

- ◆ Rugged metal case for harsh industrial environments
- ◆ Industrial operating temperature range: -25°C to +70°C
- ◆ Overload and overtemperature protection
- ◆ Power boost up to 120 %
- ◆ Power-Good signal
- ◆ Shock and vibration proof
- ◆ International safety approval package
- ◆ ATEX certification for hazardous locations
- ◆ Decoupling module for redundant operation (optional)
- ◆ Wall mounting (opt.)
- ◆ 3-year product warranty



The TSPC series are high performance DIN-rail mount power supplies for harsh industrial environments. The design is based on the popular TRACOPOWER TSP series but with reduced electrical features to make these power supplies an easy to install and cost efficient but reliable solution for basic applications.

Excellent electrical specifications and high immunity against electrical disturbances makes these compact modules the best choice for reliable industrial systems and machines.

For system applications all models provide a Power-Good signal.

The TSPC series power supplies complies with the latest safety and EMC standards for industrial environments and include ATEX EN 60079 certification and IEC 60079 test report for applications in hazardous locations.

### Models

| Order code   | Output power<br>nominal | Output voltage<br>nominal | Output current<br>nominal |
|--------------|-------------------------|---------------------------|---------------------------|
| TSPC 080-124 | 80 W                    | 24 VDC                    | 3.3 A                     |
| TSPC 120-124 | 120 W                   |                           | 5.0 A                     |
| TSPC 240-124 | 240 W                   |                           | 10 A                      |
| TSPC 480-124 | 480 W                   |                           | 20 A                      |

### Accessories (optional)



Decoupling module for redundant operation see:  
[www.tracopower.com/products/tspc-dcm.pdf](http://www.tracopower.com/products/tspc-dcm.pdf)

Wall mounting brackets: see last page

### Input Specifications

|   |   |  |
|---|---|--|
| Input voltage   | – nominal ranges<br>– effective ranges<br>– output power derating at input <100 VAC | 100 – 120 / 220 – 240 VAC by selection switch<br>85 – 132 / 187 – 264 VAC<br>3.3 %/V |
| Input voltage frequency   |   | 47 – 63 Hz   |
| Harmonic limits   |   | EN 61000-3-2   |
| Holdup time   |   | 10 ms min.   |
| Inrush current  |   | 40 A   |
| Recommended circuit breaker, characteristic C or fuse, slow blow type | – TSP 080/120<br>– TSP 240<br>– TSP 480   | 6.0 – 16.0 A<br>10.0 – 16.0 A<br>16.0 – 25.0 A                                       |
| Efficiency  |   | 85 – 92 %  |

### Output Specifications

|                                    |   |   |
|------------------------------------|---|---|
| Output voltage adj. range          | – output power derating above 24 VDC  | 24 – 28 VDC<br>5 %/V  |
| Boost output current               | – power derating above 50°C ambient<br>– power derating at input <115 VAC<br>– power derating at input <220 VAC | 120 % (at 24 VDC output voltage)<br>continuous at <+50°C ambient temperature<br>2 %/°C<br>1.3 %/V<br>0.6 %/V (at upper input voltage range) |
| Regulation                         | – Input variation<br>– Load variation (0–100 %)   | 1 % max.<br>1 % max.  |
| Ripple and Noise (20MHz bandwidth) |   | 100 mVp-p typ. (200 mVp-p max.)   |
| Overload protection                |   | 120 – 140 % of I <sub>out</sub> nom., constant current  |
| Short circuit current              |   | 90 % of I <sub>out</sub> nom. (typ.), foldback  |
| Output overvoltage protection      |   | 45 V  |
| Overtemperature protection         |   | switch off at overtemperature, automatic restart  |
| Power back immunity                |   | 35 V (40 V for 1 sec.)  |
| Power OK signal                    | – trigger threshold:<br>– output signal   | 21.0 – 22.5 V<br>open collector 10 mA max.  |
| Max. capacitive load               |   | unlimited   |

### General Specifications

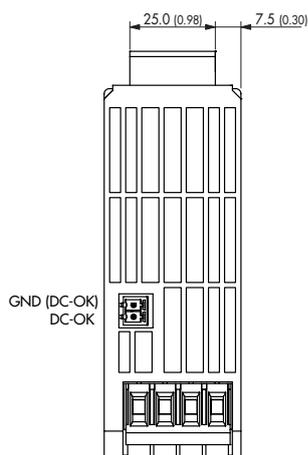
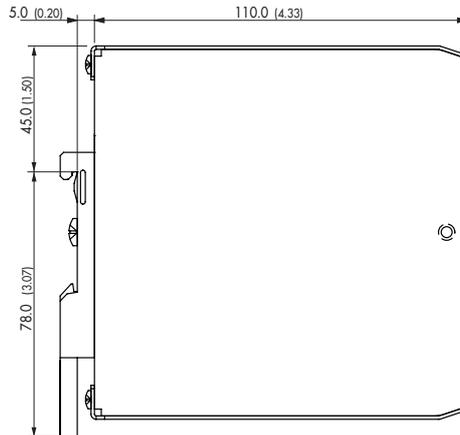
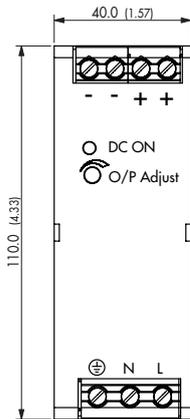
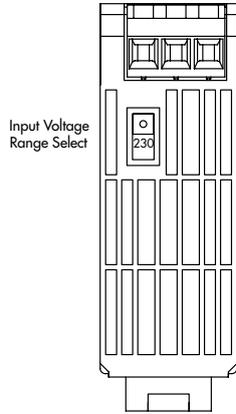
|   |  |  |
|---|--|--|
| Temperature range   | – Operating<br>– output current derating above 60°C ambient<br>– Storage | –25°C to +70°C max.<br>2.5 %/°C<br>–40°C to +85°C    |
| Cooling   |  | convection cooling, no internal fan                  |
| Humidity (non condensing)   |  | 95 % rel. H max.                                     |
| Pollution degree  |  | 2  |
| Temperature coefficient   |  | 0.02 %/K   |
| Reliability, calculated MTBF at +25°C acc. to IEC 61709<br><a href="http://www.tracopower.com/products/tspc-mtbf.pdf">www.tracopower.com/products/tspc-mtbf.pdf</a> | – TSP 080<br>– TSP 120<br>– TSP 240<br>– TSP 480                         | 2.4 Mio. h<br>2.5 Mio. h<br>1.7 Mio. h<br>1.4 Mio. h |

## General Specifications

|  |  |  |
|--|--|--|
| Isolation                                      |  | according to IEC/EN 60950-1, UL 60950-1, UL 508  |
| Safety standards                               | <ul style="list-style-type: none"> <li>– Information technology equipment</li> <li>– Industrial control equipment</li> <li>– Electrical equipment for machines</li> <li>– Electronic equipment for power installation</li> <li>– Safety transformers for SMPS</li> <li>– Control equipment for hazardous location</li> </ul>                       | IEC/EN 60950-1, UL 60950-1, CSA 22.2 No 60950-1-07<br>UL 508, CSA-C22.2 No.107<br>EN 60204-1<br>EN 50178<br>EN 61558-2-4<br>IEC/EN 60079-15  II3G EX nA IIC T4  |
| Safety approvals and certifications            | <ul style="list-style-type: none"> <li>– CB scheme (IEC/EN 60950-1)</li> <li>– UL approvals</li> <br/> <li>– ATEX (for IP 54 enclosure)</li> <br/> <li>– IECEx certificate (IEC 60079-0, IEC 60079-15)</li> <li>– BG certificate (IEC/EN 60950-1)</li> </ul>   | <a href="http://www.tracopower.com/products/tspc-cb.pdf">www.tracopower.com/products/tspc-cb.pdf</a><br>UL 60950-1, CSA 22.2 No. 60950-1-07<br><a href="http://www.tracopower.com/products/tspc-ul60950.pdf">www.tracopower.com/products/tspc-ul60950.pdf</a><br>UL 508C listed File: e210002<br><a href="http://www.tracopower.com/products/tspc-ul508.pdf">www.tracopower.com/products/tspc-ul508.pdf</a><br>certificate no. EPS 10 ATEX 1 269 X<br><a href="http://www.tracopower.com/products/tspc-atex.pdf">www.tracopower.com/products/tspc-atex.pdf</a><br><a href="http://www.tracopower.com/products/tspc-iecex.pdf">www.tracopower.com/products/tspc-iecex.pdf</a><br><a href="http://www.tracopower.com/products/tspc-bg.pdf">www.tracopower.com/products/tspc-bg.pdf</a> |
| Class of protection                            |  | safety class I (IEC 536)   |
| Degree of protection                           |  | IP 20 (IEC/EN 60529)   |
| Electromagnetic compatibility (EMC), Emissions | <ul style="list-style-type: none"> <li>– Conducted RI suppression on input</li> <li>– Radiated RI suppression</li> </ul>   | EN 61000-6-3, EN 61204-3<br>EN 55011 class B, EN 55022 class B,<br>EN 55011 class B, EN 55022 class B,   |
| Electromagnetic compatibility (EMC), Immunity  | <ul style="list-style-type: none"> <li>– Electrostatic discharge (ESD)</li> <li>– Radiated RF field immunity</li> <li>– Electrical fast transient / burst immunity</li> <li>– Surge immunity</li> <li>– Immunity to conducted RF disturbances</li> <li>– Power frequency field immunity</li> <li>– Mains voltage dips and interruptions</li> </ul> | EN 61000-6-2, EN 61204-3<br>IEC/EN 61000-4-2    4 kV / 8 kV    criteria B<br>IEC/EN 61000-4-3    10 V / m    criteria B<br>IEC/EN 61000-4-4    2 kV    criteria B<br>IEC/EN 61000-4-5    1 kV / 2 kV    criteria B<br>IEC/EN 61000-4-6    10 V    criteria A<br>IEC/EN 61000-4-8    30 A / m    criteria A<br>IEC/EN 61000-4-11          criteria B/C  |
| Environment                                    | <ul style="list-style-type: none"> <li>– Vibration acc. IEC 68-2-6;</li> <li>– Shock acc. IEC 60068-2-27</li> </ul>  | 3 axis, sine sweep, 10 – 55 Hz, 1 g, 1 oct/min<br>3 axis, 15 g half sine, 11 ms  |
| Enclosure material                             |  | aluminium (chassis) / stainless steel (cover)  |
| Mounting                                       | <ul style="list-style-type: none"> <li>– DIN-rail mounting</li> <li>– Wall mounting (option)</li> </ul>  | for DIN-rails as per EN 50022-35x15/7.5<br>(snap-on with self-locking spring)<br><b>with wall mounting bracket</b> - see page 12   |
| Environmental compliance                       | <ul style="list-style-type: none"> <li>– Reach</li> <li>– RoHS</li> </ul>  | <a href="http://www.tracopower.com/products/tspc-reach.pdf">www.tracopower.com/products/tspc-reach.pdf</a><br>RoHS directive 2011/65/EU  |
| Power Good signal                              |  | 21.0 – 22.5 V, open collector 10 mA  |
| Connection                                     | <ul style="list-style-type: none"> <li>– Input / Output</li> <li>– Power Good signal (mating connector)</li> </ul>   | screw terminals<br><b>Phoenix contact MC 1,5/2-ST-3,5</b> (not included)   |
| Installation instructions                      |  | <a href="http://www.tracopower.com/products/tspc-inst.pdf">www.tracopower.com/products/tspc-inst.pdf</a>   |

**Outline Dimensions**

TSPC 080-124

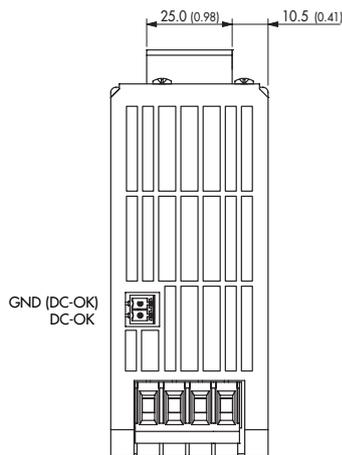
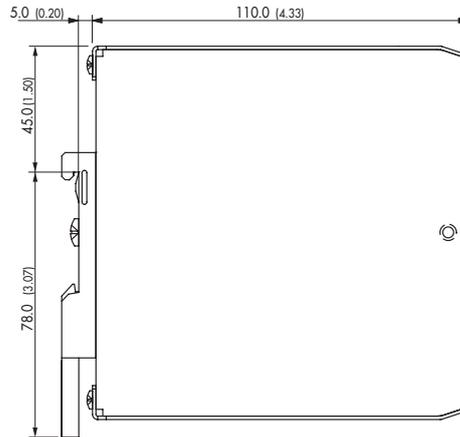
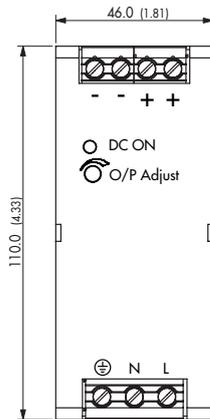
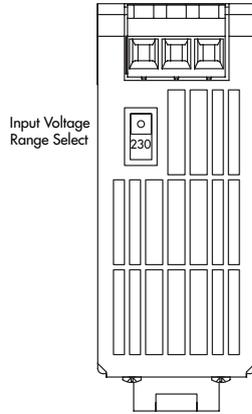


**Weight:** 400 g (14.1 oz)

Dimensions in [mm], ( ) = Inch  
Tolerances:  $\pm 0.5$  mm ( $\pm 0.02$ )

**Outline Dimensions**

**TSPC 120-124**

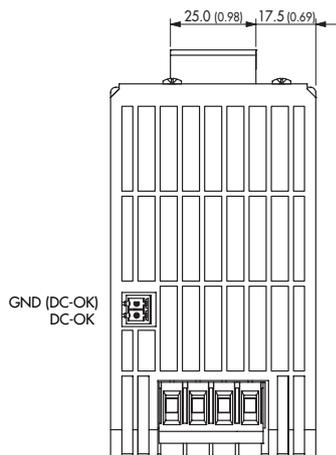
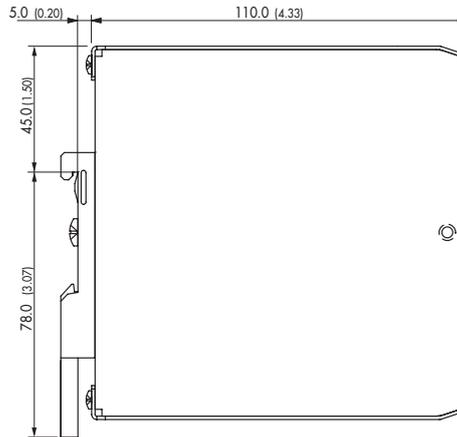
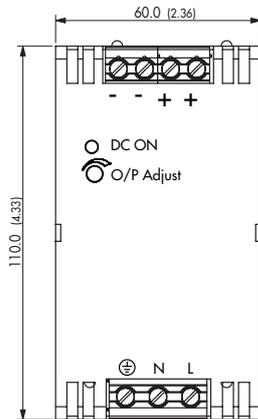
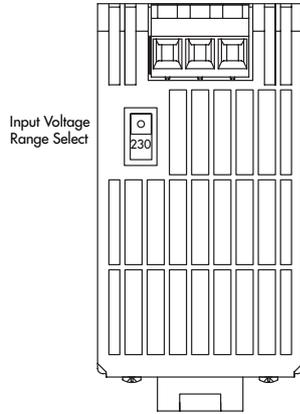


**Weight:** 500 g (17.7 oz)

Dimensions in [mm], ( ) = Inch  
Tolerances: ±0.5 mm (±0.02)

**Outline Dimensions**

**TSPC 240-124**

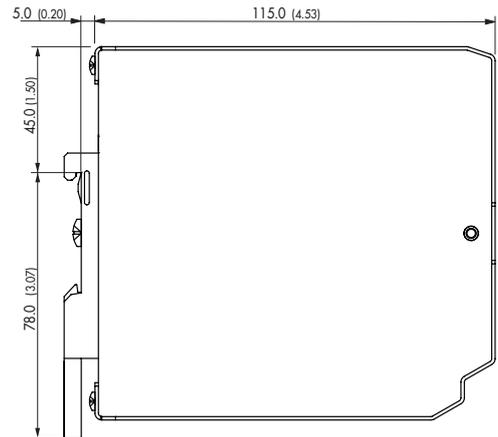
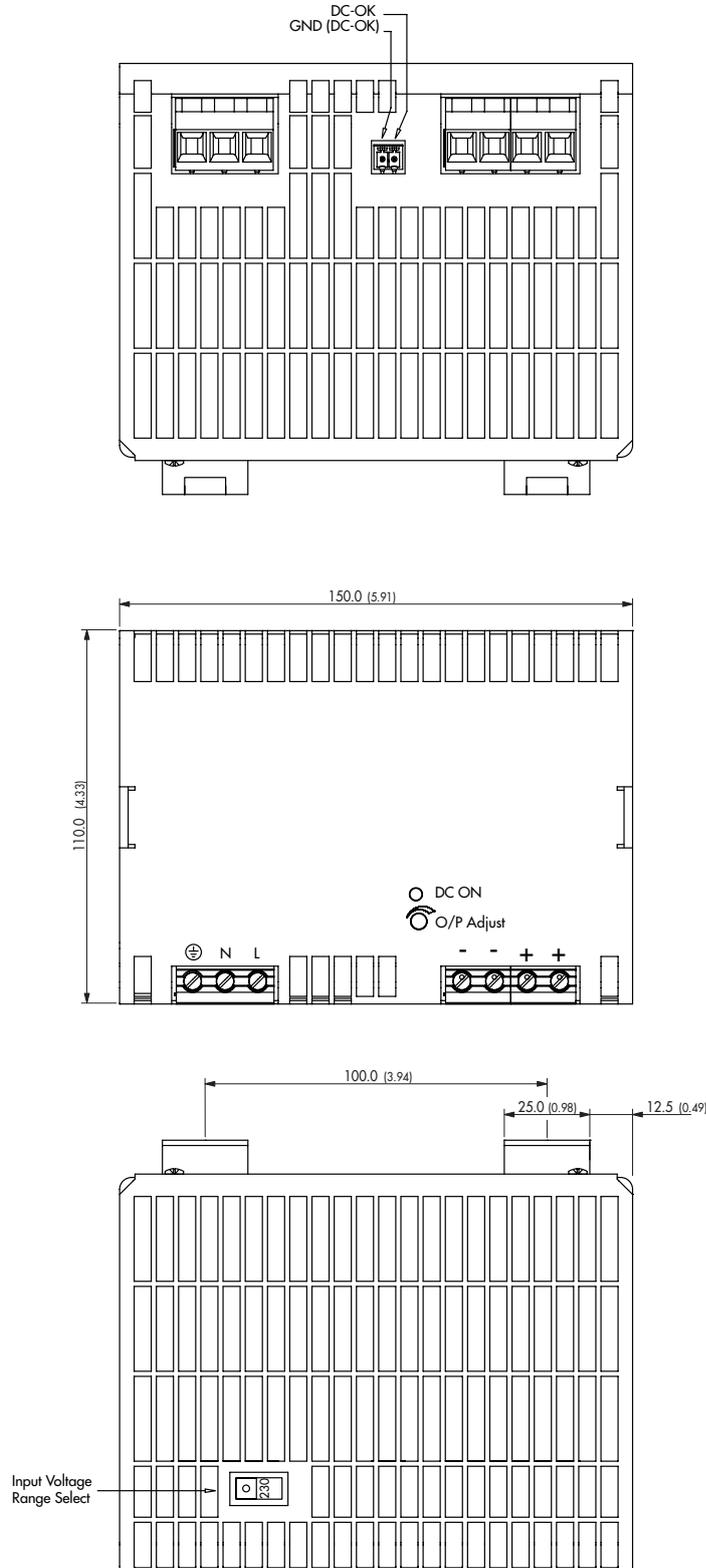


**Weight:** 750 g (26.5 oz)

Dimensions in [mm], ( ) = Inch  
Tolerances:  $\pm 0.5$  mm ( $\pm 0.02$ )

**Outline Dimensions**

TSPC 480-124



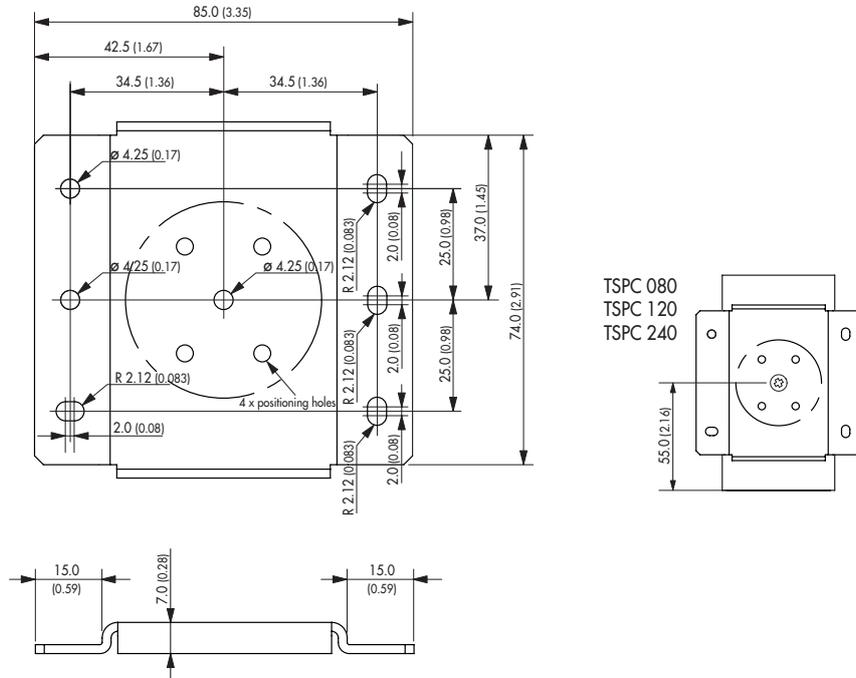
**Weight:** 1950 g (68.8 oz)

Dimensions in [mm], ( ) = Inch  
Tolerances: ±0.5 mm (±0.02)

**TSP-WMK Wall Mounting Bracket**

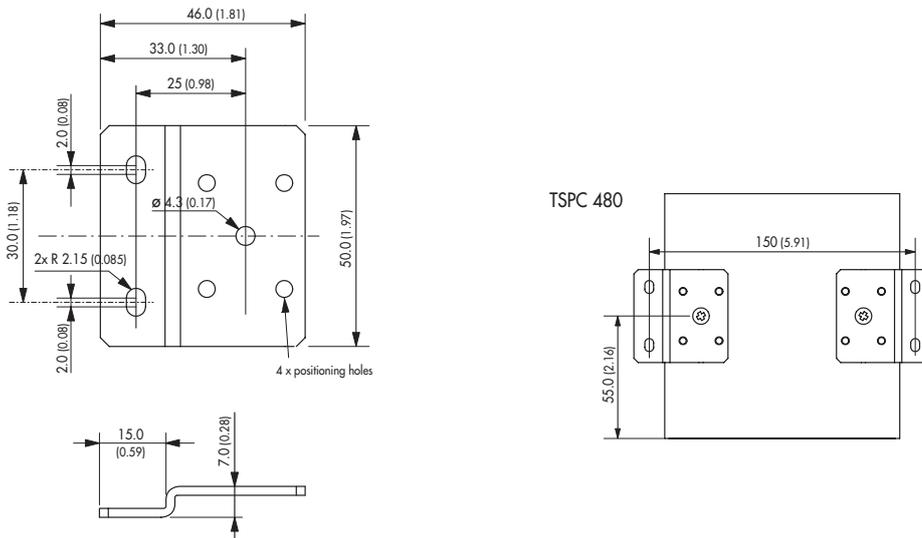
| order code | for models                               | content of kit |
|------------|--|----------------|
| TSP-WMK03  | TSPC 080, TSPC 120, TSPC 240, TSP-DCM600 | 1 bracket      |
| TSP-WMK02  | TSPC 480                                 | 2 brackets     |

**TSP-WMK03**



Material: 2 mm Mild Steel  
Tolerance: ±0.1mm (±0.004)

**TSP-WMK02**



Material: 2 mm Mild Steel  
Tolerance: ±0.1mm (±0.004)

Dimensions: [mm] ( ) = Inch

Dimensions in [mm], ( ) = Inch  
Tolerances: ±0.5 mm (±0.02)

Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at [www.tracopower.com](http://www.tracopower.com)

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

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<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

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Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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