

Programmable Logic Relay



SG2 Series

Advanced



Sample/Time Run: 05/27/94 11:21:22

Temp: 27.8

72.171x, 9.1181

FOURIER ANALYSIS

| | | | | | |
|----|----|-----|------|------|----|
| 45 | 10 | 2.5 | 32 | 45 | 11 |
| 50 | 12 | 3.0 | 34 | 50 | 13 |
| 53 | 12 | 3.0 | 35 | 50 | 13 |
| 55 | 12 | 3.0 | 35.5 | 51.5 | 13 |
| 56 | 12 | 3.0 | 40 | 56 | 13 |
| 61 | 12 | 3.0 | 45 | 61 | 13 |
| 63 | 12 | 3.0 | 47 | 63 | 13 |
| 66 | 12 | 3.0 | 50 | 66 | 13 |
| 69 | 12 | 3.0 | 53 | 69 | 13 |
| 71 | 12 | 3.0 | 55 | 71 | 13 |
| 72 | 12 | 3.0 | 56 | 72 | 13 |



Complete product line:10/12/20 points basic module , analog input / output , temperature input , relay or transistor outputs is optional.

- ◆ Max expansion 44 digital I/O points, including 3 sets of 8 points(4 inputs / 4 outputs) expansion modules. 1 set analog input module, 1 set temperature input module, 2 set analog output module (2 channel current or voltage output) and 1 set communication module.
- ◆ Analog input can expand to 8 points in which 4 points are 10 bits voltage/current input(0-10V / 4-20mA), temperature input can expand to 4 points(PT-100).
- ◆ Several communication expansion modules are available:Profibus-DP, Devicenet, Modbus RTU, Ethernet(TCP/IP).
- ◆ Built-in 16x4 LCD display and seven languages:English, French, Spanish, Italian, German, Portuguese and Simplified Chinese are selectable.
- ◆ Ladder format, max 300 lines, 4 instructions per line. FBD format, max 260 blocks.
- ◆ High speed counter input(1KHz) and pulse output are available.
- ◆ Built-in 31 multi-function timers, 31 sets of counter, 31 RTC comparators and 126 auxiliary, 31 analog compare.
- ◆ Lower price variant models without LCD Keypad and without top cover are available if order amounts reach TECO minimum production requirement.
- ◆ Basic module(V type) built-in Modbus port(RTU), 8 channel I/O link and Remote I/O communication port.
- ◆ Built-in RTC(setting summer / winter time change) will be operational up to 240 hours after power off.
- ◆ Relay output contact rating max 8A / Transistor output rating max 0.5A.
- ◆ Two possible levels(A, B) can set 16 bits password protection function.
- ◆ 2 PWM outputs are available. One can be used as PLSY(pulse output) at 1KHZ.

| Item | | Specification |
|-------------------------|-----------------------|---|
| Method of input program | | By means of Ladder/Function Block |
| Operating Environment | Operating temperature | -20~55°C |
| | Storage temperature | -40~70°C |
| | Operating humidity | 5~90% RH no frost |
| | Environment gas | No corrosive gas environment |
| Main Structure | Vibration resistance | IEC60068-2-6 Standard |
| | Impact resistance | 0.075mm amplitude/1.0g acceleration IEC60068-2-27 Standard |
| | | 15g peak, 11ms duration |
| Noise proofing | ESD | Contact ±4KV, air discharge ±8KV |
| | EFT | Power AC: ±2KV DC: ±1KV |
| | CS | 0.15~80MHz 10V/m |
| | RS | 80~1000MHz 10V/m |
| | EMI | EN55011 class B |
| Installation | Enclosure Protection | IP20 |
| | Fixing Method | Direct or Din rail(35mm)installation |
| | Direction | Please refer to installation manual |
| Size of cable | | AWG 12/ φ 3.5mm ² |
| Dimension | | 72×90×59.6mm 10 points basic module |
| | | 126×90×59.6mm 20 points basic module |
| | | 38×90×59.6mm expansion module |



System specification

| | Model | Power supply | | | Input | Output point | Analog input | LCD Key | Expansion ability | High speed input | PWM Output | I/O LINK | |
|-------------------------------|---|--------------|--------|--------|-------|--------------|--------------|------------|-------------------|------------------|------------|----------|---|
| | | AC 100-240V | DC 24V | DC 12V | | | | | | | | | |
| 10 point Variant | Expandable Type (★: project requested) | | | | | | | | | | | | |
| | | 10HR-A | ◎ | | | 6 | 4 | Relay | | ◎ | ◎ | | |
| | | 12HR-D | | ◎ | | 8* | 4 | Relay | 2 | ◎ | ◎ | ◎ | |
| | | 12HT-D | | ◎ | | 8* | 4 | Transistor | 2 | ◎ | ◎ | ◎ | ◎ |
| | | 12HR-12D | | | ◎ | 8* | 4 | Relay | 2 | ◎ | ◎ | ◎ | |
| | Expandable & without control panel(★: project requested) | | | | | | | | | | | | |
| | ★ | 10KR-A | ◎ | | | 6 | 4 | Relay | | | ◎ | | |
| | ★ | 12KR-D | | ◎ | | 8* | 4 | Relay | 2 | | ◎ | ◎ | |
| | ★ | 12KT-D | | ◎ | | 8* | 4 | Transistor | 2 | | ◎ | ◎ | ◎ |
| | ★ | 12KR-12D | | | ◎ | 8* | 4 | Relay | 2 | | ◎ | ◎ | |
| | Standard & without upper-cover (Economical Type) (★: project requested) | | | | | | | | | | | | |
| | ★ | 10CR-A | ◎ | | | 6 | 4 | Relay | | | | | |
| | ★ | 12CR-D | | ◎ | | 8* | 4 | Relay | 2 | | | ◎ | |
| | ★ | 12CT-D | | ◎ | | 8* | 4 | Transistor | 2 | | | ◎ | ◎ |
| 20 point model | Expandable Type | | | | | | | | | | | | |
| | | 20HR-A | ◎ | | | 12 | 8 | Relay | | ◎ | ◎ | | |
| | | 20HR-D | | ◎ | | 12* | 8 | Relay | 4 | ◎ | ◎ | ◎ | |
| | | 20HT-D | | ◎ | | 12* | 8 | Transistor | 4 | ◎ | ◎ | ◎ | ◎ |
| | | 20HR-12D | | | ◎ | 12* | 8 | Relay | 4 | ◎ | ◎ | ◎ | |
| | Expandable & without control panel (Blind Type) (★: project requested) | | | | | | | | | | | | |
| | ★ | 20KR-A | ◎ | | | 12 | 8 | Relay | | | ◎ | | |
| | ★ | 20KR-D | | ◎ | | 12* | 8 | Relay | 4 | | ◎ | ◎ | |
| | ★ | 20KT-D | | ◎ | | 12* | 8 | Transistor | 4 | | ◎ | ◎ | ◎ |
| | ★ | 20KR-12D | | | ◎ | 12* | 8 | Relay | 4 | | ◎ | ◎ | |
| | Standard & without upper-cover (Economical Type) | | | | | | | | | | | | |
| | ★ | 20CR-A | ◎ | | | 12 | 8 | Relay | | | | | |
| | ★ | 20CR-D | | ◎ | | 12* | 8 | Relay | 4 | | | ◎ | |
| | ★ | 20CT-D | | ◎ | | 12* | 8 | Transistor | 4 | | | ◎ | ◎ |
| High speed communication Type | | | | | | | | | | | | | |
| | 20VR-D | | ◎ | | 12* | 8 | Relay | 4 | ◎ | ◎ | ◎ | | |
| | 20VT-D | | ◎ | | 12* | 8 | Transistor | 4 | ◎ | ◎ | ◎ | ◎ | |
| Expansion | | 8ER-A | ◎ | | | 4 | 4 | Relay | | | | | |
| | | 8ER-D | | ◎ | | 4 | 4 | Relay | | | | | |
| | | 8ET-D | | ◎ | | 4 | 4 | Transistor | | | | | |



SG2-8ET-D



SG2-DNET



SG2-MBUS



SG2-PBUS

* The input points consist of the ones having analog input function.



Expansion and option model

| | Model | Part No. | Instruction |
|----|--------------------|----------|--|
| | Power supply | 10PS-24 | Input:AC100~240V / Output:24V 1.3A |
| | Analog input | SG2-4AI | 4 points are 12 bits voltage / current input(0-10V / 0-20mA) |
| *1 | Analog output | SG2-2AO | 2 channel Output Module(voltage / current:0-10V / 0-20mA) |
| *1 | Temperature input | SG2-4PT | Temperature Input Module(4 channel PT-100 input) |
| | Communication | SG2-MBUS | Modbus Communication Module(DC24V) |
| | Communication | SG2-PBUS | Profibus Communication Module(DC24V) |
| | Communication | SG2-DNET | Devicenet Communication Module(DC24V) |
| | Communication | EN01 | Ethernet(TCP/IP)Communication Module(DC24V) |
| | Mempack | PM05 3rd | Download / Upload program |
| | PC interface cable | PL01 | PC-Link cable |
| | PDA connector | JNSWPDA | PDA-Link interface |

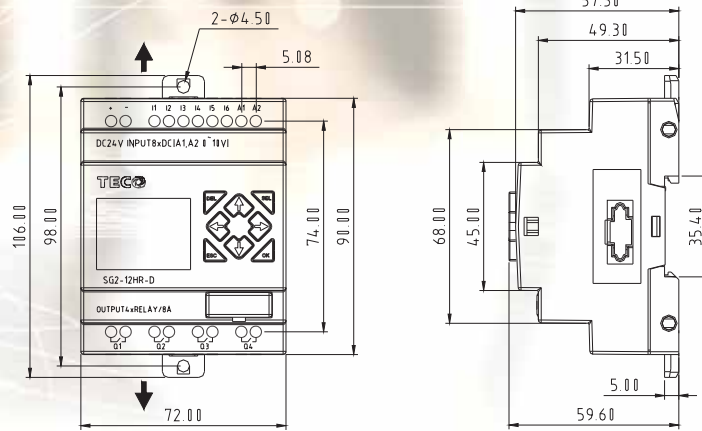
Notes : SG2 PDA software can be used by WIN CE interface and link HP hx2190 PDA by PDA cable(JNSWPDA)

*1:It cannot be used with SG2 firmware version lower than V3.0

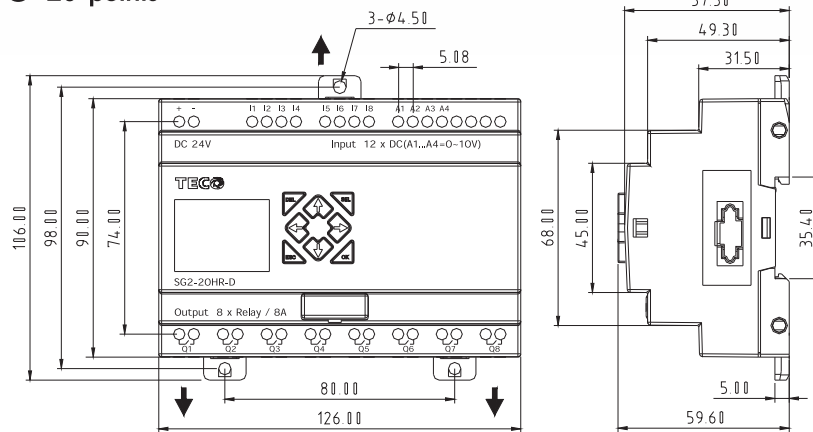


Dimension (unit:mm)

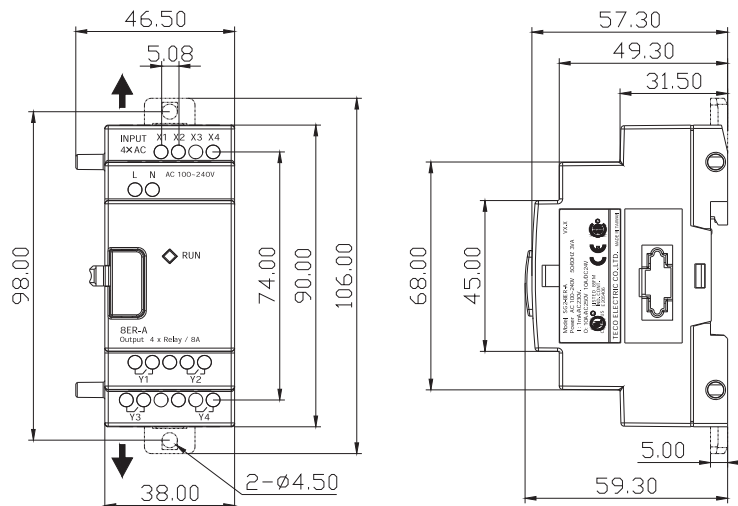
◎ 10/12 points



◎ 20 points



◎ Expansion Module (8 points)



TECO ELECTRIC & MACHINERY CO., LTD.

10F, No.3-1, Yuan Cyu St., Nan-Kang District, Taipei City 115, Taiwan
 TEL:+886-2-6615-9111 Ext.1721 FAX:+886-2-6615-1033 <http://www.teco.com.tw>