

ATEX GRP Transformer

LL-114/T4/W LL-214/T4/W LL-221/T4/W



- A fully certified Gas Zone 1 and 2, Dust Zone 21 and 22 ATEX and IEC Ex hazardous area transformer.
- Durable GRP (Glass Reinforced Polyester) enclosure with 316 Stainless steel skid.
- Transformer supplied with ATX sockets fitted.
- Available input Voltages: 110V & 230V.
- Available output Voltages: 24V, 42V & 110V.

WOLF SAFETY LAMP COMPANY

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Authorised Representative (EU)2019R1020: Authorised Representative Service, 77 Camden Street Lower, Dublin, D02 XE80, Ireland







Wolf ATEX Transformer **Operation and Maintenance Instructions** Please Retain - Read Before Use

EU / UK Declaration of Conformity

The Wolf LL-114/T4/W.... LL-214/T4/W.... and LL-221/T4/W... series ATEX GRP Transformer meets all relevant provisions of the 2014/34/EU Explosive Atmospheres (ATEX Equipment) Directive and Equipment by virtue of the issued EU type examination certificate, and subsequent review confirming compliance with all relevant IECEx Scheme Certification harmonised standards and essesntial health and safety requirements.

The Wolf ATEX GRP Transformer is rated up to 400VA and uses a durable GRP (glass reinforced polvester) enclosure housed in a protective 316 grade stainless steel skid. The transformer is certified Group II, Category 2 equipment for use in Zone 1 & 2 potentially explosive cases, vapours & mists, where temperature class T4 is permitted, and zone 21 & 22 potentially explosive dusts where a maximum surface temperature of 100°C is permitted.

Approval Code: K II 2 G D

Ex eb db IIC T4 Gb

Fx tb IIIC T100°C Db IP66 -20°C ≤ Ta ≤ 30 - 55°C (Upper T amb. rated to output VA)

Model No	Input Voltage	Output Voltage
LL-114/T4/W	110V +/- 15V	24V AC
LL-214/T4/W	230V AC +/- 15V	24V AC
LL-221/T4/W	230V AC +/- 15V	110V AC
LL-221/T4/W/CTE	230V AC +/- 15V	110V AC CTE (55V-0V-55V)

The suffixes define; cable type, input plug and fuse arrangement)

Notified Body: SGS FIMKO OY., P.O. Box 30 (Särkiniementie 3) 00211 HELSINKI, Finland, Notified body number: 0598

Type examination Certificate: ExVertias25ATEX2069X Harmonised standards applied: EN IEC 60079-0:2018, EN 60079-1:2014, EN IEC 60079-7:2015+A1:2018, EN60079-31:2014

This product does not fall within the scope of the EMC Directive 2014/30/EU as per EU "Guide for the EMCD (Directive 2014/30/EU)" as it is inherently benign in terms of electromagnetic compatibility (both for emission and immunity)

The Wolf ATEX GRP Transformer is also Compliant with the 2011/65/EU RoHS Directive to the harmonised standard EN IEC 63000:2018.

This declaration is issued under the sole responsibility of Wolf Safety Lamp Company. Alex Jackson - Managing Director,

Wolf Safety Lamp Company Ltd., Sheffield, S8 0YA, UK. Dated 01 March 2025.

Certificate number: IEC Ex EXV 25.0018X Certification/Approval Code: Ex eb db IIC T4 Gb Ex tb IIIC T100°C Db $-20^{\circ}C \le Ta \le 30 - 55^{\circ}C$ (Upper T amb. rated to output VA) Standards applied: IEC 60079-0:2017, IEC 60079-1: 2014, IEC 60079-7: 2017, IEC 60079-31:2022 Ingress protection: IP66 to EN 60529:1992

T-Class	VA Rating	Ambient Temperature Range
T4	280	-20°C to 55°C
T4	310	-20°C to 50°C
T4	320	-20°C to 48°C
T4	340	-20°C to 44°C
T4	400	-20°C to 30°C

SPECIAL CONDITIONS FOR SAFE USE (X)

1. Upper ambient temperature shall not exceed the limits defined for maximum load power (VA)

2. The equipment shall only be used in a vertical orientation as indicated on the front of the equipment via a "THIS WAY UP" label.

IMPORTANT INFORMATION



1.Please read these safety, operation and maintenance instructions carefully before commencing use or maintenance and retain for future use.

2. **IMPORTANT.** Check model identification label attached to the lid for the transformer's power rating. The user must ensure this power rating is not exceeded.

3. **IMPORTANT.** Check model identification label attached to the lid for rated voltage (this value typically has a +/-15V tolerance).





PRODUCT DIMENSIONS:





WEIGHT: 23kg (without cable)

Wiring Diagrams:

GRP Transformer 1 x I/P & 1 x 0/P Fuse



GRP Transformer 1 x I/P & 4 x 0/P Fuses



4. Ensure the cable type is suitable for your application as certain cables and their operational use / installation may alter the temperature range of the product:

-SY cable has a lower operational temperature range of -5°C for flexed applications. Note this cable's

insulation is made from PVC. -SB cable has a lower operational temperature range

of -20°C for flexed applications.

-H07RN-F cable has a lower operational temperature range of -25°C flexed applications.

-Helkama cable has a lower operational temperature range of -35°C for flexed applications.

5. It is the user's responsibility to ensure there is no potential difference between the earth supply to the transformer and the earth where it is sited. Where this is not possible the transformer should also be locally earth bonded. A flexible cable with a conductor area of 2. A visual check should be carried out to ensure all 6mm² minimum which is no longer than two metres is recommended for this. The transformer must be de-energised during connection or disconnection of the local earth bond. The external earth connection to the earth stud shall be made with a crimped ring (cable lug) connector secured with a nut and a contact washer

6.The transformer housing is constructed from Glass Reinforced Polyester (GRP) and the mounted sockets are plastic, the end user must ensure that these materials are suitable for the atmosphere the transformer will be used in. Excessive force should not be used on plastic components.

7. Do not open when energised. After disconnection from the mains supply, a delay of 5 mins must be observed before openina.

8.Ensure all replacement fuses are of the correct type and current rating.

Details of the fuses fitted are found on the transformer bottom. model identification label attached to the lid.

9.Prices and design are subject to alteration without notice. All products sold are subject to our conditions of sale. A copy of these instructions with any relevant revisions can be found at - www.wolfsafetv.com

IMPORTANT - No modifications are permitted to the Transformer, use only genuine Wolf spare parts and accessories, unauthorised modifications, spare parts or accessories will invalidate certification.

10. When using the product, the plugs must be connected and fully engaged in their corresponding socket to maintain the IP rating of the plug & socket. Check the seals are present and in good condition in the socket lid on any fitted sockets. The covers on the sockets must be fully closed and latched to seal surfaces and maintain the stated IP rating of the product.

Note - plugs do not have latching covers or other devices to prevent the ingress of fluid and/or dusts. They are only IP rated when engaged in their corresponding sockets. Plugs must be kept clean and dry when not engaged with a socket.

MAINTENANCE

1. For Maintenance purposes isolate the transformer from the mains supply.

internal cable is in good condition and not suffering any sign of damage or degradation.

3. All internal connections should be checked to ensure that they are correctly secured.

4. The transformer input and any connected equipment cables, glands and plugs should be inspected before each use. Any damaged cables, glands and plugs should be replaced immediately.

5. The condition of the GRP Enclosure, door gaskets and sockets should be inspected for damage, and to ensure the IP66 rating isn't compromised.

6. If changing the input or output fuses, care should be taken to secure the screwed cover on fully.

OPERATION INSTRUCTIONS.

1. The transformer must only be operated in a vertical orientation, with the component transformer at the

2. This Wolf ATEX transformer is fitted with IEC 60269, 80kA breaking capacity cartridge fuses and is designed to supply a maximum load of 400VA dependent on the ambient temperature that the transformer is operated in. The fuse types and maximum values must not be exceeded. The total power of apparatus operated from the transformer should not exceed the given maximum VA.

Document LL-1577, contains suggested combinations of Wolf lamps that can be connected. Where apparatus other than Wolf lighting products are connected, its load should be checked to ensure it is suitable for use with type gG (general) fuses. Details of the fuses fitted are found on the transformer model identification label 7. DIN rail mounted screw type terminal blocks are attached to the lid.

3. The equipment shall only be used with a power source having a prospective short circuit current rating (SCCR) which does not exceed 10kA.

4. In the event of a fault in a circuit connected to the transformer, it is important that this fault current is interrupted by the output fuses before overheating damage to circuits and a potentially unsafe condition in the safe or hazardous area can occur. The user must therefore ensure that the maximum total impedance of the potential fault current flow path, from the source to the point of a fault, will not prevent this happening. The connected circuit impedance is proportional to the length and conductor area of the cable. Document LL-1577 contains Wolf's recommended maximum cable lengths for given transformer output voltage and fuses the cable clamp tightened to 2Nm. fitted.

5. Check the approval label on the lid to establish whether the transformer output has a centre tapped earth (CTE).

6. Ensure the voltage drop in cables longer than 20m connected to the transformer does not prevent 24V products from operating within their specified voltage tolerance (see product instructions).

fitted to the transformer to connect the input cable. Each terminal is suitable for a single conductor up to 4mm² only. These terminals should be tightened down to 0.6 Nm whether a conductor is fitted or not.

8. Approved cable glands must be used and be suitable for the type of cable used. Any unused cable entries should be blanked off with a certified blanking plug to maintain a minimum IP rating as marked on the certification label. Gland and blanking plug should be approved to maintain the certification and IP rating as per the label.

Brass M20 Trumpet glands fitted by Wolf have the cable clamp tightened to 1Nm. If contact between the two clamping faces is not made then low strength threadlock is applied to prevent clamp fixing from loosening. Black polymide M25 Trumpet glands have

SPARE PARTS

Use only Genuine Wolf Spares

Item No.	Part No.	Spare Part Description
1	LL-1281	ATEX & IECEx 400VA 230/110V:24V component transformer.
2	LL-1282	ATEX & IECEx 400VA 230:110V component transformer.
3	LL-378	ATX SOCKET 2P+E 16A 24 V (Flange).
4	LL-1092	ATX Socket 2P+E 16A 110V (Flange).
5	LL-377	4A aM Fuse
6	LL-1002	2A aM Fuse
7	LL-379	16A gG Fuse
8	LL-1067	12A gG Fuse
9	LL-1110	10A gG Fuse
10	LL-1024	8A gG Fuse
11	LL-1016	6A gG Fuse
12	LL-1007	4A gG Fuse

For other spares contact Wolf Safety.

DISPOSAL OF WASTE MATERIAL:

Disposal of packaging, parts and end of life products should be carried out in accordance with applicable regulations.

The Wolf Safety Lamp Co. Ltd has a policy of continuous product improvement. Changes in design details may be made without prior notice. Prices and design are subject to alteration without notice. All products sold are subject to our conditions of sale. A copy of these instructions with any relevant revisions can be found at www.wolfsafetv.com.

Transformer Technical Infomation:

Single Phase 50/60Hz Class I Circuit insulation voltage:

4500V between windings •

- 2300V between primary wining and earth •
- 1800V between secondary winding and earth

Insulation Class F

