GrowSphere™ Catalogue

GrowSphere™ Operating System

V1.3 – April 2024, South Africa

NETAFIM™ DIGITAL FARMING
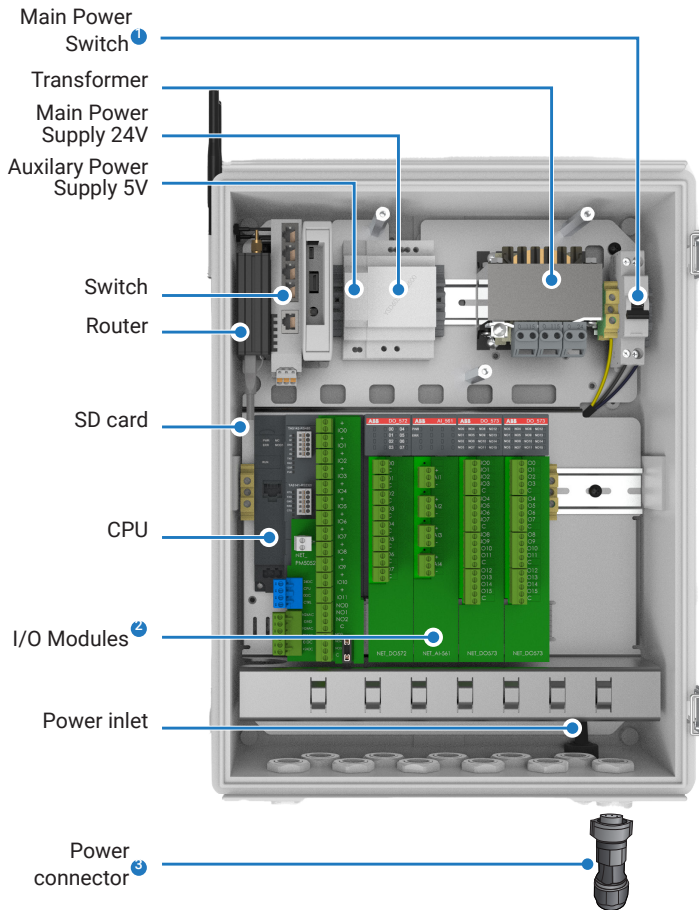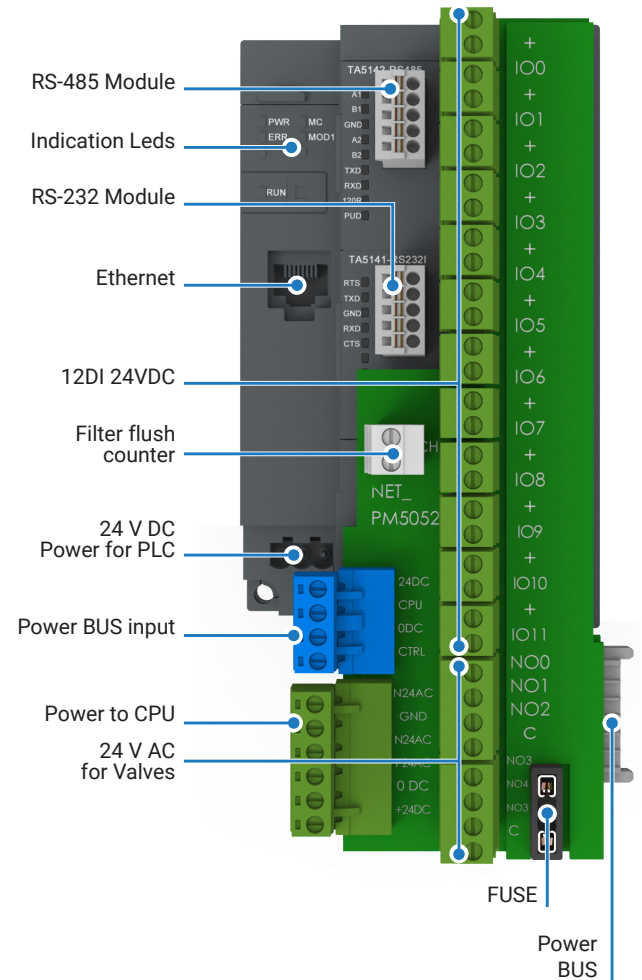
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/GrowSphere™ MAX

GrowSphere™ **MAX** is an intuitive and simple-to-use controller designed to help you grow more with less. **Grow**Sphere™ **MAX** regulates water and fertilizer delivery in a precision irrigation system, activating local and remote devices such as pumps, valves, filters, dosing pumps, and other hydraulic components. This ensures crops receive the optimal amount of water and nutrients at all times.

/Internal Design

/**Grow**Sphere™ **MAX**

- Main Power Switch ⏻
- Transformer
- Main Power Supply 24V
- Auxilary Power Supply 5V
- Switch
- Router
- SD card
- CPU
- I/O Modules ②
- Power inlet
- Power connector ③

/CPU

- RS-485 Module
- Indication Leds
- RS-232 Module
- Ethernet
- 12DI 24VDC
- Filter flush counter
- 24 V DC Power for PLC
- Power BUS input
- Power to CPU
- 24 V AC for Valves
- FUSE
- Power BUS

⏻ Switches the main power on and off

② Enable connecting the peripheral components

③ You can find the connector in the accessories box

* Subject to product configuration

/Ordering Information

CATALOGUE NUMBER	DESCRIPTION
74702-000069	**GS-MAX Controller 220V-6DO-12DI** **Grow**Sphere™ **MAX** 220V, 6 Digital Outputs, and 12 Digital Inputs

/Expansion Modules

CATALOGUE NUMBER	DESCRIPTION	CATALOGUE NUMBER	DESCRIPTION
74743-000098	**GS-MAX 16 RELAY WITH ADAPTOR** • 16 Outputs - Relay • Shared Common • Kickback protection • 24 VAC @ 80 VA	74743-000099	**GS-MAX 8 TRIAC WITH ADAPTOR** • 8 x 24VAC output • High-speed operation of the dosing output
74743-000100	**GS-MAX 4 AI WITH ADAPTOR** • 4 Analog Inputs • Active/ Passive Sensor • 0-20 mA • Feed Voltage – 24 DC	74743-000101	**GS-MAX 16 DI WITH ADAPTOR** • 16 Digital Inputs • Dry/ Active Contact • Feed voltage - 24 DC

/GrowSphere™ MAX - Spare Parts

PRODUCT IMAGE	CATALOGUE NUMBER	DESCRIPTION
	74702-000077	**ALUMINUM STAND FOR GS-MAX STAND ALONE** The stand is for use with the GrowSphere™ MAX controller as a stand-alone i.e., when the controller is not connected to FertiKit™
	74741-000100	**MOBILE SMA ANTENNA - PR1US440** The mobile antenna is connected externally to improve the communication between the controller and the cloud
	74743-000005	**Power supply 60W, DIN Rail, Single 24V DC** 5V DC power supply for modem, router, switch, and screen
	74743-000014	**GS-MAX RS232 SERIAL PORT ISOLATED BOARD** The RS 232 Serial port connects the SingleNet, NetRTU, and Davis weather station to the GrowSphere™ MAX
	74743-000017	**GS-MAX RS485 SERIAL PORT ISOLATED BOARD** The RS 485 Serial port connects the RadioNet and the SingleNet base units to the GrowSphere™ MAX
	74743-000144	**POWER SUPPLY,15W- 5V, ULTRA SLIM, DIN RAIL** 5V DC power supply for Gateways and Davis weather station
	74743-000155	**ANTENNA 2.4G-5G SMA-RP SY2400** The WiFi antenna is connected to the cellular modem allowing connection to the controller via WiFi

/GrowSphere™ MAX - Accessories

CLIMATE SENSORS

PRODUCT IMAGE	CATALOGUE NUMBER	DESCRIPTION
	74730-000050	**DAVIS WS GROWSPHERE DIRECT FULL PACK** Everything you need in order to connect a station directly to GrowSphere MAX: station, the envoy, and the connection from the envoy. Additional catalogue numbers are available on request for spare parts and packages for the GrowSphere Max that can access the Davis Weather Station through the cloud.
	74703-000002	**MAX MEASURING BOX SE TEMP & HUMIDITY** Outside temperature and humidity sensor for the GrowSphere MAX. A 4-core shielded wired connection to the analog input module.

TRANSMITTER KIT

PRODUCT IMAGE	CATALOGUE NUMBER	DESCRIPTION
	74360-007901	**ABB AWT 420 EC/pH TRANSMITTER, PANEL MOUNT/ WALL MOUNT (TRANSMITTER ONLY)** This EC/pH transmitter is compatible with the new ABB EC/pH sensors. Through re-configuring, it is also compatible with the old EC/pH sensors. The EC/pH transmitter comes standard with a EC and a pH module, that is replaceable and exchangeable.
	74360 007970	**EC MODULE REPLACEMENT FOR AWT 420**
	74360 007971	**pH MODULE REPLACEMENT FOR AWT 420**

EC AND pH SENSORS

PRODUCT IMAGE	CATALOGUE NUMBER	DESCRIPTION
	74360-000004	**ABB pH SENSOR APS110** pH sensor for the ABB AWT420 EC/pH transmitter.
	74360-000005	**ABB EC SENSOR CS150** EC sensor for the ABB AWT420 EC/pH transmitter.
	33140-000004	**PVC UNION ADAPTOR FOR ABB SENSOR** Adaptor fitting for the ABB EC and pH sensors. The adaptor is slightly longer to accommodate the longer ABB EC and pH sensors. This adaptor can also be used with previous EC and pH sensors.