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## Industrial Controller R&S® PSL3

Powerful controller integrates easily in test environments

- ◆ Maximum reliability due to fully optimized design and comprehensive tests in manufacture
- ◆ All development done inhouse and "made in Germany", ensuring availability for spare parts for years to come
- ◆ Excellent EMC values ensure minimum emission and block out electromagnetic interference
- ◆ Comprehensive interfaces for quick integration in test environments
- ◆ Energy-saving design throughout, thus low temperature stress on the components
- ◆ Customized and flexibly expandable
- ◆ Compact design, installable in racks
- ◆ Excellent price/performance ratio in the industrial segment

**ROHDE & SCHWARZ**

# R&S PSL3 - Powerful industrial controller ...

## Maximum reliability

Reliability, long service life and user-friendly service are of primary importance, particularly in industry. The R&S PSL3 was optimized to meet exactly these requirements. Thus, we have good reason for using the R&S PSL3 as the standard controller in our own Rohde & Schwarz system solutions.

## Excellent price/performance ratio

Although industrial controllers tend to be expensive, the R&S PSL3 is favourably priced. By focusing on the main functions, we were able to achieve an excellent price/performance ratio without compromising on the hardware components. The sophisticated concept offers maximum flexibility. Functionality can be expanded almost limitlessly.

## Tried-and-tested Rohde & Schwarz quality

Rohde & Schwarz is well-known for the high quality of its products and has years of expertise in the field of industrial controllers. Values specified in the data sheet such as mechanical resistance, temperature, safety and EMC characteristics are reliably checked and optimized through complex tests.



## Details matter

### Motherboard – developed and produced in Germany

The extremely complex motherboard of the R&S PSL3 combines CPU, chip set, graphics, GPIB and standard interfaces such as USB, Ethernet, COM and LPT on one module. The motherboard has been

exclusively developed and manufactured in Germany for Rohde & Schwarz. It is used not only in the R&S PSL3, but also in a variety of other Rohde & Schwarz devices. Reliability and long service life of this module are therefore pivotal. Comprehensive tests were introduced in production to keep the failure rate to a minimum. An energy-saving mobile processor cuts power consumption and thus heat

## ... featuring attractive details



generation in the controller interior, which in turn further increases component service life.

Long-term availability of the components is a must with devices from Rohde & Schwarz, and this also applies to the R&S PSL3. Nevertheless, should a failure occur at any time in the future, replacement modules will still be available.

### Device concept – compact and flexible

Despite its small dimensions, the robust housing is extremely expandable. Cards can be inserted in four unused PCI slots and two ISA slots, thus protecting investments in existing systems that are based on the earlier bus system, and were in some cases expensive because they were customized. Clamps ensure the controller

is locked firmly in place. The housing has sufficient space to accommodate a second hard disk (option R&S PSL-B7). A CD-RW/DVD disk drive is just as much part of the standard equipment as the 3.5" disk drive.

### Wealth of interfaces that leave almost nothing to be desired

- ◆ Two USB controllers provide four USB ports, two of which are located at the front which is particularly advantageous in rack-mounting (option R&S ZZA-311)
- ◆ Two independent Ethernet controllers permit the flexible integration of the R&S PSL3 in Ethernet networks (LAN). Here, too, one of the two interfaces is available at the controller front
- ◆ Two serial (COM1/COM2) and one parallel (LPT1 (ECP, EPP)) interface permit connections also to conventional test environments
- ◆ In addition to the analog VGA standard connection, the R&S PSL3 also offers a digital DVI interface which allows operation of suitable TFT monitors without conversion losses (at different resolutions). The result is impressive – truly brilliant images
- ◆ Of course, an industrial controller would not be complete without a GPIB interface. It is included in the base unit and compatible with the quasi industrial standard set by National Instruments (AT-GPIB/TNT)

**Our commitment:  
excellent EMC values**

The outstanding EMC values of the R&S PSL3 block out all electromagnetic interference with the test setups. The controller was developed and designed thoroughly in accordance with EMC directives, with the core know-how of Rohde & Schwarz implemented in every aspect.

Interfaces to the exterior are specially filtered, and keyboard (option R&S PSL-Z2) and mouse (option R&S PSL-Z10) have also been very carefully selected and tested in accordance with the latest EMC directives.

*Rear view of the PSL3:  
View on the interfaces and free  
PCI and ISA slots*

**Software support –  
100% standard-compatible**

The IBM-compatible hardware architecture ensures smooth operation of the standard operating systems and programs. The R&S PSL3 can be ordered with Windows XP Embedded (option R&S PSL-K12), also in combination with LabWindows/CVI (R&S PSL-K13). LabWindows/CVI from National Instruments is an inter-

active approach to programming virtual instruments on the R&S PSL3 and is considered a quasi-industrial standard.

If required, the controller can also be ordered as a pure hardware platform (without software options). This is particularly beneficial if specific operating systems are used as part of system applications.



Specifications see PD 0758.0216.22  
and on [www.rohde-schwarz.com](http://www.rohde-schwarz.com)  
(Search term: PSL3)



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## Specifications



**ROHDE & SCHWARZ**



## Specifications

|   |   |
|---|---|
| <b>CPU</b>                              | Low Voltage Intel® Pentium III, 700 MHz or better   |
| <b>Memory</b>                           | L2 Cache, 256 kbyte   |
|   | SDRAM, 256 Mbyte, extendable with option PSP-B2 to 512 MB   |
| <b>Drives</b>                           |   |
| Harddisk                                | 3.5", 40 GB or better, 2nd HD with option R&S PSL-B7  |
| DVD-Combodrive<br>CD                    | up to 700 MB, CD-R read/write 24x/24x or better CD-RW read/write 24x/10x or better  |
| DVD                                     | up to 8.5 Gbyte, DVD read 8x or better  |
| Floppy disk                             | 3 1/2", 1.44 MB   |
| <b>Internal Interfaces</b>              |   |
| Free slots<br>PCI<br>ISA                | 4 x 32 bit, max 330 mm x 106 mm<br>2 x 16 bit, max 337 mm x 121 mm  |
| <b>External Interfaces</b>              |   |
| Display (max 1600 x 1200)<br>DVI<br>VGA | DVI-D connector<br>15-pin sub-D connector   |
| USB                                     | 4 x USB 1.1 with 2 USB controller   |
| Ethernet                                | 2 x 10/100 MBit/s, RJ45   |
| Serial                                  | 2 x RS-232-C (COM), 9-pin sub-D connector   |
| Parallel                                | Centronics LPT1 (ECP, EPP), 25-pin sub-D connector  |
| IEC/IEEE                                | IEC 60625-2 (IEEE 488.2), compatible with NI TNT, 24-pin Amphenol connector   |
| <b>Software</b>                         |   |
| BIOS                                    | AWARD   |
| Operating System (optional)             | Windows XP embedded (english)   |
| Measurement software (optional)         | LabWindows/CVI  |
| <b>General data</b>                     |   |
| Rated temperature range                 | +5°C to +45°C, meets EN60068-2-1 or -2  |
| Storage temperature range               | 25°C to +60°C, meets EN60068-2-1 or -2  |
| Humidity<br>(+40 °C, non-condensing)    | 80% relative humidity, meets EN 60068-2-3   |
| Electromagnetic compatibility           | meets requirements of EMC Directive 89/336/EEC, applied standard: EN 61326 (Immunity for industrial environment; Emission requirements class B) |

|   |  |
|---|--|
| Electrical safety                             | EN 61010-1   |
| Mechanical resistance<br>Vibration sinusoidal | non-operating mode meets EN 60068-2-6, MIL-T-28800 D class 5, 5 Hz to 150 Hz, max. 2 g at 55 Hz, 55 Hz to 150 Hz, 0.5 g const meets EN 60068-2-36, 10 Hz to 300 Hz, acceleration 1.2 g rms |
| Vibration random                              |  |
| Shock   | meets EN 60068-2-27, MIL-STD-810D, 40 g shock spectrum   |
| Power supply                                  | Power factor correction meets EN61000-3-2 100 V to 240 V (AC) ± 10%, 2.2 A to 0.15 A, 50 Hz to 60 Hz   |
| Input<br>Power consumption (base unit)        | approx. 35 W   |
| Dimensions (W x H x D)                        | 465 mm x 150 mm x 517 mm (19"; 3 height units)   |
| Weight (base unit )                           | approx. 9.5 kg   |

## Ordering information

| Description   | Type                                   | Order number |
|---|--|--------------|
| Industrial Controller   | R&S PSL3                               | 1161.5000.02 |
| <b>Accessoires supplied</b>   | Pocket guide, driver (CD), power cable |              |
| <b>Extras</b>   |  |              |
| 2nd Harddisk, 40 GB   | R&S PSL-B7                             | 1157.6470.02 |
| Keyboard, US character set, USB   | R&S PSL-Z2                             | 1157.6870.03 |
| Mouse, optical, USB   | R&S PSL-Z10                            | 1157.7060.02 |
| Operating System Windows XP embedded (english)  | R&S PSL-K12                            | 1157.7160.02 |
| Operating System Windows XP embedded (english) + Labwindows/CVI, full development vers. | R&S PSL-K13                            | 1157.7260.02 |
| TFT Monitor 17"   | R&S PMC3                               | 1082.6004.04 |
| 19"-Rack Adapter for R&S PSL3   | R&S ZZA-311                            | 1096.3277.00 |
| IEC Bus Cables  |  |              |
| 0.5 m   | R&S PCK                                | 0292.2013.05 |
| 1 m   |  | 0292.2013.10 |
| 2 m   |  | 0292.2013.20 |
| 4 m   |  | 0292.2013.40 |



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