We bring quality to light.

SNT 10
DC Power Supply

Instrument Systems
light measurement

State-of-the-art choice for a reliable, high power DC supply

The SNT 10 DC Power Supply is a precision tool developed to meet the needs of the automotive and vehicle industries in terms of accuracy, functionality, and user friendliness. It has been designed to be used in laboratory environments in conjunction with photometric test equipment for high performance testing of vehicle and traffic lighting.

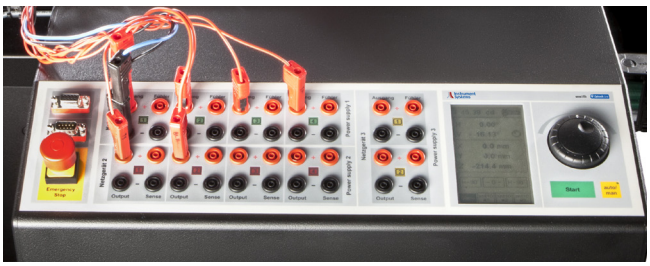
Features include:

- 50 V, 20 A (for U < 18 V) meeting the needs of today and tomorrow for testing and monitoring applications in the automotive and nonautomotive industries (other versions available)
- Unique adjustment accuracy 1 mV, 1 mA (or 0.1 mA)
- Low ripple & noise
- Fast up-and-down programming
- High accuracy current programming and read back
- Full protection from overcurrent, overvoltage, overtemperature
- Remote sense
- Electronic calibration
- CAN bus compatible
- RS 232 interface
- Standard 2-year warranty

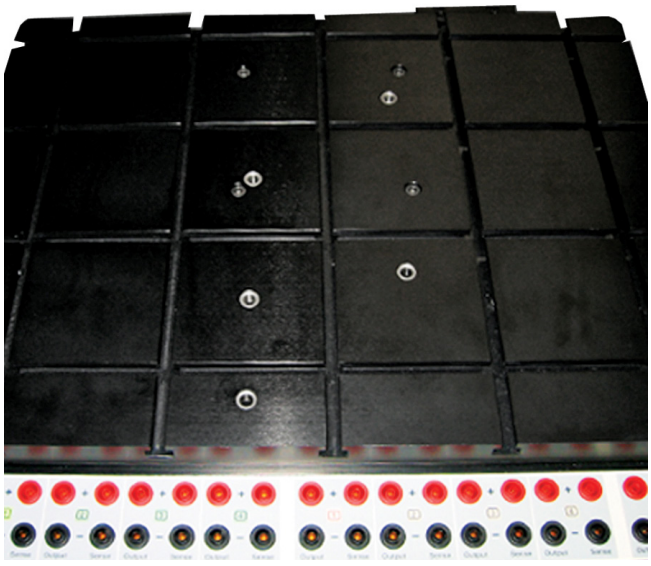
Special features

- The power supply has 5 channels allowing PC or manually controlled switchover between up to four light sources incorporated in a head or rear lamp assembly (fifth channel for connecting an integrating sphere)
- Operating LED equipped turn indicators in flashing mode (ECE R6 requirement) in conjunction with goniophotometer AMS controller
- Operating HID equipped lamps without additional circuits

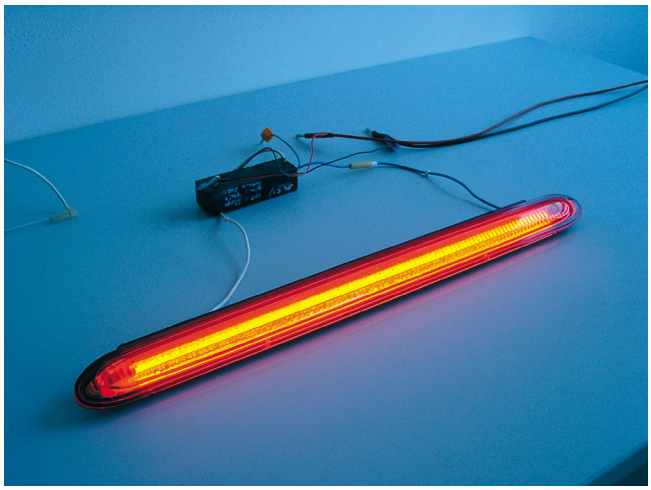
SNT 10 DC Power Supply integration with AMS Goniophotometer



Test table with recoCAN-L control unit and 10-channel multiplexer for integration of up to three SNT 10 DC Power Supplies



Test table with data interface, CAN-Bus, and multiplexer with 9 channels for three power supplies, 9 x output/9 x sense



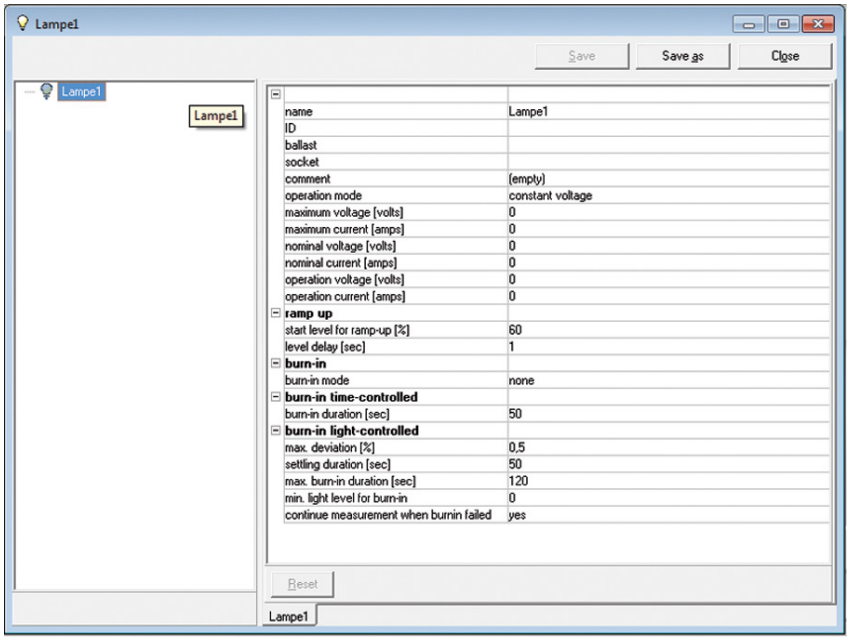
LED high mounted stop lamp operated by SNT 10

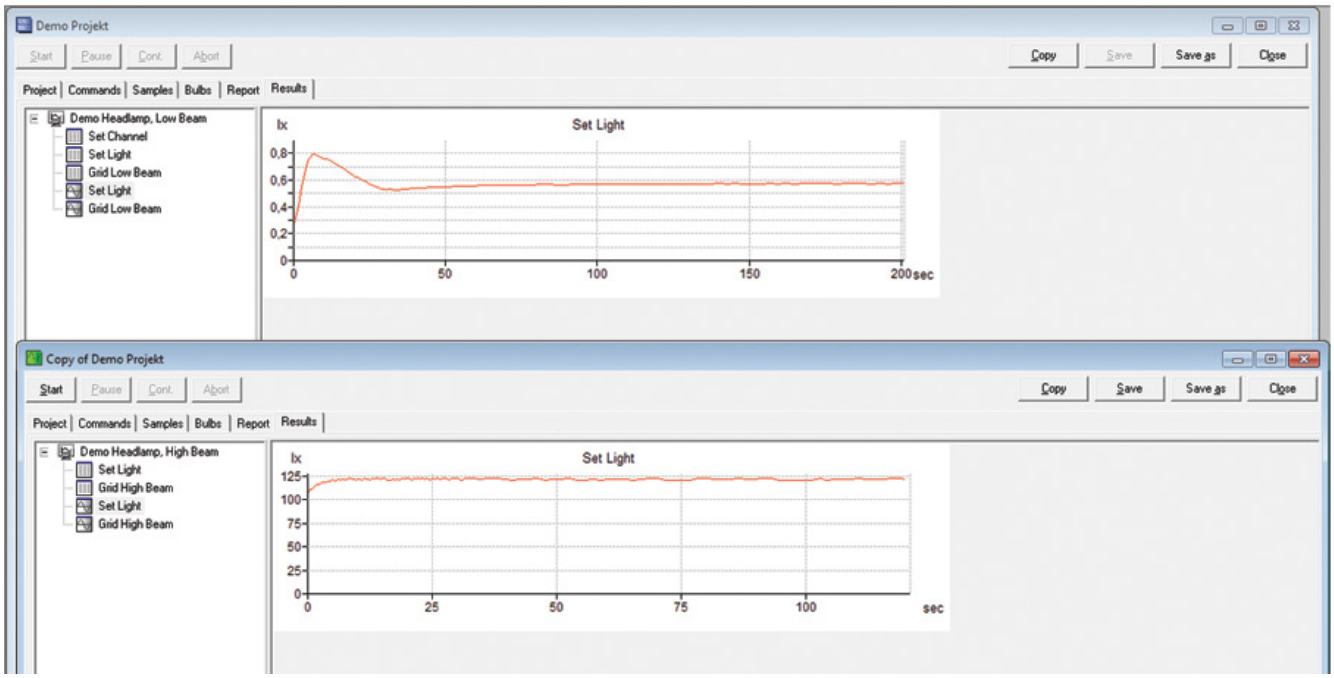
HID (Xenon) Headlamp operated by SNT 10

19" rack integration

Instrument Systems offers SNT 10 power supplies with higher adjustment resolution for current to be used in lower current applications (0.2 or 0.1 mA). See table of versions available.

Setting lamp parameters in LightCon Software





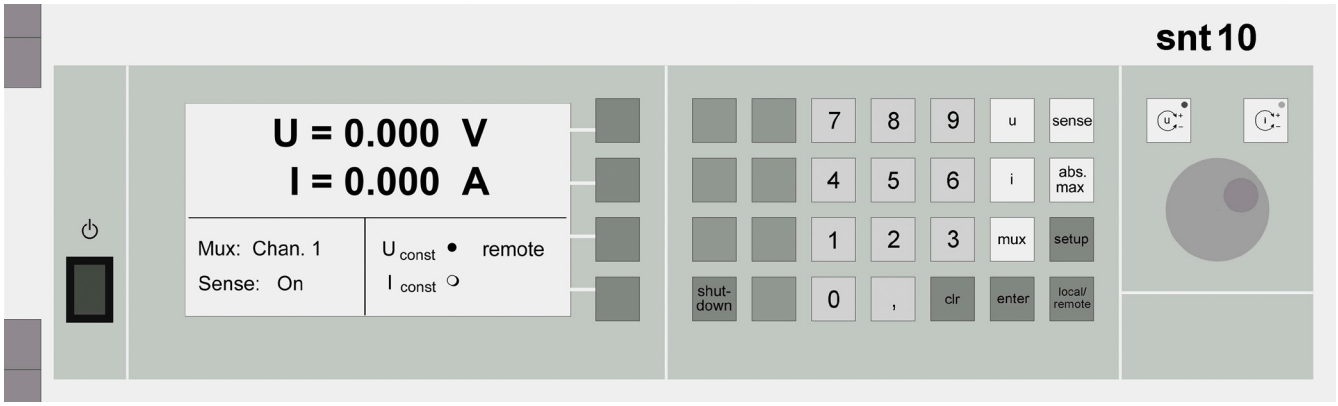
Burn-in graphic HID headlamp

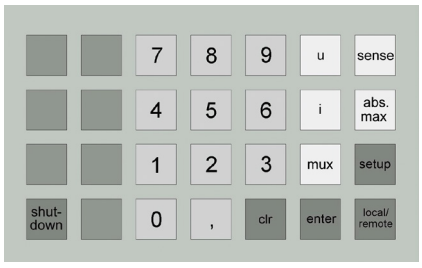
Special features

- 4 channels power + 4 channels sense wire connected to lamp multiplexer at goniophotometer test table
- Additional channel for integrating sphere applications
- Compatible with AMS Goniophotometer system
- PC control by LightCon Software
- Automatic burning-in of lamps with light control (luminous flux control, burn-in diagram for HID lamps)

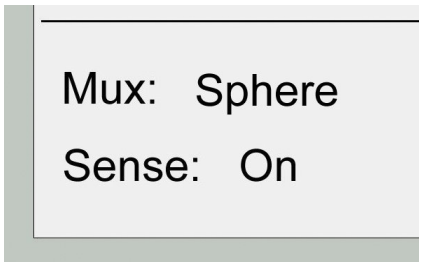
Manual operation

Front panel SNT 10 DC Power Supply



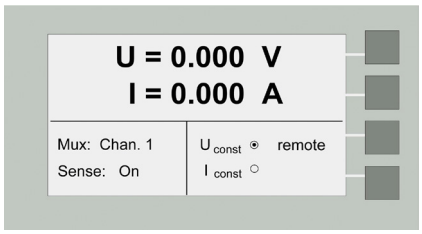


Key pad for manual control
(direct input of voltage/current values)

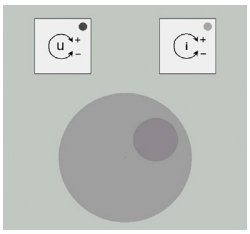


Sphere channel active

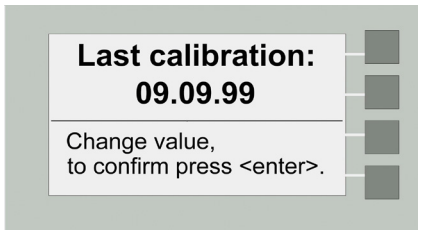
Multiplexer channel active



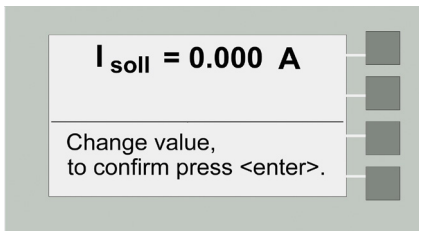
Constant current or voltage operation 4 channels available for automatic selection (additional 5th channel for integrating sphere operation) Sense feedback control



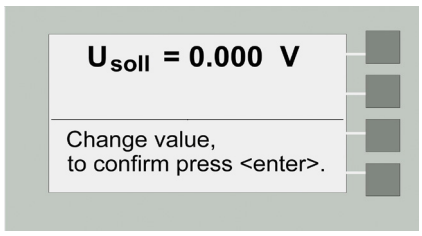
Voltage/current adjustment knob



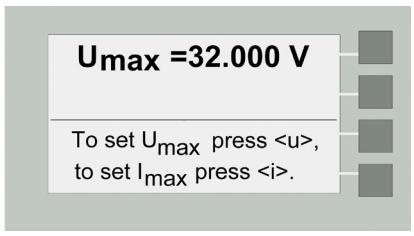
Display of last calibration date



Setting nominal value for current



Setting nominal value for voltage



Setting maximum voltage

Optronik Line

During the developmental phase, our power supplies undergo a battery of environmental tests. The power supplies are designed with built-in margin so that they can meet their specifications over time, under all conditions, and also withstand peak stress. Wide design margins and stringent environmental tests guarantee reliable products.

Support, services, and assistance

Instrument Systems aims to maximize the value you receive while minimizing your risk and problems. We strive to ensure that you get the test and measurement capabilities you paid for and obtain the support you need. Our extensive support resources and services can help you choose the right Optronik Line products for your applications and apply them successfully. Every instrument and system we sell has a global warranty. Support is available for at least five years beyond the production life of the product. Two concepts underlie our overall support policy: “Our Commitment” and “Your Advantage”.

Our Commitment

“Our commitment“ means your test and measurement equipment from the Optronik Line will meet its advertised performance and functionality. When you are choosing new equipment, we will help you with product information, including realistic performance specifications and practical recommendations from experienced test engineers. When you use Optronik Line equipment, we can verify that it works properly, help with product operation, and provide basic measurement assistance for the use of specified capabilities, upon request and at no extra cost.

Your advantage

“Your advantage” means that we offer a wide range of additional expert test and measurement services, which you can purchase according to your unique technical and business needs. Solve problems efficiently and gain a competitive edge by contracting with us for calibration, extra-cost upgrades, out-of-warranty repairs, and on-site education and training, as well as design, system integration, project management, and other professional services. Experienced engineers and technicians and our global sales and after-sales representative network worldwide can help you maximize your productivity, optimize the return on investment of your Optronik Line instruments and systems, and obtain dependable measurement accuracy for the life of those products.

Instrument Systems’ Optronik Division

is more than a manufacturer of photometer and goniophotometer systems and accessories. We also offer a range of services to support customers who purchase Optronik Line products, as well as customers who outsource manufacturing, test, and calibration services.

Customer service reflects a legacy of expertise in photometry technology and applications. No other manufacturer offers the knowledge base or the range of products developed by Instrument Systems, and no other goniophotometer series can be compared with the performance in both accuracy and speed of the Optronik Line AMS series.

Get assistance with all your test and measurement needs at: info@optronik.de

Custom Development

We welcome inquiries for the design and manufacture of custom optical radiation measurement and test systems. Experienced research and development engineers work closely with our customers to provide the highest level of product development, applications, and technical support. Customer focus, quality, innovation and excellence drive our culture.

You are welcome to visit our R&D and production plant in Berlin.

Technical specifications

Specification	50V/20,12A	50V/10A	32V/20A	32V/12A	32V/3.2A
Output Ratings					
Voltage	50 V	50 V	32 V	32 V	32 V
Main supply	230 V ± 10%, 50 Hz	230 V ± 10%, 50 Hz	230 V ± 10%, 50 Hz	230 V ± 10%, 50 Hz	230 V ± 10%, 50 Hz
Current	20 A (for V < 18 V)	10 A	20 A	12 A	3.2 A
Max. power	500 W	500 W	500 W	384 W	102.4 W
Programming accuracy U	1 mV	1 mV	1 mV	0.5 mV	1 mV
Programming accuracy I	1 mA	0.2 mA	1 mA	0.2 mA	0.1 mA
Standard tolerance	max. ± 10 mV for 0...50 V	max. ± 10 mV for 0...50 V	max. ± 10 mV for 0...30 V	max. ± 8 mV for 0...32 V	max. ± 10 mV for 0...30 V
	max. ± 10 mA for 0...20 A	max. ± 5 mA for 0...10 A	max. ± 10 mA for 0...20 A	max. ± 5 mA for 0...12 A	max. ± 3 mA for 0...3.2 A
	max. ± 4 mV for 0...32 V	max. ± 4 mV for 0...32 V	max. ± 2 mV for 0...20 V	max. ± 2 mV for 0...20 V	max. ± 2 mV for 0...20 V
	max. ± 3 mA for 0...6 A	max. ± 2 mA for 0...3 A	max. ± 3 mA for 0...6 A	max. ± 0.2 mA for 0...6 A	max. ± 2 mA for 0...2.5 A
	typ. ± 2 mV for 0...20 V	typ. ± 2 mV for 0...32 V	typ. ± 1 mV for 0...20 V	typ. ± 1 mV for 0...20 V	typ. ± 1 mV for 0...20 V
	typ. ± 1.5 mA for 0...6 A	typ. ± 1 mA for 0...3 A	typ. ± 1.5 mA for 0...6 A	typ. ± 1 mA for 0...6 A	typ. ± 1 mA for 0...2.5 A
	at ± 10% mains voltage modification	at ± 10% mains voltage modification	at ± 10% mains voltage modification	at ± 10% mains voltage modification	at ± 10% mains voltage modification
	1 x 10^{-5} from nominal value at no-load/full-load operation <± 1 x 10^{-5} from nominal value more than 8 hours <± 1 x 10^{-5} from nominal value	1 x 10^{-5} from nominal value at no-load/full-load operation <± 1 x 10^{-5} from nominal value more than 8 hours <± 1 x 10^{-5} from nominal value	1 x 10^{-5} from nominal value at no-load/full-load operation <± 1 x 10^{-5} from nominal value more than 8 hours <± 1 x 10^{-5} from nominal value	1 x 10^{-5} from nominal value at no-load/full-load operation <± 1 x 10^{-5} from nominal value more than 8 hours <± 1 x 10^{-5} from nominal value	1 x 10^{-5} from nominal value at no-load/full-load operation <± 1 x 10^{-5} from nominal value more than 8 hours <± 1 x 10^{-5} from nominal value
Display resolution V	1 mV	1 mV	1 mV	1 mV	1 mV
Display resolution A	1 mA	0.2 mA	1 mA	1 mA	0.1 mA
V Display deviation	max. ± 6 mV typ. ± 2 mV	max. ± 6 mV typ. ± 2 mV	max. ± 3 mV typ. ± 1.5 mV	max. ± 6 mV typ. ± 2 mV	max. ± 3 mV typ. ± 1.5 mV
A Display deviation	max. ± 3 mV typ. ± 1.5 mV	max. ± 2 mV typ. ± 1 mV	max. ± 3 mV typ. ± 1.5 mV	max. ± 3 mV typ. ± 1.5 mV	max. ± 2 mV typ. ± 1 mV
Environment	+10°C...+35°C, relative humidity 20...80 %, non-condensing				
Interface	CAN bus compatible, RS232				
Dimensions	483 mm x 132 mm (3HE) x 370 mm (19“- instrument)				
Weight	approx. 8.7 kg				

- Laboratory power supply with DC voltage, system compatible, switch-mode pre-adjustment, linear re-adjustment
- 16-bit D/A converter, 16-bit A/D converter
- Push-pull output stage, adjustment via sensor inputs (can be switched off)
- Automatic switch-selecting of current and voltage regulation, potential-free output, connections on the back of the instrument
- Dual output channels, option to connect a 4, 8, 9, or 10-channel lamp multiplexer
- Additional 5th channel for integrated operation with integrating sphere for lamp flux measurement
- Sense wiring for each channel
- Operation via front panel keyboard or serial interface RS232
- Large, graphic LC display with backlight illumination, microprocessor-controlled
- 5-digit display
- Display of mode of operation (constant current or constant voltage operation mode; remote PC aided or local, manual mode)
- Display of selected multiplexer channel
- Compatible to optoCAN Goniometer Interface Bus
- Power factor correction

Instrument Systems
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