

Commander EVO® CONTROLLERS

Commander EVO® controllers meet the irrigation needs of the most demanding crops for farms of any size. The Commander EVO® controllers combine the management

of pH and EC with a more professional management of irrigation cycles.

What is more, they are equipped with radio remote control to be managed by a software program accessible via the Internet. All of this makes Irritec® Commander EVO® controllers for agriculture the best solution for every requirement.



for extensive crops



for large farms



for crops in soilless

Characteristics	COMMANDER EVO® BASIC	COMMANDER EVO® PLUS	COMMANDER EVO® GOLD
Suitable for	farms with extensive crops	large farms with extensive crops	large farms with crops in soilless
Valves	up to 208 valves divided in 64 independent blocks	up to 216 valves divided in 64 independent blocks	up to 216 valves divided in 64 independent blocks
Valves with cable	112 + 96 radio	120 + 96 radio	120 + 96 radio
Irrigation programs with multiple starts	20 (4 valves at time) Irrigation precision in seconds	20 (4 valves at time) Irrigation precision in seconds	20 (4 valves at time) Irrigation precision in seconds
Type of irrigation	per: time / demand / temperature / sun radiation	per: time / demand / temperature / sun radiation	per: time / demand / temperature / sun radiation
Communication	GSM, SMS e Radio	GSM, SMS e Radio	GSM, SMS e Radio
Interface PC	NO	YES, easy to use	YES, easy to use
Pump	diesel or electric	5, diesel or electric	5, diesel or electric
Fertilizers	2 per tempo / volume (paralleli o sequenziali)	6 per time / volume / proportional to the flow rate (parallel or sequential)	4 per EC / time / volume / proportional to the flow rate (parallel or sequential) Control pH ad objective (acid/ base)
Pre irrigation	NO	YES	YES
Alarms	YES	YES	YES
Programmable mixers	YES (ON/OFF)	YES (ON/OFF)	YES (ON/OFF)
Backwash management	10 filters	10 filters	10 filters
Wash according to	time / pressure difference	time / volume / pressure difference	time / volume / pressure difference
Possibility to set a different time for each filter	YES	YES	YES
Enlargeable with modules for 16 zone (+96)	YES	YES	YES
Radio Connection	YES	YES	YES
Supply	230 VAC, 12VDC, batteries	230 VAC, 12VDC, batteries	230 VAC
Outputs	24 vac, 12 vdc, 9/12 vdc latch	24 vac, 12 vdc, 9/12 vdc latch	24 volt
Digital inputs	1 water meter 1 differential manometer 5 configurable	1 water meter 6 fertilizer meters 1 differential manometer 10 configurable	1 water meter 4 fertilizer meters 1 differential manometer 10 configurable
Analogue inputs	NO	pH, EC, temperature, sun radiation	pH, EC, temperature, sun radiation
Language	English, Spanish, Italian e German	English, Spanish, Italian e German	English, Spanish, Italian e German

Commander EVO BASIC

ICCEB - COMMANDER EVO BASIC

The new Commander EVO BASIC is a compact, financially accessible and easy to use equipment. Characterised by an advanced programmer for the price of basic equipment.

The Commander EVO BASIC manages irrigation valves using any type of solenoid or via radio, electrical or diesel pumping units, differentiated fertilisation, filter washing, alarm detection, GSM, PC, SMS communication, etc.

Irrigation:

- Time and volume
- Precise irrigation in seconds
- 16 valves + 96 expansions via cable + 96 radio
- 20 sequential or 4 simultaneous programs
- 64 blocks/combinations of valves
- Start timed irrigation or as required (sensor)
- Electrical or diesel pump
- 4 languages (Italian, English, Spanish, German)

Fertilisation:

- 2 fertilisers per time or volume, parallel or sequential mode
- Programmable pre-irrigation
- Alarms
- 1 programmable mixer

Management of a maximum of 10 filters accord to time and differential manometer. Different times for each filter.

Modular:

- Enlargeable in modules of 16 or 24 external outputs (+96)
- Radio transmission module connection (96 valves)

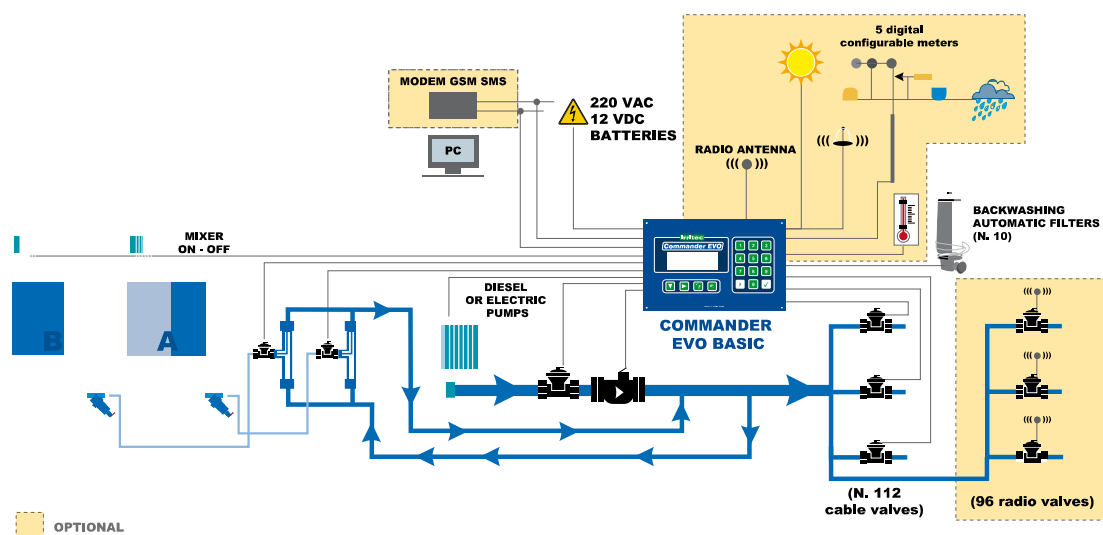


Electrical characteristics

- Power supply: 220VAC
12VDC
9VDC (batteries)
- Outputs: 16 (-1 latch version)
- Digital inputs: 1 differential manometer
1 water meter
2 fertiliser meters
5 configurable meters
- Communication: SMS, PC, GSM

Field of application

Controller to manage open field irrigation systems; specialist vegetable plots and orchards. Professional irrigation.



Commander EVO PLUS

ICCEP - COMMANDER EVO PLUS

The Commander EVO PLUS programmers meet fertigation needs for the most demanding crops on small and medium sized farms. Up to 206 valves in 64 independent blocks with 20 irrigation programs having multiple starts, cyclic irrigation and at high frequency, irrigation and fertilisation according to time and volume, proportional fertilisation, reading of pH and EC values, 4 auxiliary pumps, diesel unit control, PC, GSM, SMS and radio communication, all with an intuitive and easy to use interface.

Irrigation:

- Time and volume
- Precise irrigation in seconds
- 24 valves + 96 expansions via cable + 96 radio
- Up to 64 blocks/combinations of valves
- 20 consecutive sequential or 4 simultaneous programs
- Irrigation starts according to hour, request, temperature and sun radiation
- Diesel pump or 5 electric pumps
- 4 languages (Italian, English, Spanish, German)

Fertilisation:

- 6 fertilisers per time, volume and proportional to flow rate, parallel or sequential mode
- pH and EC monitoring only
- Programmable pre-irrigation
- Alarms
- 1 ON/OFF programmable mixer

Management of a maximum of 10 filters accord to time, volume and differential manometer. Different cleaning times for each filter.

Modular:

- Enlargeable in modules of 16 or 24 external outputs (+96)
- Radio transmission module connection (+96)

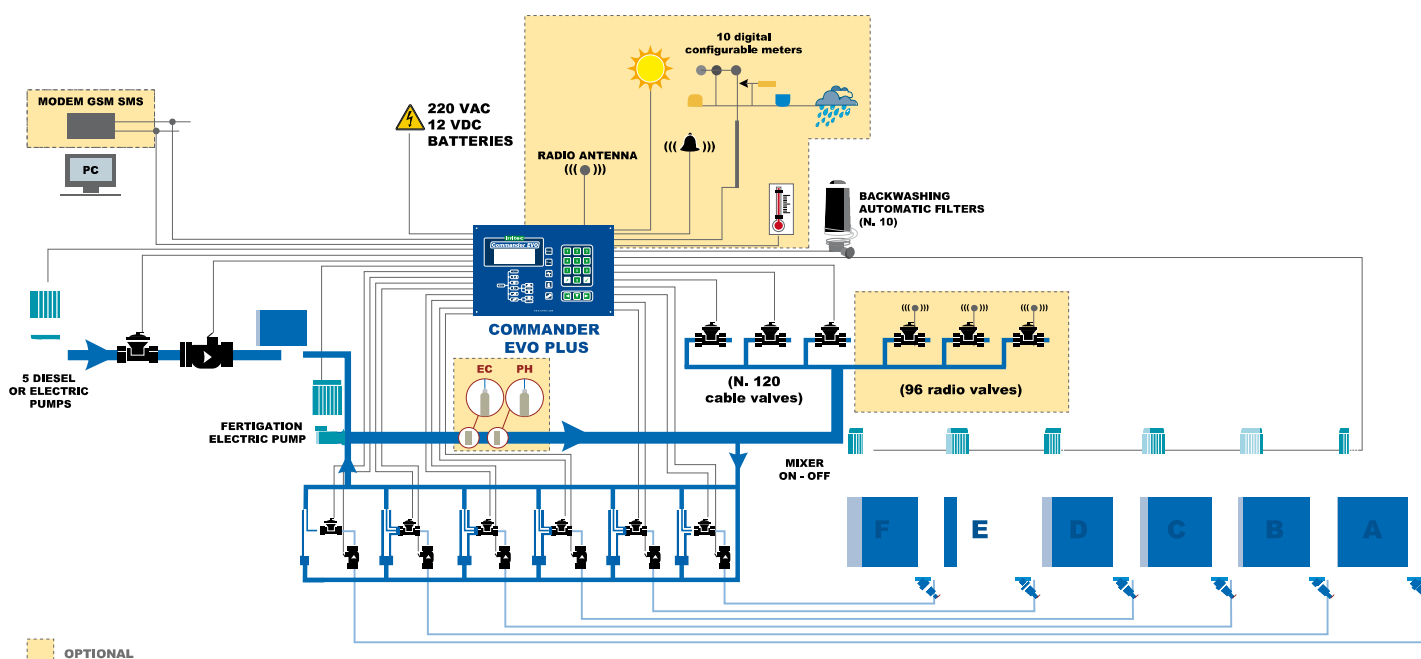


Electrical characteristics

- Power supply: 220VAC
12VDC
9VDC (batteries)
- Outputs: 24 (-1 latch version)
- Digital inputs: 1 water meter
6 fertiliser meters
1 differential manometer
10 configurable meters
- Analogue inputs: pH, EC, Temp, Rad.
- Communication: PC, GPRS

Field of application

Controller to manage open field and greenhouse irrigation systems (no soilless).
Professional irrigation.



Commander EVO GOLD

ICCEG - COMMANDER EVO GOLD

The new Commander EVO GOLD combines the power of the Commander EVO PLUS with fertigation control to achieve pH and EC objectives in a compact and easy to use device. There are multiple fertilisation possibilities according to time, volume, proportional volume, pH and EC objectives, irrigation requests for thresholds, probes for radiation and ambient temperature, dosage of 4 fertilisers plus an acid with individual meters, PC, GSM, SMS and radio communication, making the Commander EVO GOLD a suitable device for greenhouses, hydroponic crops and farms where precise and controlled application of the nutrients is required.

Irrigation:

- Time and volume
- pH and EC control
- 24 valves + 96 expansions via cable + 96 radio
- Up to 64 blocks/combinations of valves
- 20 sequential programs
- Irrigation starts according to hour, request, temperature and sun radiation
- 5 electric pumps
- 4 languages (Italian, English, Spanish, German)
- Analogue inputs: pH, EC, temperature, solar radiation

Fertilisation:

- 4 fertilisers according to EC, time, volume and proportional to flow rate, parallel or sequential mode.
- target pH control and acid or base injection.
- Programmable pre-irrigation
- Alarms
- ON/OFF programmable mixer

Management of a maximum of 10 filters according to time, volume and differential manometer. Different cleaning times for each filter.

Modular:

- Enlargeable in modules of 16 or 24 external outputs (+96)
- Radio transmission module connection (+96)

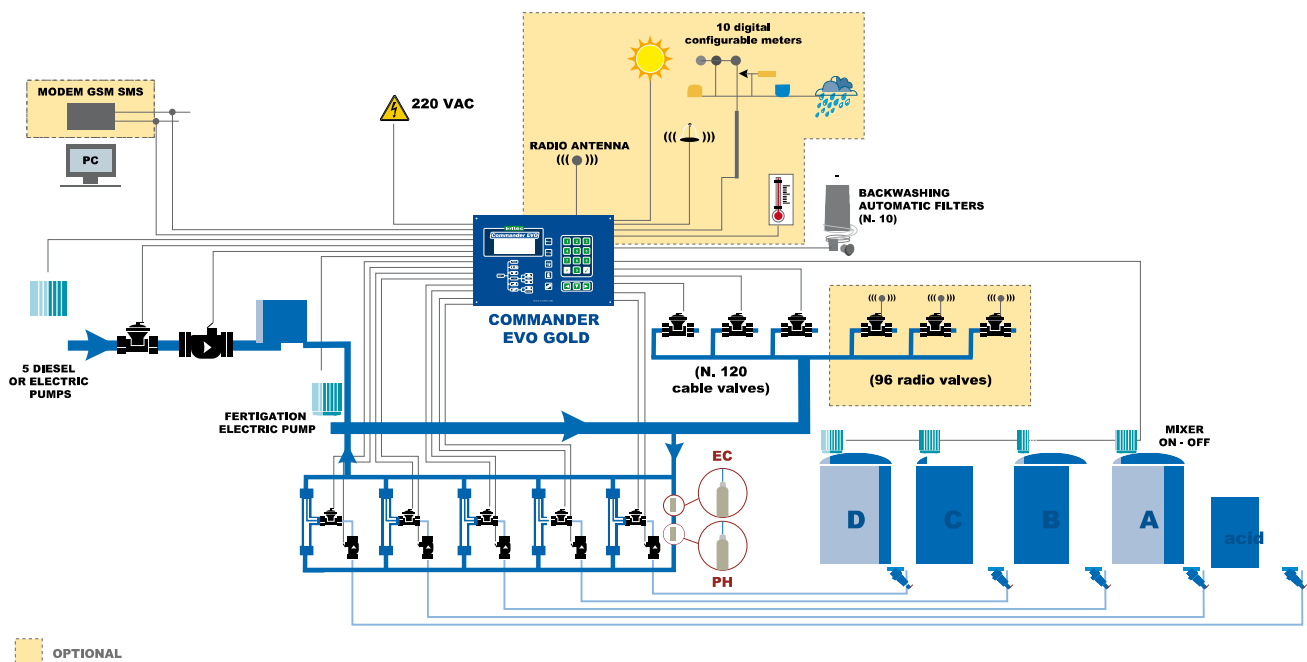


Electrical characteristics

- Power supply: 220VAC
- Outputs: 24
- Digital inputs: 1 water meter
4 fertiliser meters
1 differential manometer
10 configurable meters
- Analogue inputs: pH, EC, Temp, Rad.
- Communication: PC, GPRS

Field of application

Controller to manage open field and greenhouse irrigation systems with planting in soil or soilless. Advanced management of irrigation and fertiliser distribution.



ACCESSORIES

(IC) CEE

Programmer expansion module for Commander EVO Basic/Plus/Gold



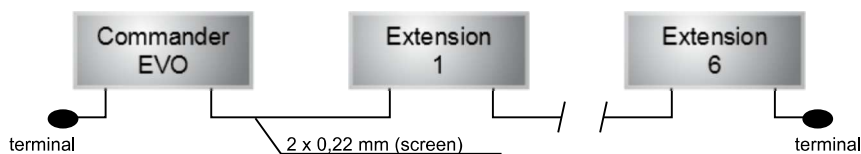
Characteristics

- outputs 24 Vac, 12 Vdc and 9 Vdc latch
- 24 - 16 zones
- connection with cable RS-485

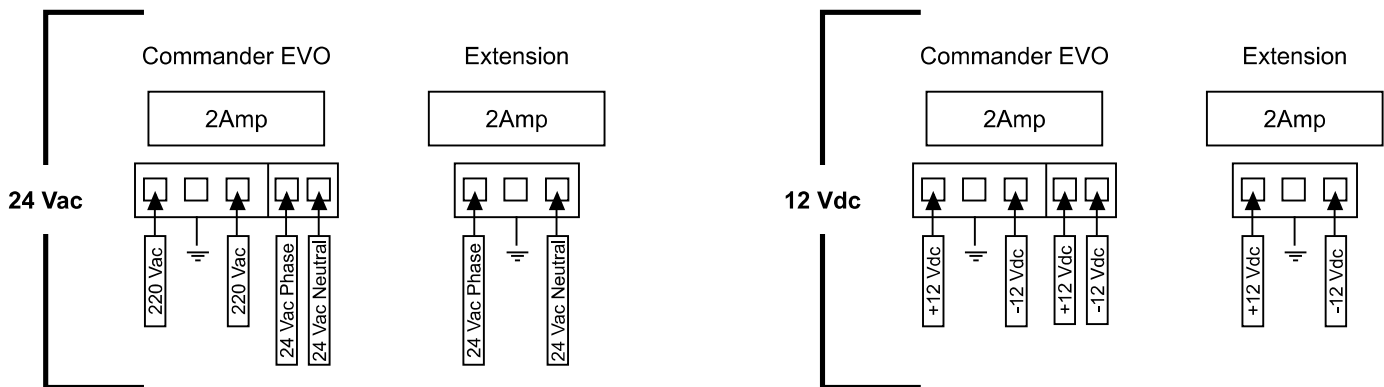
All the Commander EVO series programmers have the possibility of being increased to add another 96 outputs. This increase is obtained by connecting the programmer to the accessory extension units with 16 or 24 outputs.

Connection between the Commander EVO programmer and the various accessory modules is very simple.

The connection diagram is as follows:

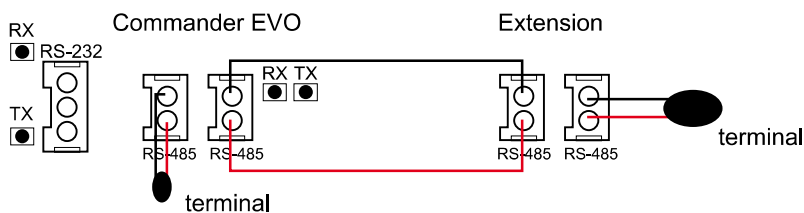


There are two types of extension units based on the 12 Vdc or 24 Vac power supply. The connection details are as follows:

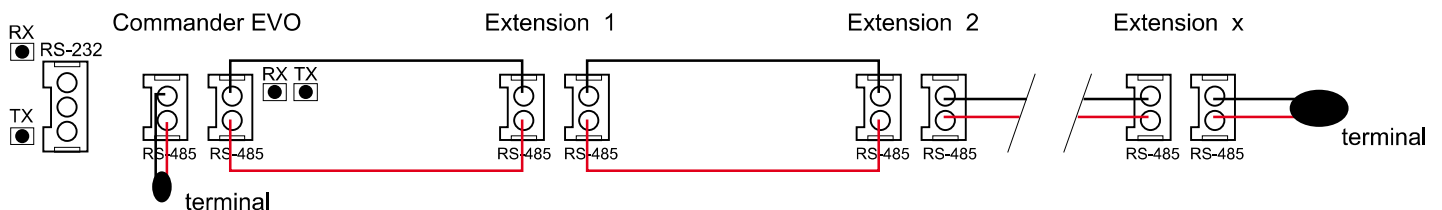


Note: It is highly important not to invert the poles in these connections.

Interfacing between the Commander EVO programmer and an extension unit is implemented as illustrated in the following diagram:



If the Commander EVO programmer must manage multiple extension units, their installation is similar to that previously explained. Simply, connect the other extension modules after the first.



See the COMMANDER EVO instruction manual

ACCESSORIES

(IC) MOD

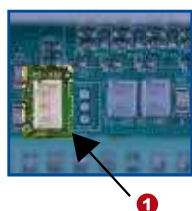
modem for Commander EVO programmer



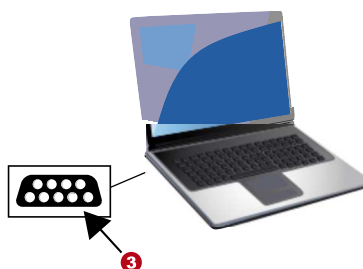
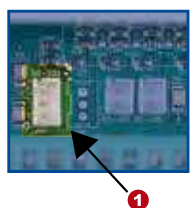
Characteristics

- GPRS/Internet
- international sim card with annual contract
- 220 VAC power supply

MODEM – CONTROLLER CONNECTION



COMPUTER - CONTROLLER CONNECTION



1 = RS-232 serial connector on the “Commander Evo” controller. Connect the connection cable for the modem or computer here. Only one connection can take place at a time.

2 = RS-232 modem serial port. Connect the connection cable of the controller here from connector 1.

OR

3 = RS-232 computer serial port. Connect the connection cable of the controller here from connector 1.

N.B.: If the computer does not have a RS-232 serial port, you need to use an adaptor



(IJ) TS5

pH/EC transmitter for Commander EVO programmer

Characteristics

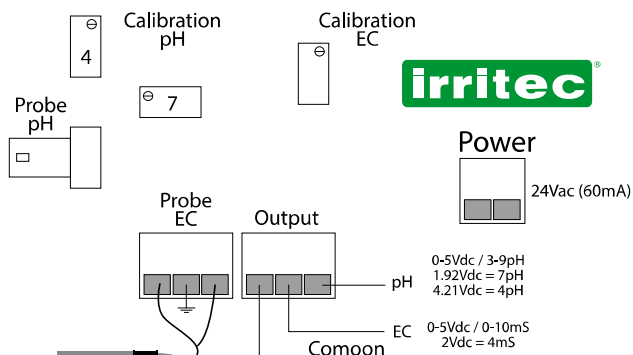
- 24 vac power supply
- 0/5 volt outputs

pH electrode - calibration on two points with solution pH 7.0 and pH 4.0

EC electrode - calibration on two points, 0 and EC 1.4 mS

If you want to connect the probes to the analogue signal, follow the instructions described in the graph alongside.

TRANSMITTER PH/EC



ACCESSORIES

(IJ) SS5

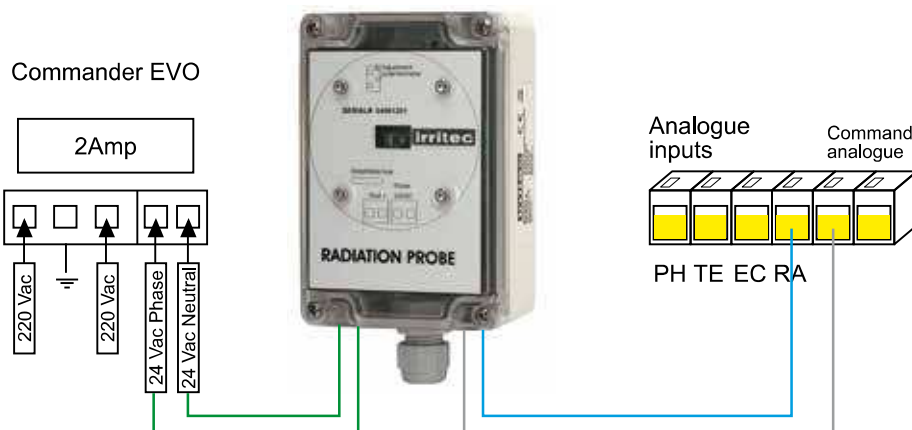
solar radiation sensor



Characteristics

- 24 vac power supply
- 4/20mA volt outputs

With the sun radiation sensor, Commander EVO can recognise instantaneous and accumulated sunlight, by setting the choice on the programmer.



Range: 0 - 1275 W/h
 Precision: 10 W/h
 Output signal: 4/20 mA

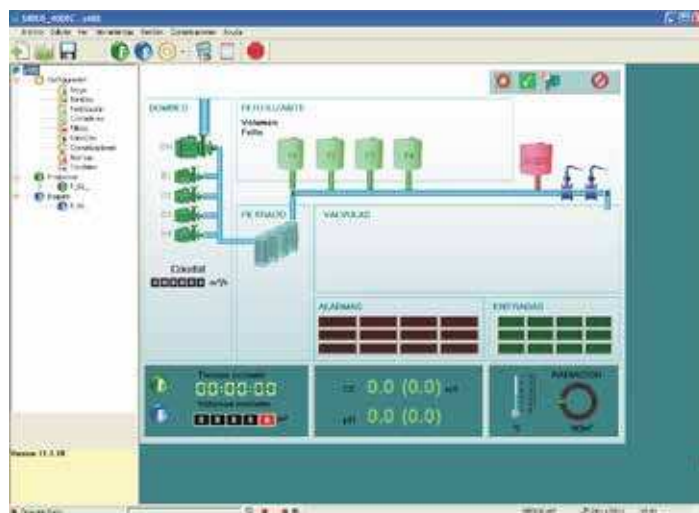
(IJ) SON

pH/EC electrodes for Commander EVO programmer



(IC) SCE

software for Commander EVO programmer plus USB / RS-232 cable



(IC) CER - EVO RADIO SYSTEM

Professional wireless irrigation control system.

The compact and autonomous **ICCERRIC** radio receiver activates 2 valves using latch solenoids.

Receiver characteristics:

- Power supply with lithium batteries and 9 volt batteries
- Programmable safety disconnection system
- Radio receiver indication
- Electronically isolated outputs with led lighting
- Indications of overall status and outputs with led lighting
- Output independent activation

The **iccrtra** radio transmitter enables management of up to 16 sectors plug a main valve or a pump extendible up to 352 sectors via radio transmission at 27.3 mega hz.

The **ICCRTRA** radio transmitter can be connected to the valve outputs of any irrigation programmer, converting the 24 volt signal into a coded digital signal and transmits it to the field receiver limited to 16 analogue outputs up to 96 if connected to any controller in the Commander EVO series.

Transmitter characteristics:

- 220 VAC power supply

Price list ref.	Description
ICCRTRA	Radio transmitter
ICCERRIC	Radio receiver - 2 zones
ICCERKIC	Antenna and cable
ICCERBAT	3.6 V lithium replacement battery



ICCERRIC



ICCRTRA

