



ICA 30/60

Wireless web based automation system – intelligent irrigation and 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 than conventional systems.

No infrastructure needed: Completely wireless – you need solar energy and Cellular coverage (GSM/GPRS)

Better crop: Foresee the water need and determine the refill point with best timing and amount based on the real needs of the crop, turf or trees.

Time-savings and full traceability: This proactive system gives full information anytime and anywhere, and guarantees that your crop is getting always the best, fully automatically.

Cost effective and reliable: Save on installation costs as well as on repair costs as everything is fully wireless and, therefore, easy to exchange if necessary.

Intelligent: Irrigation / fertigation starts and stops only when crop/turf needs it due to seamless integration of soil moisture, ET (Evapotranspiration) and other sensors.

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Working principle:

iMetos® ICA 30/60 is a web-based controller which uses Internet technology to remotely operate the irrigation or automation system of a farm or a residential area. The operation and control of the systems is made through Pessl Instruments online platform www.fieldclimate.com. The state-of-the-art system can work with most solenoid valves (DC 12V) like any normal controller on scheduled time domain trigger, but can operate also with sensor-based solutions (soil moisture, ET, flow rate etc). iMetos® ICA 30/60 can also work seamlessly with the continuous monitoring technologies of the iMetos® weather station and soil moisture logger line, which allows merging these technologies with remote access and intelligent control operations via Internet. With no PC Software and just the Internet browser or your cell phone, you steer, program and control directly the irrigation or fertilizer injection, etc. based on your personal judgment, on the crop specific evapo-transpiration or on soil moisture deficit. It can receive automatically daily ET data from a weather station nearby and can be stopped immediately if the rain sensor on the ICA is triggered. You can integrate local weather forecast with iMeteo (<http://info.metos.at/tiki-index.php?page=WeatherForecast%20imeteo>) and you know the forecast in your fields 5 days ahead on the hourly basis. Conversely, it will stop the irrigation cycle automatically when the soil water content has reached saturation value or a simply set value. Configurable settings allow running the system on the manual mode



or on the time trigger as well. iMetos® ICA 30/60 can be operated just simply with SMS when no GPRS is available and will automatically send an SMS warning if threshold is triggered (too much or too little water). The iMetos® ICA 30/60 and 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 models, the 3-channel based unit (ICA30) and the 6-channel system (ICA60). Both systems are sophisticated controllers which are designed to work with DC valves and solar panel only. The ICA 30/60 are self-contained in an IP65 case, with rechargeable battery and can operate three (30) or six (60) DC solenoid valves. Both systems have also a switch interface that can detect potential problems (i.e. no pressure etc.) if irrigation system does not work correctly. Both models are compatible with Pessl Instruments chain interface, thus, allowing connection of various sensors (soil moisture sensors, temperature, dendrometer, water level, water counter, pressure transducer etc.). iMetos® ICA30/60 has also a 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.



Tecnical data iMetos® ica 30/60

Technical description:

Standalone telemetry device based on the Wavecom quad band engine (ETSI 300 113, ACA, FCC and CE approval)
 3 or 6 (30/60) control outputs with bi-directional communication (output control and status information retrieving)
 3 or 6 bi-directional Latch valves (DC) switches for 12 V solenoids (2A, 100msec pulses)
 Methodology with multi-level scheduler options
 Secured wireless two-way communication via SMS and/or GPRS and automated system alerts via email or cell phone with phone messaging (SMS)
 Alerts: Irrigation stop caused by rain, or manual stop
 Automatic field wire fault detection and protection; water flow problem alerts
 No central software required – only internet browser and password required for unlimited access to FieldClimate web platform.

Technical features:

Sensors Layout:
 1 rain gauge analog input;,
 1 RS485 digital input - automatic sensor recognition supporting sensor chains;
 1 or 2 pressure detectors (ICA30/60)
Memory:
 2MB flash memory
Internet Connectivity:
 GSM - GPRS, EDGE, HSDPA
Dimensions (without sensors):
 21 cm L x 16 cm W x 19 cm H
Weight (without sensors):
 2.6kg
Measuring interval:
 5 minutes
Logging interval/ Internet contact interval:
 User selectable
Battery:
 6 V, 4.5AH
Operating range:
 -35° C to 80° C
Solar panel:
 15 x 15 cm, 0.6 Watts
Part. no. ICA30:
 Internet Central Control for 3 DC valve with IP 65 box, 6 V battery and solar panel
Part. no. ICA60:
 Internet Central Control for 6 DC valve with IP 65 box, 6 V battery and solar panel