

INSTRUCTION

Summary

| Model | Functions |
|------------|--|
| UK-101 | Protectorelay for Combustion Safety Control & Automatic Operation of Oil burners. Valve 1Stage. Flame Eye (c.d.s) |
| UK-102 | Protectorelay for Combustion Safety Control & Automatic Operation of Oil burners. Valve 2Stage. Flame Eye (c.d.s) |
| UK-202F | Protectorelay for Combustion Safety Control & Automatic Operation of Gas burners with flame rod (current sensor). Valve 2 stage with pilot valve |
| UK-202U | Protectorelay for Combustion Safety Control & Automatic Operation of Gas or Oil burners with Ultraviolet flame Detector (C7027A or C7035A). Valve 2 stage with pilot valve |
| UK-402 | Automatic Gas Valve leakage detector |
| UK-301 | Water level control in water tank or Automatic pumping operation for water supply or drainage |
| UK-3 | Converter for mechanical Room-controller system to be electronic Room-controller system |
| ROOMCON-6T | Multiple functional Room-controller (temperature control, timer, continue running, hot water supply) |

Characteristics

- Power supply : AC200~240V 50~60Hz
- Electricity consumption : Below 4.5VA
- Ambient temperature : -20°C ~ 60°C (While not frozen and not dew-drop)
- Special pre-purge setting → standard pre-purge(15s) or special pre-purge(35s)

| SEQUENCE | MODEL | Available special time control | | | |
|--|--------------------------|--------------------------------|--------------------------|---|---|
| | | UK-101 | UK-102 | UK-202F | UK-202U |
| Pre-Purge | | 14sec ± 4sec | 35sec ± 5sec | Standard : 15sec ± 4sec Special : 35sec ± 5sec | Standard : 15sec ± 4sec Special : 35sec ± 5sec |
| Pre-ignition | | 9sec ± 2sec | 9sec ± 2sec | | |
| Post-Purge | | 8sec ± 2sec | 8sec ± 2sec | 6sec ± 2sec | 6sec ± 2sec |
| Safety-switching | | 7sec ± 2sec | 7sec ± 2sec | 3sec ± 1sec | 3sec ± 1sec |
| Fire detector response | | below 1sec | below 1sec | below 1sec | below 1sec |
| Suspect Fire | | below 1sec | below 1sec | below 2sec | below 2sec |
| Post-purge(Lock-out) | | | | 10~25sec (setting 15sec) | 10~25sec (setting 15sec) |
| Fire detector | Flame Eye c.d.s | | Flame Eye c.d.s | Flame Rod | Flame UV TRON |
| | P930-05, 06 | | P930-05, 06 | Kanthal | C7027, C7035 |
| | Ignition: below 50kΩ | | Ignition: below 50kΩ | Ignition: over 2μA | Ignition: : over 1.5mA |
| | Extinction: over 80kΩ | | Extinction: over 80kΩ | Extinction: below 0.7μA | Extinction: below 1mA |
| | Suspect fire: below 10kΩ | | Suspect fire: below 10kΩ | Burner: over 5μA | burner: over 3mA |
| Maximum load (use separate relay s/w for more load) | Fan Motor: 250VA | | Fan Motor: 250VA | Fan Motor: 250VA | Fan Motor: 250VA |
| | ig-trans : 250VA | | ig-trans : 250VA | ig-trans : 250VA | ig-trans : 250VA |
| | Valve : 100VA | | Valve : 100VA | Valve : 100VA | Valve : 100VA |
| | Alarm : 100VA | | Alarm : 100VA | Alarm : 100VA | Alarm : 100VA |

Dimensions

| | | | | |
|---------------|---------------------|---------------------|---------------------|---------------------|
| External | Refer to figure A-1 | Refer to figure A-2 | Refer to figure A-3 | Refer to figure A-4 |
| Terminal base | Refer to figure B-1 | Refer to figure B-2 | Refer to figure B-2 | Refer to figure B-2 |

Circuit connections with relative devices

| | |
|------------------|--|
| Electric circuit | Refer to circuit diagram inside products |
| Wiring standard | Use UL AWG #18번 |

Operation

| | |
|-------------|---|
| Check point | ① Before connecting the device to the electric power line, check carefully whether wires are duly connected |
| | ② Use the device within a range of 85 to 110 percent of the nominal voltage |
| | ③ The device may be wrong operated or damaged when electric voltage is below or over the range |
| Reset | Put the switch on after waiting for 2 seconds for re-operation |

Response-Test of ignition spark(Turn oil valve or gas valve off)

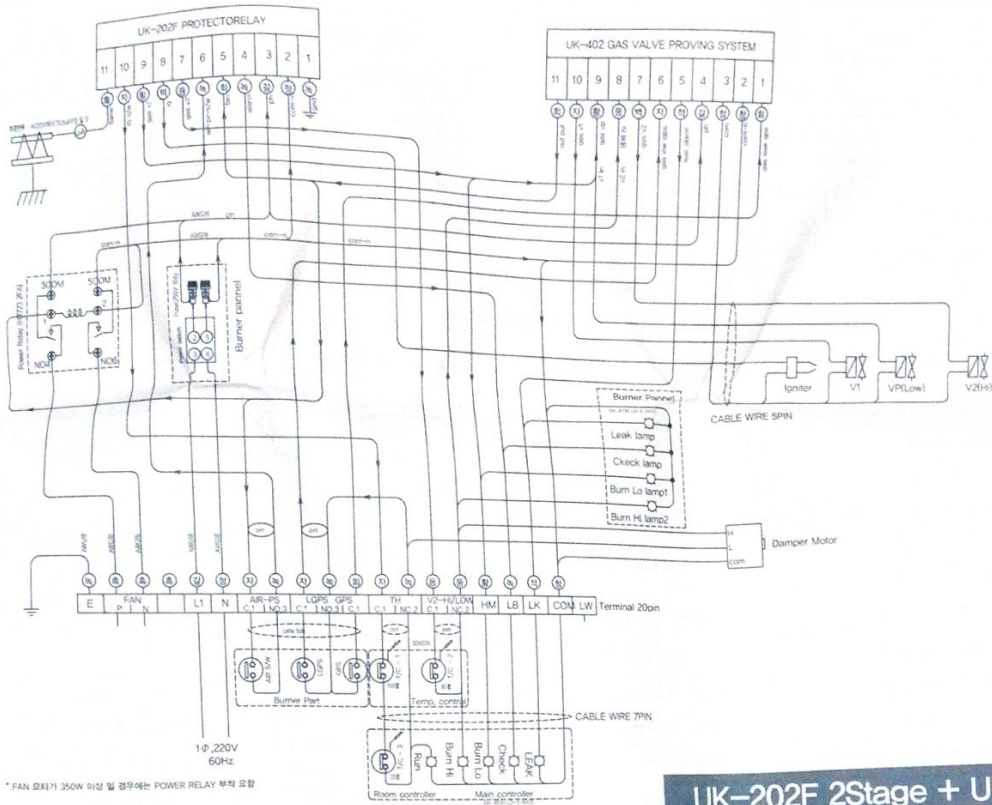
| | |
|-----------------|--|
| Flame Eye c.d.s | ① Make a parallel circuit with kΩ-Meter after removing c.d.s wires from controller. |
| | ② Must be over 200kΩ when Ig-trans is working. |
| Flame rod | Make a series circuit with DCμA-Meter. Must be no-response when ig-trans is working. |
| Flame UV TRON | Make a series circuit with DCmA-Meter. Must be no-response when ig-trans is working. |

Test for fire-extinction and safety lock (Turn fuel valve off after running of burner during 5minutes in combustion chamber)

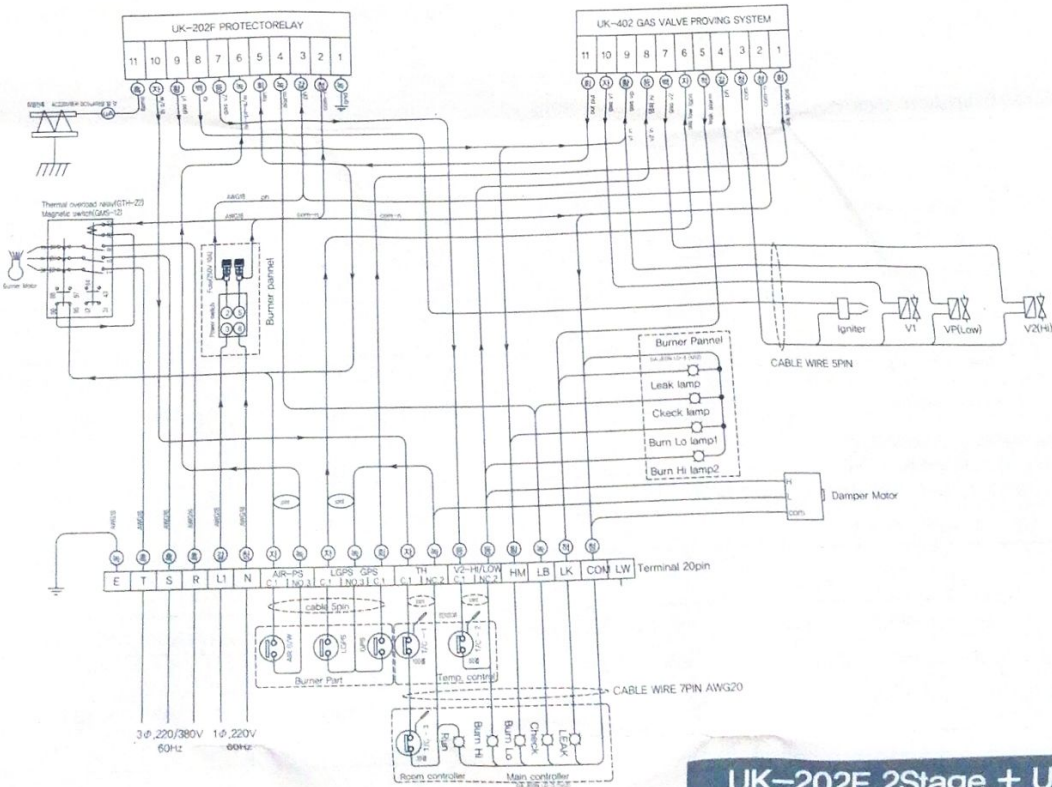
| | |
|------------------------------|--|
| Extinction (Detect response) | Must be shut off within 0.8 ~ 3 seconds |
| Safety-lock | Must be shut off within the time for safety-lock described on the above list of characteristics for each model |

Repair and maintenance

- ① Cut off electric power immediately and check the cause when the alarm beeps during the operation of device and put the reset-switch on after taking the necessary steps
- ② Checking of the device might cause a danger of accidents or its damages.
All maintenance and check must be made by qualified personnel with a knowledge of the device.



UK-202F 2Stage + UK-402 (Single phase)

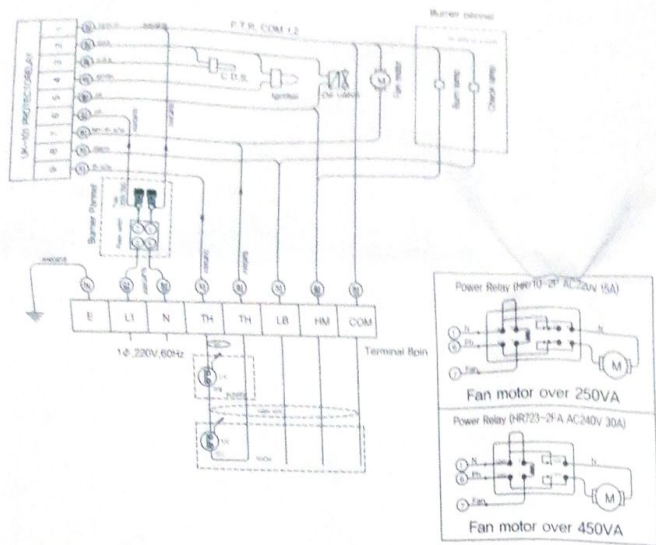


UK-202F 2Stage + UK-402 (Three phase)

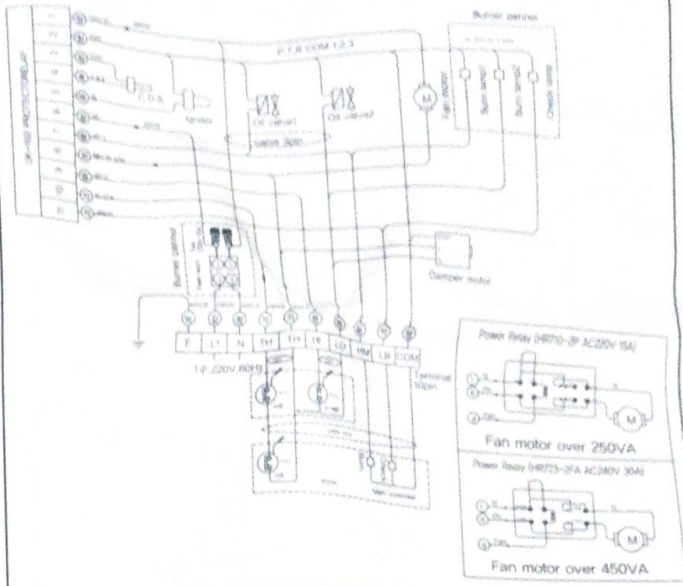
MEMO

* For the other questions
 TEL : 82-2-424-1361(5 Line)
 FAX : 82-2-424-1366
 E-mail : unik@unik.co.kr

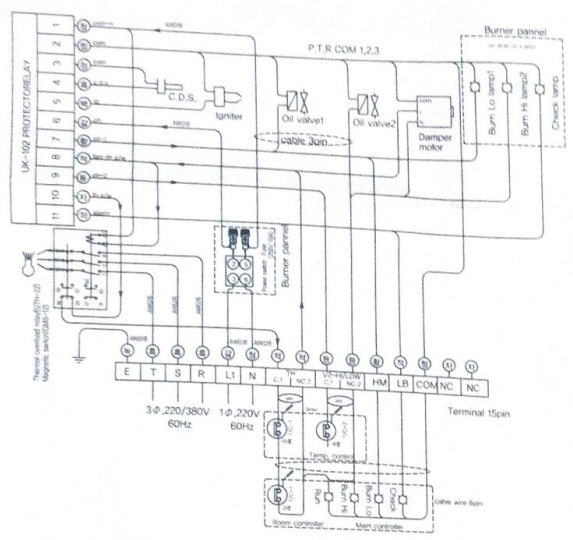
Electric circuit



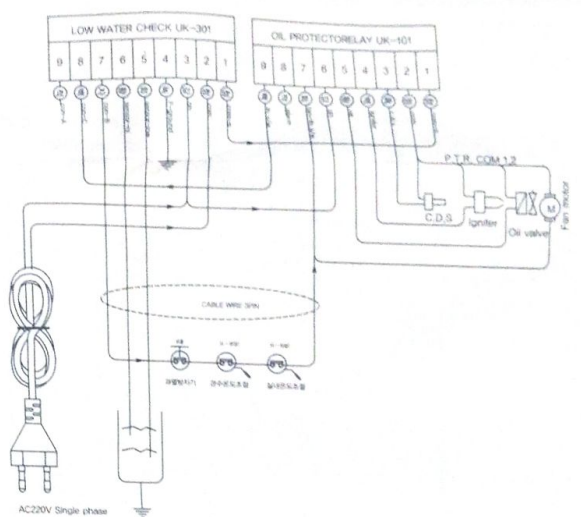
UK-101 1Stage (Single phase)



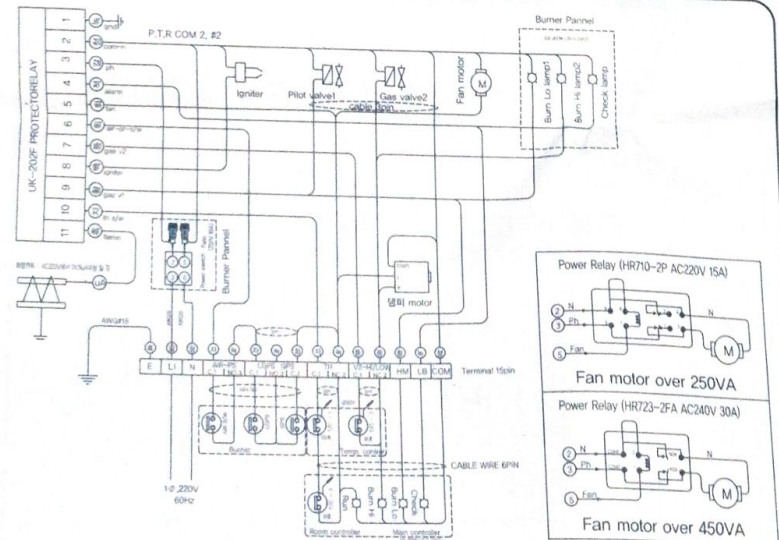
UK-102 2Stage (Single phase)



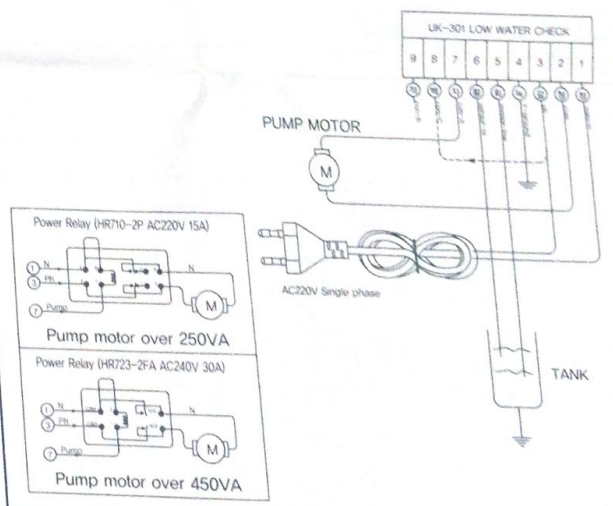
UK-102 2Stage (Three phase)



UK-301 LOW WATER CHECK + UK-101 OIL 1STAGE



UK-202F 2Stage (Single phase)



UK-301 LOW WATER CHECK PUMP

Electrical Directives

- ① Low Voltage Directive
- ② E.M.C Directive

External Look

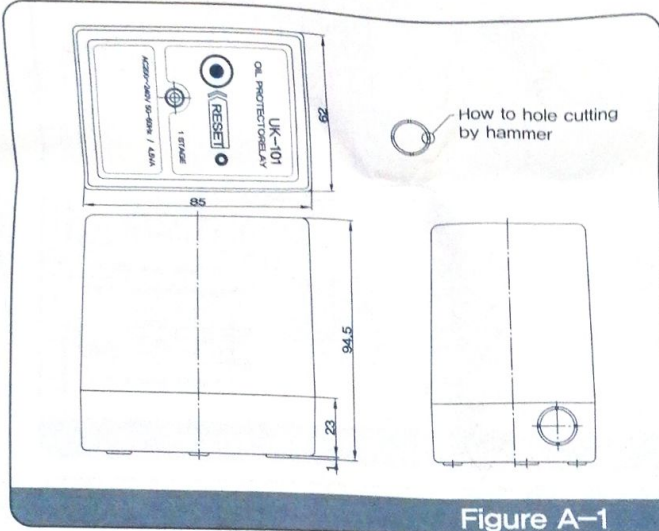


Figure A-1

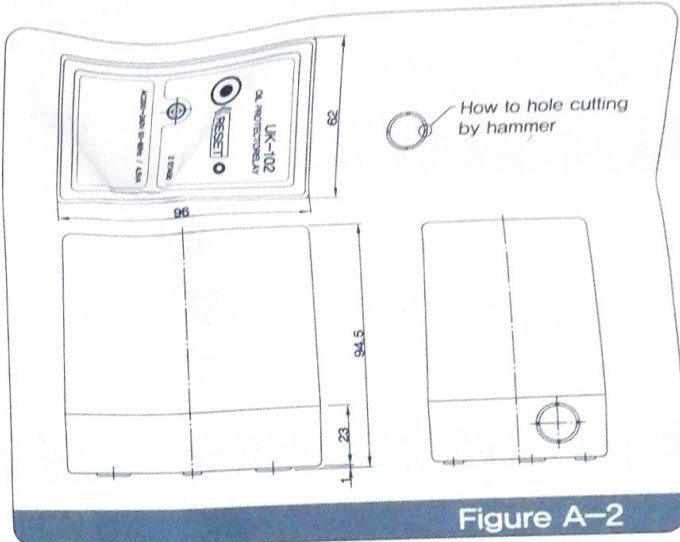


Figure A-2

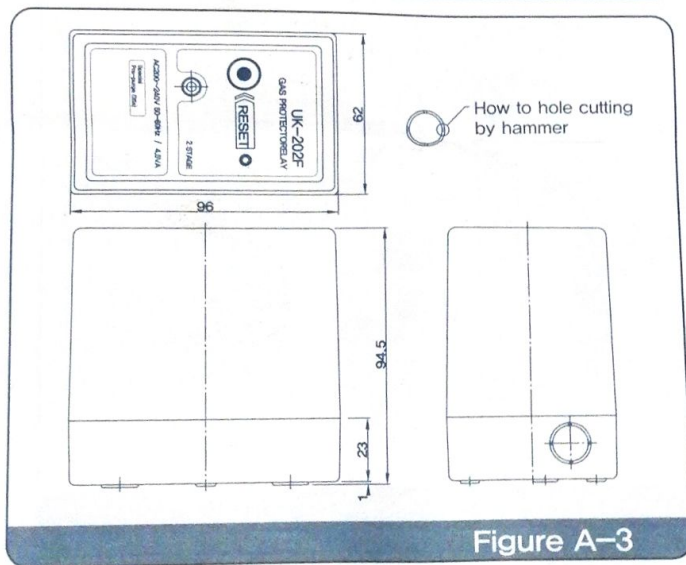


Figure A-3

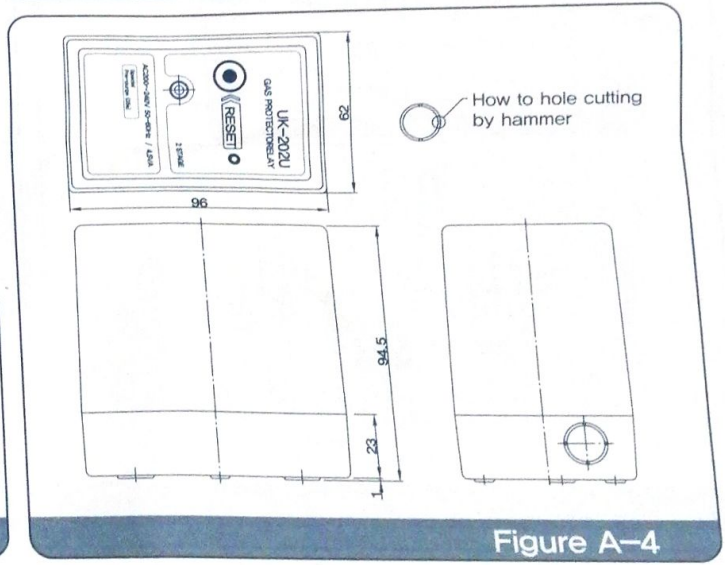


Figure A-4

Dimensioned sketch base

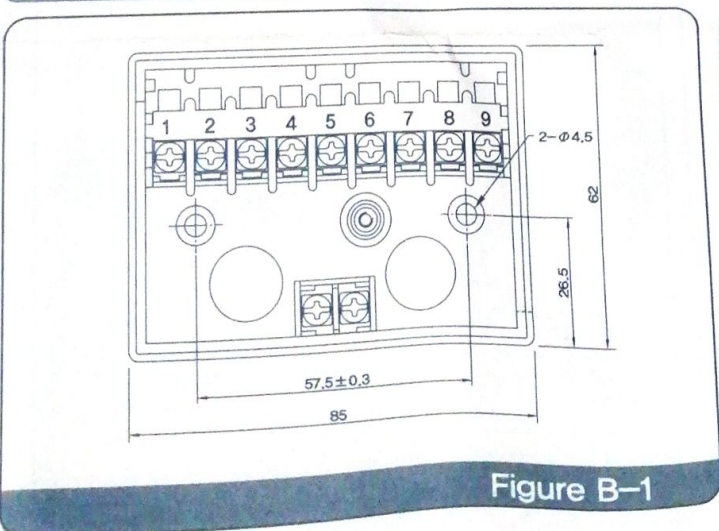


Figure B-1

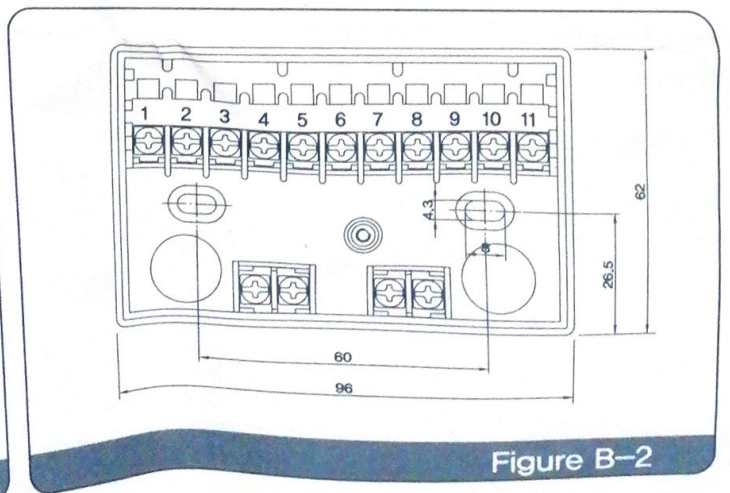


Figure B-2