

### Features

- ◆ Rugged power supplies for harsh outdoor environments
- ◆ Die-cast aluminium housing
- ◆ Dust, water (incl. salt water), ice and oil resistant enclosure
- ◆ IP67 and NEMA 4X rated
- ◆ Connection via waterproof I/O plug-connectors
- ◆ Shock & vibration proof construction
- ◆ Operating temp. range  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- ◆ Universal input 85 to 264 VAC
- ◆ Output voltage adjustable
- ◆ DC-OK indicator
- ◆ Low ripple and noise
- ◆ Worldwide safety approvals
- ◆ Class I, zone 2 approval incl. ATEX certification (tested in accordance to IECEx)
- ◆ 3-year product warranty



These power supplies have been designed particularly for applications in extreme environments. The rugged die-cast aluminium housing is water, ice, oil and dust resistant in compliance with IP67 and NEMA 4X standards. The metal case works as an efficient heatsink allowing full power operation at up to  $+60^{\circ}\text{C}$  ambient temperature (no fan required). With a shock and vibration proof construction the power supplies can be mounted directly on a machine.

An International safety approval package includes CB scheme as well as ATEX certification applications in hazardous locations i.e in chemical or food processing industries. The TEX series offers a cost efficient solution for de-centralized power systems in industrial automation applications with critical environment conditions.

### Models

Order Code	Output Power (max.)	Output Voltage* (nom.)	Output Current (max.)
TEX 120-112	96 W	12 VDC	8.0 A
TEX 120-124	120 W	24 VDC	5.0 A

\* adjustable

### Input Specifications

Input voltage	<ul style="list-style-type: none"> <li>- nominal</li> <li>- AC range</li> <li>- DC range</li> </ul>	100 – 240 VAC 85 – 264 VAC 85 – 375 VDC (power derating tba.)
Input frequency		47 – 63 Hz
Harmonic limits		EN 61000-3-2, Class A
Input current at full load (typ.)		1.0 A at 230 VAC, 2.0 A at 115 VAC
Recommended circuit breaker (characteristic C or slow blow fuse)		5.0 A

### Output Specifications

Output voltage adjustable range	12 VDC model: 12 – 15 VDC 24 VDC model: 24 – 28 VDC
Output regulation (10 to 90% load variation)	2.5 %
Ripple and noise (20MHz bandwidth)	<50 mV pk-pk
Electronic short circuit protection	current limitation at 110 % typ. (automatic recovery)
Output overvoltage protection	<40 V
Hold-up time	>20 ms

### General Specifications

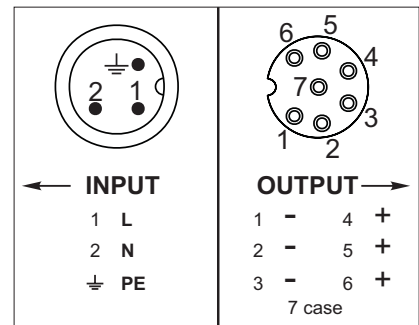
Temperature range	<ul style="list-style-type: none"> <li>- Operating</li> <li>- Rated for ATEX certification</li> <li>- Storage</li> </ul>	-40°C to +85°C max. -40°C to +70°C max. -40°C to +85°C max.
Power derating		above 60°C 2.0 %/K
Safety standards	<ul style="list-style-type: none"> <li>- Information technology equipment</li> <li>- Control equipment for hazardous location</li> <li>- Electrical equip. for potentially explosive atmospheres</li> <li>- Industrial control equipment</li> <li>- Electrical equip. for measurement, control, laboratory</li> <li>- Electrical equipment for machines</li> <li>- Electronic equipment for power installation</li> <li>- Safety transformers</li> </ul>	IEC/EN 60950-1 UL File e213613 (Class I, Division 1 & 2, group A, B, C & D, T4) IEC/EN 60079-15 (Class I, Zone 2, EEx nA IIC T4) UL 508, File e210002 IEC/EN 61010-1, C22.2 61010-1-12, UL 61010-1 3rd EN 60204-3 EN 50178 EN 61558-2-8
Safety approvals and certifications	<ul style="list-style-type: none"> <li>- UL 508</li> <li>- UL HazLoc</li> <li>- CB test certificate IEC 60950-1</li> <li>- SIQ certificate EN 60950-1, EN 60204, EN50178</li> <li>- CB test certificate IEC 61010-1:2010 (3rd-edition)</li> <li>- SIQ certificate EN 61010-1:2010</li> <li>- CSA certificate UL 61010-1 (3rd-edition)</li> <li>- ATEX, EN 60079-15</li> </ul>	<a href="http://www.tracopower.com/products/tex120-ul508.pdf">www.tracopower.com/products/tex120-ul508.pdf</a> <a href="http://www.tracopower.com/products/tex120-hazloc.pdf">www.tracopower.com/products/tex120-hazloc.pdf</a> <a href="http://www.tracopower.com/products/tex120-cb.pdf">www.tracopower.com/products/tex120-cb.pdf</a> <a href="http://www.tracopower.com/products/tex120-en.pdf">www.tracopower.com/products/tex120-en.pdf</a> <a href="http://www.tracopower.com/products/tex120-cb61010.pdf">www.tracopower.com/products/tex120-cb61010.pdf</a> <a href="http://www.tracopower.com/products/tex120-en61010.pdf">www.tracopower.com/products/tex120-en61010.pdf</a> <a href="http://www.tracopower.com/products/tex120-csa61010.pdf">www.tracopower.com/products/tex120-csa61010.pdf</a> <a href="http://www.tracopower.com/products/tex120-atex.pdf">www.tracopower.com/products/tex120-atex.pdf</a>
Electromagnetic compatibility (EMC), emissions	<ul style="list-style-type: none"> <li>- Conducted RI suppression on input</li> <li>- Radiated RI suppression</li> <li>- Harmonic limits</li> </ul>	EN 61000-6-3 EN 55022 class B EN 55022 class B EN 61000-3-2, Class A
Electromagnetic compatibility (EMC), immunity	<ul style="list-style-type: none"> <li>- Electrostatic discharge (ESD)</li> <li>- Radiated RF field immunity</li> <li>- Electrical fast transient / burst immunity input</li> <li>- Electrical fast transient / burst immunity output</li> <li>- Surge immunity line – neutral</li> <li>- Surge immunity line – ground</li> <li>- Surge immunity neutral – ground</li> <li>- Surge immunity output</li> <li>- Immunity to conducted RF disturbances</li> <li>- Mains voltage dips and interruptions</li> </ul>	EN 61000-6-2 EN 61000-4-2, 8 kV / 15 kV, perf. criteria A EN 61000-4-3, 10 V/m, perf. criteria A EN 61000-4-4, 4 kV, perf. criteria A EN 61000-4-4, 2 kV, perf. criteria A EN 61000-4-5, 4 kV, perf. criteria A EN 61000-4-5, 2 kV, perf. criteria A EN 61000-4-5, 4 kV, perf. criteria A EN 61000-4-5, 0.5 kV, perf. criteria A EN 61000-4-6, 10 V, perf. criteria A EN 61000-4-11, 30 % /10 mS, criteria B, EN 61000-4-11, 60 % /100 mS, criteria C

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

**General Specifications**

Safety class		degree of protection class I
Case protection	<ul style="list-style-type: none"> <li>- Degree of protection (IP67)</li> <li>- Water intrusion test</li> <li>- Dust test</li> <li>- Icing test</li> <li>- Oil exclusion test</li> <li>- Salt spray test</li> <li>- Gasket aging test</li> <li>- Hosedown test</li> </ul>	IP 67 (IEC 60529), NEMA 4X rated, UL 50 <a href="http://www.tracopower.com/products/tex120-ip.pdf">www.tracopower.com/products/tex120-ip.pdf</a> <a href="http://www.tracopower.com/products/tex120-water.pdf">www.tracopower.com/products/tex120-water.pdf</a> <a href="http://www.tracopower.com/products/tex120-dust.pdf">www.tracopower.com/products/tex120-dust.pdf</a> <a href="http://www.tracopower.com/products/tex120-icing.pdf">www.tracopower.com/products/tex120-icing.pdf</a> <a href="http://www.tracopower.com/products/tex120-oil.pdf">www.tracopower.com/products/tex120-oil.pdf</a> <a href="http://www.tracopower.com/products/tex120-salt.pdf">www.tracopower.com/products/tex120-salt.pdf</a> <a href="http://www.tracopower.com/products/tex120-aging.pdf">www.tracopower.com/products/tex120-aging.pdf</a> <a href="http://www.tracopower.com/products/tex120-hose.pdf">www.tracopower.com/products/tex120-hose.pdf</a>
Humidity		up to 100 % rel. H with condensation
Reliability (calculated MTBF at +40°C according IEC 61709)		>900'000h
Environment	<ul style="list-style-type: none"> <li>- Vibration</li> <li>- Shock</li> </ul>	IEC 60068-2-6, 3 axis, sine sweep, 10–55Hz, 1g, 1 oct/min IEC 60068-2-27, 3 axis, 15g half sine, 11ms
Environmental compliance	<ul style="list-style-type: none"> <li>- Reach</li> <li>- RoHS</li> </ul>	<a href="http://www.tracopower.com/overview/tex120">www.tracopower.com/overview/tex120</a> RoHS directive 2011/65/EU
Altitude		3000 m max. (10'000 ft)
Installation instructions		<a href="http://www.tracopower.com/products/tex120-inst.pdf">www.tracopower.com/products/tex120-inst.pdf</a>

**Case Dimensions**



**Connectors not included in shipment!**  
(Units are supplied with sealing connector caps)

Material: die-cast aluminium  
Weight: 1000 g (35.3 oz)

Dimensions in [mm], ( ) = Inch  
Tolerances: ±0.5 mm (±0.02)

**Accessories \***

TEX-P11	AC Input connector: Binder 3-pin female circular plug 99-4222-14-04
TEX-P21	DC Output connector: Binder: 7-pin male circular plug 99-4225-160-07
TEX-C11	TEX-IP-ASSY Input cable assembly 2m, (wire to pin reference comes with cable)
TEX-C21	TEX-OP-ASSY Output cable assembly 2m, (wire to pin reference comes with cable)

\* Units delivered before mid 2010 are equipped with Amphenol sockets see: [www.tracopower.com/products/tex120-amphenol.pdf](http://www.tracopower.com/products/tex120-amphenol.pdf)

Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at [www.tracopower.com](http://www.tracopower.com)