

TECO SG2 (V3) Programmable Relay Specifications

General Specifications

Power Supply	
Input Power Voltage Range	12VDC Models: 10.4-14.4V 24VDC Models: 20.4-28.8V 110/220VAC: 85-265VAC
Power Consumption	12VDC: 12-point, 150mA 20-point: 150mA 24VDC: 12-point, 90mA 20-point: 150mA 100-240VAC: 90mA
Wire Size (all terminals)	26 to 14 AWG
Programming	
Programming languages	Ladder/Function Block
Program Memory	300 Lines or 260 Function Blocks
Programming storage media	Flash
Execution Speed	10ms/cycle
Built-in HMI	
Customizable screens	31 (H coils)
LCD Display	4 lines x 16 characters
Function Keys	8, 4 user-defined (Z inputs)
Auxiliary Coils	
Maximum Number	126 (63 M-coils, 63 N-coils)
Timers	
Maximum Number	31 T-coils
Timing ranges	0.01s-9999min
Counters	
Maximum Number	31 C-coils
Highest count	999999
RTC (Real Time Clock)	
Number available	31 R-coils
Resolution	1 min
Time span available	week, year, month, day, hour, min
Daylight Savings feature	Yes
Power off RTC retention	240 hours
Compare Instructions (Analog, Timer, or Counter Values)	
Number available	31 G-coils
Compare functions	EQ, LT, GT, LE, GE, NE
NEW! PID Control (Proportional-Integral-Derivative)	
Maximum Number	15 Loops (PI Coils)
NEW! Math Instructions	
Number available	62 (31 AS Coils, 31 MD Coils) up to 124 additional (plus unused T, C, R, G coils)
Math Operations	+ - x /
Data Multiplexer Instructions	
Number available	15 (MX Coils)
Resolution	2-bit, 4 data registers
Data Registers	
Number available	240 (DR Coils, 16-bit)
Shift Instruction	
Number available	1 8-bit (S Coil)
Analog Ramp Instructions	
Number available	31 (AR Coils)
Environmental	
Enclosure Type	IP20
Maximum Vibration	1G according to IEC60068-2-6
Operating Temperature Range	-4° to 131°F (-20° 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	12VDC: < 2.5VDC; 24VDC: < 5VDC; 110/220VAC: < 40VAC
Input Signal "ON" Threshold	12VDC: > 7.5VDC; 24VDC: > 15VDC; 110/220VAC: > 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
Acceptable Input Range	Base module: Analog input: 0-10VDC voltage, 24VDC when used as discrete input Expansion module: Analog input: 0-10VDC voltage or 0-20mA current
Input Signal "OFF" Threshold	< 5VDC (as 24VDC discrete input)
Input Signal "ON" Threshold	> 9.8VDC (as 24VDC discrete input)
Isolation	None
Short circuit protection	Yes
Total number available	Base module: A01-A04 Expansion module: A05-A08
Temperature Input (SG2-4PT Expansion Module)	
Sensor Type	3-wire PT100
Temperature input range	-100°C - 600°C
Resolution	3.5°C
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	
Pulse Outputs	1 PWM and 1 PWM or Pulse Output
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
Analog Outputs (SG2-2AO Expansion Module)	
Analog output range	0V-10V (load > 500 ohm), 0-20mA (load < 500 ohm)
Resolution	10-bit
Full scale accuracy	2.5%

Communication Options

Built-in RS485 Communication (SG2-20Vx-x units only)	
Modbus-RTU	Master/Slave mode, 4800-115.2kb, supports Modbus function codes 1, 3, 5, 6, 16
DataLink	Link up to 3 SG2-20Vx-x units (1-master, 2-slaves) at 38.4kb
Remote-I/O	Link up to 8 Remote-I/O slave units (SG2-20Vx-x only) to 1-master unit at 8.4kb

Dimensions

