ZYGGOT® THM+ARC

Online Thermography + Ultra Selective Arc Flash Protection System

General Information

Relay not switching on

- Check if the relay's power supply terminal and V5Con are powered correctly.
- Check if the power supply at the relay input is 24 Vdc.
- Check if the power supply is switched on.

Communication failure with supervisor

- Check the pinout according to the communication protocol used.
- See the Modbus map in the product manual.
- Check if the function is active on the Modbus configuration screen.
- Check if the correct *offset* is used, according to the Modbus map.
- Check the use of a resistor in the customer's Modbus network.
- Analyze possible interference from other *slaves* on the network.
- Check if you are using the correct port according to the communication protocol used:
  - For Modbus RTU 485 communication use terminals "C" and "D" on the V5con.
  - For Modbus TCP/IP or Ethernet IP communication, check that the "LAN" port on the back of the V5F relay is being used.
  - For Modbus RTU 232 communication, use the relay's MJ1/2 port via an RJ45 connector.

Temperature Information

Sensor oscillation

- Check if the termination resistors have been used correctly — 01 resistor for simple topology and 02 resistors for topology that bypasses both sides.
- Check the integrity of the ZTA derivators.
- Insulate and test the cables to identify possible shorts.

Relay indicating alarm/trip

- Check the alarm *setpoint* for point temperature and ambient temperature around the sensor.
- Analyze whether there are any unresponsive sensors.
- Check the trip *setpoint* for point temperature and ambient temperature around the sensor.
- To reset the condition, enter the alarms screen, click on "ALRM", press "CLR ALL" - "ESC" - "Mute Alarm" and "Reset Fail".
- Check if the alarm/trip persists. If so, there may be an overtemperature at some point or a fault in the network.

Sensor error

Bottom of scale (888)

- Check if the sensors are correctly addressed with different numbers.
- Check if the termination resistors are being used:
  - V5F Relay: 1 resistor
- Check if all cables are connected.
- Check the integrity of the ZTA shunts.
- Check if the sensor terminals are intact.
- Check if any sensors are burnt out.
- If the above items are correct, test the cables individually.
- Check for a possible short in the termination resistor.
- For the V5F relay, check the voltage level at the LV sensors.
- Check that the maximum distance of the sensor network is being respected — 80 sensors.
- Check that the maximum number of sensors in the network has not been exceeded — 125 sensors.
- Check the voltage level of the sensors on the THM Status screen, to ensure that there are no sensors with values much lower than 24V.

Incorrect sensor reading

- In the case of tubular sensors, check if they are positioned correctly, using the VLP2 laser sight to ensure that they are aimed at the center of the Unidex tape.
- Check ifthat the Unidex tape that comes with each sensor is being used and that monitoring is being carried out exclusively on it, respecting the sensor's lens opening (7°).
- Use the Zyggot 2.0 manager software (available on our website in the Downloads tab), together with the ZCC180 addressing cable, to confirm that the emissivity is set to 0.95 — the recommended value for use with the Unidex tape.
- Check if the angle of view is within the recommended limit — up to 45°.
- Confirm that the monitoring is being carried out on an ad hoc basis (one sensor per busbar).

Arc Information

Sensor not responding

- Check that the sensors are addressed correctly, with different numbers — 0 to 100 per gateway.
- If there are multiple gateways, check that they are addressed correctly:
  - The first gateway is addressed as "200" and has a limit of up to 40 gateways per relay.
- Check if 01 terminating resistor is used to close the sensor loop.
- Check if the arc system gateways are being supplied with 24Vdc.
- Check if all cables are connected.
- Check if the sensor terminals are intact.
- Check if any sensor is burnt out — You can check this using the addressing software, or by looking at the sensor's rear LED. If the LED is off, the sensor is burnt out.
- If the above items are correct, test the cables individually.
- Check for a possible short in the termination resistor.
- Check if the maximum distance of the sensor network is being respected — gateway and last sensor must not exceed 80 meters.
- Check ifthat the RS 485 network (mini-usb cables interconnecting the system) is not exceeding 80 meters.
- Check that the maximum number of sensors on the network has not been exceeded — 100 sensores per gateway.
- Check if the topology is correct.
- Check if the cable for the arc sensor network is connected to the gateway's CAN output.
- Check if the RS 485 connector is connected to the RS 485 loop.
- Check the voltage drop of the sensors on the "Arc Status" screen, S.Arco voltage level.

Relay accusing alarm/trip

- To reset the condition, enter the alarms screen, click on “ALRM”, press “Clr All” - “ESC” - “Mute Alarm” and “Reset Fail”.

Gateway not responding

- Check if the gateway is correctly powered with 24Vdc.
- Check if the mini-usb cable is properly connected.

Downloads

- **Addressing Software - Temperature:** Zyggot Manager 2.0
- **Addressing Software - Arc:** Zyggot Arco 3.00 Configurador
- **Manual ZYGGOT® THM+ARC:** User Manual - THM+ARC

Access website