# **SM20**



## Level controller or high power interface module



The SM20 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 out-puts: Main output SPCO 20(8) Ampere 250V Secondary output SPCO 10(4) Ampere 250V automatic/manual switch

LED indicators for: power supply, low level and output on.

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- Primary output can directly control motors up to 2HP cos 0.4-0.5 single phase
- 2 SPC0 relay outputs
- 12Vac sensor voltage
- 1, 2 or 3 sensor inputs
- 240 or 415Vac supply
- DIN rail mounting

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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)	А	20	10
(n/c contact)	А	10	10
Switching Current Max Inductive	А	8	4
Standard Parts	Inputs	Outputs	
SM20	1, 2 or 3	2	

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

### Mechanical Diagram

24 23 22 21 20 19 18 17 16 15 14 13	
SM20 Interface Module	
Cynergy <sup>3</sup> Made in Italy	90 mm
► 53 mm	

### 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 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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Top tank switch (NC when level low)

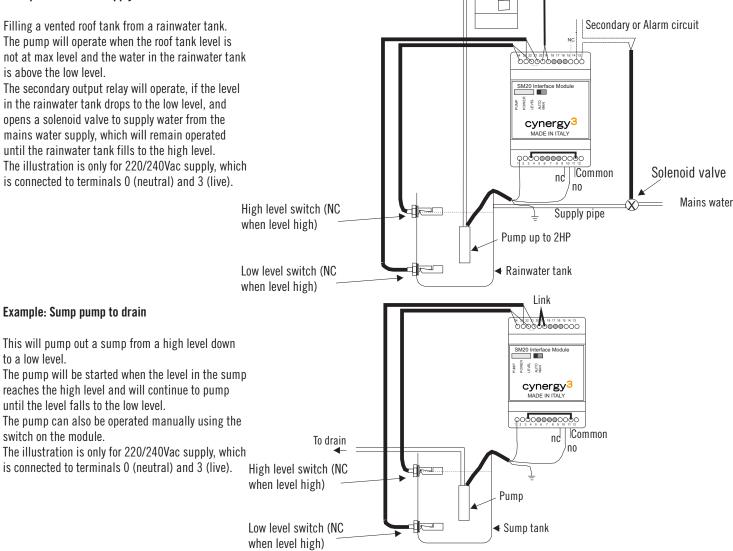
The SM20 can be used for many process control functions, including: Dry running control with 2 level switches Dry running control with 1 level switch Dry running control with conductive probes Pump control by pressure switch Pump control by level switch Automatic/manual control selector "No water" alarm or secondary control output

#### Troubleshooting

Pump does not start, green LED off Pump does not start, yellow LED on Pump does not start, yellow LED off No power to module check connections 9-10-11 for pump supply Check link between 19-20. Check pressure or level switch, if fitted. Check system has not already reach maximum pressure or level No water in supply tank. Check maximum level switch is correctly installed. Check terminals 21-22-

Pump does not start, red LED on Pump does no stop No water in supply tank. Check maximum level switch is correctly installed. Check terminals 21-22-23-24 Check the Auto/Man selector. Check that pressure or level switch, on 19-20, functions correctly.

### **Example: Rainwater supply**



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.

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