

# Power Controller Selection Guide

## Step1 – Line and Wiring Specification

Energy supplier type       Line                       Generator                       Photovoltaic

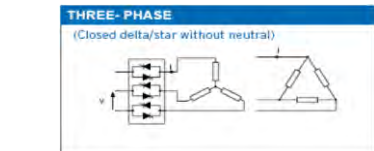
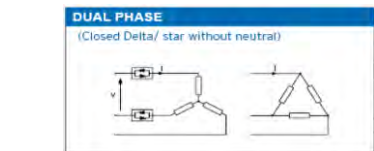
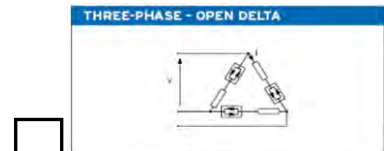
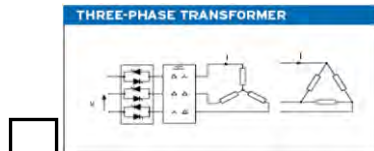
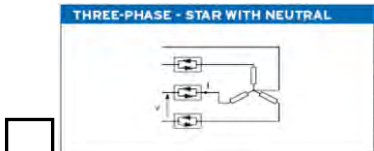
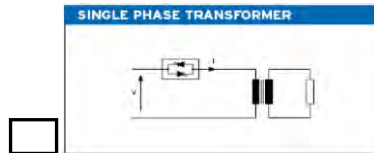
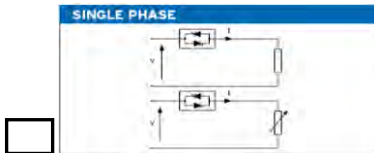
Line type                       Single phase                       Three phase

Line Voltage (V)               230Vac     400Vac     480ac     600Vac    Other : Volt

Line frequency (Hz)               50                       60

Neutral                       Yes                       No

## Load Connection



Closed Delta  
 Star without Neutral

Closed Delta  
 Star without Neutral

## Step2 – Load Type Specification

Load Power  Watt – single element  Watt – Total three phase

Load Voltage  Volt – single element

Load Current  Ampere – single element

Number of Elements in series

Number of Elements in parallel

Number of Controlled Heating Zones

Cable length between Load and SSR  meters

**Low thermal coefficient Heating elements** (Load datasheet technical data is required)

Linear resistance  Infrared Lamps Long Wave (LWIR)

**High thermal coefficient Heating elements** (Load datasheet technical data is required)

Infrared Lamps Medium Wave (MWIR)

Infrared Lamps Short Wave (SWIR)


(MoSi<sub>2</sub>) Silicon – Molybdenum “Kanthal®” heaters

(SiC) Silicon Carbide heaters

## Step3 – Input Control Specification

- Digital On/Off       Digital PWM
- Analog 0-10Vdc       Analog 0-5Vdc       Analog 0-20mA       Analog 4-20mA
- Analog Potentiometer
- Modbus RTU Serial       Ethernet Fieldbus

## Step4 – Connection, Options and Alarms Specification

- SSR Controller Connection:     Single phase       Dual phase       Three phase
- PID Closed loop control:       On-board       External       None
- High-speed fuse:               Integrated        Integrated electronic fuse
- Soft Start
- Current Limit
- Alarms:                           Load Break Alarm     Short Circuit Alarm     Overtemperature Alarm
- Configuration:                  Smart                  PC (GF\_Express)     Keyboard

## Step5 – Feedback Specification

- Feedback type:                  Voltage                  Current                  Power

### Step6 – Fieldbus Specification

- |  |  |                                      |
|--|--|--------------------------------------|
| <input type="checkbox"/> Modbus RTU (Serial) | <input type="checkbox"/> Modbus TCP (Ethernet) | <input type="checkbox"/> Ethernet/IP |
| <input type="checkbox"/> ProfibusNET         | <input type="checkbox"/> ProfiBus              | <input type="checkbox"/> DeviceNet   |
| <input type="checkbox"/> EtherCAT            | <input type="checkbox"/> CanOpen               | <input type="checkbox"/> None        |

### Step7 – Transformer Technical Data (if required)

- |                                   |  |                              |                                     |                                      |        |
|-----------------------------------|--|------------------------------|-------------------------------------|--------------------------------------|--------|
| Primary Voltage                   | <input type="text"/>                     | Volt                         | Primary Current                     | <input type="text"/>                 | Ampere |
| Secondary Voltage                 | <input type="text"/>                     | Volt                         | Secondary Current                   | <input type="text"/>                 | Ampere |
| Power VA                          | <input type="text"/>                     |                              | Cos $\Phi$                          | <input type="text"/>                 |        |
| Neutral on Transformer Primary:   | <input type="checkbox"/> Yes             | <input type="checkbox"/> No  |                                     |                                      |        |
| Neutral on Transformer Secondary: | <input type="checkbox"/> Yes             | <input type="checkbox"/> No  |                                     |                                      |        |
| Secondary transformer type:       | <input type="checkbox"/> $\Delta/\Delta$ | <input type="checkbox"/> Y/Y | <input type="checkbox"/> $\Delta/Y$ | <input type="checkbox"/> Y/ $\Delta$ |        |

### Step8 – Load and Power Control Installation Wiring Scheme

Include load and Power control installation wiring scheme