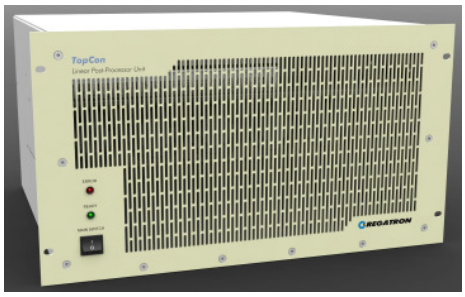
# Linear Post-Processor Unit

**for Regatron Power Supplies**

# 26A / 13A / 1000 VDC

**TC.LIN.SER.26.1000.26**

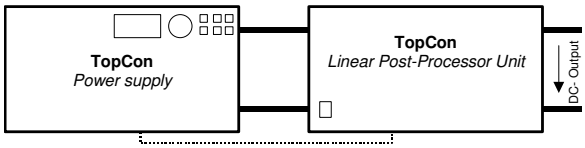


Linear Post-Processor Unit

### Features

- The *Linear Post-Processor Unit* combines the advantages of a primary switched power supply like high efficiency, small outline, leight weight, cost efficiency, with the fast, smoth linear controlled output capability of a linear power supply.
- To be used in combination with TopCon Power Supplies
- Modular concept for easy power increase: Parallel, master-slave-operation of Power Supplies and *Linear Post-Processor Units*.
- Very fast digital controller features quick response time, enhanced dynamics and programmable control characteristics
- User-friendly PC program available. This enables the user to communicate over the power supply to the *Linear Post-Processor Unit*.[1)]
- Seamless integration into the well established TopControl software
- Swiss made: developed, manufactured and tested in Switzerland by Regatron AG.

### System Configuration (single Modules)

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### Input requirements and output specifications

| | |
|---|---|
| **Mains input data (Auxiliary Supply)** | |
| Voltage | 85 – 264V AC |
| Frequency | 48 – 62Hz |
| Input power | 120W |
| **DC Input ratings** | |
| Input voltage | 0 – 1000V DC |
| Input current | 26A DC max |
| Leakage current DC to PE | < 10 mA |
| **Output ratings** | |
| Output voltage range | 0 – 1000V DC[2)] |
| Drop Voltage (typical) | 50V [3)] |
| Output current full range | 0 – 26A [4)] |
| Output current half range | 0 – 13A |
| Output Capacitor | < 10nF |
| **Dissipation Power** | |
| Continous power diss. | 1500W[5)] |
| Power diss. <3Min | 2000W. [6)] |
| Transient power diss. | Full SOA protection |
| **Operating modes** | |
| AAP[7)] voltage regulation CV | 0- ($V_{max}$ – $V_{Drop}$) |
| AAP[7)] current regulation CC | 0 – 100 % Imax |
| **Resolution** | |
| voltage, current resolution | 14.5 Bit [8)] |
| **Static accuracy** | |
| Load regulation CV, CC | < ± 0.1 % FS [9)] |
| Line regulation CV, CC | < ± 0.1 % FS [10)] |
| **Transient response time** | |
| Load regulation CV, CC | < 100us [11)] |
| Set value tracking CV, CC | < 100us [12)] |
| **Stability** | |
| CV, CC | < ± 0.05 % FS [13)] |
| **Temperature coefficient** | |
| CV, CC | < 0.01 % FS / °C [14)] |
| **Remote sensing** | |
| Terminals on rear side | cable voltage drop compensation |

### General specifications

| | |
|---|---|
| Weight | 23 kg |
| Width front panel | 483 mm |
| Width housing | 444 mm (19“) |
| Height front panel | 265 mm |
| Height housing | 262 mm (6 U) |
| Depth with output terminals | 485 mm |
| Depth housing | 450 mm |

DC input connections: 3 x 25 $mm^2$ (DC+, DC-, PE)
DC Output connections: 3 x 25 $mm^2$ (DC+, DC-, PE)
Remote Sensing connections 2 x 10 $mm^2$ (DC+, DC-)

1) Most commonly used parameter are accessible via PC Program TopControl connected to TopCon Power Supply
2) Maximum Output Voltage = Input Voltage – Drop Voltage
3) Adjustable Value, the Drop Voltage influences directly the power dissipation
4) Full Range / Half Range are selectable by PC program TopControl
5) At ambient temperature 25°C, for *current half range* 60% of specified value
6) For Drop Voltage < 250VDC, for *current half range* 50% of specified value
7) Application Area Programming, e.g. I(U) curves of solar panel / solar array
8) Improved by using oversampling technics
9) Typical value for 60 to 70 % load variation, at constant line input and temperature conditions.
10) Typical value for variation within 60% to 70% max DC input voltage, at constant load and temperature conditions.
11) Typical recovery time to within < ± 2 % band of set value for a load step 60 to 70 %, ohmic load, at constant line input and temperature conditions. Transient response time can be slightly affected by multi-unit operation.
12) Typical recovery time to within < ± 2 % band of set value for a set value step 60 to 70 %, ohmic load, at constant line input and temperature conditions. Transient response time can be slightly affected by multi-unit operation.
13) Maximum drift over 8 hours after 30 minute warm-up time, at constant line input, load and temperature conditions.
14) Typical change of output values versus ambient temperature, at constant line input and load conditions.

**Ambient conditions**

| | |
|---|---|
| Operating temperature | 5 – 40 °C |
| Storage temperature | –25 – 70 °C |
| Relative air humidity | 0 – 95 % (non-condensing) |

**Cooling**
internal temperature-controlled fans

**Safety**

**Type of protection (IEC 529)**

| | |
|---|---|
| Basic construction | IP 20 |
| Mounted in cabinet | up to IP 43 |

**Isolation**

| | |
|---|---|
| Line to output | 4000 Vrms |
| Line to case | 2500 Vrms |

DC-Input, Output to case: ± 1000 VDC, > 10 MΩ

**Standard programming interfaces**

**Control port**
Isolation to electronics and earth: 125 Vrms
15 pin D-sub connector, female, on rear panel

**Control port input functions**
Future use

**Control port output functions**
Future use

**Standard programming interfaces** (continued)

**RS232**
Isolation to electronics and earth: 125 Vrms
9 pin D-sub connector, female, on rear panel

| | |
|---|---|
| Baud rate | 38400 baud |
| Resolution (programming and readback): | |
| U, I | 0.005 % FS |

**Ordering code**
TC.LIN.SER.26.1000.26

**Scope of delivery**
TopCon Linear Post-Processor Unit ready to install, including:
Operating manual (English), RS232 cable 1.8 m, CAN cable, CANTerm Connector, installation disc TopControl, API (DLL file) for LabVIEW® and C/C++ and other programming languages, to be used in combination with TopCon Power Supplies.