

Uninterruptible Power Supply (UPS)

with Intrinsically Safe Output and 3.5 Ah Battery Backup

Environments: Mining • Tunnelling

Features

- Robust stainless steel housing
- Regulated output is current limited and has continuous short circuit protection
- 3.5 Ah back-up battery with automatic uninterrupted power transfer
- 12 V, 750 mA Ex ia Ma certified output
- Analogue output signal to show battery charge status
- Volt-free contact to show mains input status

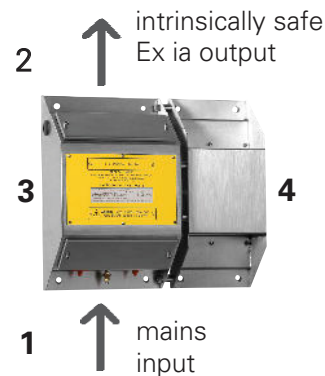


Benefits

- Can remain on standby battery power in Ex ia Ma area conditions
- Available power can be remotely monitored via the battery charge analogue output signal
- ac mains failure can be remotely monitored via a volt-free output
- Spacious termination facilities to connect heavy-duty mining cables
- Sealed unit requires no user maintenance or examination
- Ex eq certification eliminates any maintenance costs of Ex d style enclosures

Functional Overview

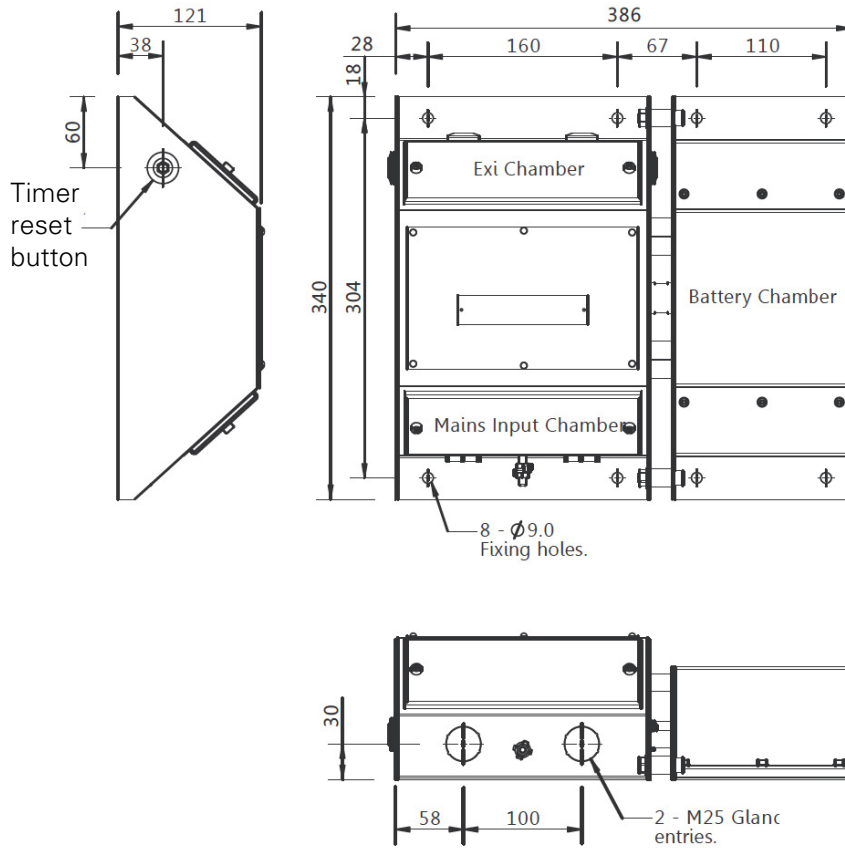
The power supply converts an ac supply voltage into a stabilised and regulated intrinsically safe source, ideal for supplying power to approved sensors and electronic control devices in hazardous areas.



Technical Information

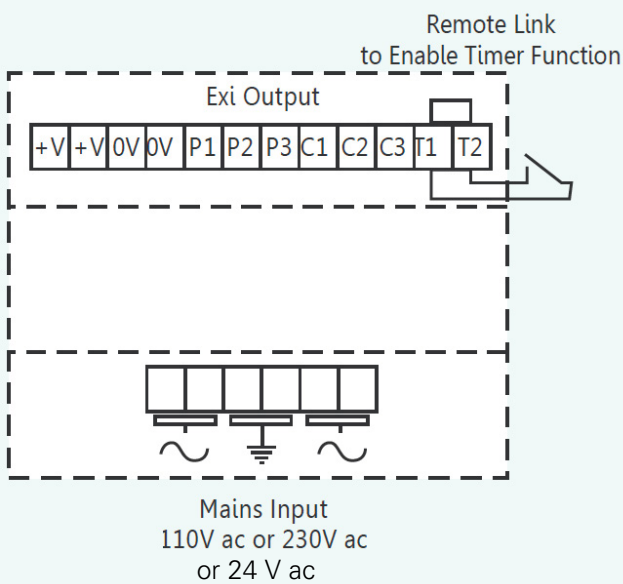
1	Input Voltage:	110 V ac \pm 10% or 230 V ac \pm 10% - 50/60 Hz or 24 V ac \pm 10%
2	Output Voltage:	12 V dc -0 V/+0.6 V
	Output Current:	750 mA
	Output Ripple/Noise:	150 mV max
	Line Regulation:	<5% over the input voltage range
	Load Regulation:	<5% over 0 to 90% of load current <10% between 90% and 100% of load current
	Voltage Limiting:	Over voltage detection with crowbar protection and short circuit protection
	Current Limiting:	Automatic current limiting of the intrinsically safe output also limits the current to less than the rupturing capacity of the output protection fuse.
3	Max. Operating Temperature:	-20°C to +40°C
	Storage Temperature:	-20°C to +70°C
	Humidity:	0 to 95% RH, non-condensing
	Vibration Limits/Low Frequency:	0.25 mm peak, sinusoidal vibration in the range 10 Hz to 100 Hz in 3 perpendicular planes
	Medium Frequency:	2g peak, sinusoidal vibration in the range 10 Hz to 600 Hz in 3 perpendicular planes
	Mechanical Shock:	1000 shocks of 40g minimum in 3 perpendicular planes
	Housing Material:	Stainless steel
	Weight:	16 kg
4	Back-up Battery:	Sealed lead-acid - 3.5 Ah Automatic charge control to full capacity Automatic uninterrupted output power transfer following input power failure
	Power Fail Indication:	Relay contacts change state on power failure. Contact rating: 0.25 A at 30 V dc max.
	Charge Condition:	Analogue output signal proportional to the charge level of the battery Choice of 0.4 V to 2.0 V or 4 to 20 mA signals
	Battery life:	6 years with normal usage
	Ex Certification:	Group I - Please refer to user manual for full certification details

Dimensions



Connections

Connections



+V = 12 V dc intrinsically safe output

0V = 0 V intrinsically safe output

P1 = C
P2 = N/C
P3 = N/O } Power Fail Relay

C1 = 0.4 to 2 V
C2 = 0 V
C3 = 4 to 20 mA } Charge Condition Monitor Output

T1
T2 } Timer Control Terminals

Battery Conserve Timer

The TX6648 Power supply is fitted with a Battery Conserve Timer.

The timer is used to conserve battery power when used on mobile machinery where battery support will only be required for short intervals between long periods.

- The battery will be charged in the normal way when the main power is ON
- The battery back-up output will be terminated 30 minutes after the main power is OFF
- The battery back-up output may be re-instated at any time for a period of 30 minutes by operation of a pushbutton on the side of the power supply housing or a remote pushbutton connected to T1 and T2
- The timer is disabled by fitting a link between T1 and T2

Order Reference

ATEX & IECEx Certification

110 V ac supply: **TX6648.35.105.101.1206.19**

230 V ac supply: **TX6648.35.106.101.1206.19**

24 V ac supply: **TX6648.35.103.101.1206.19**



MASC Certification

110 V ac supply: **TX6648.35.105.101.1206.05**

230 V ac supply: **TX6648.35.106.101.1206.05**

24 V ac supply: **TX6648.35.103.101.1206.05**

DISCLAIMER

The information provided in this document contains general descriptions and technical characteristics of the performance of the product. It is not intended as a substitute for and is not to be used for determining suitability or reliability of this product for specific user applications. It is the duty of any user or installer to perform the appropriate and complete risk assessment, evaluation and testing of the products with respect to the specific application or use. Trolex shall not be responsible or liable for misuse of the information contained herein. When instruments are used for applications with technical safety requirements, the relevant instructions must be followed.

All pertinent state, regional, and local safety regulations must be observed when installing and using this instrument. For reasons of safety and to help ensure compliance with documented system data, only Trolex or its affiliates should perform repairs to components.

Trolex Ltd. reserves the right to revise and update this documentation from time to time without obligation to provide notification of such revision or change. Revised documentation may be obtainable from Trolex.

Trolex Ltd. reserves the right, without notice, to make changes in equipment design or performance as progress in engineering, manufacturing or technology may warrant.

TRADEMARK

© 2025 Trolex® Ltd.

No part of this document may be reproduced in any form or by any means, electronic or mechanical, including photocopying, without express written permission of Trolex.

Trolex is a registered trademark of Trolex Ltd. The use of all trademarks in this document is acknowledged.

At Trolex, we save lives.

We believe that no person should risk their life to earn a living.

Our aim is to become the world's leading name in health and safety technology, through pioneering products that provide real-world benefits to our customers, whenever workers operate in hazardous environments.

For more information about Trolex, please contact us at:

Website

www.trolex.com

Enquiries

sales@trolex.com

Telephone

+44 (0) 161 483 1435

Trolex Ltd

Newby Road, Hazel Grove
Stockport, Cheshire
SK7 5DY, United Kingdom

@TrolexUK

