

GrowSphere™ MAX

GrowSphere™ MAX is an intuitive and simple-to-use controller. It is designed to speak the grower's language. The GrowSphere™ MAX regulates water and fertilizer delivery in a precision irrigation system. Managing local and remote devices such as pumps, main valves, field valves, and other hydraulic components, ensuring crops receive the optimal amount of water and nutrients at all times.



Configurations



GrowSphere™ MAX
CORE



GrowSphere™ MAX
double door with screen



GrowSphere™ MAX
with screen

Advanced Features

- Intuitive operation that makes irrigation tasks quick and efficient
- Smart alerts and notifications
- Built-in setting validation
- Flexible and secure remote access
- Integrates with the **GrowSphere™** Workspace
- Suitable for all farm sizes
- Modular configuration
- Industry standard electric components

Supported Irrigation Devices

Object	Per Main Line	Total
Main Line	1	4
Main Valve	1	4
Each with its Sub main valve, water meter, pressure sensor	6	24
Main Water Meter	1	4
Pumps	3	12
Central Filter Station	1	4
Filter (flushing control + indication)	32	128
Dosing Stations	1	4
Dosing Channels (venturies)	8	32*
Valves	160	256
Reservoir per controller	--	1
Well/pumps per reservoir	--	6
DMS	8	32
Central Pump station	For all ML up to 8 pumps	

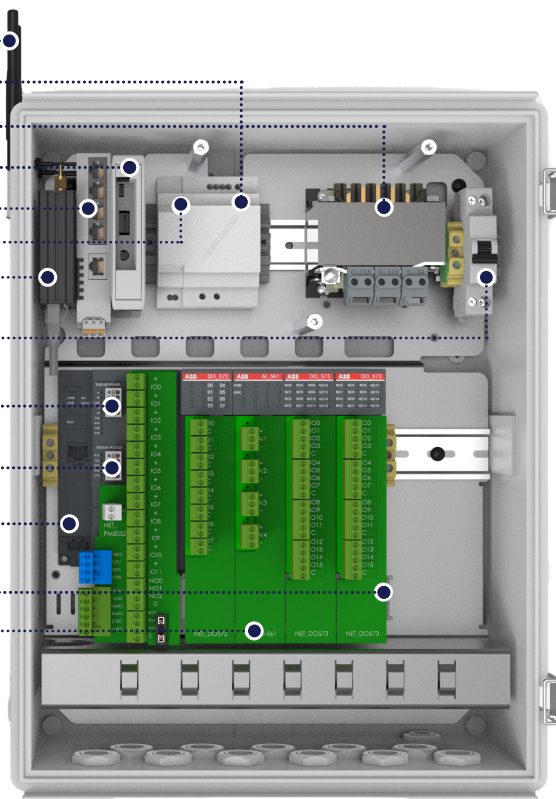
*Subject to I/O modules configuration and a maximum capacity of 6 modules per controller and up to 4 expansion boxes per controller, each with additional PLC and 6 IO modules

Programs, Shifts and Recipes

Programs, Shifts and Recipes	Per Main Line	Total
Irrigation Programs	40	40
Shifts per program	20	
Valves Per Shift	32	
Dosing Recipes	10	40

Internal Design*

- Antenna
- Power supply
- Transformer 24VAC
- Linux based PC - In no screen model
- Switch
- Axillary power supply 5V
- Cellular Modem
- Main Power switch
- RS485
- RS232
- CPU
- Power BUS
- Modular I/O
- Subject to final product configuration



Excluded from MAX CORE

RS485, RS232, Switch, Auxillary power supply 5V, RPi

Technical Specifications

Processor Module - PM5052

Custom ABB controller

- Memory - 80MB
- 12 DI
- 6 DO
- 1 x RS232 Communication Port for external devices
- 1 x RS485 Communication Port for external devices

Screen

- Input - 24VDC
- CPU - quad-core 1.8GHz
- O.S - Android
- Resolution - 1280*800
- Screen Saver - after 10 min
- 10 inch screen

Power Supply

- Main Input - 100 ~ 240 VAC
- 50-60Hz according to configuration
- Rated current - 2.5A @ 24v
- Aux Output PS 5V

Cellular Modem - 4G

- 2 Ethernet ports
- Wireless access point

Remote Terminal Units

- RadioNet
- SingleNet

Weight and Size

Dimensions:

- Maximum - 35 cm X 45 cm X 20 cm (excluding antennas)

Weight:

- Maximum- 12.4 kg
- Industrial quality (IP65 / UL) enclosure

Expandable I/O Modules

Triac output Module:

- 8 x 24VAC output
- High-speed operation of dosing output
- current per channel = 2 A

Relay output Module:

- 16 x 24 VAC
- Fuse protected outputs
- Rated current per group = 10A max

Digital Input module:

- 16 Digital inputs
- Feed (Sourcing) voltage - 24 VDC
- Maximum 4 pulses in Sec (Software limitation)

Analog Input module:

- 4/8 Analog inputs
- Feed (Sourcing) voltage - 24 VDC
- Resolution - 0-20mA; 4 -20mA; 12 bit

Certifications

- Standard Compliance: CE & FCC

Catalog Numbers

GrowSphere™ MAX

Material	Material Description
74702-000001	GS-MAX-DISP-220V-6DO-12DI
74702-000063	GS-MAX-DISP-110V-6DO-12DI
74702-000069	GS-MAX-DD-220V-6DO-12DI
74702-000070	GS-MAX-DD-110V-6DO-12DI
74702-000072	GS-MAX-DD-110V-6DO-12DI_USA
74702-000082	GS-MAX-CORE-220V-6DO-12DI
74702-000083	GS-MAX-CORE-110V-6DO-12DI
74702-000084	GS-MAX-CORE-110V-6DO-12DI_USA

Catalog Numbers

Spare Parts

Material	Material Description
74743-000098	GS-MAX 16 RELAY WITH ADAPTOR
74743-000099	GS-MAX 8 TRIAC WITH ADAPTOR
74743-000100	GS-MAX 4 AI WITH ADAPTOR
74703-000037	GS MAX ADAPTOR CARD FOR AI568
74703-000038	GS-MAX 8 AI WITH ADAPTOR
74743-000101	GS-MAX 16 DI WITH ADAPTOR
74703-000003	GS-MAX POWER SUPPLY 60W 24V DC
74703-000004	GS-MAX POWER SUPPLY 15W 5V
74703-000010	GS-MAX RS232 SERIAL PORT
74703-000011	GS-MAX RS485 SERIAL PORT
74703-000012	GS-MAX WI-FI ANTENNA 2.4G-5G SMA
74703-000013	GS MODEM ROUTER RUT-241 GLOBAL
74703-000014	GS MODEM ROUTER RUT-241 US
74715-000007	5M-RF-CABLE M TO F
74715-000008	SOLAR PANEL 11W W/5M CABLE
74703-000024	GS-MAX-TOUCH SCREEN PEN
74703-000028	GS-MAX TOUCH SCREEN
74703-000023	GS-MAX-PLC 80MB
74703-000001	GS-MAX Switch - 5 RJ45 ports with 10/100 Mbps
74703-000022	GS-MAX ELECTRICITY CONNECTOR
74703-000021	GS MAX ADAPTOR CARD FOR PM5052-R
74703-000017	GS MAX ADAPTOR CARD FOR DO573
74703-000018	GS MAX ADAPTOR CARD FOR DO572
74703-000019	GS MAX ADAPTOR CARD FOR AI561
74703-000020	GS MAX ADAPTOR CARD FOR DI561
74702-000077	GS-MAX ALUMINIUM STAND
74703-000025	GS-MAX - GLOBAL CELL_ANTENNA
74703-000026	GS-MAX - US CELL_ANTENNA
74703-000029	GS-HIGH GANE ANTENNA FOR MAX/IOT
74703-000030	GS MAX Lexan
74703-000031	GS MAX ETHERNET SWITCH, 5 x RJ45 ports
74703-000032	GS-MAX 24VAC TRANSFORMER 100VA
74703-000033	GS-MAX PLC 5032
74703-000034	GS-MAX PLC 5032 ADAPTOR CARD

Technical Assets

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