Operation and maintenance instructions for Wolf ATEX GRP transformers fitted with couplers.

Models covered by these instructions.		
Model Number (see label on lid)	**Rated Input Voltage**	**Output Voltage**
LL-114/E/***/***/H***	110V AC +6%, -10%	24V
LL-142/E/***/***/H***	110V AC +6%, -10%	42V
LL-214/E/***/***/H***	230V AC +6%, -10%	24V
LL-242/E/***/***/H***	230V AC +6%, -10%	42V
LL-221/E/***/***/H***	230V AC +6%, -10%	110V
LL-221/E/***/***/H***/CTE	230V AC +6%, -10%	110V AC CTE (55V-0V-55V)
(Suffixes define temperature class, input plug, cable, output sockets and fuse arrangement)		

The Wolf ATEX GRP Transformer range is rated for a maximum 400VA and uses a durable GRP (glass reinforced polyester) enclosure housed in a protective 316 stainless steel skid.

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

The transformer is certified with a maximum output of 400VA in an ambient temperature of up to 40ºC or 320VA in an ambient temperature of up to 55ºC, and is Group II, Category 2 equipment for use in Zone 1 & 2 potentially explosive gases, vapours & mists, where temperature class T4 is permitted, and zone 21 & 22 potentially explosive dusts where a maximum surface temperature of 70ºC is permitted.

Approval Codes/Certification for :

Ⓔx II 2 G D Ex db eb IIC T4 Gb
Ex tb IIIC T70ºC Db IP66

400VA - Tamb = -20 to +40ºC 320VA - Tamb = -20 to +55ºC

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

ATEX Certificate: INERIS 22 ATEX 0030X.

Certificate 'X' suffix:

Specific conditions of use referring to the fuse "FU40" covered by the certificate LCIE 15 ATEX 3014U: The flamepath is specified in the manufacturer drawing.

Specific conditions of use referring to the transformer "TRE" covered by the certificate LCIE 15 ATEX 3042U: The connection is done in the factory by means of a terminal Ex "eb" certified for the intended use.

Declarations and Attestations of conformity are also enclosed.

The transformer is also IECEx approved as described above:
IECEx INE 22.0048X.

IMPORTANT INFORMATION

1. Read these instructions carefully before commencing use of the transformer and retain them for future use.
2. Check the approval label to ensure the equipment is suitable for the supply provided, ambient temperature present and the environmental conditions.
3. 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.
4. 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 6mm^2 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.
5. 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.
6. The transformer must not be opened when energised. After disconnection from the mains supply, a delay of 5 mins must be observed before opening.
7. 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.

8. 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.wolfsafety.com

9. 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. 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 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 there is no breakdown in the IP66 rating.
6. If changing the input or output fuses, care should be taken to 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.
   This Wolf ATEX transformer is fitted with IEC 60269, 80kA breaking capacity cartridge fuses and is designed to supply a maximum load of 400VA/320VA 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 attached to the lid.

2. 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 fitted.

   Check model identification label on lid to establish whether the output of the transformer is CTE connected.

3. Apparatus with long cable lengths (>20m) operated at 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).
4. 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 4mm^2 only. These terminals should be tightened down to 0.6 Nm whether a conductor is fitted or not.
5. Suitably certified cable glands must be used and be appropriate for the type of cable used. Any unused cable entries should be blanked off with suitably certified blanking plugs. Glands and blanking plugs should be approved to maintain the certification and IP rating as per the approval label.

6. 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 the cable clamp tightened to 2.0Nm.

DISPOSAL OF WASTE MATERIAL

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

TRANSFORMER SPARES

WARNING: USE ONLY GENUINE WOLF REPLACEMENT PARTS.

LL-1281	ATEX and IECEx 400VA 230/110V:24V component transformer.
LL-1488	ATEX and IECEx 400VA 230/110V:42V component transformer.
LL-1282	ATEX and IECEx 400VA 230:110V component transformer.
LL-1252	Protective Label Cover
LL-1375	STAHL 24V Coupler
LL-1481	STAHL 42V Coupler
LL-1348	STAHL 110V Coupler
LL-1349	CEAG 24V Coupler
LL-1475	CEAG 42V Coupler
LL-1049	CEAG 110V Coupler

Spare fuses. (Fuse details are on the transformer model identification label).	
LL-377	4A aM input fuse
LL-1002	2A aM input fuse
LL-379	16A gG output fuse
LL-1067	12A gG output fuse
LL-1110	10A gG output fuse
LL-1024	8A gG output fuse
LL-1016	6A gG output fuse
LL-1007	4A gG output fuse

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.

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