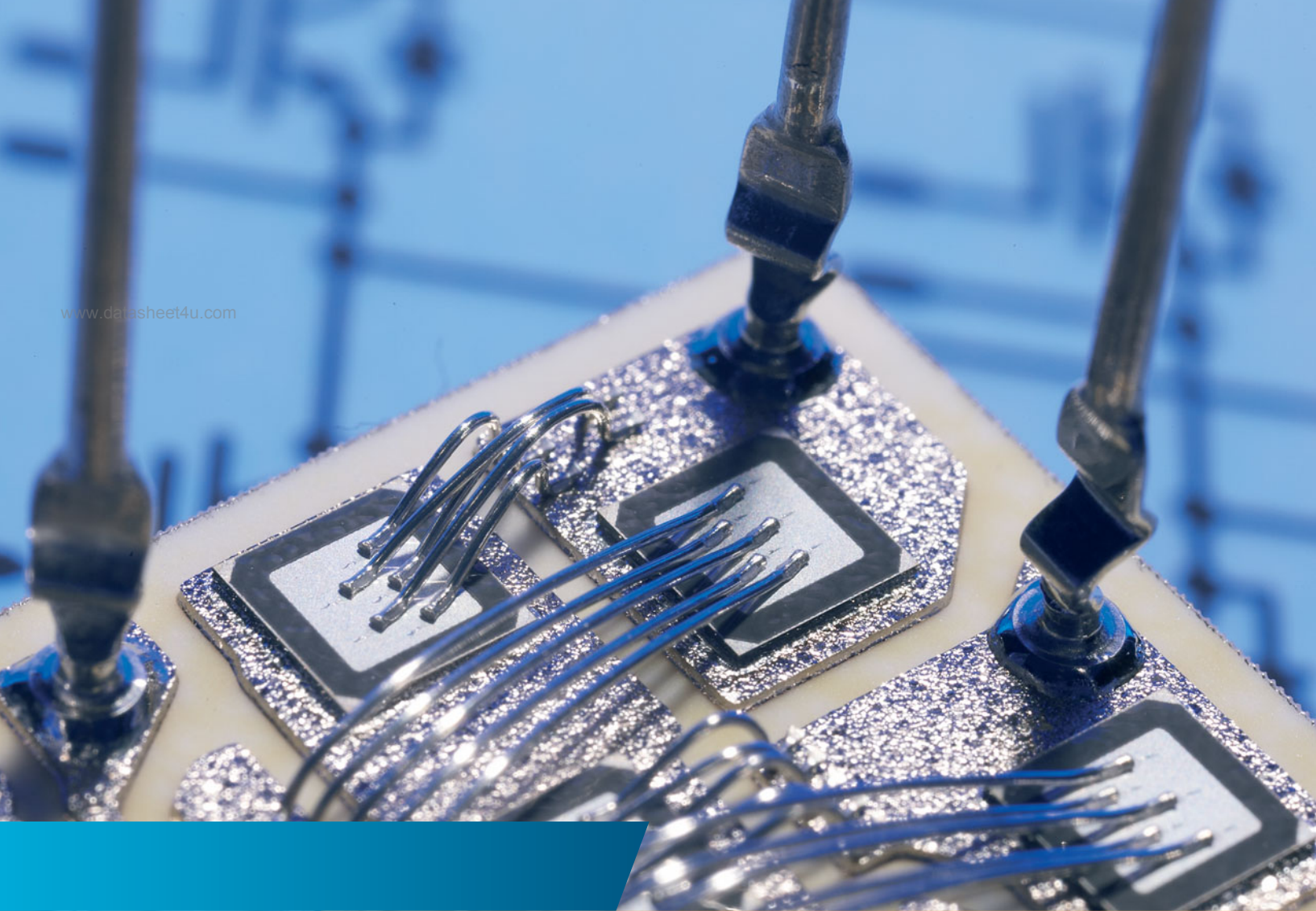
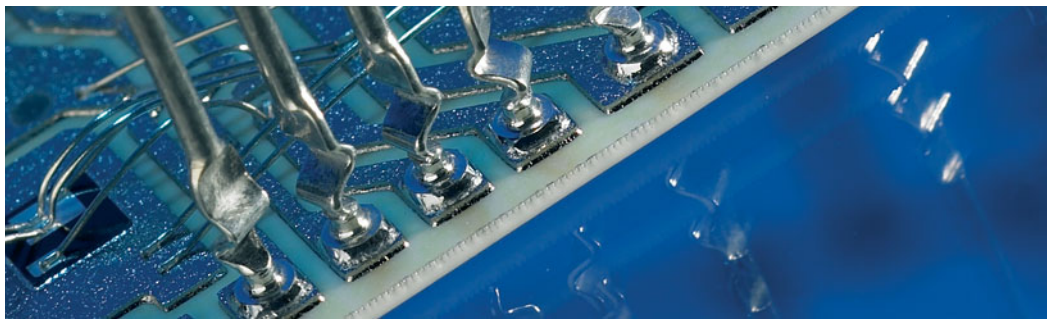




Power Integrated Module Solutions

Tyco Electronics Power Systems is one of the market leaders in Power Modules. Target applications include motor drives, power supplies and welding equipment. With 11 different standard housings and more than 35 standard product families, Tyco Electronics offers a wide power range using different topologies.

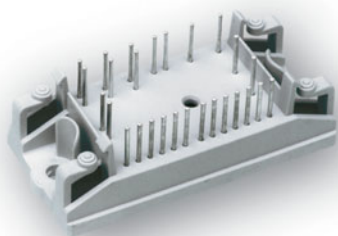


The products include Power Integrated Modules (combination of input rectifiers, six pack inverter and brake chopper), six pack modules , PFC-, H-bridge and half-bridge modules. Tyco Electronics covers a broad power spectrum, ranging from 5A to 450A at 600V and 1200V.

Tyco Electronics Power Modules for motor drive applications cover a wide power range. They are available in 7 different standard housings from 5A to 100A at 600V, and from 5A to 100A at 1200V, suitable for switching frequencies of up to 30kHz.

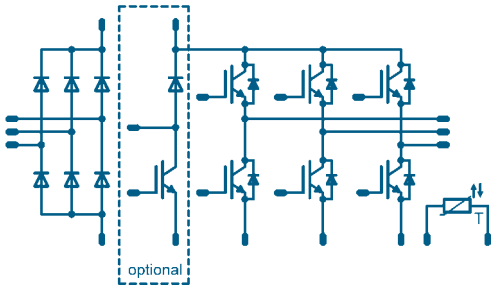
flowPIM 0 2nd gen

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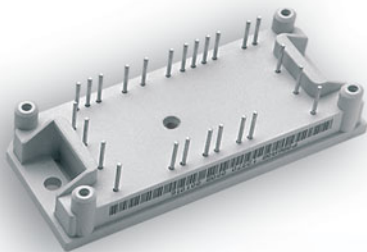


- Trench Fieldstop IGBTs for low saturation losses
- Optional with enhanced rectifier and w/o BRC
- Clip-in PCB mounting

Part-No	Voltage	Current*
V23990-P541 -1)-PM	600V	6A
V23990-P543 -1)-PM	600V	10A
V23990-P544 -1)-PM	600V	15A
V23990-P545 -1)-PM	600V	20A
V23990-P546 -1)-PM	600V	30A
V23990-P549 -2)-PM	1200V	8A
V23990-P540 -2)-PM	1200V	15A

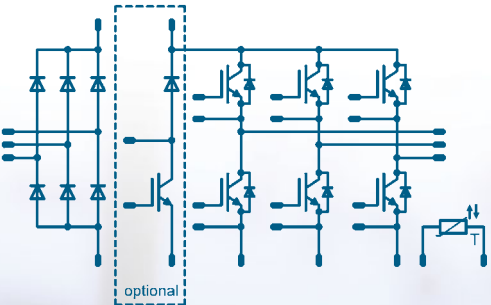


flowPIM 1 2nd gen



- Trench Fieldstop IGBTs for low saturation losses
- Optional w/o BRC
- Compact design with enhanced rectifier

Part-No	Voltage	Current*
V23990-P585 -3)-PM	600V	30A
V23990-P586 -3)-PM	600V	50A
V23990-P587 -3)-PM	600V	75A
V23990-P588 -4)-PM	1200V	15A
V23990-P589 -4)-PM	1200V	25A
V23990-P580 -4)-PM	1200V	35A

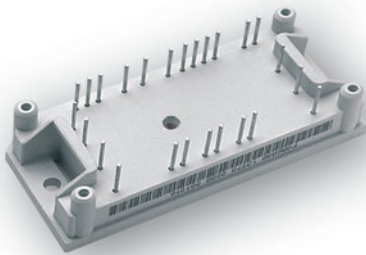


1) A20 with brake with standard rectifier
A21 with brake with enhanced rectifier
C20 without brake with standard rectifier
C21 without brake with enhanced rectifier
2) A with brake with standard rectifier
A01 with brake with enhanced rectifier
C without brake with standard rectifier
C01 without brake with enhanced rectifier
3) A20 with brake
C20 without brake
4) A with brake
C without brake
5) With improved inverter shunt tolerance
6) With fast IGBT 2
7) With high-speed FRED

* Rated current of components

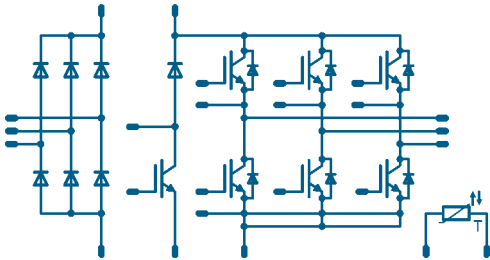
flowPIM 1

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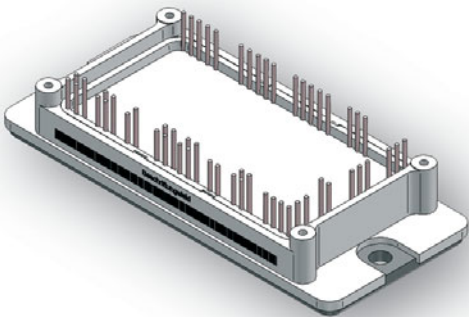


- Higher performance pin to pin compatible replacement of V23990-P8x-A20-PM family

Part-No	Voltage	Current*
V23990-P481 -A-PM	600V	5A
V23990-P482 -A-PM	600V	8A
V23990-P483 -A-PM	600V	10A
V23990-P484 -A-PM	600V	15A
V23990-P485 -A-PM	600V	20A
V23990-P486 -A-PM	600V	30A
V23990-P487 -A-PM	1200V	10A
V23990-P488 -A-PM	1200V	15A
V23990-P480 -A-PM	1200V	25A

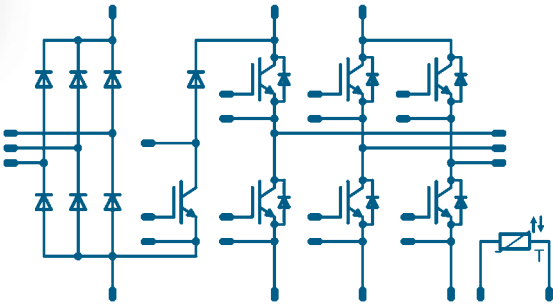


flowPIM 2 3rd gen



- IGBT4 technology for low saturation losses and improved EMC behavior
- Improved layout
- Compact and low inductive design
- Isolated temperature sensor

Part-No	Voltage	Current*
V23990-P763-A-PM	600V	50A
V23990-P764-A-PM	600V	75A
V23990-P765-A-PM	600V	100A
V23990-P767-A-PM	1200V	35A
V23990-P768-A-PM	1200V	50A
V23990-P769-A-PM	1200V	75A
V23990-P760-A-PM	1200V	100A

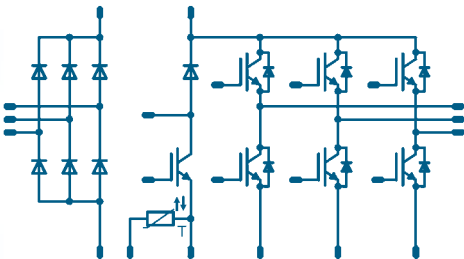


flow90PIM 1



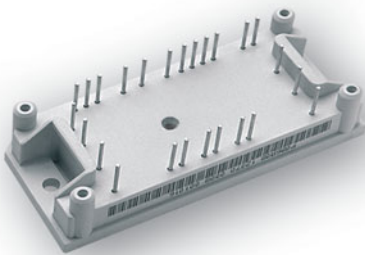
- Trench Fieldstop IGBTs for low saturation losses
- Supports designs with 90° mounting angle between heatsink and PCB
- Clip-in PCB mounting
- Clip or screw on heatsink mounting

Part-No	Voltage	Current*
V23990-P631 -A-PM	600V	6A
V23990-P632 -A-PM	600V	10A
V23990-P633 -A-PM	600V	15A
V23990-P634 -A-PM	600V	20A
V23990-P635 -A-PM	600V	30A
V23990-P639 -A-PM	1200V	8A
V23990-P630 -A-PM	1200V	15A



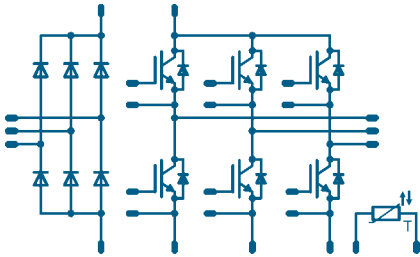
flowPIM 1+E

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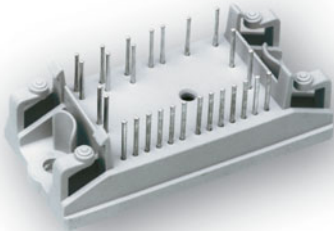


- Ultrafast IGBTs for reduced switching losses dedicated for $f_{sw} > 8\text{kHz}$
- Typical applications: fans and pumps

Part-No	Voltage	Current*
V23990-P516-C-PM	1200V	8A
V23990-P517-C-PM	1200V	15A
V23990-P518-C44-PM	1200V	25A

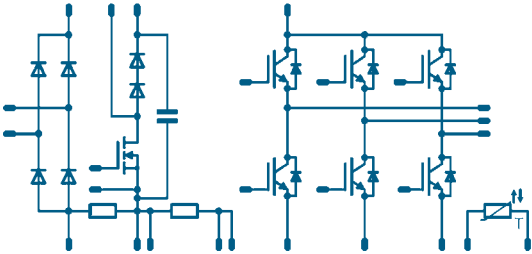


flowPIM 0+P

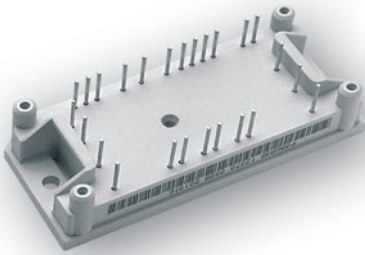


- PIM module with CoolMOS PFC inverter for up to 200kHz switching frequency
- Trench Fieldstop technology
- Clip-in PCB mounting

Part-No	Voltage	Current*
V23990-P371-B10-PM	600V	4A
V23990-P372-B10-PM	600V	6A
V23990-P373-B10-PM	600V	10A

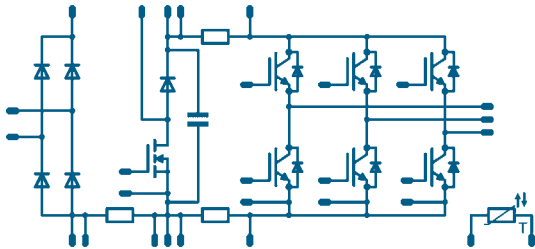


flowPIM 1+P

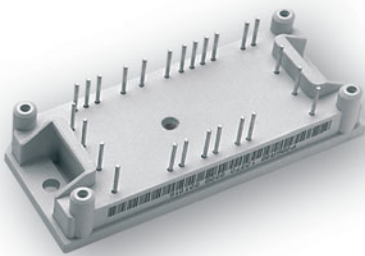


- PIM module with PFC inverter up to 200kHz switching frequency
- With inverter high side shunt for short circuit protection

Part-No	Voltage	Current*
V23990-P301-B-PM	600V	4A
V23990-P303-B-PM	600V	10A
V23990-P303-B11-PM ⁵⁾	600V	10A
V23990-P303-B12-PM ⁵⁾	600V	20A
V23990-P304-B-PM	600V	15A
V23990-P305-B-PM	600V	20A

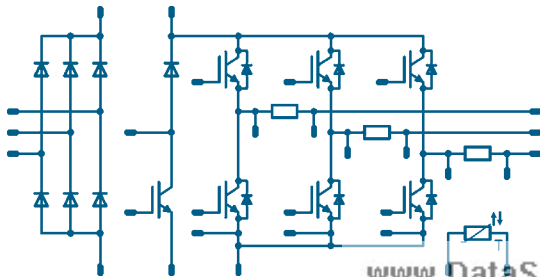


flowPIM 1+S

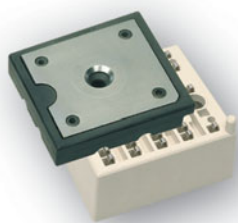


- PIM module with shunts in the motor phases

Part-No	Voltage	Current*
V23990-P329-A-PM	1200V	10A
V23990-P320-A-PM	1200V	15A

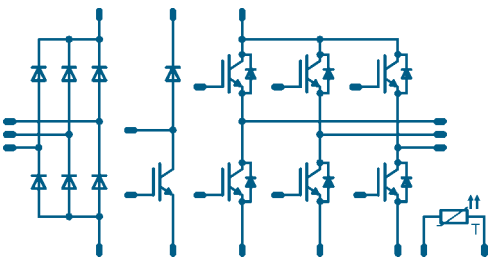


MiniSKiiP® 1



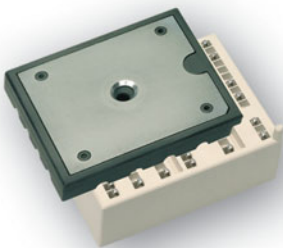
www.datasheet4u.com

- Trench Fieldstop IGBTs for low saturation losses
- Solderless spring contact mounting system

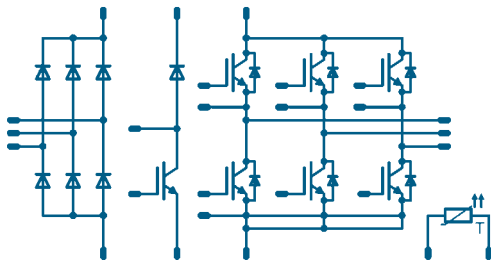


Part-No	Voltage	Current*	Semikron Equivalent
V23990-K201 -A30-PM ⁶⁾	600V	6A	SKiiP 11 NAB 065 V1
V23990-K202 -A30-PM ⁶⁾	600V	10A	SKiiP 12 NAB 065 V1
V23990-K203 -A30-PM ⁶⁾	600V	15A	SKiiP 13 NAB 065 V1
V23990-K204 -A30-PM ⁶⁾	600V	20A	SKiiP 14 NAB 065 V1
V23990-K201 -A-PM	600V	6A	SKiiP 11 NAB 066 V1
V23990-K202 -A-PM	600V	10A	SKiiP 12 NAB 066 V1
V23990-K203 -A-PM	600V	15A	SKiiP 13 NAB 066 V1
V23990-K204 -A-PM	600V	20A	SKiiP 14 NAB 066 V1
V23990-K209 -A-PM	1200V	8A	SKiiP 11 NAB 126 V1
V23990-K200 -A-PM	1200V	15A	SKiiP 12 NAB 126 V1
V23990-K200 -A10-PM ⁷⁾	1200V	15A	

MiniSKiiP® 2

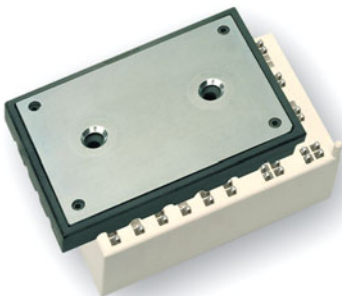


- Trench Fieldstop IGBTs for low saturation losses
- Solderless spring contact mounting system

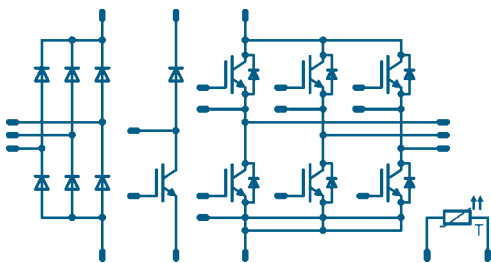


Part-No	Voltage	Current*	Semikron Equivalent
V23990-K222 -A30-PM ⁶⁾	600V	30A	SKiiP 25 NAB 065 V1
V23990-K223 -A30-PM ⁶⁾	600V	50A	SKiiP 26 NAB 065 V1
V23990-K222 -A-PM	600V	30A	SKiiP 25 NAB 066 V1
V23990-K223 -A-PM	600V	50A	SKiiP 26 NAB 066 V1
V23990-K229 -A-PM	1200V	25A	SKiiP 23 NAB 126 V1
V23990-K229 -A10-PM ⁷⁾	1200V	25A	
V23990-K220 -A-PM	1200V	35A	SKiiP 24 NAB 126 V1

MiniSKiiP® 3



- Trench Fieldstop IGBTs for low saturation losses
- Solderless spring contact mounting system



Part-No	Voltage	Current*	Semikron Equivalent
V23990-K242-A30-PM ⁶⁾	600V	60A	SKiiP 37 NAB 065 V1
V23990-K243-A30-PM ⁶⁾	600V	100A	SKiiP 38 NAB 065 V1
V23990-K242-A-PM	600V	75A	SKiiP 37 NAB 066 V1
V23990-K243-A-PM	600V	100A	SKiiP 38 NAB 066 V1
V23990-K249-A-PM	1200V	50A	SKiiP 35 NAB 126 V1
V23990-K240-A-PM	1200V	70A	SKiiP 36 NAB 126 V1

Housing Dimensions

flow 0



height*: 17 mm
width: 66 mm
depth: 33 mm

flow 1



height*: 17 mm
width: 82 mm
depth: 38 mm

flow 2



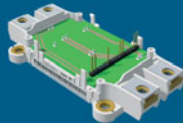
height*: 17 mm
width: 108 mm
depth: 47 mm

flow90 1



height*: 28 mm
width: 84 mm
depth: 21 mm

flowSCREW 2



height*: 17 mm
width: 117 mm
depth: 64 mm

flowSCREW 3



height*: 17 mm
width: 150 mm
depth: 64 mm

flyerIPM



height*: 19 mm
width: 99 mm
depth: 97 mm

PFC-IPM



height*: 25 mm
width: 79 mm
depth: 69 mm

flat 1



height*: 13 mm
width: 70 mm
depth: 41 mm

MiniSKiiP® 1



height*: 16 mm
width: 42 mm
depth: 40 mm

MiniSKiiP® 2



height*: 16 mm
width: 59 mm
depth: 52 mm

MiniSKiiP® 3

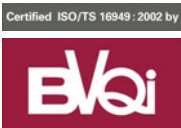


height*: 16 mm
width: 82 mm
depth: 59 mm

* Height equals to installation height

Tyco Electronics is a worldwide leading company in the development and manufacturing of passive and active electronic components. In 1996 the decision was made to step into the future-oriented Power Module market. The responsibility for this product group is based in Ottobrunn, Germany. A dedicated team continuously develops new state of the art technologies, which are turned into standard and customized products. All Power Module products are developed and manufactured in our ISO9001 and TS16949 certified factory in Hungary. Our modules conform to the RoHS standard and are 100% electrically and functionally tested prior to packaging. This way we constantly guarantee high quality products.

Tyco Electronics, your reliable partner!



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