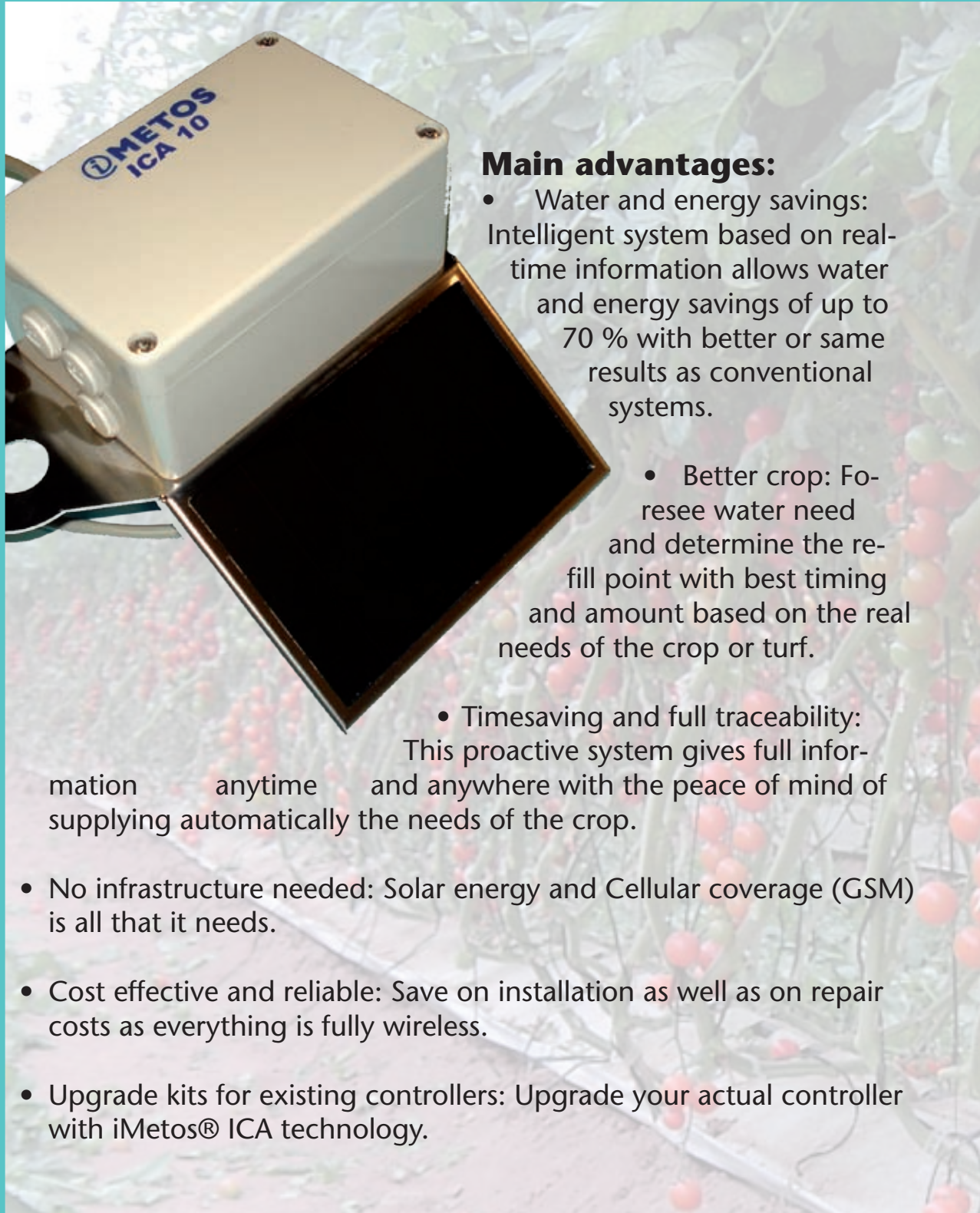


Wireless web-based automation system – intelligent control anywhere in the world.



Main advantages:

- Water and energy savings: Intelligent system based on real-time information allows water and energy savings of up to 70 % with better or same results as conventional systems.
 - Better crop: Forecast water need and determine the refill point with best timing and amount based on the real needs of the crop or turf.
 - Timesaving and full traceability: This proactive system gives full information anytime and anywhere with the peace of mind of supplying automatically the needs of the crop.
- No infrastructure needed: Solar energy and Cellular coverage (GSM) is all that it needs.
 - Cost effective and reliable: Save on installation as well as on repair costs as everything is fully wireless.
 - Upgrade kits for existing controllers: Upgrade your actual controller with iMetos® ICA technology.

Visit our Webpage: www.metos.at

Working principle:

iMetos® ica is a control system which uses Internet technology to operate remotely the irrigation automation system of a farm or a residential area. Pessl Instruments provides with www.fieldclimate.com a platform where the remote operation of the systems takes place. This state of the art system works like any normal controller on a scheduled time domain trigger but operates (when available) seamlessly with the continuous monitoring technologies of the **iMetos®** weather station and soil moisture logger line. This allows merging these technologies with remote access and intelligent control operations via the Internet. With no PC Software and just the Internet browser you program directly irrigation or fertilizer injection etc based on crop specific evapotranspiration, or soil moisture deficit. It can receive automatically daily ET data from a weather station near by and can be stopped immediately if the rain sensor on the ICA is triggered. Conversely it will stop the irrigation cycle automatically when the soil water content has reached saturation value or a simply set value. A manual option allows running the system on manual mode or on time trigger. The iMetos® www.fieldclimate.com website utilizes wireless communication by regular

Internet connection from each field station to navigate and automate all functions from virtually anywhere in the world.

iMetos® ica is available in two model groups: There is the 2-channel (**ICA20**) and the 5-channel (**ICA50**) system. These are designed to interface with standard irrigation controllers like the Toro MC Series and many others. These two devices are controlled via SMS from the website. ICA20 and 50 needs permanent power supply using a wall charger and are built into the box of the standard controller.

iMetos® ICA 10 is substituting the traditional controller completely. It is a sophisticated controller that is designed to work with DC valves and solar panel only. The ICA 10 is self-contained in an IP65 case, with rechargeable battery and can operate one DC solenoid valve. The ICA 10 is operated through the Internet and SMS and has a rechargeable battery and a solar panel. ICA10 has also rain click interface and will stop irrigation if a set threshold has been triggered. The installation of this system is fast, easy and cost effective and avoids long and expensive cabling because it is completely autonomous of any external power supply.

Technical data:

iMetos® ica 20/50

- Stand alone telemetry device
- Based on the Telit Quad band modem (Band EGSM 900/1800/850/1900 MHz approval ETSI 300 113, ACA, FCC and CE approval)
- Two (ica20) or five (ica50) control outputs/inputs in bi-directional communication. It is possible to control the outputs and retrieve status information from the inputs
- Optocoupler inputs (12V = high, max. 10mA) and Control outputs with relays (6A at max. 250 V AC each)
- Power supply voltage 5-32V – wall charger with status-LED's for inputs and outputs as well as for GSM network
- Ready to use due to standard configuration (only one phone call with a mobile needed) or Expert configuration allows setting of individual parameters

iMetos® ica 10

- Stand alone telemetry device based on the Telit quad band engine approval ETSI 300 113, ACA, FCC and CE approval
- 1 control outputs with bi-directional communication possible to control the outputs and retrieve status information from the inputs (Open/close with pulse 100 m/sec.)
- Solar power supply voltage 6 Volt (Non Volatile Memory) – no mains required with status-LED's for inputs and outputs as well as for GSM network
- Soil Moisture and/or ET calculations based scheduling utilizing fieldclimate web service
- Methodology with multi-level scheduler maximizes water options.
- Secured wireless two-way communication via SMS and automated system alerts via email or cell phone with phone messaging (SMS)
- Automatic or manual rain shut off alerts and automatic field wire fault protection and detection and flow fault alerts
- No central software required – only internet browser and password required with unlimited programs with unlimited start times each
- IP65 enclosure - Dimension: 250 X 200 X 100 mm

