PS 6000
The integrated system for perfect resistance welding
PS 6000 – powerful in medium frequency and AC applications

Used in countless applications, welding systems made by the European market leader Bosch Rexroth are the first choice of satisfied car manufacturers, tier one suppliers and welding equipment manufacturers worldwide. PS 6000 for applications up to 360 kA increases process reliability, reduces rework costs and provides consistent weld spot quality – even with the most complex material combinations.

The modular concept behind the PS 6000 integrates fully compatible and coordinated components in one particularly cost-effective system:

▶ Intelligent inverters
▶ Powerful medium frequency transformers

The flexible control system, adaptive control modes and highly-dynamic servo drives allow you to break into new innovative applications. Standard functions such as constant-current regulation, pressure regulation, electrode management concepts and tip dressing, ensure that weld quality lives up to your demands.

Benefits

▶ High reliability achieved through the use of well tried and tested technology
▶ Maximum flexibility in the I/O and network area thanks to plug-in modules such as PROFIBUS, PROFINET IO, DeviceNet and EtherNet/IP
▶ 100 % quality control and documentation of spot welds
▶ Innovative functions for process monitoring
▶ Expulsion reduction achieved by adaptive control of the welding process
▶ Servo gun control system
▶ Windows-based user interface for all process functions with SQL database
▶ Extensive monitoring functions for maximum system protection
▶ Flexibility for retrofitting function and modules

PS 6000 – the powerful system solution for the automotive industry, suppliers and welding equipment manufacturers.
System components

**Intelligent inverters**
Modular medium frequency resistance welding control system with optional servo gun control and PSQ 6000 process module for adaptive control and quality monitoring. Upgrades are possible with plug-in I/O modules for all commonly used networks.

**Powerful medium frequency transformers**
Medium frequency transformers combining resistance welding with high power density compact dimensions and low weight. Included features: temperature monitoring, current sensor and safety resistor.

**Adaptive current/voltage control**
Welding controller for enhanced process stability and assured spot weld quality. Extensive monitoring functions verify welding system functionality. Unique Q-Stop logic optimizes system productivity.
The 1,000 Hz medium frequency/DC technology has proven its economic efficiency in many applications compared to other processes:

- Higher weld quality by more dynamic current control than can be achieved with AC technology
- Weld-ability of many materials increased by more powerful energy insertion
- Expulsion reduced by decreased welding current and/or current time
- Electrode life lengthened thanks to lower thermal and mechanical load on the electrode tips
- Smaller and lighter transformers for integration into the weld gun

PSI 6000 – the right inverter any time for any application

The intelligent PSI 6000 inverters have been specifically designed for spot, projection and resistance seam welding. The extensive control functions guarantee high process reliability. The PSI 6000 family offers a variety of additional functions for welding high-strength metals, aluminium and three sheet stackups.

<table>
<thead>
<tr>
<th>Property</th>
<th>PSI 6200/w1</th>
<th>PSI 6300/a1</th>
<th>PSI 6300/a2</th>
<th>PSI 6300/w1</th>
<th>PSI 6300/w2</th>
<th>PSI 6400/w1</th>
<th>PSI 6500/w1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>approx. 56 kg</td>
<td>approx. 20 kg</td>
<td>approx. 21 kg</td>
<td>approx. 25 kg</td>
<td>approx. 25 kg</td>
<td>approx. 56 kg</td>
<td>approx. 70 kg</td>
</tr>
<tr>
<td>Supply voltage range</td>
<td>400…480 V</td>
<td>400…480 V</td>
<td>500…690 V</td>
<td>400…480 V</td>
<td>500…690 V</td>
<td>400…480 V</td>
<td>400…480 V</td>
</tr>
<tr>
<td>Rated mains current</td>
<td>220 A</td>
<td>110 A</td>
<td>110 A</td>
<td>110 A</td>
<td>110 A</td>
<td>220 A</td>
<td>330 A</td>
</tr>
<tr>
<td>(max. thermal continuous current)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. primary current</td>
<td>1,200 A</td>
<td>800 A</td>
<td>800 A</td>
<td>800 A</td>
<td>800 A</td>
<td>1,600 A</td>
<td>2,400 A</td>
</tr>
<tr>
<td>Max. secondary current*</td>
<td>54 kA</td>
<td>36 kA</td>
<td>36 kA</td>
<td>36 kA</td>
<td>36 kA</td>
<td>60 kA</td>
<td>120 kA</td>
</tr>
<tr>
<td>Required connection cross-section</td>
<td>95 mm²</td>
<td>35 mm²</td>
<td>35 mm²</td>
<td>35 mm²</td>
<td>35 mm²</td>
<td>95 mm²</td>
<td>2 – 4 cables; per cable 120 mm²</td>
</tr>
</tbody>
</table>

Mains voltage
- a1/w1: air-cooled, water-cooled 400 V to 480 V, 50/60 Hz
- a2/w2: air-cooled, water-cooled 500 V to 690 V, 50/60 Hz

* Specific to the welding transformer used.
**PSI 62C0 inverter**
Inverter for steel, aluminum and seam welding applications up to 54 kA
▶ Water-cooled
▶ PSQ 6000 quality system (optional)
▶ Connection to MF transformer of the PSG 6000 series

**PSI 63C0 inverter**
Inverter up to 36 kA for steel applications
▶ Air-cooled/water-cooled
▶ PSQ 6000 quality system (optional)
▶ Connection to MF transformer of the PSG 6000 series

**PSI 64C0 inverter**
Inverter for aluminum applications up to 60 kA
▶ Water-cooled
▶ PSQ 6000 quality control system (optional)
▶ Connection to MF transformer of PSG 6000 series

**PSI 65C0 inverter**
Inverter for resistance seam and projection welding applications up to 120 kA
▶ Water-cooled
▶ Parallel connection of max. 3 inverters for currents up to 360 kA
▶ PSQ 6000 quality system (optional)

**Interfaces for the PSI 6000 series**
Flexible due to pluggable I/O cards and field bus connections.
The PST 6000 AC controllers are mechanically identical to the PSI 6300 inverter series. This provides a low-cost migration path to middle-frequency AC at a later time. Naturally these control systems offer you the same flexibility in the I/O area and all the control functions of the entire PS 6000 system.

The AC controllers PST 6000 are designed for applications up to 250 kVA

- Air-cooled/water-cooled
- Optimum weld result by means of primary or secondary current control
- Competitive solution for standard applications

### PST 6000 – cost-effective AC series for standard application

The PST 6000 AC controllers are designed for applications up to 250 kVA

- Air-cooled/water-cooled
- Optimum weld result by means of primary or secondary current control
- Competitive solution for standard applications

### Characteristic

<table>
<thead>
<tr>
<th></th>
<th>PST 6100L</th>
<th>PST 6100W</th>
<th>PST 6250L</th>
<th>PST 6250W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply connection</td>
<td>grounded</td>
<td>grounded</td>
<td>grounded</td>
<td>grounded</td>
</tr>
<tr>
<td>or TT system</td>
<td>TN</td>
<td>TT</td>
<td>TN</td>
<td>TT</td>
</tr>
<tr>
<td>Rated transformer output</td>
<td>kVA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 % duty cycle, at 400 V</td>
<td>77/145*</td>
<td>167</td>
<td>224</td>
<td>257</td>
</tr>
<tr>
<td>and 80 % transformer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>load up to 20 % system</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>utilization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated transformer output</td>
<td>kVA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 % duty cycle, at 400 V</td>
<td>16/62.5*</td>
<td>106</td>
<td>65/141*</td>
<td>162</td>
</tr>
<tr>
<td>and 80 % transformer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>load up to 50 % system</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>utilization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated line current; max.</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>continuous thermal current</td>
<td>69/130*</td>
<td>150</td>
<td>200</td>
<td>230</td>
</tr>
<tr>
<td>Connection cross-section</td>
<td>mm²</td>
<td>50</td>
<td>50</td>
<td>95</td>
</tr>
<tr>
<td>Weight</td>
<td>kg</td>
<td>12.5</td>
<td>21</td>
<td>13</td>
</tr>
</tbody>
</table>

* without/with fan hood
The AC controllers PST 600E are designed for applications up to 500 kVA
▶ Air cooling/water cooling
▶ Parallel input/output box with coordinated scope of functions
▶ High-precision primary current control without external current sensor – no more cables and connectors
▶ Optional slot for fieldbus module (Ethernet)
▶ Attractively priced alternative for use on older welding systems

For stationary welding machines and manual welding workstations – the PST 600E AC controllers from Rexroth have a compact, slim design which makes them up to 60 % smaller and lighter.

### PST 600E – compact power packs for stationary machines and manual welding units

The AC controllers PST 600E are designed for applications up to 500 kVA
▶ Air cooling/water cooling
▶ Parallel input/output box with coordinated scope of functions
▶ High-precision primary current control without external current sensor – no more cables and connectors
▶ Optional slot for fieldbus module (Ethernet)
▶ Attractively priced alternative for use on older welding systems

#### Left: Air-cooled version for manual welding gun applications and simple projection welding tasks

#### Middle: Water-cooled version for manual welding gun and projection welding applications requiring more power

#### Right: Water-cooled version for welding systems with high performance requirements up to 500 kVA

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>PST 610EL</th>
<th>PST 610EW</th>
<th>PST 625EL</th>
<th>PST 625EW</th>
<th>PST 650EW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling</td>
<td>Air</td>
<td>Water</td>
<td>Air</td>
<td>Water</td>
<td>Water</td>
</tr>
<tr>
<td>Power supply connection grounded TN or TT system</td>
<td>400 V (-20 %) to 600 V (+10 %), 50/60 Hz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum output current for duty cycle</td>
<td>A %</td>
<td>300/300*, 10/20*</td>
<td>300, 20</td>
<td>389/365*, 15/30*</td>
<td>400, 30</td>
</tr>
<tr>
<td>Rated transformer output 50 % duty cycle, at 400 V- and 80 % transformer load up to 50 % system utilization</td>
<td>kVA</td>
<td>68/95*</td>
<td>95</td>
<td>106/141*</td>
<td>155</td>
</tr>
<tr>
<td>Rated line current; max. continuous thermal current</td>
<td>A</td>
<td>95/130*</td>
<td>130</td>
<td>200</td>
<td>230</td>
</tr>
<tr>
<td>Connection cross-section</td>
<td>mm²</td>
<td>50</td>
<td>50</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>Weight</td>
<td>kg</td>
<td>8.6</td>
<td>7.9</td>
<td>13</td>
<td>9.1</td>
</tr>
</tbody>
</table>

* without/with fan hood
The PSQ 6000 has built-in control and monitoring functionality. The XQR control card is available as an upgrade for PSI 6000 series systems.

Adaptive current/voltage control for the highest spot weld quality
The adaptive process control mode gives you added flexibility for future requirements in the welding process. By measuring current and voltage, the resistance and energy can also be recorded, controlled and accurately evaluated during welding. The adaptive control algorithm ensures consistent quality and reduces spatter in demanding welding applications. Expensive rework can be reduced.

Process monitoring
Tolerance limits can be set and monitored for a number of basic process parameters: current, phase angle, electrode voltage, resistance, current time, power and energy. Two consolidated variables, which summarize the basic variables, are provided to simplify system handling:

- PSF – the process stability factor indicates the stability of the welding process
- UIP – the quality factor provides an indication of actual spot quality

Q-Stop logic
Patented Q-Stop logic is a very useful extension of monitoring functionality. It enables users to analyze and optimize system productivity by defining how the system reacts to repetitive faults in a program or on a particular part.

Process overview
To provide the big picture, the status of all attached welding controllers is displayed on a bar graph.
 Adaptive current/voltage control – consistent weld quality and reduced expulsion

 BOS 6000 – the combined user interface for weld control and quality monitoring

 Q-Stop logic and the process overview give you the tools you need to analyze and optimize system productivity
PSQ 6000 – for supreme quality in spot welding

Commissioning strategy
When you are working in the main operating modes (robotic spot welding and manual spot welding), we provide you with highly efficient tools and strategies to speed up and simplify the welding system commissioning process. This approach has a proven track record in many automotive projects.

Process analysis
Process analysis/PSQ Analysis provides vital information during commissioning and ongoing production. You use it during the commissioning phase to determine the monitoring limits which you then load into the controller. You can easily determine which systems have reached an acceptable spatter level. During ongoing production, you can reliably assess the stability of each system right down to the individual spot weld.

Services
On request, we will be right at your side to help you install and set up your welding systems. We can provide assistance in every phase of your project from parameterization right through to final optimization. Rexroth has experience in working with production line builders and end users.

▲ Our user interfaces and tools provide the support you need during commissioning and ongoing production
Integrated servo gun controller for maximum flexibility

The new welding control cabinet from Bosch Rexroth combines a welding and servo gun controller in a compact cabinet concept. This series, which features an integrated gun controller and the compact GDM (gun data module) for saving welding gun data, enables maximum integration and flexibility.

Compact welding case series with integrated servo gun controller

The high-performance PSI 63C0 welding controller for steel applications and the integrated servo gun controller with the compact IndraDrive Cs drive system are combined into a compact control cabinet concept.

Features
▶ Control cabinet variants for application as a suspended system, floor standing cabinet, or robot cabinet
▶ Comprehensive programming via BOS 6000

Benefits
▶ Installation surface maximized as a result of small footprint
▶ Greater flexibility via standardized interfaces
▶ Reduced training outlay thanks to proven programming environment

Gun data module GDM

The compact GDM records and saves welding gun data and can make it available via the Ethernet-based interface for production and maintenance purposes.

Benefits
▶ Compact construction that requires minimal installation space
▶ Improved quality due to the production and maintenance data saved. This facilitates preventive maintenance of the welding gun for optimal, cost-efficient production.
▶ Quick, reliable transfer of data to the welding controller via the Ethernet-based interface
Welding aluminum in a cost-effective, reliable manner

The automotive industry is increasingly concentrating on the potential of lightweight, to reduce weight and thus consumption. The usage of aluminum required high process knowledge – therefore all this knowledge must be coordinated and built up. Rexroth offers a full range of cost-efficient and reliable welding solutions – including for aluminum.

Bosch Rexroth is the only market provider worldwide which defines the requirements for efficiency and reliability requirements for welding aluminum. The welding process is backed up by new control and monitoring algorithm.

For the first time, automotive manufactures has the possibility to work with a system solution by Bosch Rexroth which can reliably weld aluminum for automotive bodywork, for the same costs like steel welding.
Inverter and transformers for aluminum welding

The PSI64CO adaptive welding inverter for aluminum is developed to identify the physical characteristics of the material. The comprehensive monitoring and the active regulation of the welding procedure during the operational process is now practicable for the first time. Therefore we use the proven mid-frequency/direct current technology.

The material-specific properties of aluminum require higher welding currents among shorter welding times. The PSG 6180 RSTK provided ideal prerequisites for aluminum welding and is thus one unit of many in Bosch Rexroth´s comprehensive line of transformers.
Transformers programm – for maximum efficiency and accuracy

The medium-frequency transformer series are an additional asset to our successful PSI 6000 inverter system. Precisely coordinated and perfectly compatible, these components facilitate optimum power transfer and additional monitoring functions between the inverter and transformer, resulting in greater profitability and enhanced precision in welding.

PSG 6000 – compact medium-frequency transformers

The medium-frequency transformers in the PSG 6000 series are optimized for greater power and operating efficiency in resistance welding. They are characterized by a particularly compact design and low weight.

Features
▶ Process monitoring by
   - Integrated current measuring coil
   - Adaptive control of the welding control

▶ Component protection by
   - Integrated temperature monitoring of the winding package and the rectifier unit
   - Programmable monitoring limit values in the welding control

<table>
<thead>
<tr>
<th>PSG 6000 transformer series</th>
<th>PSG 6130</th>
<th>PSG 6170</th>
<th>PSG 6250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output up to 20 % ED kVA</td>
<td>130</td>
<td>170</td>
<td>250</td>
</tr>
<tr>
<td>Nominal DC voltage V</td>
<td>9.5</td>
<td>9.5</td>
<td>14</td>
</tr>
<tr>
<td>Continuous on-state current kA</td>
<td>6.5</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Cooling water flow l/min</td>
<td>6</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Dimensions W x H x D mm</td>
<td>160 x 127 x 262</td>
<td>160 x 127 x 297</td>
<td>160 x 127 x 300</td>
</tr>
<tr>
<td>Weight kg</td>
<td>16</td>
<td>19</td>
<td>23</td>
</tr>
</tbody>
</table>
Benefits of middle frequency transformers from Rexroth

▶ Standardized platform transformer for the automotive industry
▶ Optimal power transfer
▶ Monitoring function that oversees interaction between the inverter and transformer
▶ Optimal application possibilities thanks to a compact construction and low weight

PSG 6130.xx.RSTK (MF 100) – the new platform transformer

The compact, lightweight middle frequency transformers from the PSG 6130.xxRSTK series are optimized for all global robot applications up to 130 kVA.

Features

▶ For all robot applications
▶ Compliant with DIN EN ISO 22829 requirements and welding gun specifications for the automotive sector
▶ Primary connection via single-conductor plug connector
▶ Common AIDA push-pull sensor connector for temperature, force, voltage, and current signals
▶ Suitable for primary, secondary, and adaptive welding current controls

<table>
<thead>
<tr>
<th>Platform transformer PSG 6130.xx.RSTK (MF 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output</strong></td>
</tr>
<tr>
<td><strong>Nominal DC voltage</strong></td>
</tr>
<tr>
<td><strong>Continuous on-state current</strong></td>
</tr>
<tr>
<td><strong>Cooling water flow</strong></td>
</tr>
<tr>
<td><strong>Dimensions W x H x D</strong></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
</tr>
</tbody>
</table>
## An overview of the medium-frequency transformers

<table>
<thead>
<tr>
<th>PSG 6130</th>
<th>Primary connection</th>
<th>Internal current measuring coil and temperature monitoring</th>
<th>Nominal DC voltage</th>
<th>Nominal primary voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>6130.00AS</td>
<td>via interface box</td>
<td>●</td>
<td>9.5 V</td>
<td>530 V</td>
</tr>
<tr>
<td>6130.00PS</td>
<td>via MC 150</td>
<td>●</td>
<td>9.5 V</td>
<td>530 V</td>
</tr>
<tr>
<td>6130.00PTK</td>
<td>via MC 150</td>
<td></td>
<td>9.5 V</td>
<td>530 V</td>
</tr>
<tr>
<td>6130.00PSTK</td>
<td>via MC 150</td>
<td>●</td>
<td>9.5 V</td>
<td>530 V</td>
</tr>
<tr>
<td>6130.xxRSTK</td>
<td>via single wire</td>
<td>●</td>
<td>9 V</td>
<td>530 V/645 V/926 V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PSG 6170 and PSG 6180</th>
<th>Primary connection</th>
<th>Internal current measuring coil and temperature monitoring</th>
<th>Nominal DC voltage</th>
<th>Nominal primary voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>6170.00PTK</td>
<td>via MC 150</td>
<td></td>
<td>9.5 V</td>
<td>530 V</td>
</tr>
<tr>
<td>6170.00PSD</td>
<td>via MC 150</td>
<td>●</td>
<td>9.5 V</td>
<td>530 V</td>
</tr>
<tr>
<td>6170.68AT</td>
<td>via interface box</td>
<td></td>
<td>9.5 V</td>
<td>530 V</td>
</tr>
<tr>
<td>6180.xxRSTK</td>
<td>via single wire</td>
<td>●</td>
<td>14 V</td>
<td>530 V/645 V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PSG 6170 and PSG 6250</th>
<th>Primary connection</th>
<th>Internal current measuring coil and temperature monitoring</th>
<th>Nominal DC voltage</th>
<th>Nominal primary voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>6170.00ASTK</td>
<td>via interface box*</td>
<td>●</td>
<td>9.5 V</td>
<td>530 V</td>
</tr>
<tr>
<td>6250.00ASTK</td>
<td>via interface box</td>
<td>●</td>
<td>14 V</td>
<td>530 V</td>
</tr>
</tbody>
</table>

* Both interface boxes as transformer accessory (TH 6000 MC and TH 6000 PG).

<table>
<thead>
<tr>
<th>PSG 6160 and PSG 6230</th>
<th>Primary connection</th>
<th>Internal current measuring coil and temperature monitoring</th>
<th>Nominal DC voltage</th>
<th>Nominal primary voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>6160.00TS231</td>
<td>via PG</td>
<td>●</td>
<td>9 V</td>
<td>500 V</td>
</tr>
<tr>
<td>6160.00TS232</td>
<td>via PG</td>
<td>●</td>
<td>9 V</td>
<td>650 V</td>
</tr>
<tr>
<td>6160.00TS233</td>
<td>via PG</td>
<td>●</td>
<td>9 V</td>
<td>800 V</td>
</tr>
<tr>
<td>6230.00GM234</td>
<td>via PG</td>
<td></td>
<td>13 V</td>
<td>500 V</td>
</tr>
<tr>
<td>6230.00GM235</td>
<td>via PG</td>
<td></td>
<td>13 V</td>
<td>650 V</td>
</tr>
<tr>
<td>6230.00GM236</td>
<td>via PG</td>
<td></td>
<td>13 V</td>
<td>800 V</td>
</tr>
</tbody>
</table>

LSA Control S.L. www.lsa-control.com comercial@lsa-control.com (+34) 960 62 43 01
Transformers
Variants of primary connection

Example:
PSG 6130.00 AS
Connection with additional, individual terminal box

Example:
PSG 3075.10 PZ
Connection via round plug connector

Example:
PSG 6130.00 RSTK
Connection via single-conductor plug connector

Example:
PSG 6160.00GM234
Connection via PG fitting
STC Teach software function (Sheet Thickness Combination) – for expedited initial start-up

The new STC Teach software function makes it possible to optimize welding procedures for different panel thickness combinations and materials in advance by running tests in a laboratory. These parameters and the set-in welding combinations used by the manufacturer were entered in a central database to minimize the commissioning time for spot welds up to 90%.

**Features**

- Welding parameters are determined in advance by carrying out test welds in a laboratory
- The predetermined parameters allow production operation to take place immediately while actively monitoring and regulating all spot welds
- Product derivatives can be quickly and easily communicated (taught)
- Central data storage for welding parameters, reference curves, and quality thresholds
- Parameter sets can be alternatively selected for every panel thickness combination
- Easy assignment of the spot weld tables determined via the BOS 6000 user interface
IndraControl VCH 05 – versatile handheld console for mobile applications

The web-based IndraControl VCH 05 handheld console allows you to operate any number of controllers on the go. No specialized knowledge is required as handling and use are straightforward. State-of-the-art processor and communication interfaces enable quick access to welding parameters and diagnostic utilities.

BOS 6000 – operation and observation to perfection

The windows-based BOS 6000 user interface with built-in SQL database function makes it very easy to operate the system and monitor performance. You can operate both the welding controller and the process module on a standardized BOS 6000 user interface. The BOS 6000 also provides connectivity to higher-level data processing systems.

IndraControl VPP 40 – compact PC system for industrial applications

The robust VPP 40 industrial PC is the complete solution for control, operation and visualization. It is specifically designed for use as a stand-alone or networked PC and can be integrated inexpensively in control cabinets. Depending on the operating requirements this PC can be supplied with a touch screen or keyboard.
The data specified above only serve to describe the product. As our products are constantly being further developed, no statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.