

Technical documentation

Last changed on: 2024-04-03

DPS series

High Precision Built-in or System Capable High Voltage Power Supply Module

- Versions from 500 V – 6 kV
- patented resonance converter technology
- available as metal-box or 3U MMC version
- combinable in a multichannel THQ AC/DC HV power supply
- INHIBIT, adjustable hardware limits
- very low ripple and noise, low EMI
- high precision, high stability
- version with reversible polarity



Document history

| Version | Date | Major changes |
|---------|--------------------------|---|
| 4.0 | 2024-04-03 | In Table 9 Shortcut (VIN_C) corrected, in Table 4: Configurations item code fixed |
| 3.9 | 2024-02-20 | Additions in the chapter 3.3.2 polarity and order guides |
| 3.8 | 2024-01-24 | Notes HV connection SHV in version S08 (table 5 and 7) |
| 3.7 | 2023-09-06 | New product picture, remove chapter 7 "Revisions", Specification of the length for HV cable, table 3: specification for DPS-mini removed (footnote 1), example for order options (table 6), description picture number 7 edited, order guides revised |
| 3.6 | 2023-04-18 | HV cable connection (Figure 9: HV cable connection), Color of the LED negative fixed, Description and pictures (Jumper) edited under 3.4.3separation supply ground from signal ground, Glossary refresh |
| 3.5 | 2022-11-07 | short article names, rename document |
| 3.4 | 2022-08-11 | improved documentation |
| 3.3 | 2021-12-07 | Improved documentation connectors, revisions, Overview, Glossary, Table of Contents, Configurations for DP and DK modules, separation of the modules DPS compact metal box/ DPS 3U Euro cassette and DPSmini |
| 3.2 | 2020-09-03 | Improved documentation |
| 3.1 | 2020-08-18 | Improved documentation (Set / Monitor accuracy) |
| 3.0 | 2020-07-13 | Improved documentation (safety information, changing polarity) |
| 2.5 | 2019-09-11 | Improved documentation |
| 2.4 | 2019-07-30 | error correction |
| 2.3 | 2019-06-13 | Improved documentation |
| 2.2 | 2019-03-25 | Fixed dimensions for DPS mini Improved documentation |
| 2.1 | 2017-08-30 2018-06-13 | Fixed dimensions for DPS mini Improved documentation |
| 2.0 | 2017-02-28 | Relayouted documentation |

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The information in this manual is subject to change without notice. We take no responsibility for any mistake in the document. We reserve the right to make changes in the product design without reservation and without notification to the users. We decline all responsibility for damages and injuries caused by an improper use of the device.





Safety

This section contains important security information for the installation and operation of the device. Failure to follow safety instructions and warnings can result in serious injury or death and property damage.

Safety and operating instructions must be read carefully before starting any operation.

We decline all responsibility for damages and injuries caused which may arise from improper use of our equipment.

Depiction of the safety instructions

| | |
|--|---|
| DANGER! | |
|  DANGER! | <p>“Danger!” indicates a severe injury hazard. The non-observance of safety instructions marked as “Danger!” will lead to possible injury or death.</p> |
| WARNING! | |
|  WARNING! | <p>“Warning!” indicates an injury hazard. The non-observance of safety instructions marked as “Warning!” could lead to possible injury or death.</p> |
| CAUTION! | |
|  CAUTION! | <p>Advices marked as “Caution!” describe actions to avoid possible damages to property.</p> |
| INFORMATION | |
|  INFORMATION | <p>Advices marked as “Information” give important information.</p> |



Read the manual.



Attention high voltage!

HIGH VOLTAGE



Important information.

Intended Use

The device may only be operated within the limits specified in the data sheet. The permissible ambient conditions (temperature, humidity) must be observed. The device is designed exclusively for the generation of high voltage as specified in the data sheet. Any other use not specified by the manufacturer is not intended. The manufacturer is not liable for any damage resulting from improper use.

Qualification of personnel

A qualified person is someone who is able to assess the work assigned to him, recognize possible dangers and take suitable safety measures on the basis of his technical training, his knowledge and experience as well as his knowledge of the relevant regulations.

General safety instructions

- Observe the valid regulations for accident prevention and environmental protection.
- Observe the safety regulations of the country in which the product is used.
- Observe the technical data and environmental conditions specified in the product documentation.
- You may only put the product into operation after it has been established that the high-voltage device complies with the country-specific regulations, safety regulations and standards of the application.
- The high-voltage power supply unit may only be installed by qualified personnel.

Important safety instructions

WARNING!



WARNING!

To avoid injury of users it is not allowed to open the unit. There are no parts which can be maintained by users inside of the unit. Opening the unit will void the warranty.

WARNING!



WARNING!

The high-voltage cable must be professionally connected to the consumer/ load and the connection insulated with the appropriate dielectric strength. Do not power the consumer/ load outside of its specified range.

WARNING!



WARNING!

Before connecting or disconnecting HV cables or any operation on the HV output or the application, the unit has to be switched off and discharge of residual voltage has to be finished. Depending on application residual voltages can be present for long time periods.

WARNING!



WARNING!

Do not operate the unit in wet or damp conditions.

WARNING!



WARNING!

Do not operate the unit in an explosive atmosphere.

WARNING!



WARNING!

Do not operate the unit if you suspect the unit or the connected equipment to be damaged.

CAUTION!



CAUTION!

Before changing the polarity of modules with switchable polarity, the high voltage generation must be switched off. The HV-Output including connected loads must not have any residual voltage.

Nonobservance of this condition may damage the module.

CAUTION!



CAUTION!

The devices (3UC) must only be used in combination with iseg approved crates.

INFORMATION



INFORMATION

Please check the compatibility with the devices used.

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1. General description

DPS modules are highly precise and highly stable analog controlled high voltage power supplies. The modules are available as compact metal box or system capable in 3U Euro cassette. DPS modules (compact metal box) can be used as standalone DC/DC converters, DPS (compact metal box) can be combined to a multichannel AC/DC supply in a THQ AC/DC HV unit or integrated in a modular MMC system as 3U module. The output voltage is controllable via analog interface with either a potentiometer (internal reference voltage) or an analog control voltage. The polarity of standard DPS modules is electronically switchable. To protect the connected load the modules are equipped with INHIBIT, standard DPS modules are also equipped with adjustable current and voltage limits.

Customized versions can be produced on [request](#).

2. Overview

2.1. DPS – compact metal box

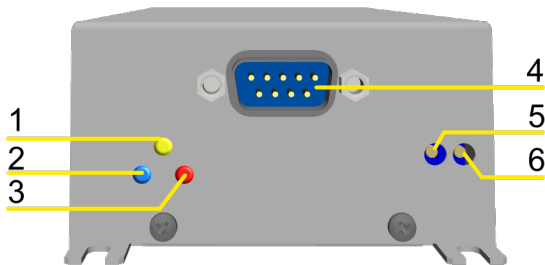


Figure 1: Front side

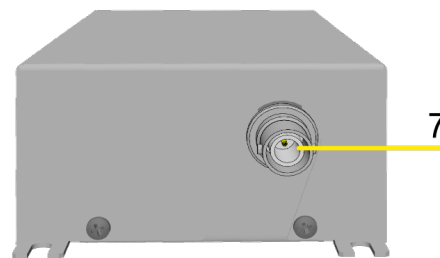


Figure 2: Back side – with HV connector

| Number | Description | Detailed explanation in chapter | |
|--|---------------------|---|---|
| [1] | HV ON LED | Signals output voltage | 3.4.2 Switchable Polarity |
| [2] | Polarity LED | voltage output is negative | 3.4.2 Switchable Polarity |
| [3] | Polarity LED | voltage output is positive | 3.4.2 Switchable Polarity |
| [4] | Interface connector | Power supply and control signal | 5.1 Interface connector D-SUB 9 (compact metal box) |
| [5] | Current Limit | setting a limit for current (I_{nom}) | 3 Technical Data, 3.2 Specifications |
| [6] | Voltage Limit | setting a limit for voltage (V_{nom}) | 3 Technical Data, 3.2 Specifications |
| [7] ⁽¹⁾ | High voltage output | Sample for DPS with SHV connector | Table 4: Configurations: DPS – compact metal box |
| Notes: | | | |
| 1) – depending on model (SHV or cable) | | | |

Table 1

2.2. DPS – 3U Euro cassette

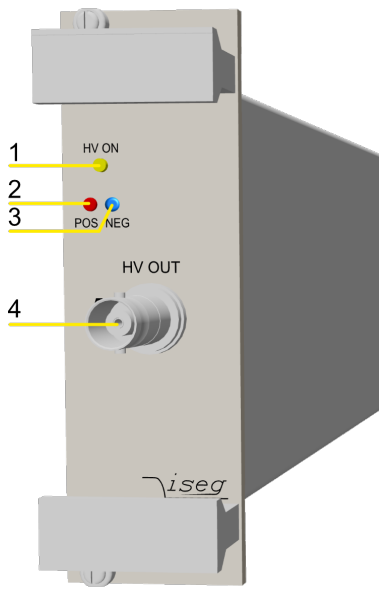


Figure 3: Front side, 3UC

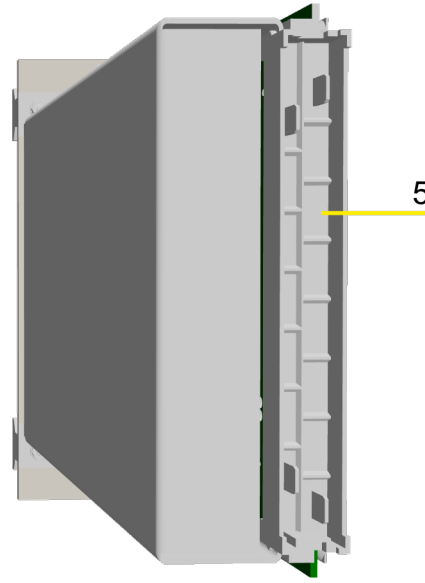


Figure 4: Back side, 3UC

| Number | Description | Description | Detailed explanation in chapter |
|--------|---------------------|---------------------------------|--|
| [1] | HV ON LED | Signals output voltage | 3.4.2 Switchable Polarity |
| [2] | Polarity LED | voltage output is positive | 3.4.2 Switchable Polarity |
| [3] | Polarity LED | voltage output is negative | 3.4.2 Switchable Polarity |
| [4] | High voltage output | | 3 Technical Data |
| [5] | Interface connector | Power supply and control signal | 5.2 System connector H15 (3UC Euro cassette) |

Table 2

3. Technical Data

3.1. Specifications

| SPECIFICATIONS | DPS | DPS 3UC |
|--|--|---------------------------|
| Output voltage V_{nom} | 500 V – 6 kV | |
| Polarity | Switchable | |
| Ripple and noise ($f > 10$ Hz) ⁽¹⁾ | typ. < 3 mV _{p-p} , max. 7 mV _{p-p} | |
| Stability – [ΔV_{out} vs. ΔV_{in}] ⁽¹⁾ | < $1 \cdot 10^{-5} \cdot V_{nom}$ | |
| Stability – [ΔV_{out} vs. ΔR_{load}] ⁽¹⁾ | < $5 \cdot 10^{-5} \cdot V_{nom}$ | |
| Temperatur coefficient | 50 ppm/K | |
| Supply voltage V_{in} | 22.8 – 25.2V | |
| Supply current I_{in} at $V_{out} = 0$ at $V_{out} = V_{nom}$ / with load | < 120 mA < 800 mA | |
| Set / Monitor voltage V_{set} | 0 – 5 V opt. 0 – 10 V | 0 – 5 V |
| Set / Monitor accuracy | $\pm 1 \% \cdot V_{nom}$ | |
| Voltage ramp up/down | $0.25 \cdot V_{nom} / s$ | |
| Protection | Overload and short circuit protected (ATTENTION: there is only one short circuit or arc per second allowed!) | |
| | INHIBIT, V/I-limit (setting with potentiometer LIMIT I resp. V) | INHIBIT |
| Remote connector | D-Sub 9 | H15 |
| HV connector | HV-cable ⁽²⁾ SHV | SHV |
| Case | metal box (also THQ version) | 3U cassette (MMC capable) |
| Dimensions – L/W/H | 185/75/40 mm ³ | 160mm/8HP/3U |
| Operating temperature | 0 – 40 °C | |
| Storage temperature | -20 – 85°C | |
| Humidity | max. 70 % | |
| Notes: 1) – Specifications for stability, ripple and noise are guaranteed in the range $2\% \cdot V_{nom} < V_{out} \leq V_{nom}$ 2) – the HV cable has a length of 600mm as standard, see Figure 9: HV cable connection | | |

Table 3: Technical data: Specifications

3.2. Configurations

| CONFIGURATIONS DPS – compact metal box | | | | | | | | |
|--|------------------|------------------|--------------------------------------|-----------------------------------|-------------------------|---------------------------|-----------------------------|---------------------|
| | V _{nom} | I _{nom} | Standard Ripple (mV _{p-p}) | Internal Capacitance nominal (nF) | Damping Resistor (kOhm) | Discharge Resistor (MOhm) | HV connector ⁽¹⁾ | Item Code |
| DPR 05 106 | 500 V | 10 mA | 7 | 450 | 0,22 | 12 | cable | DP005106r24yyooocRk |
| DPR 10 106 | 1 kV | 10 mA | 7 | 240 | 0.22 | 12 | cable | DP010106r24yyooocRk |
| DPR 15 805 | 1.5 kV | 8 mA | 7 | 130 | 0,22 | 12 | cable | DP015805r24yyooocRk |
| DPR 20 605 | 2 kV | 6 mA | 7 | 20 | 0,22 | 25 | cable | DP020605r24yyooocRk |
| DPR 30 405 | 3 kV | 4 mA | 7 | 22 | 0,22 | 25 | cable | DP030405r24yyooocRk |
| DPR 40 305 | 4 kV | 3 mA | 7 | 27 | 0.22 | 30 | cable | DP040305r24yyooocRk |
| DPR 50 205 | 5 kV | 2 mA | 7 | 10 | 0.68 | 30 | cable | DP050205r24yyooocRk |
| DPR 60 155 | 6 kV | 1.5 mA | 7 | 10 | 0.68 | 30 | cable | DP060155r24yyooocRk |

Notes:
replacement characters: o – options, c – connector, R – revision, k – customization, y – monitor voltages
1) – the HV cable has a length of 600mm as standard, see Figure 9: HV cable connection

Table 4: Configurations: DPS – compact metal box

| CONFIGURATIONS DPS – 3U Euro cassette | | | | | | | | |
|---------------------------------------|------------------|------------------|--------------------------------------|-----------------------------------|-------------------------|---------------------------|--------------------|---------------------|
| | V _{nom} | I _{nom} | Standard Ripple (mV _{p-p}) | Internal Capacitance nominal (nF) | Damping Resistor (kOhm) | Discharge Resistor (MOhm) | HV connector | Item Code |
| DPR 05 106 | 500 V | 10 mA | 7 | 450 | 0.1 | 12 | SHV | DK005106r2450ooocRk |
| DPR 10 106 | 1 kV | 10 mA | 7 | 240 | 0.1 | 12 | SHV | DK010106r2450ooocRk |
| DPR 15 805 | 1.5 kV | 8 mA | 7 | 130 | 0.1 | 12 | SHV | DK015805r2450ooocRk |
| DPR 20 605 | 2 kV | 6 mA | 7 | 40 | 0.1 | 25 | SHV | DK020605r2450ooocRk |
| DPR 30 405 | 3 kV | 4 mA | 7 | 40 | 0.1 | 25 | SHV | DK030405r2450ooocRk |
| DPR 40 305 | 4 kV | 3 mA | 7 | 27 | 0.22 | 30 | SHV | DK040305r2450ooocRk |
| DPR 50 205 | 5 kV | 2 mA | 7 | 10 | 0.68 | 30 | SHV ⁽¹⁾ | DK050205r2450ooocRk |
| DPR 60 155 | 6 kV | 1.5 mA | 7 | 10 | 0.68 | 30 | SHV ⁽¹⁾ | DK060155r2450ooocRk |

Notes:
replacement characters: o – options, c – connector, R – revision, k – customization
1) – SHV connector, version S08

Table 5: Configurations: DPS – 3U Euro cassette

3.3. Options

| OPTIONS / ORDER INFO | INFO | EXAMPLE |
|--------------------------------------|--|-----------------------------|
| Set / monitor voltage ⁽¹⁾ | 0 – 5V, standard 0 – 10V, optional | DPR 05 106 DPR 05 106_A0 |
| 3UC | 3U , Height unit based on the 19-inch standard housing, MMC capable version | |

Notes:
1) – only for compact metal box

Table 6: Technical data: Options and order information

3.4. Functional description

If the high voltage excitation is switched on and off via PIN ON, it rises or falls by means of ramp up (see 3.4.2 Switchable Polarity) to the maximum set voltage via V_{SET} . A monitor voltage for the output current and output voltage is available via the I_{MON} and V_{MON} connections. The pin REF (reference) can be used for the V_{SET} voltage via an additional circuit (see Figure 5: VSET)

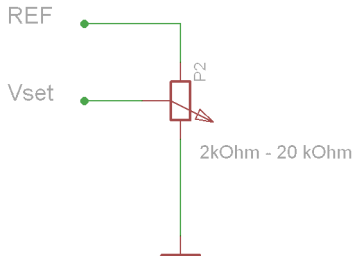


Figure 5: VSET

3.4.1. INHIBIT ¹

Modules equipped with the option INHIBIT ² provide the possibility to shut down single channels, a group of channels (monitor group) or the entire module with or without ramp, triggered by an external signal.

3.4.2. Switchable Polarity

The polarity can be switched via the input POL:

| signal | level | polarity |
|--------|------------|------------|
| POL | High or NC | → positive |
| POL | Low | → negative |

INFORMATION



INFORMATION

Switching the polarity is only possible with output voltages from 0 to 64 V. At higher voltages, the changeover process is blocked to protect the changeover relay.

The HV ON LED (yellow) indicates that the output voltage is still greater than 64V. If the output voltage is less than 64V, it is switched off.

If the level at the POL input (see chapter 5 Connectors and PIN assignments) changes from high to low or from low to high, the generation of high voltage is stopped first. If the voltage has fallen below 64V, the polarity is switched and the voltage value specified at input V_{set} is approached with a voltage ramp of $0.25 \cdot V_{nom}/s$.

¹ Only for 3U Euro cassette

² Only for 3U Euro cassette

3.4.3. separation supply ground from signal ground

In version 3UC, the supply ground (0V) can be separated from the signal ground (GND) by removing the jumper. See Figure 6: view of the top and Figure 7: detail view of Figure 6: view of the top (Jumper red marked).

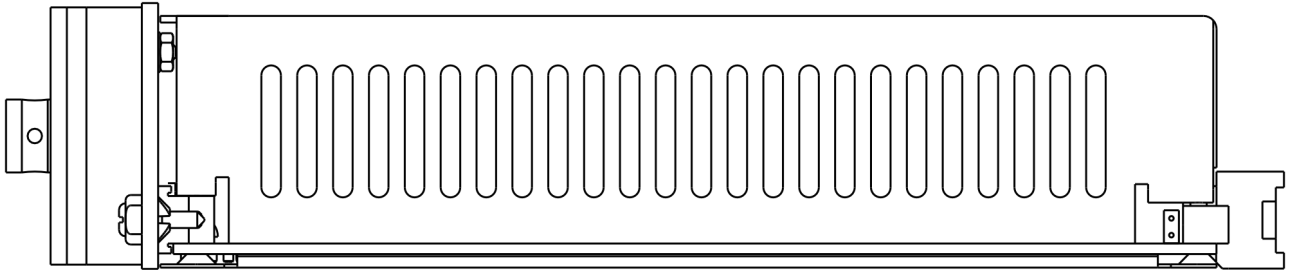


Figure 6: view of the top

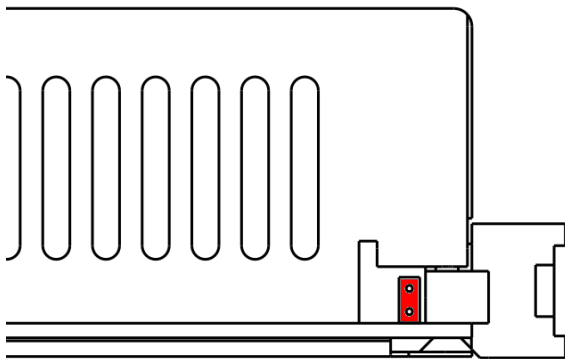


Figure 7: detail view of Figure 6: view of the top (Jumper red marked)

4. Dimensional drawings

4.1. DPS – compact metal box

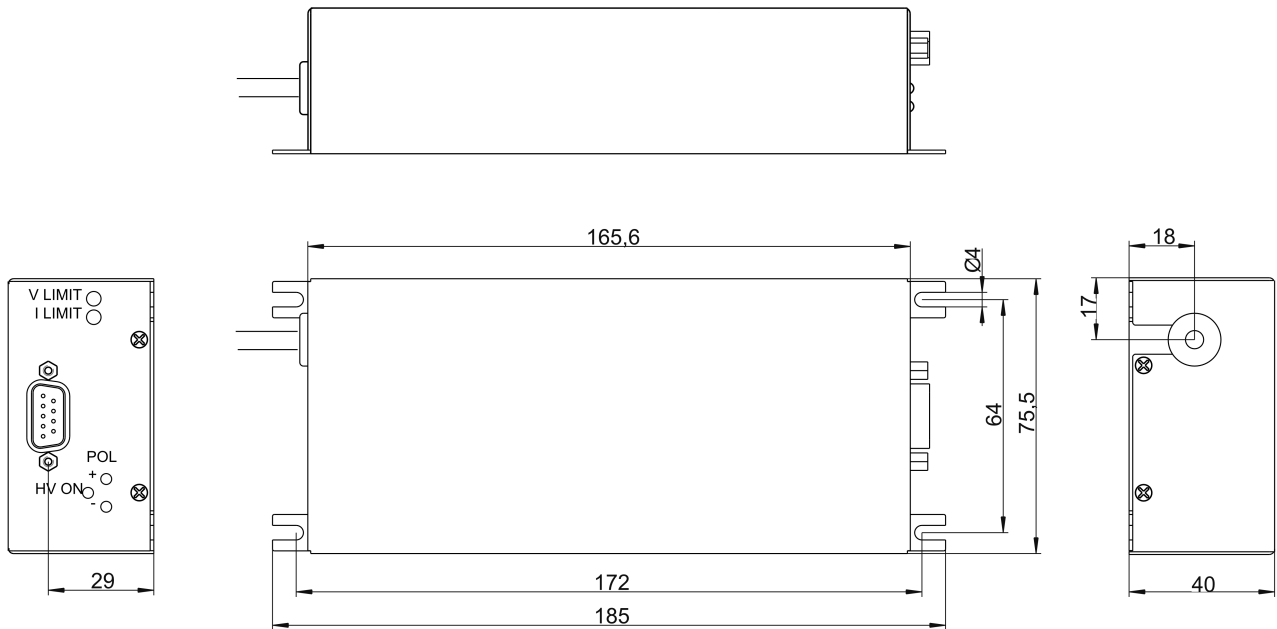


Figure 8: dimensional drawing DPS with cable

4.2. HV-Cable configuration

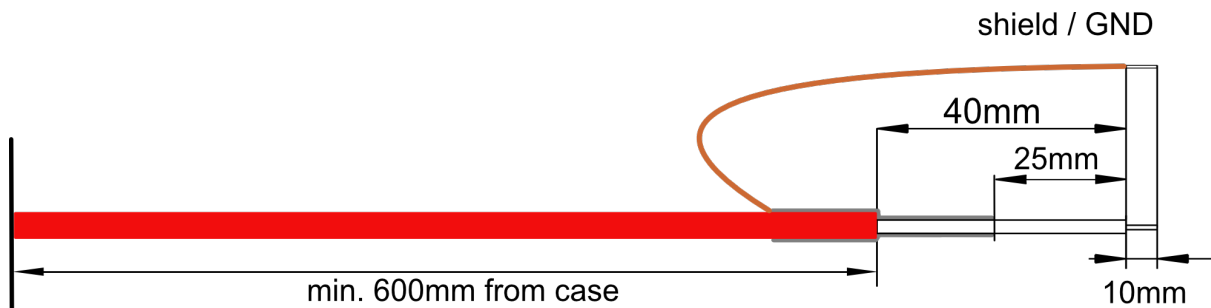


Figure 9: HV cable connection

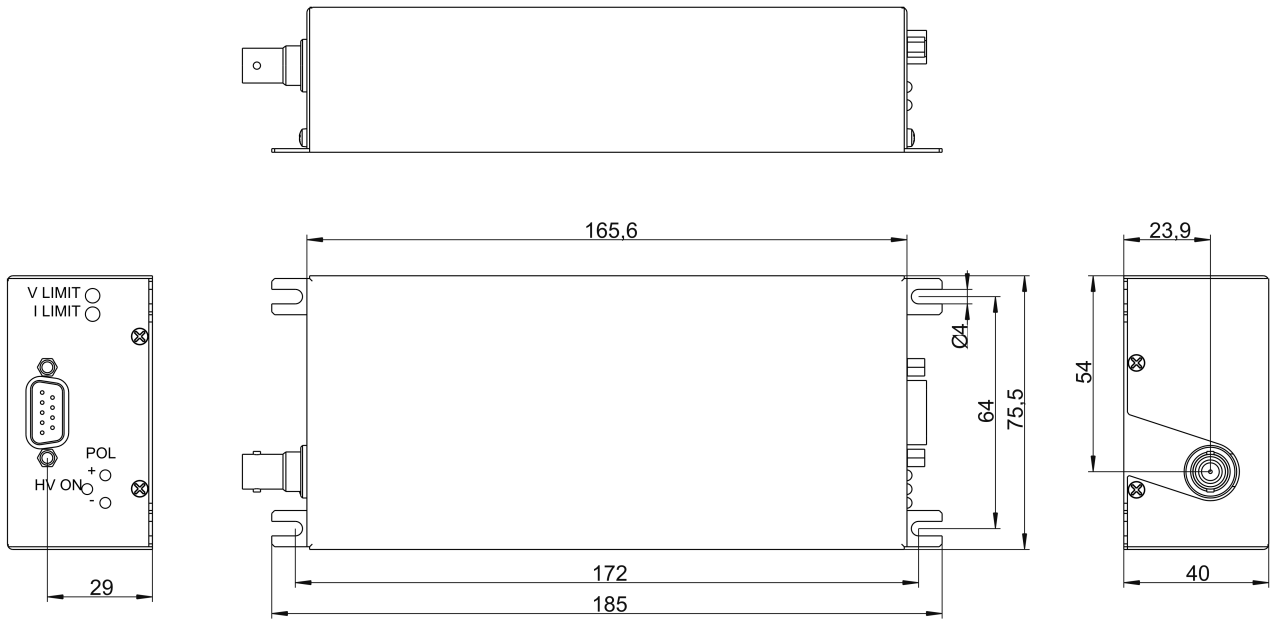


Figure 10: dimensional drawing DPS with SHV

4.3. DPS – 3UC Euro cassette

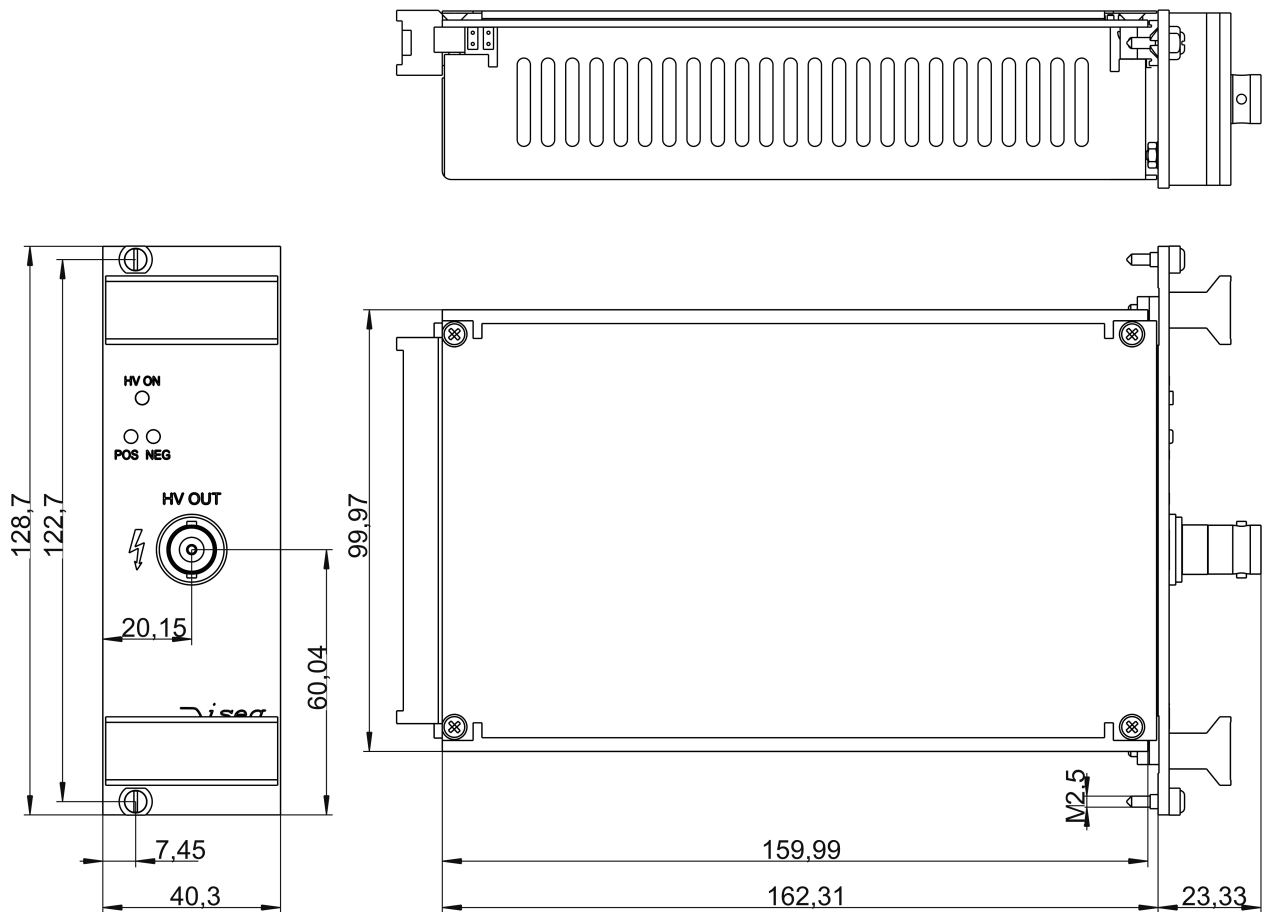


Figure 11: dimensional drawing DPS 3UC

5. Connectors and PIN assignments

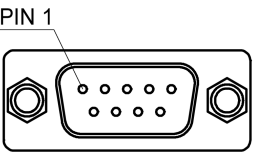


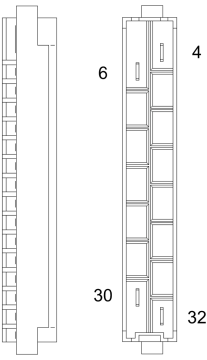
| CONNECTORS – POWER SIDE | | PART NUMBERS (manufacturer code / iseg accessory parts item code) | |
|--|---|---|---------------------------|
| D-SUB9 - male | | CABLE SIDE | |
|  Figure 12 | connector manufacturer iseg part number | D SUD9, Female different producers | (DIN 41652) |
| SHV | | CABLE SIDE | |
|  Figure 13 | part number manufacturer iseg part number | 57K101-006N3 Rosenberger Z590162 | |
| SHV Version S08 | | CABLE SIDE | |
|  Figure 14 | part number manufacturer iseg part number | R317.005.000 Radiall Z592474 | |
| H15 | | CABLE SIDE | |
|  Figure 15 | connector manufacturer iseg part number | Female power plug type H15, compatible with iseg crates different producers | (DIN 41612 / IEC 60603-2) |

Table 7

5.1. Interface connector D-SUB 9 (compact metal box)

| PIN | NAME | DESCRIPTION | VALUE |
|-----|--------------------|--|---|
| 1 | 0V ⁽¹⁾ | Supply ground | 0 V |
| 2 | IMON | I _{mon} Monitor voltage of output current | 0 ... 5 V (optionally: 0 ... 10 V) |
| 3 | ON | HV ON/OFF with voltage ramp | TTL-level: LOW → HV ON HIGH or not connected → HV OFF |
| 4 | POL | Polarity | HIGH or not connected → positive LOW → negative |
| 5 | VIN | V _{in} Supply voltage | +24 V DC |
| 6 | GND ⁽¹⁾ | Signal ground | |
| 7 | VMON | V _{mon} Monitor voltage | 0 ... 5 V (optionally: 0 ... 10 V) |
| 8 | VSET | V _{set} Set value of output voltage | 0 ... 5V (optionally: 0 ... 10 V) |
| 9 | REF | V _{ref} Internal reference voltage | 5 V (optionally: 10V) |

Notes:
 Case is connected to GND
 1) – internally connected

Table 8: PIN Assignment D-SUB 9

5.2. System connector H15 (3UC Euro cassette)

| PIN | NAME | DESCRIPTION | VALUE |
|-----|-------------------------|---|---|
| 6 | 0V | Supply ground | |
| 8 | REF | V_{ref} Internal reference voltage | 5 V |
| 10 | 0V | Supply ground | |
| 12 | GND | Signal ground | |
| 14 | IMON | I_{mon} Monitor voltage of output current | 0 ... 5 V |
| 16 | ON | HV ON/OFF with voltage ramp | TTL-level: LOW → HV ON HIGH or not connected → HV OFF |
| 18 | VIN_S ⁽¹⁾ | $V_{in,s}$ Supply voltage | +24 V DC |
| 20 | VSET | V_{set} Set value of output voltage | 0 ... 5 V |
| 22 | POL | Polarity | HIGH or not connected → positive LOW → negative |
| 24 | VMON | V_{mon} Monitor voltage | 0 ... 5 V |
| 26 | VIN ⁽¹⁾ | V_{in} Supply voltage (Power) | +24 V DC |
| 28 | ISET | I_{set} Set voltage of output current | 0 ... 5 V |
| 30 | KILL_ENA ⁽²⁾ | Killenable, high active | TTL-level |
| 32 | INH | Inhibit, LOW = active, shut down the output voltage | TTL-level: LOW → HV OFF HIGH or not connected → HV ON |

Notes:
Case is connected to **0V** and with Jumper J1 connected to **GND**, see chapter 3.4.3 separation supply ground from signal ground
1) – internally connected
2) – If KillEnable is active the occur of Inhibit will trigger a Kill-signal. This signal will switch off the HV immediately without ramp. Restoring the output voltage is only possible after operating KILL-ENA or HV_ON.

Table 9: PIN Assignment 3U Euro cassette (H15)

6. Order guides

| CONFIGURATION ORDER GUIDE (item code parts) | | | | | | | | | |
|---|--|---|----------------|--|---|--------|--|--|---|
| Dx | 030 | 405 | r | 24 | 50 | 000 | 02 | 0 | 0 |
| Type | V _{nom} | I _{nom} (nA) | Polarity | Input Voltage | Monitor Voltage | Option | HV Connector | Revision | Customized Version |
| | three significant digits • 100V For Example: 030 = 3000V | two significant digits + number of zeros For Example: 405 = 4mA | r = reversible | two significant digits For Example: 24 = 24 Volt | two significant digits 1.th hex • 1V 2.th dez • 0,1V For Example: 50 = 5V A0 = 10V | | 00 = Cable 02 = SHV 03 = SHV, version S08 | one digit Example: 0 = no revision | one digit Example: 0 = no customization |
| Notes: x = P - Metal box, x = K - 3U Cassette, x = T - for THQ | | | | | | | | | |

Table 10: Configuration item code

| CABLE ORDER GUIDE | | | | | |
|--|------------------|------------|---------------------------------------|---------------------|--|
| POWER SUPPLY SIDE CONNECTOR | V _{max} | CABLE CODE | CABLE DESCRIPTION | LOAD SIDE CONNECTOR | ORDER CODE LLL = length in m ⁽¹⁾ |
| SHV | ≤ 5 kV | 04 | HV cable shielded 30kV (HTV-30S-22-2) | open | SHV_C04-LLL |
| S08 | ≤ 8 kV | 04 | HV cable shielded 30kV (HTV-30S-22-2) | open | S08_C04-LLL |
| Notes: 1) - Length building examples: 10cm → 0.1, 2.5m → 2.5, 12m → 012, 999m → 999 | | | | | |

Table 11: Guideline for cable ordering

7. References

For more information please use the following download links:

| |
|--|
| <p>This document</p> <p>https://iseq-hv.com/download/DC_DC/DPS/iseq_datasheet_DPS_en.pdf</p> |
| <p>DPS series</p> <p>https://iseq-hv.com/en/products/detail/DPS</p> |
| <p>Archives</p> <p>https://iseq-hv.com/download/?dir=DC_DC/DPS/archive</p> |
| <p>Cables and Connectors</p> <p>https://iseq-hv.com/download/ACCESSORIES/Adapters%20and%20Cables/iseq_Cables%20and%20Connectors_en.pdf</p> |

| | |
|------------------------------------|---|
| Manufacturers website (connectors) | |
| Radiall | https://www.radiall.com/ |
| Rosenberger | https://www.rosenberger.com/ |

8. Glossary

| SHORTCUT | MEANING |
|--------------------------------------|--|
| 0V | Supply ground |
| V_{nom} | nominal output voltage |
| V_{out} | output voltage |
| V_{set} | set value of output voltage |
| V_{mon} | monitor voltage of output voltage |
| V_{meas} | digital measured value of output voltage |
| V_{p-p} | peak to peak ripple voltage |
| V_{in} | input / supply voltage |
| $V_{in,s}$ | $V_{in,s}$ Supply voltage (Control) |
| V_{type} | type of output voltage (AC, DC) |
| V_{ref} | internal reference voltage |
| V_{max} | limit (max.) value of output voltage |
| V_{limit} | voltage limit |
| $\Delta V_{out} - [\Delta V_{in}]$ | deviation of V_{out} depending on variation of supply voltage |
| $\Delta V_{out} - [\Delta R_{load}]$ | deviation of V_{out} depending on variation of output load |
| V_{bounds} | voltage bounds, a tolerance tube $V_{set} \pm V_{bounds}$ around V_{set} |
| I_{nom} | nominal output current |
| I_{out} | output current |
| I_{set} | set value of output current |
| I_{mon} | monitor voltage of output current |
| I_{meas} | digital measured value of current |
| I_{trip} | current limit to shut down the output voltage |
| I_{in} | input / supply current |
| I_{max} | limit (max.) value of output current |
| I_{limit} | current limit |
| I_{bounds} | current bounds, a tolerance tube $I_{set} \pm I_{bounds}$ around I_{set} |
| P_{nom} | nominal output power |
| P_{in} | input power |
| $P_{in,nom}$ | nominal input power |
| T | temperature |
| T_{REF} | reference temperature |
| ON | HV ON |
| OFF | HV OFF |
| CH | channel(s) |


| SHORTCUT | MEANING |
|----------|---------------|
| HV | high voltage |
| LV | low voltage |
| GND | signal ground |
| INH | Inhibit |
| POL | Polarity |
| KILL | KillEnable |

Table 12: Glossary

9. Warranty & Service

This device is made with high care and quality assurance methods. The standard factory warranty is 12 months. Please contact the iseg sales department if you wish to extend the warranty.

CAUTION!




Repair and maintenance may only be performed by trained and authorized personnel.

For repair please follow the RMA instructions on our website: www.iseg-hv.com/en/support/rma

CAUTION!

10. Disposal

INFORMATION



All high-voltage equipment and integrated components are largely made of recyclable materials. Do not dispose the device with regular residual waste. Please use the recycling and disposal facilities for electrical and electronic equipment available in your country.

INFORMATION

11. Manufacturer contact

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