

PROGRAMMABLE LOGIC RELAYS



TECO

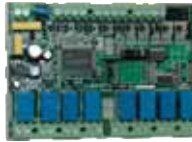


44 MAX I/O

Blind Type



Bareboard Type



Expansion Modules



| Part # | Input Power | Inputs | Outputs | Display | Communications | Max I/O* |
|--|--|--|----------|---------|-----------------|----------|
| SG2-12HR-D | 24 VDC | 6 DC, 2 Analog | 4 Relay | | N/A | 36 |
| SG2-12HT-D | | 6 DC, 2 Analog | 4 Trans. | | N/A | 36 |
| SG2-20HR-D | | 8 DC, 4 Analog | 8 Relay | | N/A | 44 |
| SG2-20HT-D | | 8 DC, 4 Analog | 8 Trans. | | N/A | 44 |
| SG2-20VR-D | | 8 DC, 4 Analog | 8 Relay | | Built-in MODBUS | 44 |
| SG2-20VT-D | | 8 DC, 4 Analog | 8 Trans. | | Built-in MODBUS | 44 |
| SG2-10HR-A | 85-240 VAC | 6 AC | 4 Relay | | N/A | 34 |
| SG2-20HR-A | | 12 AC | 8 Relay | | N/A | 44 |
| Expansion Modules | | | | | | |
| SG2-8ER-D | 24VDC | 4 DC | 4 Relay | N/A | N/A | N/A |
| SG2-8ET-D | | 4 DC | 4 Trans. | N/A | N/A | N/A |
| SG2-8ER-A | 85-240VAC | 4 AC | 4 Relay | N/A | N/A | N/A |
| SG2-4AI | 12-24 VDC | 4 Analog | N/A | N/A | N/A | N/A |
| SG2-MODBUS | 24 VDC | Communications Module, RS-485 MODBUS-RTU | | | | |
| OEM "Blind" Models, No Keypad, No Display | | | | | | |
| SG2-12KR-D | 24VDC | 6 DC, 2 Analog | 4 Relay | N/A | N/A | 12 |
| SG2-20KR-D | | 8 DC, 4 Analog | 8 Relay | N/A | N/A | 20 |
| SG2-10KR-A | 85-240VAC | 6 AC | 4 Relay | N/A | N/A | 10 |
| SG2-20KR-A | | 12 AC | 8 Relay | N/A | N/A | 20 |
| OEM "Bareboard" Models, No Keypad, No Display, No Expansion | | | | | | |
| SG2-12CR-D | 24VDC | 6 DC, 2 Analog | 4 Relay | N/A | N/A | 12 |
| SG2-20CR-D | | 8 DC, 4 Analog | 8 Relay | N/A | N/A | 20 |
| SG2-10CR-A | 85-240VAC | 6 AC | 4 Relay | N/A | N/A | 10 |
| SG2-20CR-A | | 12 AC | 8 Relay | N/A | N/A | 20 |
| Accessories | | | | | | |
| SG2-PL01 | SG2 Programming Cable | | | | | |
| SG2-PM05 | SG2 Memory cartridge | | | | | |
| SG2-SW | SG2 Programming software. Available on CD or FREE via download from Web | | | | | |

Product Features

Simple yet powerful, dependable yet affordable. The SG2 Series PLR includes the needed features at the industry's lowest price. Why pay more when this controller offers all you need?

Multiple I/O Configurations

- IP20 enclosed case with LCD and keypad or bare-board models, DIN-rail or panel mount
- AC and DC inputs; DC transistor and Relay outputs
- Built-in 2 channel high-speed DC inputs (1 kHz) for single channel encoder or pulse catch
- PWM DC output, 1 CH / 16-bit available
- Integrated 10-bit Analog Input (0-10V) available
- 4 line x 12 character LCD with keypad for program modification, preset changes, and text message display
- Retentive Flash Memory programs are safely stored in memory even during extended power loss.
- Built-in RTC (Real-time Clock) on all models
- Super Capacitor backup, no battery required.
- Removable Spare Memory Cartridge
- Store programs and timer/counter values for easy backup or transfer
- Program Memory: 200 lines or 99 Function Blocks, 15 Timers, 15 Counters, 15 FC, 15 Compares

General Specifications

| Power Supply | |
|---|--|
| Input Power Voltage Range | DC Models: 20.4-28.8V AC Models: 85-265V |
| Power Consumption | 24VDC: 10-point, 90mA 20-point: 150mA 100-240VAC: 90mA |
| Wire Size (all terminals) | 26 to 14 AWG |
| Programming | |
| Programming languages | Ladder/Function Block |
| Program Memory | 200 Lines or 99 Function Blocks |
| Programming storage media | Flash |
| Execution Speed | 10ms/cycle |
| LCD Display | 4 lines x 12 characters |
| Timers | |
| Maximum Number | 15 |
| Timing ranges | 0.01s-9999min |
| Counters | |
| Maximum Number | 15 |
| Highest count | 999999 |
| Resolution | 1 |
| RTC (Real Time Clock) | |
| Number available | 15 |
| Resolution | 1min |
| Time span available | week, year, month, day, hour, min |
| Compare Instructions (Analog, Timer, or Counter Values) | |
| Number available | 15 |
| Compare versus other inputs | Timer, Counter, or Numeric values |
| Environmental | |
| Enclosure Type | IP20 |
| Maximum Vibration | 1G according to IEC60068-2-6 |
| Operating Temperature Range | 32° to 131°F (0° to 55°C) |
| Storage Temperature Range | -40° to 158°F (-40° to 70°C) |
| Maximum Humidity | 90% (Relative, non-condensing) |
| Vibration | 0.075mm amplitude 1.0g acceleration |
| Weight | 10-point: 230g 8-point: 190g 20-point: 345g |
| Agency Approvals | cUL, CE, UL |

| Discrete Inputs | |
|--------------------------------|---|
| Current consumption | 4mA @ 12VDC 3.2mA @ 24VDC 1.3mA @ 100-240VAC |
| Input Signal "OFF" Threshold | < 5VDC; < 40VAC |
| Input Signal "ON" Threshold | > 15VDC; > 79VAC |
| Input On delay | DC: 5ms; 240VAC: 50ms; 120VAC: 90ms |
| Input Off Delay | DC: 3ms; 240VAC: 50ms; 120VAC: 90ms |
| Transistor Type | 3-wire PNP Sensor compatible |
| High Speed Input frequency | 1kHz |
| Standard Input frequency | < 40 Hz |
| Required protection | Inverse voltage protection required |
| Analog Inputs | |
| Resolution | 10 bit |
| Voltage Range acceptable | Analog input: 0-10VDC, 24VDC when used as discrete input |
| Input Signal "OFF" Threshold | < 5VDC (as 24VDC discreet input) |
| Input Signal "ON" Threshold | > 9.8VDC (as 24VDC discreet input) |
| Isolation | None |
| Short circuit protection | Yes |
| Total number available | A1-A8 |
| Relay Outputs | |
| Contact material | Ag Alloy |
| Current rating | 8A |
| HP rating | 1/3HP @ 120V 1/2HP @ 250V |
| Maximum Load | Resistive: 8A/point; Inductive: 4A/point |
| Maximum operating time | 15ms (normal condition) |
| Life expectancy (rated load) | 100k operations |
| Minimum load | 16.7mA |
| Transistor Outputs | |
| PWM max. output frequency | 0.5kHz (1ms on, 1ms off) |
| Standard max. output frequency | 100Hz |
| Voltage specification | 10-28.8VDC |
| Current capacity | 1A |
| Maximum Load | Resistive: 0.5A/point; Inductive: 0.3A/point |
| Minimum Load | 0.2mA |