




Wolf ATEX 400VA 316L Stainless Steel Transformer - WT-224/SS/SY15/STAHL230/24 Operation and Maintenance Instructions Please Retain – Read Before Use

The Wolf ATEX Transformer has a 316L stainless steel enclosure housed in a 316L stainless steel skid, within the enclosure is a transformer component with rated maximum load of 400 VA.

The Transformer is approved as Group II equipment for use in:
Zone 1 potentially explosive gases, vapours, mists where the T3 temperature class permits but no explosive dusts.
Zone 2 where potentially explosive non conductive dusts exist.

Approval Codes/Certification:

 II 2G 3D IP54
Ex ed IIC T3
Ex tc IIIB Dc T195°C
(Tamb = -20 to +30°C)

Supply Voltage: 230VAC +6%, -10%
Output Voltage: 24VAC

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

Check model identification label attached to the lid for rated voltage.

LCIE 02 ATEX 6118X.

Certificate 'X' suffix – Do not open when energised.

Notified Body – LCIE Paris – Head Office, 33 Avenue du General Lecierc, 92260 Fontenay-Aux-Roses, France.
Notified body number: **0081**

See Document LL-1271/SS (supplied with transformer) for ATEX EC/EU Declaration of Conformity.

IMPORTANT INFORMATION

1. Read these instructions carefully before commencing to use the Transformer and retain them for future use.
2. Check the approval label to ensure the Transformer is suitable for the supply provided, ambient temperature present and IP rating.
3. 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 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.
4. The Transformer housing is constructed from 316L stainless steel 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.
5. The Transformer must not be opened when energised. After disconnection from the mains supply a delay of 5 mins must be observed before opening.
6. Ensure all replacement fuses are of the correct type and current rating.
Details of the fuses fitted are found on the transformer model identification label attached to the lid.
7. 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.wolf-safety.co.uk

MAINTENANCE

1. Isolate the Transformer from the mains.
2. It is essential that the Transformer is maintained in accordance with the requirements of EN60079-17
3. A visual check should be carried out to ensure all internal cable is in good condition, and not suffering any sign of damage or degradation. All internal connections should be checked to ensure that they are correctly secured.
4. The transformer input cable and any attached cables should be inspected before each use. Any damaged cables should be replaced immediately.
5. The condition of the gaskets on the 316L Stainless Steel and sockets should be inspected to ensure there is no breakdown in the IP66 rating.
6. If changing the input or output fuses care should be taken to replace with the correct type of fuse and secure the screwed cover on fully.
7. **IMPORTANT** - No modifications are permitted to the Transformer.

USER GUIDANCE FOR WOLF ATEX TRANSFORMERS

1. It is a requirement of the certification that the transformer is only operated in a vertical orientation, with the component transformer at the bottom. This is indicated by the orientation warning label affixed to the transformer door.
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. The fuse types and maximum values must not be exceeded. The certification is reliant on these fuses to prevent the T Class (in max ambient) being exceeded under fault or overload conditions. Replacing these with fuses of a different type or of a higher rating could result in an unsafe condition occurring in the safe or hazardous area. To prevent nuisance tripping, the total power of apparatus operated from the transformer should not exceed the given maximum VA. Table 1 on page 2, 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 attached to the lid.
3. 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. Table 2 on page 2 contains Wolf's recommended maximum cable lengths for given transformer output voltage and fuse fitted. As can be seen from Table 2, reducing the fuse value increases the permitted cable length.
4. Apparatus with long cable lengths (>20m @ 24V) must be checked to ensure the calculated voltage drop will not prevent the apparatus from operating within the specified voltage tolerance (see apparatus instructions).
5. DIN rail mounted screw type terminal blocks are 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.
6. Approved cable glands must be used and be suitable for the type of cable used. Any unused cable entries should be blanked off with an approved stopper plug to maintain a minimum IP rating as marked on the certification label. Gland and stoppers should be approved to maintain the certification and IP rating as per the label.

Table 1 and 2 below should be used in conjunction with one another to ensure that the combination of lamps does not exceed total maximum cable lengths permissible. The total cable length of a string of linkable lights is the combined total of all the lamps in the chain. Where cables with different conductor areas are combined, the maximum cable length should be selected based on the smallest conductor area.

For advice regarding the cable type and conductor area fitted to your product please e-mail info@wolf-safety.co.uk

Table 1. Suggested combinations of lamps for use with WT-224/SS/SY15/STAHL230/24

400VA Transformer Output Voltage	400VA Transformer Output Fuse	Max No of products where T3 temperature class is permitted 30°C max ambient temp.
24V	16A gG	4 x LL-500
		4 x WF-300
		8 x LX-400*
		4 x LL-24
	12A gG	6 x LX-400*
	10A gG	2 x LL500
		3 x WF-300
		5 x LX-400
	8A gG	2 x LL-420 + 2 x LL-500
		2 x LL-420 + 2 x WF-300
2 x LL-420 + 4 x LX-400*		
2 x LL-24		
6A gG	1 x LL-420 + 1 x WF-300 + 1 x LX-400	
4A gG	4 x LL-420	
110V	4A gG	4 x LL-500
		5 x WF-300*
		10 x LX-400*
		2 x LL-420 + 4 x LX-400

*Combinations requiring linkable lamps. Use a minimum conductor area of 2.5mm² in the circuit when using linkable lamps. Users must consult tables 1, 2 + 3 and point four of the user guidance for Wolf ATEX transformers, for correct fuse rating and to ensure loading and voltage drop are not exceed.

Table 2 Recommended maximum cable lengths for WT-224/SS/SY15/STAHL230/24output fuse fitted.

2.5mm ² Cable		
Output Voltage	Output Fuse	Max cable length
24V	16A gG	20M
24V	12A gG	25M
24V	10A gG	35M
24V	8A gG	40M
24V	6A gG	60M
24V	4A gG	100M

4mm ² Cable		
Output Voltage	Output Fuse	Max cable length
24V	16A gG	35M
24V	12A gG	40M
24V	10A gG	55M
24V	8A gG	75M
24V	6A gG	110M
24V	4A gG	150M

Table 2 (continued) Recommended maximum cable lengths for given transformer output voltage and fuse fitted.

1mm ² Cable (LL-420 ATEX inspection lamp only)		
Output Voltage	Output Fuse	Max cable length
24V	12A gG	10M
24V	10A gG	15M
24V	8A gG	20M
24V	6A gG	30M
24V	4A gG	40M

1.5mm ² Cable		
Output Voltage	Output Fuse	Max cable length
24V	16A gG	10M
24V	12A gG	15M
24V	10A gG	20M
24V	8A gG	30M
24V	6A gG	45M
24V	4A gG	60M

**200M is given as this is considered a maximum that would be required in practical situations. For additional advice regarding the permissible maximum cable lengths for given transformer output voltage and fuse fitted please e-mail info@wolf-safety.co.uk

DISPOSAL OF WASTE MATERIAL

Disposal of packaging, Transformer and associated parts should be carried out in accordance with national regulations.

Transformer spares.

WARNING: USE ONLY GENUINE WOLF REPLACEMENT PARTS.

LL-1281 – ATEX and IECEx 400VA 230/110V:24V component transformer. LL-1269 - STAHL 3 pole 20-24V 16A flange mounted socket.

Table 3 -Fuses

Circuit Protected	Transformer Input Voltage.	Fuse rating	Wolf Part Number
Input	230V	2A aM	LL-1002

Circuit Protected	Transformer Output Voltage.	Fuse rating	Wolf Part Number
Output	24V	16A gG	LL-379
Output	24V	12A gG	LL-1067
Output	24V	10A gG	LL-1110
Output	24V	8A gG	LL-1024
Output	24V	6A gG	LL-1016
Output	24V	4A gG	LL-1007

For other spares contact Wolf Safety



The Wolf Safety Lamp Co. Ltd has a policy of continuous product improvement. Changes in design details may be made without prior notice.

E-mail: info@wolf-safety.co.uk Website: www.wolf-safety.co.uk