ESPAN-03 Series
Annunciator System
Compact Programmable Type

User Manual
(Rev. 1.1)

ESP TECHNOLOGIES LIMITED
www.esptechno.com

Content

Description

ESPAN-03 series were designed to use as the alarm devices for the switchgear cubicle, local control panel of GIS or cabinet of the power transformer and all the control panels, which need alarm function. it indicates fault status by using special high brightness LED. Principle design concept is microprocessor base technology.

Furthermore, ESPAN-03 series can be selected the number of alarm input between 8 or 16 when order.

Feature

- DIN format 96 x 96 mm.
- Large space saving on the front panel of the cabinet.
- Built-in opto-coupled remote push buttons.
- The mask is a single paper sheet which slide into a small transparent envelope recessed in the front panel.
- All inputs such as opto-coupled remote, NO or NC voltage free contact can be selected by software.
- Alarm sequences (Auto/Manual Reset/Indicator) of each input can be selected by software.
- Alarm type (Bell/Buzzer) of each input can be selected by software.
- High brightness LED display (5 mm.)

- Integrated two test functions (Lamp Test/Function Test) in one push button ("TEST").
- Auto acknowledges time can be set from 1 - 240 seconds.
- Direct power supply 24/48/110/125/220 Vdc. and AC Supply also available (specify when order)
- Built-in heart beat function by LED lamp to show health status as self-supervision function.
- Supervisory contact (watchdog) for remote alarm.
- Plugable terminal at the rear side for wiring
- Serial Interface (RS232 or RS485-Modbus/ASCII).
- Dimension : W 96 x H 96 x D 100 mm.
- Weight : 0.5 Kg.

Technical Data

- Auxiliary Power Supply   : 24, 48, 110, 125 and 220 VDC or AC
- Power consumption   : 10 W (max).
- Alarm type relay contact   : 2.5 A/220 VAC, 5A/120VAC, 10A/30VDC
- Response time (Operating time) : 20 ms
- Operating temperature   : 0-55 °C
- Storage temperature   : up to 70 °C
- Relative humidity   : up to 90% (no dew drop)

Operating Principle

When an alarm signal is occurred, it will initiate Bell/Buzzer to operate. In the meantime, it will send output direct to the display LED, which makes LED flicking. After pressing an acknowledged push button, Bell or Buzzer is silenced but LED is still steady on. If an alarm signal is returned to normal status then the alarm is cancelled. However, the light of the indicating display LED will be sustained unless the reset push button switch is activated. Then the LED will be turned off and return to its initial condition. The "TEST" push button included two functions. The first function is "Lamp TEST" if push and hold this push button less than 3 seconds, it will light all LED lamps at the front panel only. The second function is "Function Test" if push and hold this push button more than 3 seconds, The LED lamp will flick and Bell/Buzzer alarm. This "TEST" push button provided for checking all LED and operating function at the normal condition. While checking all LED and suddenly some of the alarm signals are occurred, the alarm sequence will be operated as usual without effect from the lamp test sequence. Alarm sequence can be selected by software for manual reset sequence or auto reset sequence, which described as below

Manual reset

When an alarm signal is occurred, LED slow flash and Bell or Buzzer is continuous activated. To stop the sound of Bell or Buzzer, "ACK" push button must be pressed. Then Bell/Buzzer is silenced but LED is still steady on. Reset is only possible by "RESET" push button when alarm input returns to normal status.

Auto reset

When an alarm is occurred, LED slow flash and Bell or Buzzer is continuous activated. To stop the sound of Bell or Buzzer, "ACK" push button must be pushed. Then Bell/Buzzer is silenced but a lamp is still steady on. Auto reset will happen when alarm input returns to normal status.

Software Configuration

1. To install the configuration software of ESPAN-03, simply double-click on the setup icon as shown in the picture below then follow the screen instruction until finished.

   setup.exe
   Setup Bootstrap for Visual Bas...
   Microsoft Corporation

   Note: The configuration software will be found in attached CD or may directly download from www.esptechno.com.

2. Start the configuration software from the start menu. The configuration window will display as a following picture.

ESPAN

ESPAN-03 Configuration V 2.1

Setup   Label Designer

| Alarm (All) | NO (All) | Manual (All) | Buzzer (All) |
| Indicator (All) | NC (All) | Auto (All) | Bell (All) |

☐ Auto Acknowledge

⬤

[▼] Delay Time(Sec.)

Upload Config.   **Download Config.**

	Input Type	Function Type	Alarm Type
INPUT 1	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 2	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 3	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 4	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 5	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 6	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 7	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 8	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both

|	Input Type	Function Type	Alarm Type
INPUT 9	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 10	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 11	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 12	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 13	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 14	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 15	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both
INPUT 16	⦿ NO ☐ Indicator	⦿ Manual ○ NC ○ Auto	⦿ Buzzer ○ Bell ☐ Both

FLASHING RATE

○ 100ms ○ 200ms ○ 300ms ○ 400ms ⦿ 500ms ○ 600ms ○ 700ms ○ 800ms ○ 900ms ○ 1 sec.

3. First of all, the users have to choose which computer port will be connected to ESPAN-03. Select setup menu which is located on the top of the configuration program. The setup window will display as a picture shown on the right hand.

4. There are 5 parameters that can be configured by users.
   4.1. Input type : User can choose NO (Normally Open) or NC (Normally Close) input contact. (Dry contact only)
   4.2. Function type : There are three functions, the first function is manual reset, the second is auto reset and the last one is an indicator. Detail of each function is explained in operation section of this manual.
   4.3. Alarm type : Two output contacts can be selected by users, those are Buzzer and Bell.
   4.4. LED flashing rate : The flashing rate can be specified by choosing from radio button, which is located on the bottom of the configuration window. The range of flashing rate is from 100 ms to 1000ms per step.
   4.5. Auto acknowledge : Choose auto acknowledge function, afterward select at delay time that can be set between 1 - 240 seconds.
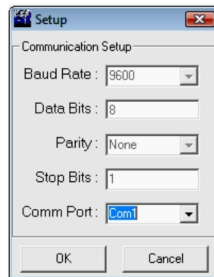
Note   All Parameters can be configured separately, input by input except for flashing rate, which has to change for all inputs.

5. Selecting repeat function that user can simply choose the shortcut menu which is located on the top of the configuration window as a picture shown below.
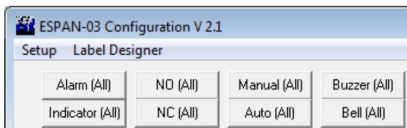

For sample : press on "NO (All)" button, when all inputs are connected to normally open contacts.

6. After all inputs have been configured, to download all parameters to ESPAN-03, press download button which is located on the top right of the configuration window. While downloading, the color of indicating circle will be changed to red color after finish the download process the color of indicating circle will be changed back to green color.
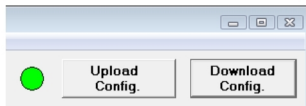
7. ESPAN-03 allow user to upload configuration by the same as download. Press Upload button then waits until upload process is finished. Same as download during upload the color of indicating circle will be changed to red after finished the upload process, the color of indicating circle will be changed back to green.
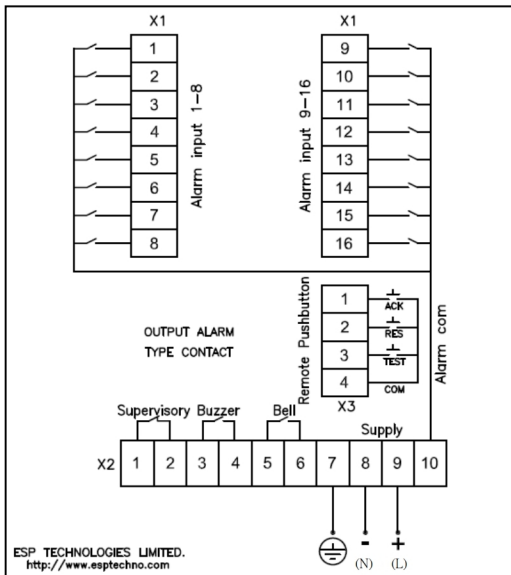
Dimensions
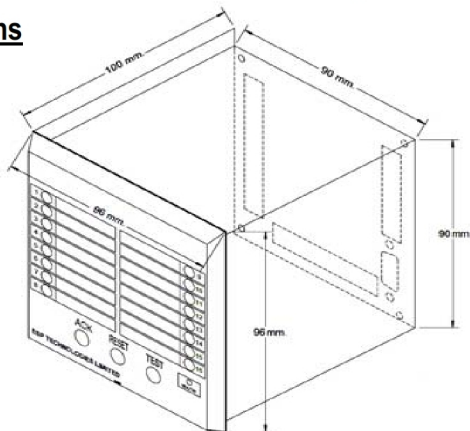
Cable Configuration

DB-9 Male   DB-9 Female

2 RX	———————	2 RX
3 TX	———————	3 TX
5 GND	———————	5 GND

ESPAN-03   Computer

Connection Diagram

ESP TECHNOLOGIES LIMITED

76/82, Changwattana road., Anusaowari, Bangkhen, Bangkok
10220, Thailand.
Tel. +662-5226245 – 7, Fax. +662-5226248

www.esptechno.com