KOLT

Military Power Solutions

Product Catalog

About KOLT

KOLT

Vision & Mission

We aim to inspire our geography by exporting technology worldwide.

Not limited to local borders, we aim to expand and be a global manufacturer in power electronics by designing beyond state-of-the-art military power supplies.

We believe that the way to success is to build strong relationships by creating high value for our customers, employees, and investors.

Contents

Your Power Solutions Provider

KOLT is a leading manufacturer of high-reliability power solutions to Defense, Aerospace, and Industrial markets.

In our vertically integrated facilities, we design our products from scratch, manufacture and test totally in house using our latest technology equipments.

KOLT's innovative products are designed to exceed the demanding performance, quality, and reliability requirements of today's power electronics applications.

KOLT has a complete staff of engineers whose specialties include electrical and mechanical design, packaging, and testing. From engineering design to finished products, we can meet your power system requirements with innovative solutions.

KOLT is certified with ISO9001, ISO14001, ISO45001, and NATO Facility Security Clearance. Our AS9100 certification is in progress and to be received starting 2023.

Our History

KOLT

OUR STORY

Design & Manufacturing
2014 | 2016

Mechanical Manufacturing for Automotive
Electronics Design Services for Defense
Serial Production for KOLT Designs

Product & Organization
2017 | 2020

Transition to Product Based Company
Sales Organization
Employee Stock Option Plan (VPs)

Exporting Technology
2021 | 2030

First Choice for Turkish Customers
Global Player in Power Electronics
Average Annual Growth: %40

2000+ units | 30000+ boards | 5000+ on field | 40+ design projects

FACILITIES

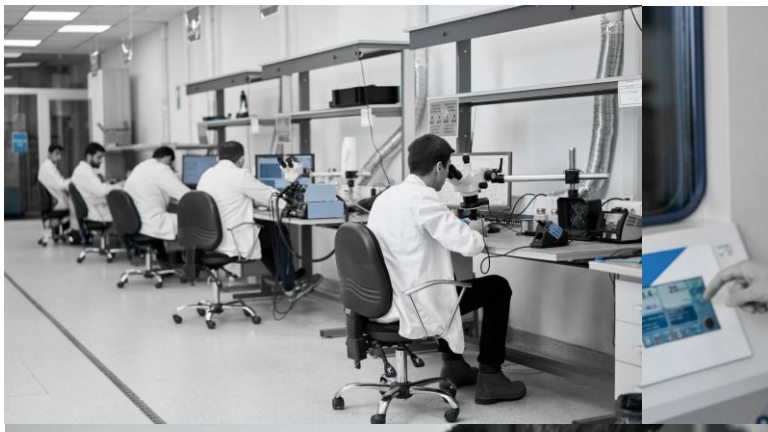
Automated Soldering
- Full LOT traceability
- ASM SIPLACE, DEK Pick & Place
- PYRAMAX BTU Nitrogen Reflow
- Nordson 460S Selective Soldering

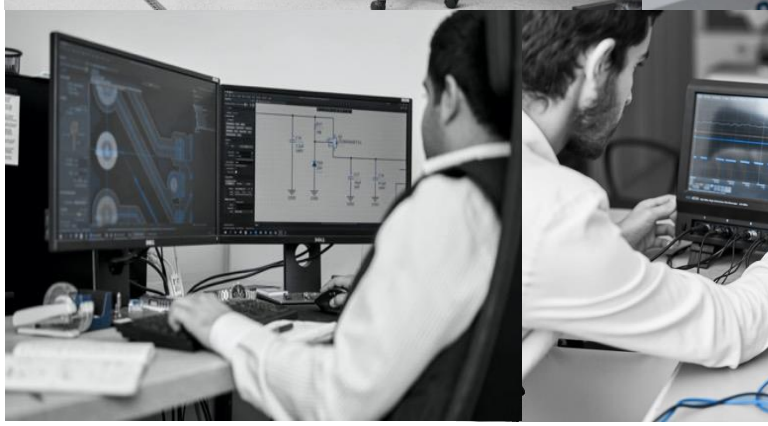
Precision Machining
- DMG MORI – CMX 600 V
- SPINNER – U630 5-axis

Electromechanical Assembly
- J-STD-001 & IPC-A-610
- IPC/WHMA-A-620 Workmanship

Testing
- Climatic Test Equipment
- Control Loop Analyzer
- AC/DC Transient Power Supplies
- EMI/EMC Test Equipment (CE102)

Quality
- ISO 9001:2015
- ASELSAN & ROKETSAN QML and QVL
- IPC (7711/7721C, A-610, WHMA-A-620, J-STD-001)
- AS9100 certification is due for 2023-Q1





2500 m^2 total floor

Govt. approved R&D Center

NATO & MSB Facility Security Certificate

8000 m^2 Factory expansion planned @ HAB, Ankara

KOLT

1. BRICK MODULES

Passive EMI Filter Modules, Quarter Brick

KOLT

Part Number & Ordering Information*

Family	Input Voltage	Maximum Current	Filter Type/ Clamping Voltage	Package	Baseplate	Options
KRFL01	**DC28WE:** 9-70 V	**C20:** 20 A **C30:** 30 A	**P:** Passive	**QB:** Quarter Brick	**F**: Flanged **H:** Half Threaded	**-**

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Passive EMI filter packaged in a quarter brick
- Wide Input voltage range: 9-70 VDC
- Low DC resistance and low drop-out voltage
- > 36 dB differential-mode attenuation at 250 kHz
- > 41 dB common-mode attenuation at 250 kHz

Size: 58.4 × 36.8 × 12.9 mm

Product Description

KRFL01 is an EMI filter based on uniquely configured differential-mode and common-mode passive stages with damping circuits that eliminate undesired resonance and oscillations. Unit is also equipped with large value capacitors with series resistors to correct the stability problems caused by the negative input resistance of converters to be interfaced. For extended reliability, our filters are using X7R multilayer ceramic capacitors only.

Designed to Meet

*with brick modules

- MIL-STD-461 (D, E, F, G)
- MIL-STD-810

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-55 to +100 ℃
Storage Temperature	-55 to +125 ℃

Screening

- Full LOT traceability
- Burn-in at 100 ℃ baseplate temperature
- Temperature cycling per MIL-STD-883
- Available with different screening grades
- IPC-610, Class III Inspection
- Final visual inspection per MIL-STD-883

Part Number & Ordering Information*

Family	Input Voltage	Maximum Current	Filter Type/ Clamping Voltage	Package	Baseplate	Options
KMFL05	**DC28E:** 9-40 V	**C30:** 30A	**DC40:** 40 V	**HB:** Half Brick	**F**: Flanged **H:** Half Threaded	-

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Active EMI filter cased into a half brick package
- Unique suppression circuitry to clamp surge and spikes
- Rated for 30 A output current
- Soft-Start feature to limit in-rush
- Reverse polarity protection
- Short-circuit protection
- ON/OFF control
- Standby feature to minimize quiescent power
- Very low DC resistance and low drop out voltage

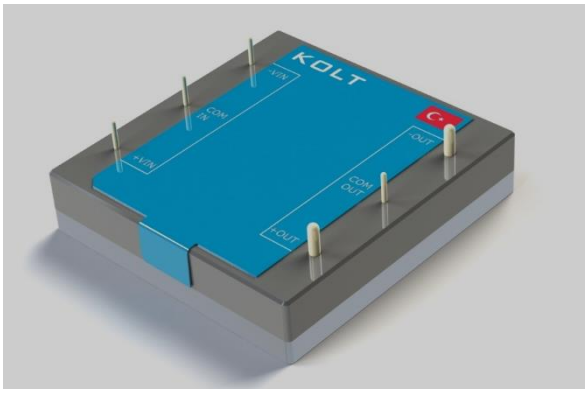
Product Description

KMFL05 is an active EMI filter based on uniquely configured differential-mode and common-mode passive stages with damping circuits that eliminate undesired resonance and oscillations. Unit is also equipped with large value capacitors with series resistors to correct the stability problems caused by the negative input resistance of converters to be interfaced. For extended reliability, our filters are using X7R multilayer ceramic capacitors only.

Thanks to our embedded soft-start circuitry, unit offers an inrush free operation when interfaced with capacitive loads. Similarly, a surge and spike free operation of downstream converts is guaranteed by our transient voltage suppression circuitry. Finally, a low-loss MOSFET based reverse polarity protection feature assures the filter's reliability against any misuse yet not compromising on the efficiency.

Designed to Meet

- MIL-STD-461 (D, E, F, G)
- MIL-STD-704 (A-F)
- MIL-STD-1275 (D, E)
- MIL-STD-810



Size: 63.2 × 60.6 × 12.9 mm

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +100 °C
Storage Temperature	-55 to +125 °C

Screening

- Full LOT traceability
- Burn-in at 100 °C baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

Part Number & Ordering Information*

Family	Input Voltage	Power	Output Voltage	Package	Baseplate	Options
KMNB01	**DC28E:** 9-40 V	**P100:** 100 W **P200:** 200 W **P300:** 300 W	**DC3V3:** 3.3 V **DC5:** 5 V	**SB:** Sixteenth Brick	**F**: Flanged **H:** Half Threaded	**PM**: PMBUS

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Non-isolated DC-DC 1/16th Brick Module
- Delivers power up to 300 W
- Rated for 60 A output current
- Peak efficiency 93.6%
- Input UVLO and OVLO protections
- Output over voltage protection
- Output overcurrent protection
- Output short-circuit protection
- Thermal Shutdown
- On/Off Control
- Trim range +20%, -20%
- PMBUS pins are only present in PMBUS option

Size: 36.5 × 26.3 × 12.9 mm

Product Description

KMNB01 is a high power density product that solves your power regulation problems in applications where the lightweight and the small size are the most critical. This sixteenth brick DC-DC converter module performs regulation in BUCK mode and delivers up to 300 W and 60 A continuous current. It operates over a wide range of input from 9 V to 40 V. The advanced thermal management of the brick engineered by KOLT allows operation of the converter in hot environment.

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +100 °C
Storage Temperature	-55 to +125 °C

Designed to Meet

*with EMI filter module

- MIL-STD-461 (D, E, F, G)
- MIL-STD-704 (A-F)
- MIL-STD-1275 (D, E)
- MIL-STD-810

Screening

- Full LOT traceability
- Burn-in at 100 °C baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

Part Number & Ordering Information*

Family	Input Voltage	Power	Output Voltage	Package	Baseplate	Options
KMNB02	**DC28E:** 9-40 V	**P100:** 100 W **P200:** 200 W **P300:** 300 W	**DC12:** 12V **DC15:** 15V **DC24:** 24V **DC28:** 28V	**SB:** Sixteenth Brick	**F**: Flanged **H:** Half Threaded	**PM**: PMBUS

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Non-isolated DC-DC 1/16th Brick Module
- Delivers power up to 300 W
- Rated for 60 A output current
- Input UVLO and OVLO protections
- Output over voltage protection
- Output overcurrent protection
- Output short-circuit protection
- Thermal Shutdown
- On/Off Control
- Trim range +20%, -20%
- PMBUS pins are only present in PMBUS option

Size: 36.5 × 26.3 × 12.9 mm

Product Description

KMNB01 is a high power density product that solves your power regulation problems in applications where the lightweight and the small size are the most critical. This sixteenth brick DC-DC converter module performs regulation in BUCK-BOOST mode and delivers up to 300 W and 60 A continuous current. It operates over a wide range of input from 9 V to 40 V. The advanced thermal management of the brick engineered by KOLT allows operation of the converter in hot environment.

Designed to Meet

*with EMI filter module

- MIL-STD-461 (D, E, F, G)
- MIL-STD-704 (A-F)
- MIL-STD-1275 (D, E)
- MIL-STD-810

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +100 ℃
Storage Temperature	-55 to +125 ℃

Screening

- Full LOT traceability
- Burn-in at 100 ℃ baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

16-40 Vdc Input, Isolated DC-DC Converters, Quarter Brick

KOLT

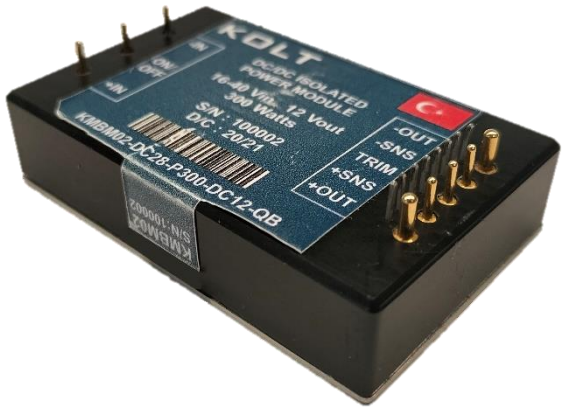
Part Number & Ordering Information*

Family	Input Voltage	Power	Output Voltage	Package	Baseplate	Options
KMBM02	**DC28:** 16-40 V	**P100:** 100 W **P200:** 200 W **P300:** 300 W	**DC3V3:**3.3 V **DC5:** 5 V **DC12:** 12 V **DC24:** 24 V **DC28:** 28 V	**QB:** Quarter Brick	**F**: Flanged **H:** Half Threaded	**PM**: PMBUS

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Isolated DC-DC Quarter Brick Module
- Galvanic isolation
- Delivers power up to 300 W
- Input UVLO and OVLO protections
- Output over voltage protection
- Output over current protection
- Output short-circuit protection
- Thermal Shutdown
- On/Off Control
- Trim range +15%, -30%
- PMBUS pins are only present in PMBUS option



Size: 58.4 × 36.8 × 12.9 mm

Product Description

KMBM02 is an isolated quarter brick module that operates over an input voltage range from 16 V to 40 V and regulates voltages from 3.3 V to 28 V with very low ripple. This quarter brick DC-DC converter module delivers up to 300 W.

Designed to Meet

*with EMI filter module

- MIL-STD-461 (D, E, F, G)
- MIL-STD-704 (A-F)
- MIL-STD-1275D
- MIL-STD-810

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +100 °C
Storage Temperature	-55 to +125 °C

Screening

- Full LOT traceability
- Burn-in at 100 °C baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

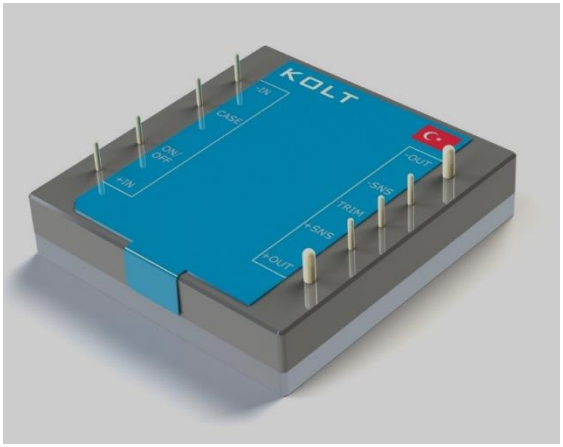
Part Number & Ordering Information*

Family	Input Voltage	Power	Output Voltage	Package	Baseplate	Options
KMBM03 **KRBM03** (-55 ℃)	**DC28:** 16-40 V	**P100:** 100 W **P200:** 200 W **P300:** 300 W	**DC3V3:** 3.3 V **DC5:** 5 V **DC12:** 12 V **DC24:** 24 V **DC28:** 28 V	**HB:** Half Brick	**F**: Flanged **H:** Half Threaded	**PM**: PMBUS

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Delivers power up to 300 W
- Input UVLO and OVLO protections
- Output over voltage protection
- Output over current protection
- Output short-circuit protection
- Thermal Shutdown
- On/Off Control
- Trim range +15%, -30%
- PMBUS pins are only present in PMBUS option



Size: 63.2 × 60.6 × 12.9 mm

Product Description

KMBM03/KRBM03 is an isolated half brick module that operates over a wide input voltage range from 16 V to 40 V and regulates voltages from 3.3 V to 28 V with very low ripple. This half brick DC-DC converter module delivers 300 W and 25 A continuous current. It is designed to meet EMI requirements and has superior noise and ripple performance. Converter is fully protected to operate reliably under all kinds of disturbances. The advanced thermal management of the brick engineered by KOLT allows operation of the converter in hot environment.

Designed to Meet

*with EMI filter module

- MIL-STD-461 (D, E, F, G)
- MIL-STD-704 (A-F)
- MIL-STD-1275D
- MIL-STD-810

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +100 ℃
Storage Temperature	-55 to +125 ℃

KRBM03 Version

Parameter	Value
Operating Temperature	-55 to +100 ℃
Storage Temperature	-55 to +125 ℃

Screening

- Full LOT traceability
- Burn-in at 100 ℃ baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

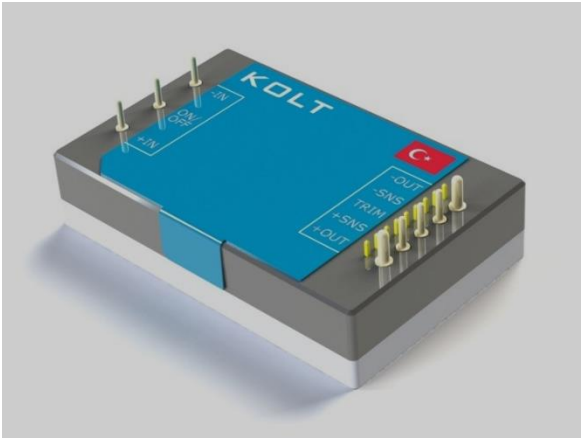
Part Number & Ordering Information*

Family	Input Voltage	Power	Output Voltage	Package	Baseplate	Options
KMBM04	**DC28WE:** 9-70 V	**P84:** 84 W	**DC3V3:** 3.3 V **DC5:** 5 V **DC12:** 12 V **DC24:** 24 V **DC28:** 28 V	**QB:** Quarter Brick	**F**: Flanged **H:** Half Threaded	**PM**: PMBUS

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Wide extended input voltage
- Delivers power up to 84 W
- Input UVLO and OVLO protections
- Output over voltage protection
- Output over current protection
- Output short-circuit protection
- Thermal Shutdown
- On/Off Control
- Trim range +15%, -30%
- PMBUS pins are only present in PMBUS option



Size: 58.4 × 36.8 × 12.9 mm

Product Description

KMBM04 is an isolated quarter brick module that operates over a wide extended input voltage range from 9 V to 70 V and regulates voltages from 3.3 V to 28 V with very low ripple. This quarter brick DC-DC converter module delivers up to 84 W.

Designed to Meet

*with EMI filter module

- MIL-STD-461 (D, E, F, G)
- MIL-STD-704 (A-F)
- MIL-STD-1275 (D, E)
- MIL-STD-810

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +100 °C
Storage Temperature	-55 to +125 °C

Screening

- Full LOT traceability
- Burn-in at 100 °C baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

Part Number & Ordering Information*

Family	Input Voltage	Power	Output Voltage	Package	Baseplate	Options
KMBM05 **KRBM05** (-55 °C)	**DC28WE:** 9-70 V	**P150:** 150 W **P250:** 250 W	**DC3V3:** 3.3 V **DC5:** 5 V **DC12:** 12 V **DC24:** 24 V **DC28:** 28 V	**HB:** Half Brick	**F**: Flanged **H:** Half Threaded	**PM**: PMBUS

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Wide extended input voltage
- Input UVLO and OVLO protections
- Output over voltage protection
- Output overcurrent protection
- Output short-circuit protection
- Thermal Shutdown
- On/Off Control
- Trim range +10%, -20%
- Predictable EMI feature due to fixed switching frequency
- No minimum load requirement
- PMBUS pins are only present in PMBUS option

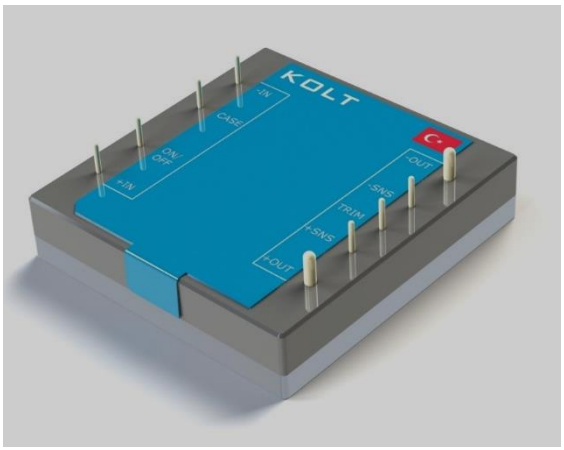
Product Description

KMBM05/KRBM05 is an isolated half brick module that operates over a wide extended input voltage range from 9 V to 70 V and regulates voltages from 3.3 V to 28 V with very low ripple. This quarter brick DC-DC converter module delivers up to 250 W.

Designed to Meet

*with EMI filter module

- MIL-STD-461 (D, E, F, G)
- MIL-STD-704 (A-F)
- MIL-STD-1275 (D, E)
- MIL-STD-810



Size: 63.2 × 60.6 × 12.9 mm

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +100 °C
Storage Temperature	-55 to +125 °C

KRBM05 Version

Parameter	Value
Operating Temperature	-55 to +100 °C
Storage Temperature	-55 to +125 °C

Screening

- Full LOT traceability
- Burn-in at 100 °C baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

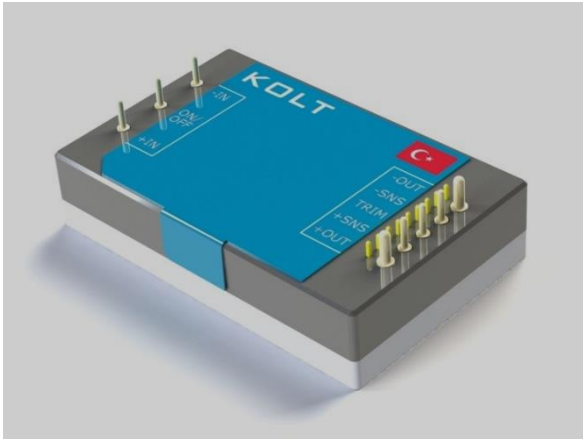
Part Number & Ordering Information*

Family	Input Voltage	Power	Output Voltage	Package	Baseplate	Options
KMBM06	**DC270:** 250-425 V	**P75:** 75 W	**DC12:** 12 V **DC15:** 15 V **DC24:** 24 V **DC28:** 28 V	**QB:** Quarter Brick	**F**: Flanged **H:** Half Threaded	**PM**: PMBUS

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Up to 75 W continuous power
- Input UVLO and OVLO protections
- Output over voltage protection
- Output overcurrent protection
- Output short-circuit protection
- Thermal Shutdown
- On/Off Control
- Trim range +10%, -20%
- Predictable EMI feature due to fixed switching frequency
- No minimum load requirement
- PMBUS pins are only present in PMBUS option



Size: 58.4 × 36.8 × 12.9 mm

Product Description

KMBM06 is an isolated half brick module that operates over a high voltage wide input voltage range from 250 V to 425 V and regulates voltages from 12 V to 28 V with very low ripple. This quarter brick DC-DC converter module delivers up to 75 W.

Designed to Meet

*with EMI filter module

- MIL-STD-461 (D, E, F, G)
- MIL-STD-810

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +100 °C
Storage Temperature	-55 to +125 °C

Screening

- Full LOT traceability
- Burn-in at 100 °C baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMRM01	**DC28:** 16-40 V	**P100:** 100 W **P200:** 200 W **P300:** 300 W	**DC3:** 3.3 V **DC5:** 5 V **DC12:** 12 V **DC24:** 24 V **DC28:** 28 V	**CM:** Custom Module	**PM**: PMBUS

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Isolated, Regulated Rugged DC-DC Converter Module
- Internal input EMI filter
- Overcurrent protection
- Short-circuit protection
- Input under voltage protection
- Input over voltage protection
- Output over voltage protection
- Thermal Shutdown
- On/Off Control
- Trim range +10%, -30%

Size: 100 × 80 × 23.4 mm

Product Description

KMRM01 is a DC/DC isolated rugged converter module that operates over input voltage range (16-40 V) and generates a regulated DC output. Module is fully protected against all kinds of faults and disturbances guaranteeing hassle-free operation in the field. KOLT's innovative thermal design allows continuous and safe operation at rated load in hot conditions.

Designed to Meet

- MIL-STD-461 (D, E, F, G)
- MIL-STD-704 (A-F)
- MIL-STD-1275D
- MIL-STD-810

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +100 ℃
Storage Temperature	-55 to +125 ℃

Screening

- Full LOT traceability
- Burn-in at 100 ℃ baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMRM03	**DC28WE:** 9-70 V	**P84:** 84 W	**DC3:** 3.3 V **DC5:** 5 V **DC12:** 12 V **DC24:** 24 V **DC28:** 28 V	**CM:** Custom Module	**PM**: PMBUS

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Wide input voltage range
- Isolated, Regulated Rugged DC-DC Converter Module
- Internal input EMI filter
- Overcurrent protection
- Short-circuit protection
- Input under voltage protection
- Input over voltage protection
- Output over voltage protection
- Thermal Shutdown
- On/Off Control
- Trim range +10%, -30%

Size: 100 × 80 × 23.4 mm

Product Description

KMRM03 is a DC/DC isolated rugged converter module that operates over wide extended input voltage range (9-70 V) and generates a regulated DC output. Module is fully protected against all kinds of faults and disturbances guaranteeing hassle-free operation in the field. KOLT's innovative thermal design allows continuous and safe operation at rated load in hot conditions.

Designed to Meet

- MIL-STD-461 (D, E, F, G)
- MIL-STD-704 (A-F)
- MIL-STD-1275 (D, E)
- MIL-STD-810

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +100 ℃
Storage Temperature	-55 to +125 ℃

Screening

- Full LOT traceability
- Burn-in at 100 ℃ baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

KOLT

2. VPX Power Supplies

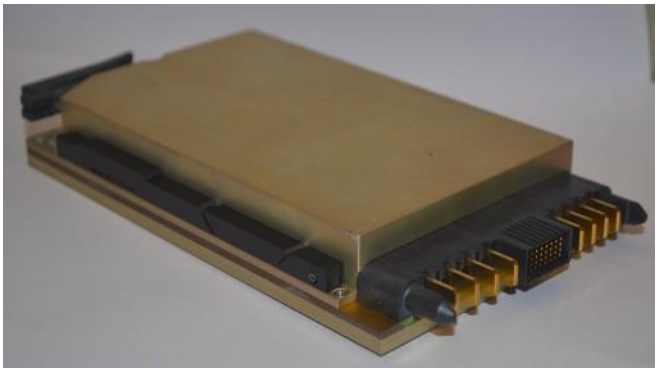
Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMPS01	**AC3D115:** 3-Phase Delta 115VAC	**P200:** 200 W	**DC28:** 28 V	**VX:** VPX	-

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- 3-ph 115 V ungrounded AC input per MIL-STD-1399
- Input Frequency: 47-63 Hz
- True 3-phase active PFC topology
- 28 VDC Output
- High Efficiency
- Isolated Outputs
- EMI Filters Included
- Non-latching Protections
- 5HP Pitch, 3U IAW Vita 62
- Fixed Switching Frequency
- Trim range +15%, -30%



Size: 180 x 100 x 25.4 mm

Product Description

This configurable power board designed to meet the unique and challenging environmental requirements of defense applications. This VPX Board has 3U form factor. Board delivers up to 200 W power with high efficiency.

Designed to Meet

- MIL-STD-461 (D, E, F, G)
- MIL-STD-1399
- MIL-STD-810

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +71 ℃
Storage Temperature	-40 to +125 ℃

Screening

- Full LOT traceability
- Burn-in at 71 ℃ card-edge temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMPS02	**DC28:** 16-40 V	**P300:** 300 W	**DC12:** 12 V	**VX:** VPX	

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- SOSA aligned ANSI/VITA 62.0 3U DC-DC Power Supply
- 16-40 VDC Input per MIL-STD-1275E
- 12VDC primary, 3,3VDC auxiliary output
- High Efficiency
- Isolated Outputs
- EMI Filters Included
- Non-latching Protections
- Fixed Switching Frequency

Product Description

This configurable power board designed to meet the unique and challenging environmental requirements of defense applications. This VPX Board has 3U form factor. Board delivers up to 330 W power with high efficiency. Available with short time delivery and custom configurations, the KOLT VPX is ready for most demanding military applications.

Designed to Meet

- MIL-STD-461 (D, E, F, G)
- MIL-STD-1275 (D, E)
- MIL-STD-810

Size: 168 x 100 x 25.4 mm

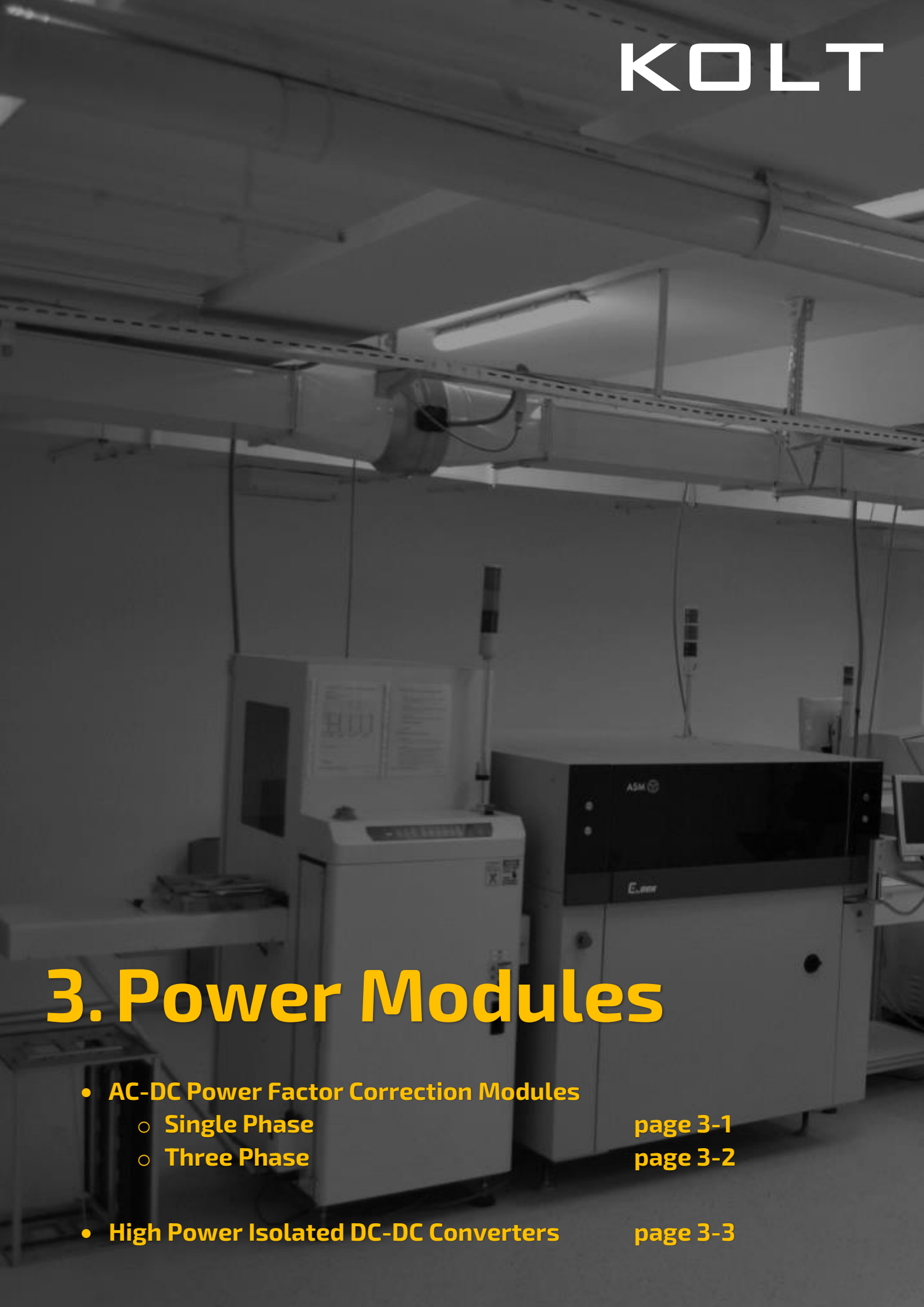
Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +85 ℃
Storage Temperature	-40 to +125 ℃

Screening

- Full LOT traceability
- Burn-in at 85 ℃ card-edge temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection



3. Power Modules

Single Phase Power Factor Correction Module

KOLT

Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMPF03	**AC1UNV:** Single Phase Universal 90-265 Vac	**P2K5:** 2.5 KW **P3K5:** 3.5 KW	**DC400:** 400 VDC	**CM:** Custom Module	-

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- AC/DC Power Factor Correction Module
- Input frequency range: 47-63 Hz
- Power Factor > 0.99
- Up to 3500 W, 8,75 A continuous output
- Internal input EMI filter
- Active inrush current limiting
- Auto-recovery input under/over voltage protection
- Input current protection
- Auto-recovery over current protection
- Auto-recovery short-circuit protection
- Auto-recovery output over voltage protection

Size:	201.5 × 131.5 × 38 mm
Weight:	1.5 kg

Product Description

KMPF03 is an AC/DC power factor correction module with a power capacity up to 3500 W that operates from a universal single-phase AC input and generates constant 400 V dc output. Module draws a nearly sinusoidal current with less than 5% THD and close to unity power factor. Converter is fully protected against all external faults and disturbances. The innovative baseplate cooling technology engineered by KOLT allows adaptation of different cooling strategies including liquid baseplate cooling. The natural and forced air cooling strategies can also be implemented via mounting on an external heatsink with peace of mind.

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +85 ℃
Storage Temperature	-55 to +125 ℃

Designed to Meet

- MIL-STD-461 (D, E, F, G)
- MIL-STD-810

Screening

- Full LOT traceability
- Burn-in at 85 ℃ baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMPF02	**AC3D440:** 3-Phase Delta 440VAC	**P2K5:** 2.5 KW **P3K5:** 3.5 KW	**DC400:** 400 VDC	**CM:** Custom Module	

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

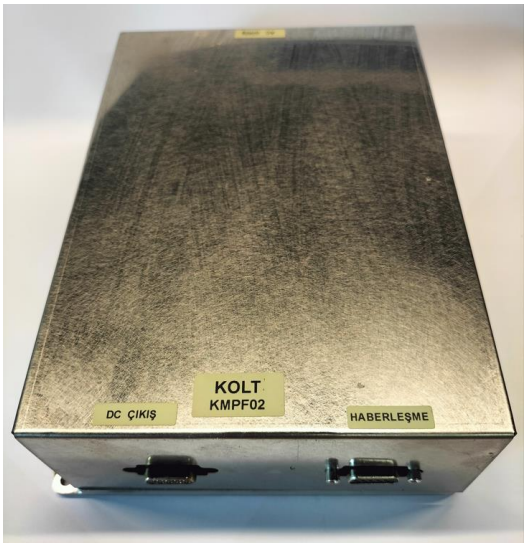
- True 3-Phase Power Factor Correction
- Operation Without "Neutral Wire"
- Wide Input Voltage Range: 360–528 VLL_RMS
- Internal Input EMI Filter
- Virtually No Inrush Current
- Input Frequency: 47-63 Hz
- Less than 5% THD of AC Input Current
- Power Factor > 0.99
- Non-Isolated Output
- Baseplate Conduction Cooled
- RS-485 Communication
- Auto-Recovery Input UV/OV Protection
- Auto-Recovery Over Temperature Protection
- Input OC Protection

Product Description

KMPF02 is a low profile and compact 3500 W single output non-Isolated PFC Module with 3-phase 3-wire, 47-63 Hz, delta input. Module can operate over a wide input voltage range (360–528 VLL_RMS) and generates constant 400 V dc output. KMPF02 draws a nearly sinusoidal current with less than 5% THD and close to unity power factor. It has superior protection features backed by analog comparators that guarantees hassle free operation.
Since the module is cooled via baseplate, it can be used with different cooling applications, including liquid baseplate cooling.

Designed to Meet

- MIL-STD-461 (D, E, F, G)
- MIL-STD-1399
- MIL-STD-810



Size:	195 × 131 × 60 mm
Weight:	2 kg

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +85 °C
Storage Temperature	-55 to +125 °C

Screening

- Full LOT traceability
- Burn-in at 85 °C baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMPM02	**DC400:** 250-425 VDC	**P1K5:** 1.5 KW **P3K5:** 3.5 KW	**DC12:** 12 VDC **DC15:** 15 VDC **DC28:** 28 VDC **DC36:** 36 VDC **DC48:** 48 VDC **DC270:** 270 VDC	**CM:** Custom Module	

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Wide input voltage range
- High efficiency and high power density
- Baseplate conduction cooled
- RS-485 communication
- Input UV/OV protection
- Output OV protection
- Short circuit protection
- Over temperature protection

Product Description

KMPM02 is a low profile and compact single output isolated DC-DC converter for rugged applications requiring a regulated DC voltage at the output. This converter operates from a wide range DC input (250-425 V) and has superior protection features backed by analog comparators. The innovative baseplate cooling technology engineered by KOLT allows adaptation of different cooling strategies including liquid baseplate cooling.

Designed to Meet

*with EMI filter module

- MIL-STD-461 (D, E, F, G)
- MIL-STD-810

Size:	167 × 131 × 34 mm
Weight:	1.5 kg

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +85 °C
Storage Temperature	-55 to +125 °C

Screening

- Full LOT traceability
- Burn-in at 85 °C baseplate temperature
- Temperature cycling
- Available with different screening grades
- Final visual inspection

KOLT

4. Power Supplies & Battery Chargers

- Single Phase Universal AC Input Power Supply & Battery Charger
- Universal Three Phase AC-DC Power Supply
- Three Phase Naval AC-DC VPX Power Supply
- Three Phase Naval AC-DC Power Supply

Single Phase Universal AC Input Power Supply & Battery Charger

KOLT

Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMBC02	**AC1UNV:** Single Phase Universal 90-265 Vac	**P2K5:** 2.5 kW **P3K5:** 3.5 kW	**DC12:** 12 VDC **DC15:** 15 VDC **DC28:** 28 VDC **DC36:** 36 VDC **DC48:** 48 VDC **DC270:** 270 VDC	**EN:** Enclosed	**H:** 300 Vac continuous input

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- 19"/2 form factor, 2U height
- 90-265 Vac input, optional 300 Vac continuous
- Input Frequency: 47-63 Hz
- Can be configured by the end user as a power supply & battery charger
- High efficiency, high power density
- Power Factor Correction
- IP67 sealed
- RS-485 communication
- Input UV/OV protection
- Output OV Protection
- Output short circuit protection
- Over temperature protection
- Charger for Lead-Acid and Li-Ion Batteries
- Droop & Active Current Sharing
- Internal ORing diode
- Can be used in as N+1 redundant system

Product Description

KMBC02 is a high efficiency and rugged multifunction AC/DC converter unit that can be operated as a power supply unit and a battery charger. It is designed to guarantee high performance in both modes under extreme environmental conditions. It has superior protection features against external faults and disturbances while meeting the major military standards. KOLT's innovative engineering has enabled a compact design of the converter with high power density and performance.

Designed to Meet

- MIL-STD-461 (D, E, F, G)
- MIL-STD-810

Size:	480×220×88 mm (19"/2 form factor, 2U height)
Weight:	13 kg

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +50 ℃
Storage Temperature	-40 to +85 ℃

Screening

- Full LOT traceability
- Optional burn-in testing
- Temperature cycling
- Available with different screening grades
- Final visual inspection

Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMPS04	**AC3SUNV:** Three Phase Universal 90-265 Vac	**P3K:** 3 kW **P7K:** 7 kW	**DC12:** 12 VDC **DC15:** 15 VDC **DC28:** 28 VDC **DC36:** 36 VDC **DC48:** 48 VDC **DC270:** 270 VDC	**EN:** Enclosed	**H:** 300 Vac continuous input

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- Three phase 90-265 Vac input, optional 300 Vac continuous
- Input Frequency: 47-63 Hz
- Can be configured as a power supply & battery charger
- High efficiency, high power density
- Power Factor Correction
- IP67 sealed
- RS-485 communication
- Input UV/OV protection
- Output OV Protection
- Output short circuit protection
- Over temperature protection

Size:

Size:	432×620×88.1 mm (19" rack 2U height)
Weight:	24 kg

Product Description

KMPS04 is a high efficiency and rugged multifunction AC/DC converter unit that can be operated as a power supply unit and a battery charger. It is designed to guarantee high performance in both modes under extreme environmental conditions. It has superior protection features against external faults and disturbances while meeting the major military standards. KOLT's innovative engineering has enabled a compact design of the converter with high power density and performance.

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +50 °C
Storage Temperature	-40 to +85 °C

Designed to Meet

- MIL-STD-461 (D, E, F, G)
- MIL-STD-810

Screening

- Full LOT traceability
- Optional burn-in testing
- Temperature cycling
- Available with different screening grades
- Final visual inspection

Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMPS01	**AC3D115:** 3-Phase Delta 115VAC	**P2K:** 2 kW	**DC28:** 28 V	**EN:** Enclosed	-

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- 3-ph 115 V Ungrounded AC Input per MIL-STD-1399
- Input Frequency: 47-63 Hz
- Fully isolated outputs
- 28 V DC Output – 9 channels
- 220 W Output power per channel
- N8 V DC Output – 15 W
- Discrete Outputs
- Discrete Inputs
- Built-In-Test (BIT)
- RS422/485 Interface
- 3U VPX form factor enclosure
- Baseplate cooled

Product Description

This environmentally sealed AC-DC power supply is designed for naval electronic warfare power supply systems. It is compact in size and baseplate cooled. Each individual channel has its own built-in test capability.

Designed to Meet

- MIL-STD-461 (D, E, F, G)
- MIL-STD-1399
- MIL-STD-810

Size:	357 x 203 x 138 mm
Weight:	14 kg

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +50 ℃
Storage Temperature	-40 to +85 ℃

Screening

- Full LOT traceability
- Optional burn-in testing
- Temperature cycling
- Available with different screening grades
- Final visual inspection

Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMPS03	**AC3D440:** 3-Phase Delta 440VAC	**P7K5:** 7.5 kW	**DC12:** 12 VDC **DC15:** 15 VDC **DC28:** 28 VDC **DC36:** 36 VDC **DC48:** 48 VDC **DC270:** 270 VDC	**EN:** Enclosed	-

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

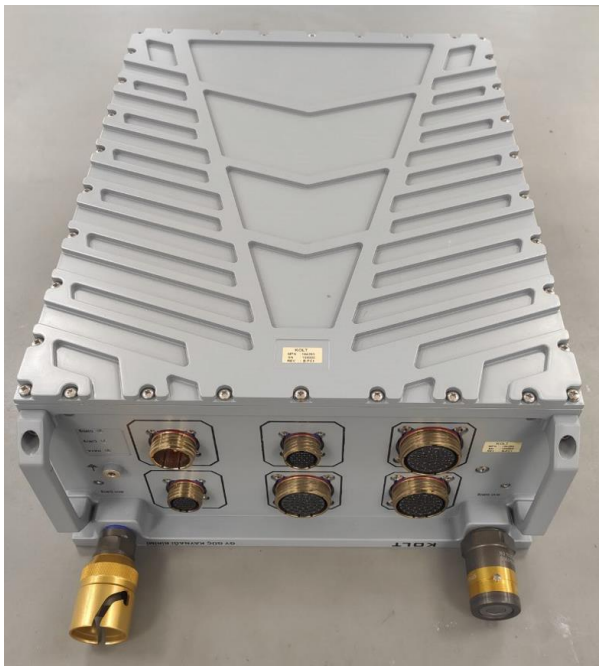
- Rugged unit for military applications
- Isolated AC/DC Power Supply
- 47-63 Hertz (Hz) Input Frequency
- True 3-Phase AC Power Factor Correction
- Less than 5% THD of AC Input Current
- Near Unity Power Factor
- Operation Without "Neutral Wire"
- Wide Input Range 360–528 VLL_RMS
- Up To 7500 W continuous output
- High Efficiency, High Power Density

Product Description

KMPS03 is a high efficiency and rugged power supply to keep you running in many tough military and naval applications. No neutral wire is required for the power supply to draw nearly sinusoidal current and provide a power factor (PF) close to unity. The PFC stage employs digitally controlled true three-phase PFC topology for high front-end efficiency and high power quality. An isolated DC/DC converter delivers power to all types of military loads using the state of the art interfacing components. KMPS03 is fully protected against all kinds of faults and disturbances providing reliable operation in the field.

Designed to Meet

- MIL-STD-461 (D, E, F, G)
- MIL-STD-1399
- MIL-STD-810



Size:	404×391×170 mm
Weight:	28 kg

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +50 °C
Storage Temperature	-40 to +85 °C

Screening

- Full LOT traceability
- Optional burn-in testing
- Temperature cycling
- Available with different screening grades
- Final visual inspection

KOLT

5. DC UPS Systems & Converter Boards

Part Number & Ordering Information*

Family	Input Voltage	Power	Output Voltage	Package
KMUS01	**DC28:** 20-32 V	**P2K2:** 2200 W	**DC28:** 20-32 V	**EN:** Enclosed Systems

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- 80 Amps continuous output
- 20-32 VDC Input & 24-29 VDC Alternator Input
- Built-In 6T Li-Ion Battery
- 3 Toggle Switches for Activating DC Input, Dimming Mode and Output
- RS422/485 Interface
- CAN BUS Interface
- 9 Led Indicators for Input, Output, Alternator and Errors
- Push Button for State of Charge (SoC)

Product Description

Battery Power Control Unit, can charge the built-in 6T Lithium-Ion batteries via vehicle alternator (24/29 VDC), this unit can be charged by both DC and Alternator Inputs and also can provide power from DC output.
This unit has DC input, Alternator, DC Output and maintenance connectors. There are 3 toggle switches on the front panel to activate the DC input, switch to dimming mode and activate the output, and a push button to show the state of charge.
In addition, there are Input, Alternator and Output LEDs on the front panel of the device that shows the active power inputs and active output. If an error condition is detected, the error LED lights up as a warning.

Qualified to Meet

- MIL-STD-461F
- MIL-STD-1275 (D, E)
- MIL-STD-810

Size:	273 x 361.4 x 360 mm
Weight:	34 kg (incl. 120 Ah lit. battery)

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-30 to +50 ℃
Storage Temperature	-40 to +60 ℃

Screening

- Full LOT traceability
- Optional burn-in
- Temperature cycling
- Final visual inspection

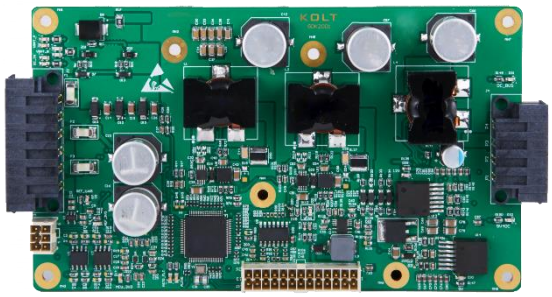
Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMUS02	**DC28:** 20-34 V	**P240:** 240 W	**DC32M:** 5.4 V @ 5.0 A 32 V @ 5,5 A 48 V @ 0.5 A	**CM:** Custom Module	

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- DC Input Simultaneously Charges Battery and Powers DC/DC Regulators
- Regulated 32 VDC output can be powered via DC Input or BB2590 Battery
- Uninterrupted Switching to Battery Power When DC Input Removed
- Built-In-Test (BIT)
- RS422/485 Interface
- On-Off Switch to Power Down Circuit During Storage
- Constant Current and Constant Voltage Battery Charge Mode



Size: 163 x 82 x 30 mm

Product Description

KMUS02 Non-Isolated Bidirectional Power Board when supplied with 20-32 VDC input charges BB2590 battery according to the healthiest smart battery charging protocol. The unit adjusts the percentage zone that CC and CV modes will occupy during the charging time according to the battery voltages.
The built-in microprocessor runs an embedded software that collects board-related information. It can send Built-in Test information or receive specific commands via the communication interface.

Designed to Meet

*with EMI filter module

- MIL-STD-461 (D, E, F)
- MIL-STD-810

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +85 ℃
Storage Temperature	-40 to +125 ℃

Screening

- Full LOT traceability
- Optional burn-in testing
- Available with different screening grades
- Final visual inspection

Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMPM00	**DC28:** 20-34 V	**P380:** 380 W **P450:** 450 W **P500:** 500 W **P550:** 550 W	**DC36M:** 36 V & other outputs **DC32M:** 32 V & other outputs **DC28M:** 28 V & other outputs	**CM:** Custom Module	-

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

- 20-34 VDC Battery Input
- Multiple output configurations
- Outputs can be changed to different voltages
- Adjustable Fan Voltage in 3 Different Levels
- RS422/485 Interface
- High efficiency
- Baseplate cooled

Product Description

These DC/DC PoL Converters, can be powered by batteries or any dc inputs and produces different output voltages. Cooling is done via baseplate. All boards have monitoring and communication capability. Some output voltages can be switched off or fan level can be changed via software.

Designed to Meet

*with EMI filter module

- MIL-STD-461 (D, E, F)
- MIL-STD-810

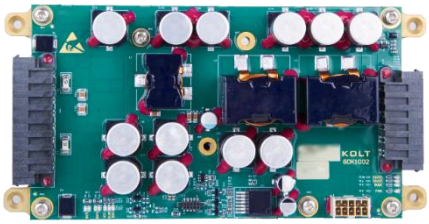
Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +85 °C
Storage Temperature	-40 to +125 °C

Screening

- Full LOT traceability
- Optional burn-in testing
- Available with different screening grades
- Final visual inspection

GDK1002 500 Watts	
	Outputs: 36 V, 28 V and 5.4 V
	Size: 163 × 82 × 25 mm
GDK1003 450 Watts	
	Outputs: 28 V and 5.4 V
	Size: 163 × 82 × 27 mm
GDK1004 380 Watts	
	Outputs: 32 V and 5.4 V
	Size: 120 × 69 × 26 mm
GDK1006 550 Watts	
	Outputs: 28 V, 24 V, 12 V and ±5 V
	Size: 185 × 110 × 19 mm

Part Number & Ordering*

Family	Input Voltage	Power	Output Voltage	Package	Options
KMFL00	**AC1UNV:** Single phase universal AC	**C50:** 50 amps	**AC1UNV:** Single phase universal AC	**EN:** Enclosured package	**VS**: Vibration dampeners **LC**: Ground fault circuit interrupter

* Full part numbering and options are available in the datasheet. "-" sign shall be placed in between all fields.

Features & Benefits

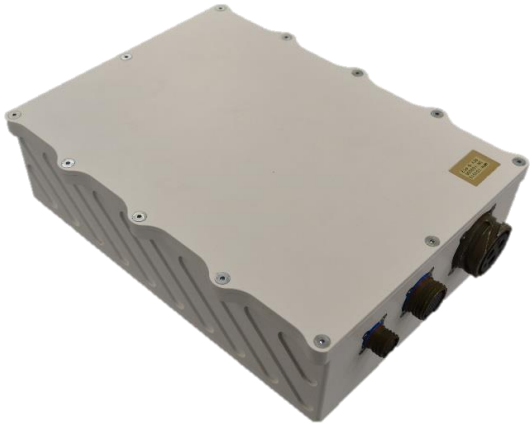
- Lightning protection & EMI filtering across all inputs
- 10 kVA single phase AC input, 85-265 Vac, 47-63 Hz
- 1 Gbps Ethernet connections (x4)
- Phone signals interface (x5)
- Qualified to tracked vehicle vibration (optional feature)

Product Description

KMFL00 is a very rugged input filter & protection unit. Its case is IP67 and it can withstand to major vibration profiles. Unit has EMI filtering & lightning protection across all inputs. Lightning protection on AC lines is compliant to EN 61643 Type 1 and both phase and neutral lines are protected independently.

Designed to Meet

- MIL-STD-810G



Size:	330 x 230 x 89 mm
Weight:	6 kg

Absolute Maximum Ratings

The absolute maximum ratings below are stress ratings only. Operation at or beyond these maximum ratings may cause permanent damage to the device.

Parameter	Value
Operating Temperature	-40 to +50 °C
Storage Temperature	-40 to +63 °C

Screening

- Full LOT traceability
- Optional burn-in testing
- Available with different screening grades
- Final visual inspection

KOLT A.Ş.

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