



## SB20

### Level controller or power interface module with alarm sounder



The SB20 is a versatile level control or interface module that can also be used in many other process control applications.

One level switch can be connected for an alarm or two level switches to start and stop a submersible pump or a solenoid valve for emptying/filling function

It works with all kind of level switches, including conductive probes, as well as pressure switches or other limit switches.

The module can be used as a dry-running protection, with a pressure switch or filling level control switch, to start and stop a pump.

Power supply 240/415 Vac.

Two outputs:

Main output SPCO 20(8) Amps 250V

Secondary output SPCO 10(4) Amps 250V

LED indicator and beeper for low level alarm

- Primary output can directly control motors up to 2HP  $\cos\Phi$  0.4-0.5 single phase
- 2 SPCO relay outputs
- Alarm indicator LED and Beeper
- 1, 2 or 3 sensor inputs
- 240 or 415Vac supply
- DIN rail mounting

#### Technical Specification

|                |                                      |              |
|----------------|--------------------------------------|--------------|
| Supply Voltage | V                                    | 240 or 415ac |
| Sensor Voltage | V                                    | 12Vac        |
| Sensor Inputs  | switch contacts or conductive probes |              |

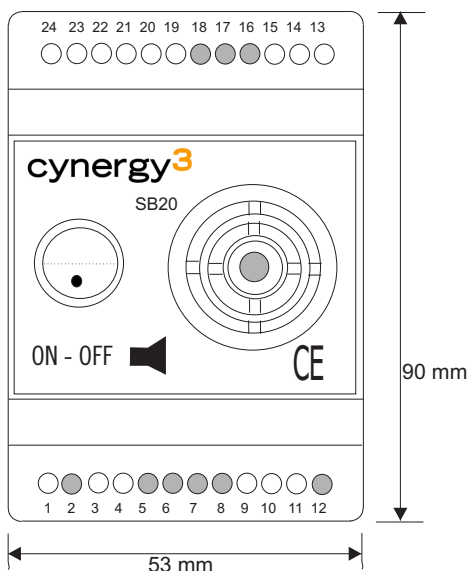
#### Output ratings

|                                 |    | Output 1 | Output 2     |
|---------------------------------|----|----------|--------------|
| Contact Form                    |    | SPCO     | SPCO         |
| Switching Power Max ac          | VA | 1500     | 750          |
| Switching Power Max dc          | W  | 560      | not approved |
| Switching Voltage AC Max        | V  | 250      | 250          |
| Switching Voltage DC Max        | V  | 28       | not approved |
| Switching Current Max Resistive |    |          |              |
| (n/o contact)                   | A  | 20       | 10           |
| (n/c contact)                   | A  | 10       | 10           |
| Switching Current Max Inductive | A  | 8        | 4            |

| Standard Parts | Inputs    | Outputs |
|----------------|-----------|---------|
| SB20           | 1, 2 or 3 | 2       |

Other versions can be made for particular applications. Please contact Cynergy3 with your requirements.

#### Mechanical Diagram



#### Terminal Assignment

|       |                          |
|-------|--------------------------|
| 1     | Supply Neutral           |
| 3     | Supply Live 240Vac       |
| 4     | Supply Live 415Vac       |
| 9     | Output 1 nc contact      |
| 10    | Output 1 no contact      |
| 11    | Output 1 common          |
| 13    | Output 2 no contact      |
| 14    | Output 2 common          |
| 15    | Output 2 nc contact      |
| 19-20 | Low voltage input sensor |
| 21-22 | Sensor common input      |
| 23    | Sensor minimum level     |
| 24    | Sensor maximum level     |

Low voltage input 19-20 for pressure/float switch with contacts closed at minimum pressure or level switch with contacts closed when level low. **NB These terminals must be bridged if no sensor is connected.**

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## Level controller or power interface module with alarm sounder

The SB20 can be used for many process control functions, including:

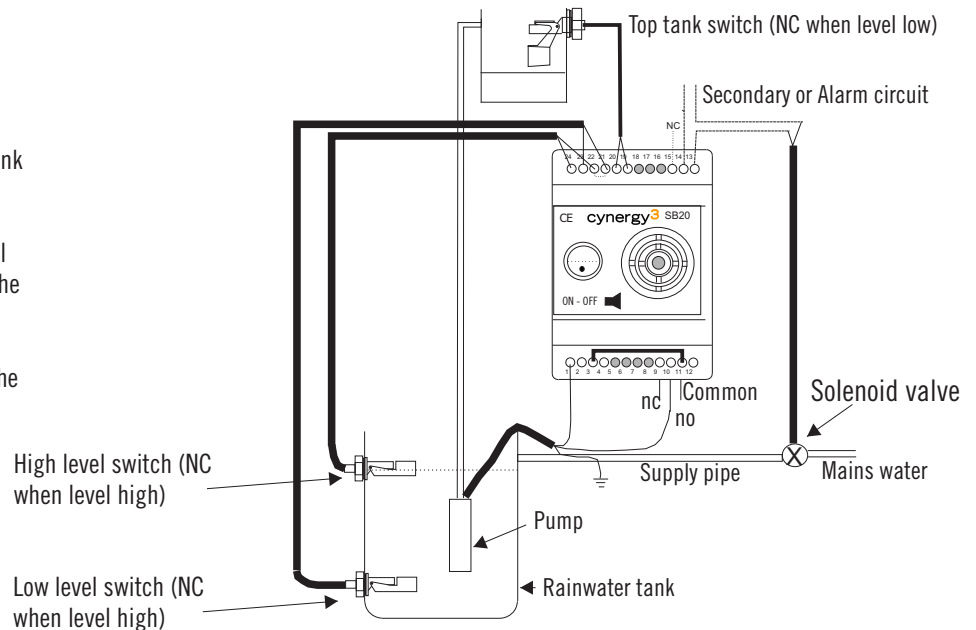
- Dry running control with 2 level switches
- Dry running control with 1 level switch
- Dry running control with conductive probes
- Pump control by pressure switch
- Pump control by level switch
- "No water" alarm and secondary control output

### Example: Rainwater supply

Filling a vented roof tank from a rainwater tank. The pump will operate when the roof tank level is not at max level and the water in the rainwater tank is above the low level.

The red alarm LED will illuminate and the Beeper will sound (with switch in ON position), if the level in the rainwater tank drops to the low level, and the secondary relay opens a solenoid valve to supply water from the mains water supply, which will remain operated until the rainwater tank fills to the high level. The Beeper alarm will, if switch is ON, sound until the tank is full.

The illustration is for 240Vac supply, which is connected to terminals 0 (neutral) and 3 (live).



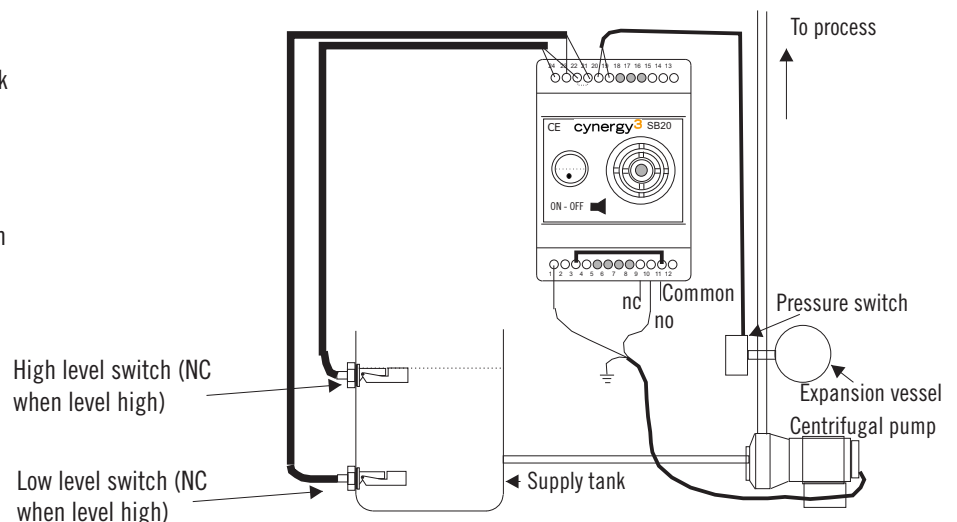
### Example: Process supply

Maintaining a pressurised supply to a process.

The pump will operate when the pressure switch is below the set level and the water in the supply tank is above the low level.

The red alarm LED will illuminate and the Beeper will sound (with switch in ON position), if the level in the supply tank drops to the low level, and the secondary relay will operate. The alarm will remain operated until the tank fills to the high level. The Beeper alarm will, if switch is ON, sound until the tank is full.

The illustration is for 240Vac supply, which is connected to terminals 0 (neutral) and 3 (live).



NB The diagrams shown above are simplified illustrations of how the module may be used and do not include any necessary safety devices, such as fuses or thermal cutouts, or statutory requirements for installation of such electrical equipment.