

A permanent supply in any environment – today and in the future
High performance power supplies fit for digitisation
Let's connect.

Power supply



Supplying power even under difficult environmental conditions

PROtop – the innovative power supply for demanding applications

High-end power supplies must perform efficiently and reliably, even in challenging industrial environments. High power reserves, long service life and optimal protection against surge voltages, vibrations and extreme temperature conditions are all a requirement.

New DCL technology provides PROtop with outstanding dynamic range. This can be used for the reliable triggering of circuit breaking switches as well as for powerful motor starts.

Its unique features make PROtop your first choice for reliability, service life and energy efficiency, even under extreme temperature and vibration conditions.



Extreme vibration and temperature resistance as well as its space- and cost-saving concept for redundant power supply systems make PROtop the optimal high-end solution for wind turbines

**Your
special
advantages:**

DCL technology

PROtop benefits from unique impulse energy reserves thanks to new DCL technology. Ideal for reliable impulse triggering of circuit breakers or as additional energy for powerful motor starts.



**Flexible application
due to various operating modes**

In parallel operation mode (P: parallel operation, S: single operation), the output voltage can be easily adjusted and the output currents can be symmetrically balanced.

Programmable short-circuit behaviour (C: sustained short-circuit current, S: short-circuit switch-off) offers specific overload and wiring protection.



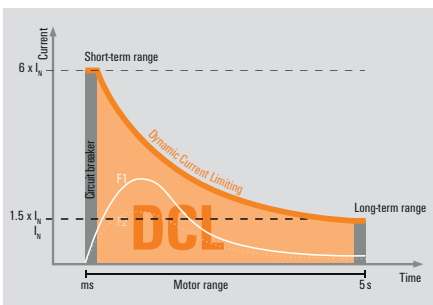
Futureproof with communicative power supplies

Available from November 2017 the communicative power supplies offer a new dimension of functional possibilities.



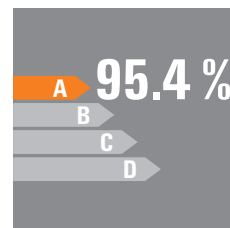
High peak power and excellent dynamic range thanks to the DCL technology

The peak current reserve of 600 % for 20 ms of innovative DCL technology reliably triggers circuit breakers. In addition, the continuous peak reserves from milliseconds to seconds ensure powerful motor starts.



Efficient, extremely space-saving and long life cycle

Efficiencies of up to 95,4 % lead to low power losses and extremely space saving housings. The lower heating up even results in high MTBF (>1.000.000 h) and long life cycle of more than 20 years.



Efficient and sustainable

Real potential for savings to increase efficiency

Production processes need to be made more efficient all the time. As well as performance, energy-efficiency and sustainability are playing an increasingly important role for cutting-edge industry.

PROtop power supplies combine excellent performance data with exemplary sustainability, which has a positive impact on the productivity of the whole production facility:

- Sustained reduction in energy costs thanks to improved efficiency
- Increase of plant availability thanks to long service life and high MTBF values
- Extremely space-saving design types for high levels of functional density

PROtop can achieve significant savings compared to conventional power supply units. Its increased efficiency saves an average of 50 kWh per day in a medium-sized production facility with approx. 100 PROtop power supplies working in three shift operation. This adds up to over 15,000 kWh a year and also improves carbon footprint. The service life, which is twice as long as standard power supplies, also effectively reduces the costs of repurchase and exchange.



Powerful in every situation

Reliable and with unique performance reserves



Even under difficult environmental conditions, power supplies need to provide a reliable supply to automation components. Strong vibrations or a wide temperature range are among the challenges, as are pulsing DC loads and difficult network conditions.

PROtop power supplies have a particularly robust network input level and are not sensitive to mechanical influences. This secures reliable operation, even under difficult conditions, such as those which prevail in wind power plants.

Thanks to the innovative DCL technology, PROtop has excellent dynamic properties and provides consistent peak load reserves for anything from a few milliseconds to a few seconds. This means circuit breakers can be reliably triggered and difficult loads supplied with high start-up currents, as is required, for example, when starting up DC motors. Additional static power reserves enable continuous current of 130 %, even at ambient temperatures of 40 °C.

Smart and innovative

Ready for the challenges of tomorrow

In an increasingly digitised and networked world of industry, the option of remote monitoring, remote maintenance and remote control of machines and systems is playing a more and more major role.

In order to be prepared for the requirements of the future, our PROtop power supply will be available with a data interface as of autumn 2017. This means process data can be transferred to a higher-level controller or made transparent for all network participants via cloud services.

Especially for facilities which are difficult to access, e.g. in offshore wind parks or in ship-building, remote monitoring and remote maintenance represent significant benefits for ongoing operation. This means, for example, power fluctuations and errors can be detected early and the number of personnel-intensive, expensive maintenance interventions is minimised.

Futureproof with communicative power supplies

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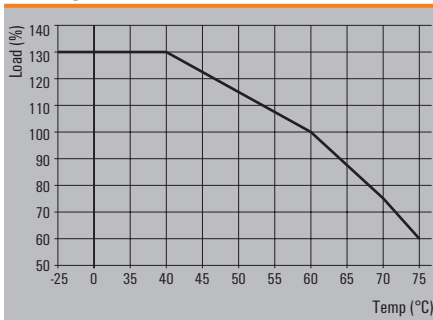


PROtop

- DCL technology for an excellent dynamic range
- High energy efficiency (up to 95.4 % efficiency)
- Mode of operation: single or parallel operation and adjustable short-circuit response (continuous current or switch-off)
- Long service life of up to 20 years, MTBF > 1,000,000 h.
- Extremely slim design
- Time-saving PUSH IN connection technology



Derating curve



Technical data

General data	
Insulation voltage input / earth	4 kV
Insulation voltage output / earth	0.5 kV
Insulation voltage, input/output	4 kV
Earth leakage current, max.	3.5 mA
Series switching capability	Yes
Ambient temperature (operational) / Storage temperature	-25 °C...75 °C / -40 °C...85 °C
Humidity at operating temperature	5...95 %, no condensation
Class of protection / Pollution degree	I, with PE connection / 2
MTBF	> 1.000.000 h according IEC 1709 (SN29500)
Housing version	Metal, corrosion resistant
Mounting position, installation notice	Horizontal on DIN rail TS 35, top and bottom 50 mm clearance for free air flow, 10 mm clearance to neighbouring active subassemblies with full load, 5 mm with passive neighbouring subassemblies, direct row mounting with 90% rated load
EMC / shock / vibration	
Interference immunity test acc. to	EN 55024, EN 55032 (EN 55022), EN 61000-6-1, 2, 3, 4
Shock	30 g in all directions
Resistance to vibration	2.3 g (on DIN rail), 4 g (with direct mounting)
Electrical safety (applied standards)	
Electrical machine equipment	Acc. to EN60204
Safety transformers for switch-mode power supplies	Acc. to EN 61558-2-17
For use with electronic equipment	Acc. to EN50178 / VDE0160
Safety extra-low voltage	SELV acc. to EN60950, PELV acc. to EN60204
Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Protection against dangerous shock currents	Acc. to VDE0106-101

Ordering data PROtop

1-phase power supplies

Type	Qty.	Order No.
PRO TOP1 72W 24V 3A	1	2466850000
PRO TOP1 240W 24V 10A	1	2466880000
PRO TOP1 960W 24V 40A	1	2466900000
PRO TOP1 480W 48V 10A	1	2467030000
PRO TOP1 120W 24V 5A	1	2466870000
PRO TOP1 480W 24V 20A	1	2466890000
PRO TOP1 120W 12V 10A	1	2466910000
PRO TOP1 960W 48V 20A	1	2466920000

3-phase power supplies

Type	Qty.	Order No.
PRO TOP3 120W 24V 5A	1	2467060000
PRO TOP3 240W 24V 10A	1	2467080000
PRO TOP3 480W 24V 20A	1	2467100000
PRO TOP3 960W 24V 40A	1	2467120000
PRO TOP3 480W 48V 10A	1	2467150000
PRO TOP3 960W 48V 20A	1	2467170000



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As experienced experts we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signal and data. We are at home in their industries and markets and know the technological challenges of tomorrow. We are therefore continuously developing innovative, sustainable and useful solutions for their individual needs. Together we set standards in Industrial Connectivity.

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