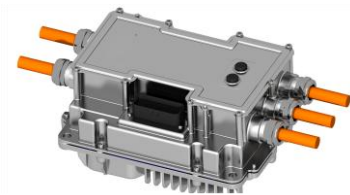
2.2/3.3KW

6.6KW

11KW

FLAC80600 Generator controller

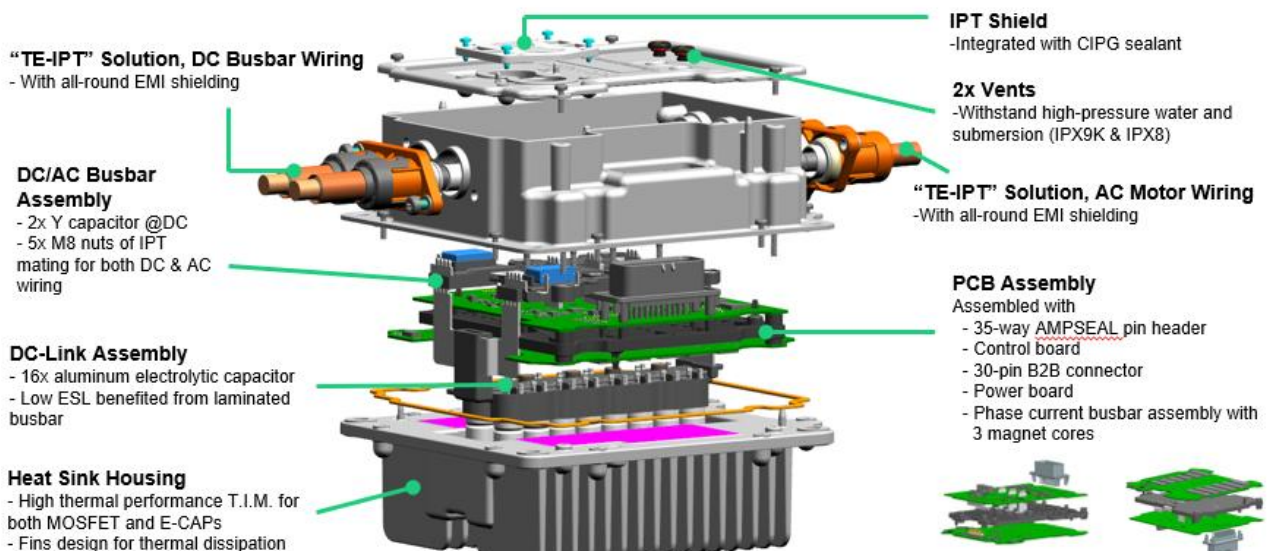
48/72/96/115V



FLAC80600	Unit	Parameters
Operation Voltage	Vdc	48V (36-60V) ;80V (60-90V) 96V (80-110V);115V (90-135V)
Peak Current of Phase/L-L(30s)	Arms	800
Peak Current of Phase/L-L(2min)	Arms	600
Peak DC Current(30s)	A	500
Conts. Current of Phase/L-L(60min)	Arms	190
Conts. DC Current(60min)	A	180
Electrical Frequency	Hz	800
Motor control Method	/	SVPWM
Switch Frequency	kHz	10 (configurable)
Ambient Temperature	°C	-40~65°C
Max. Efficiency	%	98%
Cooling	/	Passive cooling
IP Level	/	IP67
Weight	Kg	5
Dimension W x L x H	mm	248mm x 210mm x 124mm
Case Construction	/	Cast Aluminum Alloy
Position Sensor Supported	/	1. Resolver; 2. Encoder sin/cos; 3. Eddy Current Sensor
Motor Phases	/	3
Platform	/	Infineon AURIX™ MCU
IoT device	/	BLT+APP
I/O Connector	/	35pin,DI/AI/PWM/ HB/HSD+LSD/5V-OUT/ 12V-OUT supported by MCU TC367
Communication	/	Customer Specific
Functionality	/	Torque control/Speed control/ Regen mode /Anti -Rolling Control/Hill Descent Control
Logic Voltage supply	Vdc	INT/EXT. 9-16V
Dielectric Withstand	/	1000 Vdc, 1min, leakage current<20mA
Discharge	/	Discharged to 60Vdc in 5mins
Vibration	/	Max.5g, refer to GB/T 18488:2024(IEC60068-2:2019)
Safety	/	Designed to the requirements of EN ISO13849-1:2015;EN 1175:2020
EMC	/	Designed to the requirements of EN12895:2015+A1:2019
Design Life	/	8000h,Continuous operation w/o any fault

PROYAKA CONTROLLER

FLAC80 Series Controller Design



AC Motor Controller

CANBUS

24~72V

IP65

A8/ A5 / A2

The A series AC motor controller using FOC vector algorithm, automatically identify parameter from AC motors, generates the maximum possible torque and efficiency across the entire speed range, provides excellent drive experience, improved speed regulation, increased grade-ability, extended life of build-in relays and MOSFET units. A series offers fault detect function, supports over-voltage, under-voltage, over current, overheated and Reverse polarity protection.



P/N	Size DxWxH(mm)	Nominal Battery Voltage (V)	2MinuteRMS Current Rating(A)	60MinuteRMS Current Rating(A)
A8-550xIM	275*205*91.5	48~72	500	225
A8-565xIM	275*205*91.5	48~72	650	275

P/N	Size DxWxH(mm)	Nominal Battery Voltage (V)	2MinuteRMS Current Rating(A)	60MinuteRMS Current Rating(A)
A5-435xIM	193*175*78	36~48	350	150
A5-440xIM	193*175*78	36~48	400	175
A5-535xIM	193*175*78	48~72	350	150
A5-540xIM	193*175*78	48~72	400	175

P/N	Size DxWxH(mm)	Nominal Battery Voltage (V)	2MinuteRMS Current Rating(A)	60MinuteRMS Current Rating(A)
A2-222xIM	142*192*70	24	225	100
A2-230xIM	142*192*70	24	300	125
A2-422xIM	142*192*70	36~48	225	100
A2-430xIM	142*192*70	36~48	300	125
A2-522xIM	142*192*70	48~72	225	100
A2-530xIM	142*192*70	48~72	300	125

PROYAKA CONTROLLER

Other Specs

Sensor	Incremental encoder
Communication	CAN
Working / Storage Temperature	-30°C~55°C/-40°C~85°C
IP Rating	IP65
Efficiency	97%
Control Method	IFO Vector

Application



Personnel Carriers



Golf Cars



Lift Truck



Light On-road

Integrated/Sweeper-Scrubber Motor Controller

CANBUS

24~36V

IP65

DN28 - XD515 / XD510 / XD350 / XD250 / XD240

The DN28 series motor controllers are for floor care machines like sweeper and scrubber.

Superior hardware and algorithm design prevent damages from short circuit, over voltage, over current, wiring error etc. Testings of aging, thermal shock, vibration, which ensured high reliability.

The controllers supports CAN bus control, programmable and customizable, and compatible with panel, IoT, BMS equipments.

	P/N	SIZE D*W*H(mm)	Nominal Battery Voltage (V)	Motor	30s RMS Current (A)	60min RMS Current(A)
	DN28-XD515	274.3*169.3*55	24~36	Traction	150	50
				Brush	100	50
				Brush lift	20	10
				Squeegee lift	20	10
	DN28-XD510	196*130*48	24~36	Traction	100	50
				Brush	100	50
				Vacuum	50	30
				Brush lift	20	10
				Squeegee lift	20	10
	DN28-XD350	128*75*43	24	Traction	100	40
	DN28-XD350A			Traction	70	35
	P/N	SIZE D*W*H(mm)	Nominal Battery Voltage (V)	Motor	2 min RMS Current (A)	60min RMS Current(A)
	DN28-XD250	128*75*43	24	Brush	80	35
	DN28-XD240	131*72*38.2	24	Vacuum	80	25
				Brush	45	30
				Vacuum	30	20

PROYAKA CONTROLLER

Other Specs

Communication	CAN (DN28-XD240 is Serial)
Working / Storage Temperature	-25°C~50°C/-40°C~60°C
IP Rating	IP65

Application



Automatic Floor Scrubber



Ride-on Scrubber



Walk-behind Scrubber



Ride-on Sweeper

DC Brushed Motor Controller

CANBUS

24/48V

IP65

D Series (Brushed) & B Series (Brushless)

Proyaka DC brushed and brushless motor controllers are cost-effective but well produced reliable devices. Supports CAN Bus, serial and programmed easy to install and maintenance. It can be used with peace of mind.



D Series(Brushed)						
P/N	SIZE(mm) D*W*H	Nominal Battery Voltage (V)	10s RMS Current(A)	2min RMS Current(A)	60min RMS Current(A)	Comm- unication
D2-3101	131*72*38.2	24	90	50	20	Serial
D2C-3102	131*72*38.2	24	90	50	20	CAN
D2S-3101	131*72*38.2	24	90	50	25	Serial
D2SC-3102	131*72*38.2	24	90	50	25	CAN
D3-2111	128*75*43	24	150	110	50	Serial
D3-2151	128*75*43	24	150	150	60	Serial
D3C-2112	128*75*43	24	150	110	50	CAN
D3C-2152	128*75*43	24	150	150	60	CAN
B Series (Brushless)						
P/N	SIZE(mm) D*W*H	Nominal Battery Voltage (V)	2min RMS Current(A)		60min RMS Current(A)	Comm- unication
B2-4091	150*95*52.5	48	90		50	Serial
B2-4121	150*95*52.5	48	120		50	Serial
B2C-4092	150*95*52.5	48	90		50	CAN
B2C-4122	150*95*52.5	48	120		50	CAN

PROYAKA CONTROLLER

Other Specs

Series	D Series(Brushed)/B Series(Brushless)
Communication	CAN/Serial
Working / Storage Temperature	-25°C~50°C/-40°C~60°C
IP Rating	IP65

Application



Forklifts



Narrow-aisle Forklift



AGV



Mobility Products

Energy Storage Inverter

CANBUS

360V



NBQ360 Single phase 240V series

	Model	Input Vdc	Output Vac	Working environment	Dimensions mm	Output Power Kw	Net Weight Kg	Cooling	Communication	Protection
	NBQ360-2KW	360 V (200-460V)	240V/60Hz	-40°C to 55°C	365 × 230 × 104	2	10	Fan cooling	CAN	IP65
	NBQ360-2.5KW	360 V (200-460V)	240V/60Hz	-40°C to 55°C	473 × 291 × 166	2.5	12	Fan cooling	CAN	IP65
	NBQ360-3KW	360 V (200-460V)	240V/60Hz	-40°C to 55°C	365 × 230 × 104	3	10	Fan cooling	CAN	IP65
	NBQ360-6KW	360 V (200-460V)	240V/60Hz	-40°C to 55°C	473 × 291 × 166	6	20	Fan cooling	CAN	IP65
	NBQ360-12KW	360 V (200-460V)	240V/60Hz	-40°C to 55°C	580 × 373 × 185	12	30	Fan cooling	CAN	IP65

NBQ360 3-phase 380V series

	Model	Input Vdc	Output Vac	Working environment	Dimensions mm	Output Power Kw	Net Weight Kg	Cooling	Communication	Protection
	NBQ380-380-20KW	360 V (200-460V)	380V/60Hz	-40°C to 55°C	480 × 420 × 144	20	35	Fan cooling	CAN	IP54 (shock-resistant)
	NBQ380-380-40KW	360 V (200-460V)	380V/60Hz	-40°C to 55°C	560 × 390 × 181	40	44	Fan cooling	CAN	IP54 (shock-resistant)
	NBQ380-380-60KW	360 V (200-460V)	380V/60Hz	-40°C to 55°C	580 × 530 × 317	60	66	Fan cooling	CAN	IP54 (shock-resistant)
	NBQ380-380-80KW	360 V (200-460V)	380V/60Hz	-40°C to 55°C	580 × 530 × 407	80	90	Fan cooling	CAN	IP54 (shock-resistant)
	NBQ380-380-100KW	360 V (200-460V)	380V/60Hz	-40°C to 55°C	580 × 530 × 497	100	110	Fan cooling	CAN	IP54 (shock-resistant)
	NBQ380-380-120KW	360 V (200-460V)	380V/60Hz	-40°C to 55°C	580 × 530 × 587	120	135	Fan cooling	CAN	IP54 (shock-resistant)
	NBQ380-380-140KW	360 V (200-460V)	380V/60Hz	-40°C to 55°C	580 × 530 × 677	140	170	Fan cooling	CAN	IP54 (shock-resistant)
	NBQ380-380-160KW	360 V (200-460V)	380V/60Hz	360 V (200-460V)	580 × 530 × 767	160	200	Fan cooling	CAN	IP54 (shock-resistant)

PROYAKA CONVERTER

Energy Storage Inverter

CANBUS

540V



NBQ540 Single phase 240V series

	Model	Input Vdc	Output Vac	Working environment	Dimensions mm	Output Power Kw	Net Weight Kg	Cooling	Communication	Protection
	NBQ540-240-3KW	540 V (300-760V)	240V/60Hz	-40°C to 55°C	310 × 230 × 104	3	10	Fan cooling	CAN	IP65
	NBQ540-240-6.5KW	540 V (300-760V)	240V/60Hz	-40°C to 55°C	341 × 281 × 140	6.5	10	Fan cooling	CAN	IP65
	NBQ540-240-12KW	540 V (300-760V)	240V/60Hz	-40°C to 55°C	362 × 308 × 207	12	18	Fan cooling	CAN	IP65
	NBQ540-240-15KW	540 V (300-760V)	240V/60Hz	-40°C to 55°C	362 × 308 × 207	15	18	Fan cooling	CAN	IP65

NBQ540 3-phase 380V series

	Model	Input Vdc	Output Vac	Working environment	Dimensions mm	Output Power Kw	Net Weight Kg	Cooling	Communication	Protection
	NBQ540-240-20KW	540 V (300-760V)	380V/60Hz	-40°C to 55°C	480 × 420 × 144	20	35	Fan cooling	CAN	IP54 (shock-resistant)
	NBQ540-240-40KW	540 V (300-760V)	380V/60Hz	-40°C to 55°C	560 × 390 × 181	40	44	Fan cooling	CAN	IP54 (shock-resistant)
	NBQ540-240-60KW	540 V (300-760V)	380V/60Hz	-40°C to 55°C	580 × 530 × 317	60	66	Fan cooling	CAN	IP54 (shock-resistant)
	NBQ540-240-80KW	540 V (300-760V)	380V/60Hz	-40°C to 55°C	580 × 530 × 407	80	90	Fan cooling	CAN	IP54 (shock-resistant)

PROYAKA CONVERTER

DCDC converter

KS540 - 27.5V series

	Model	Input Vdc	Output Vdc	Working environment	Dimensions mm	Output Power Kw	Net Weight Kg	Cooling	Communication	Protection
	KS540-27.5-3KW	540 V (300-760V)	13.8V/27.5V	-40°C to 55°C	178 × 201 × 111	3	1.2	Fan cooling	CAN	IP65
	NBQ540-27.5-6KW	540 V (300-760V)	13.8V/27.5V/48V	-40°C to 55°C	380 × 243 × 134	6	1.5	Fan cooling	CAN	IP65