

**AC WELDING TRANSFORMER**

# **WT-A56241-220**

## **OPERATION MANUAL**



Thank you for purchasing our AC Welding Transformer **WT-A56241-220**.  
Before using this Transformer, read this operation manual carefully until you have familiarized yourself with it.  
After reading save the manual in place where operators can refer to it at any time.

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# 1. Special Precautions

## (1) Safety Precautions

Before using, read "Safety Precautions" carefully to understand the correct method of use.

- These precautions are shown for safe use of our products and for prevention of damage or injury to operators or others. Be sure to read each of them, since all of them are important for safety.
- The meaning of the words and symbols is as follows.

### DANGER

Denotes operations and practices that may imminently result in serious injury or loss of life if not correctly followed.

### WARNING

Denotes operations and practices that may result in serious injury or loss of life if not correctly followed.

### CAUTION

Denotes operations and practices that may result in personal injury or damage to the equipment if not correctly followed.



These symbols denote "prohibition". They are warnings about actions out of the scope of the warranty of the product.



These symbols denote actions which operators must take.



Each symbol with a triangle denotes that the content gives notice of DANGER, WARNING or CAUTION to the operator.

## DANGER



### **Do not touch the "Terminal block" on the rear panel of the Welding Transformer**

Since very high voltage is applied to the "Terminal block", it is very dangerous to touch it unnecessarily. When connecting or disconnecting a cable, be sure to turn off the power. After connecting the cable, install the terminal cover so that operator can not touch the terminal block during work.



### **Never disassemble, repair or modify the Welding Transformer**

These actions can cause electric shock and fire. Consult us or your distributor for inspection and repair.



### **Never burn, destroy, cut, crush or chemically decompose the Welding Transformer**

This product incorporates parts containing gallium arsenide (GaAs).

# **WARNING**



## **Do not put your hands between the electrodes**

When welding, keep your fingers and hands away from the electrodes.



## **Do not touch +/- terminal, secondary cable, any welded part or electrodes during welding and just after welding finished**

These parts are very hot. Do not touch them; otherwise you may be burnt.



## **Ground the Welding Transformer**

If the Transformer is not grounded, you may get an electric shock when there is trouble, or when electricity leaks.



## **Connect the specified cables securely**

Cables of insufficient current capacities and loose connections can cause fire and electric shock.



## **Do not damage the power cable and connecting cables**

Do not tread on, twist or tense any cable. The power cable and connecting cables may be broken, and that can cause electric shock and fire. If any part needs to be repaired or replaced, consult us or your distributor.



## **Stop the operation if any trouble occurs**

Continuous operation after occurrence of a trouble such as burning smell, abnormal sound, abnormal heat, smoke, etc. can cause electric shock and fire. If such a trouble occurs, immediately consult us or your distributor.



## **Persons with pacemakers must stay clear of the welding machine**

A person who uses a pacemaker must not approach the welding machine or walk around the welding shop while the welding machine is in operation, without being permitted by his/her doctor. The welding machine generates a magnetic field and has effects on the operation of the pacemaker while it is turned on.



## **Protective gear must be worn**

Put on protective gear such as protective gloves, long-sleeve jacket, leather apron, etc. Spatter can burn the skin if they touch the skin.



## **Wear protective glasses**

If you look at the flash directly during welding, your eyes may be damaged. If any spatter gets in your eye, you may lose your eyesight.

# **CAUTION**



**Do not splash water on the Welding Transformer**

Water splashed over the electric parts can cause electric shock and short circuits.



**Use proper tools (wire strippers, pressure wire connectors, etc) for termination of the connecting cables**

Do not cut the conductor of wire. A flaw on it can cause fire and electric shock.



**Install the Welding Transformer on firm and level surface**

If the Transformer falls or drops, injury may result.



**Do not place a water container on the Welding Transformer**

If water spills, insulation will deteriorate, and this may cause electric leak and fire.



**Keep combustible matter away from the welding machine**

Spatter can ignite combustible matter. If it is impossible to remove all combustible matter, cover them with non-combustible material.



**Do not cover the Welding Transformer with a blanket, cloth, etc.**

If such a cover is used, it may be overheated and burn.



**Do not use this Welding Transformer for purposes other than welding**

Use of this equipment in a manner other than specified can cause an electric shock and fire.



**Use ear protectors**

Loud noises can damage hearing.



**Keep a fire extinguisher nearby**

Keep a fire extinguisher in the welding shop in case of fire.



**Maintain and inspect the Welding Transformer periodically**

Maintain and inspect the Transformer periodically, and repair any damage nearby before starting operation.

## (2) Precautions for Handling

- When transporting or moving the Transformer, do not lay it down. Also, handle the Transformer with care so as not to make an impact such as drop on it. Moving the Transformer by hand must be done by at least two people.
- Install this Welding Transformer on a firm and level surface. If it is inclined, malfunction may result.
- Do not install this Welding Transformer in the following:
  - Damp places where humidity is higher than 90%,
  - Hot or cold places where temperatures are above 45°C or below 5°C,
  - Places near a high noise source,
  - Places where chemicals are handled,
  - Places where water will be condensed,
  - Dusty places,
  - Places exposed to large amounts of vibration or shock, and
  - Places at an altitude above 1000 meters.
- Clean the outside of the Welding Transformer with a soft, dry cloth or one wet with a little water. If it is very dirty, use diluted neutral detergent or alcohol. Do not use paint thinner, benzine, etc., since they can discolor or deform the Welding Transformer.
- For the water-cooled products, use city water or water for industrial use. Note that the water temperature, flow rate and water pressure fall within the specified range.
- Do not put a screw, a coin, etc., in the Welding Transformer, since they can cause a malfunction.
- Operate the Welding Transformer according to the method described in this Operation Manual.
- The Transformer is not equipped with auxiliary power such as an outlet for lighting.
- The welding power supply, the welding head, and the cables for connecting the welding power supply, the welding head and the Transformer are separately needed to use the Transformer.
- When the Transformer has the I/O signals, the I/O signal line to start the Transformer is not attached.

## (3) On Disposal

This product incorporates parts containing gallium arsenide (GaAs). At the time of disposal, separate it from general industrial waste or domestic waste and carry out the disposal in accordance with applicable laws and regulations.

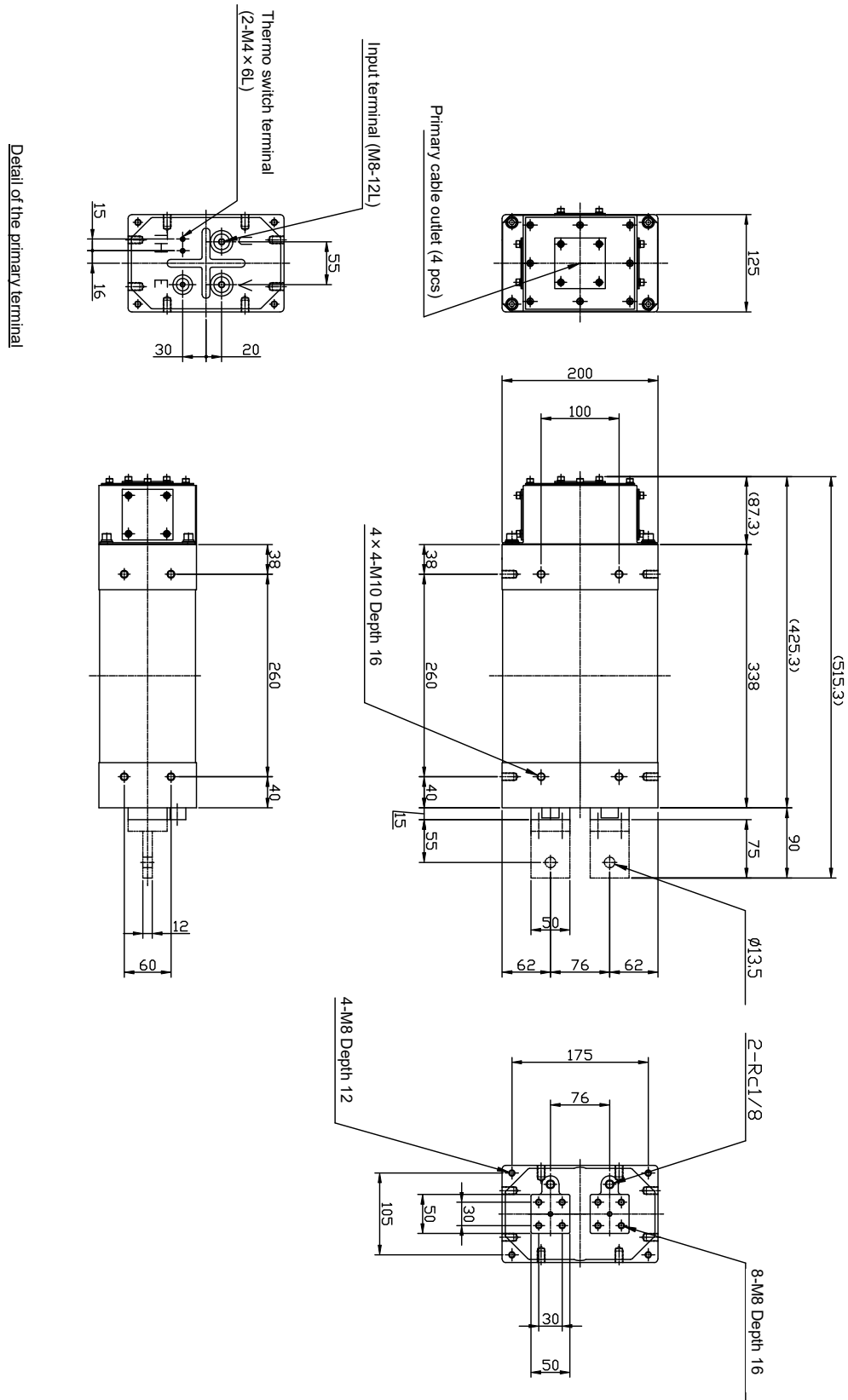
## (4) Shipping Kit

Verify that contents of the container agree with the kit list.  
If you see any damage, please contact us.

Packaged Kit	Quantity
<b>WT-A56241-220</b>	1
Operation manual	1

## 2. Outline Drawing and Specifications

### (1) Outline Drawing





## (2) Specifications

<b>Model name</b>	WT-A56241-220
<b>Rated capacity</b>	56 kVA
<b>Rated voltage</b>	220 V/50 Hz
<b>Max. capacity</b>	145 kVA
<b>No-load secondary voltage</b>	9.1 V
<b>Max. output current</b>	16 kA
<b>Max. duty cycle</b>	7.5% (at 16 kA)
<b>Operating environment</b>	Temperature +5°–+45°C, Humidity 90% or less (Dew condensation not allowed), Altitude 1000 meters or lower  Caution: Use this product in the environment without conductive dust. If conductive dust enters in the product, this may result in a failure, electric shock, or fire. When using this product in this environment, make contact with us.
<b>Storage environment</b>	Temperature -10°–+55°C and dew condensation not allowed
<b>Heat-resistant class</b>	H
<b>Case protection</b>	IP20
<b>Outline dimensions</b>	125 mm (H) × 200 mm (W) × 440 mm (D) (Not including projections)
<b>Turn ratio</b>	24:1
<b>Cooling water flow rate</b>	4 L/second min.
<b>Mass</b>	45.5 kg

**Duty cycle graph**

(Ambient temperature: 25°C)

