Hunter®
The Irrigation Innovators

Two-wire Decoder Control of up to 99 Stations

Surge Protected, Field Programmable Decoders

Remote Sensors via Two-wire Path

The versatility of the ACC controller grows even more powerful with the addition of the all-new, two-wire decoder system from Hunter. ACC-99D uses two-wire decoders to control up to 99 stations without giving up the arsenal of features in the ACC! The powerful overlapping, stacking array of programs, along with ACC's dual programmable Pump/Master Valve outputs, real-time flow monitoring, and up to four programmable sensor inputs, take full advantage of this controller's high capacity.

Decoder installations are the fastest growing technology in irrigation control. Why? Because it saves copper wire, simplifies troubleshooting, permits rapid addition of new stations, minimizes trenching, and now, permits remote sensor operation over the two-wire path.

The ACC-99D, Hunter's most powerful controller teamed with the most versatile decoders in the industry… an unbeatable combination for large sites with changing needs.

Metal Cabinet **Plastic Pedestal** **Metal Pedestal**

1-Station Decoder **2-Station Decoder** **4-Station Decoder** **6-Station Decoder** **Sensor Decoder**

Features & Benefits

The ACC-99D station count is expandable up to 99 stations by adding decoders in 1-, 2-, 4-, or 6-station configurations.

Real-time flow sensing in standalone mode
Learns flow by station and automatically responds to incorrect flow

Simple two-wire decoder installation
Up to 99 stations plus the ability to have remote sensors

Up to 6 two-wire paths of up to 15,000 feet/4.5 kilometers each
Economical wiring for the largest systems

Diagnostic output LEDs
Displays all station activity and line status at a glance

Field programmable decoders with built-in surge protection
No complicated serial numbers or extra lightning devices

Easy modular upgrade to 2-way communication with central control
Simple plug-in modules upgrade ACC to hardwire, modem, or radio control

Programmable pump/master valve assignments
Run pumps and master valves via conventional or decoder outputs

6 fully-independent programs (plus 4 custom programs)
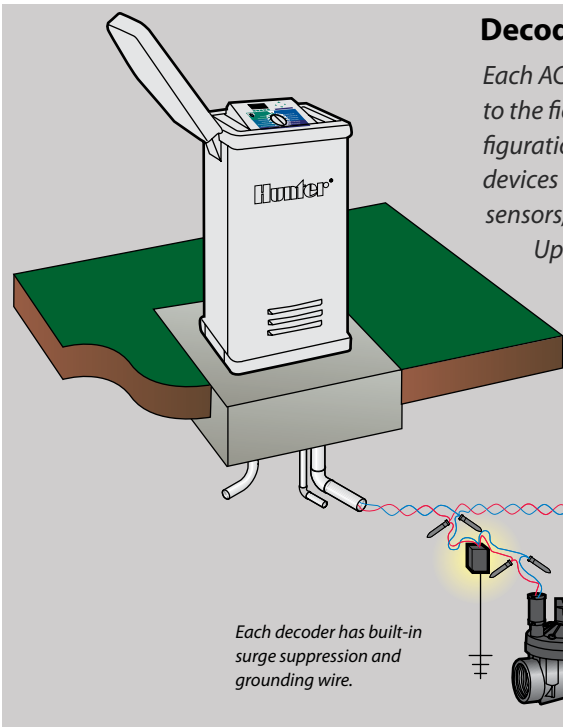Standard programs each have separate day cycles and 10 start times, offering total flexibility for complex landscapes

Non-volatile 100-year memory
Program data is retained during power outages, no battery required

Multiple sensor hookups
Accommodate devices for weather and flow to provide automatic system shutoff in abnormal conditions

Decoders, Wiring, and Wire Paths

Each ACC-99D permits operation of 99 stations over one or more two-wire "paths" to the field. The full line of decoders comes in 1, 2, 4, and 6-station waterproof configurations…each with built-in surge suppression (no external surge suppression devices required)! You can even add in-line sensor decoders to monitor remote sensors, via the two-wire paths.

*Up to **6 different paths** out of the controller may be used to make the most efficient use of wire, minimize trenching and disruption of landscaping.*

Hunter's color-coded, twisted pair IDWIRE is a cost-effective, easily-installed, direct burial wiring solution that resists surges and electrical noise, while providing high tensile strength for permanent in-ground installation. The wire may also be spliced to follow piping in complex installations.

Continue adding decoders for up to 99 stations.

Each decoder has built-in surge suppression and grounding wire.

Put Sensors Where They're Needed the Most…Remote Sensors via Two-Wire

Each ACC-99D controller may have one flow sensor (responding to station level) and up to four sensors (with individual program-level response). Sensors may be connected in any combination of direct wire to the controller's main module, or remotely, via the sensor decoder (ICD-SEN).

Each sensor decoder can monitor up to two remote sensors, over the same two-wire path used for decoder/solenoid activation (up to 10,000 feet/3 kilometers away). ICD-SEN can monitor weather sensors such as the Mini-Clik®, Rain-Clik™, Freeze-Clik, Wind-Clik, Mini-Weather Station, or the HFS Flow Sensor.

Each sensor may have its own alarm response pre-programmed, regardless of how it is connected!
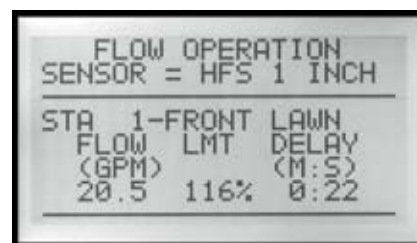
Hunter Rain-Clik with instant shut-off.

Power, Flexibility, Reliability…
In a Package Your Crews Can Already Operate

Hunter's remarkable ACC-99D decoder output module simplifies decoder installation and troubleshooting. The ability to operate (and add) large numbers of irrigation solenoids over a single pair of wires has never been easier…or more competitive. Best of all, ACC-99D programs like the rest of your controllers, with simple dial-and-button controls.

Electrically efficient decoders permit simultaneous operation of up to 12 solenoids, plus dual Pump/Master Valve combinations. A full range of multi-station decoders (1, 2, 4, and 6) features independent station control for manifolded or clustered valves.

ACC-99D provides true two-way decoder control: each decoder

The large backlit LCD display provides lots of information and easily steps the user through the programming process.

confirms its on/off commands and status back to the controller, every time it is activated. This is especially important because ACC-99D can operate dozens of solenoids, miles or kilometers away. On board diagnostics, overload protection, current sensing, and line fault detection are all standard, along with our signature surge suppression circuitry.

Real-Time Flow Sensing: A Landscape Saver

Real time flow sensing will identify a system's low flow or overflow conditions instantly, before resulting damage (to either the system or surrounding landscape) can occur. The user determines the thresholds for "highest flow rate" and "lowest flow rate." When the limits are exceeded, the ACC shuts off that part of the system. Add the HFS flow sensor and the corresponding FCT sensor body your piping requires.

Models

ACC-99D – 2-Wire Decoder Controller with 99 station capacity, wall mount metal cabinet

ACC-99DPP – 2-Wire Decoder Controller with 99 station capacity, plastic pedestal

ICD-100 – Single-station decoder with surge suppression and ground wire

ICD-200 – Two-station decoder with surge suppression and ground wire

ICD-400 – Four-station decoder with surge suppression and ground wire

ICD-600 – Six-station decoder with surge suppression and ground wire

ICD-SEN – Two input sensor decoder with surge suppression and ground wire

IDWIRE1 – 14 AWG decoder wire (up to 10,000 ft./3km)

IDWIRE2 – 12 AWG decoder wire (up to 15,000 ft./4.5km)

HFS – Hunter flow sensor, requires the use of an FCT-xxx

ACC-PED – Metal Pedestal for use with ACC-99D

Dimensions

- ACC-99D Cabinet :
  12⅜" H x 15½" W x 6⁷⁄₁₆" D
  (31.37 cm H x 39.37 cm W x 16.38 cm D)

- ACC-99D Metal Pedestal:
  36⅛" H x 15½" W x 5" D
  (91.45 cm H x 39.37 cm W x 12.7 cm D)

- ACC-99D Plastic Pedestal:
  38⅜" H x 21⁹⁄₁₆" W x 15⅞" D
  (97.47 cm H x 54.61 cm W x 40.32 cm D)

- Decoders:
  ICD-100, 200, ICD-SEN - 3⅝" H* x 1½" W x ½" D
  (92 mm H* x 38 mm W x 12.7 mm D)
  ICD-400, 600 - 3⅝" H* x 1¾ " W x 1½" D
  (92 mm H* x 46mm W x 38mm D)

- Wire leads (all) - 18" L, 18 AWG dia.
  (46 cm L, 1 mm dia.)

  *Not including wire leads.

Earth Grounding: The Hunter Difference

ACC-99D does not require any special surge modules or other devices. Each decoder includes a built-in earth ground wire…ground as many as you need (based on frequency of lightning in your area), with conventional earth grounding hardware.

Specifications and Features

- Transformer Input: 120/230VAC, 50/60 Hz, 2A max at 120V, 1A max at 230V.
- Transformer output: 24VAC, 4A, @ 120VAC
- Decoder Line (path) output: 34V p-p
- Decoder Power draw: .3 mA (standby), 40 mA per active output
- Solenoid capacity: 2 standard 24 VAC Hunter solenoids per output within spec wire runs, up to 14 solenoids max simultaneous (includes dual P/MV outputs)
- Wiring, two-wire path: IDWIRE1, Red/Blue twisted pair 14 AWG to 10,000 ft./3km
- IDWIRE2, Red/Blue twisted pair 12 AWG to 15,000 ft./4.5km
- Wiring, Decoder to solenoid: standard pair 18 AWG/1mm to 100 ft./33m (twisted improves surge resistance)
- 6 two-wire output paths to field decoders
- Two-way confirmation of decoder activation
- Two-way monitoring of sensor connections (ICD-SEN)
- Diagnostic LEDs with line status, signal activity, decoder and status
- Programmable decoder station IDs (from controller panel)

ACC-99D Decoder Systems include all standard features of the ACC controller, including:

- 6 Automatic programs, with 4 custom manual (auxiliary) programs
- Dual pump/master valve outputs programmable by station
- 1 flow meter (diagnostics to station level) and up to 4 weather sensor inputs (programmable to program level)
- Programmable overlap or SmartStack by program with simultaneous station groups.
- Seasonal adjust, 0 to 300% in 1% increments
- Flow learning mode by station with programmable alarm thresholds
- Station run times up to 6 hours with programmable delay between stations (up to 4 hours)
- Programmable rain delay up to 31 days
- Non-volatile memory and 366-day calendar (including leap year)
- Self-diagnostic circuit breaker skips shorted stations and continues watering
- SmartPort® equipped for wireless remote control
- Test program feature allows for quick system checks
- IMMS 2.0 central system compatible
- Upgrade to ET capacity

Integrates Seamlessly with Hunter Irrigation Management and Monitoring System™

The ACC-99D controller has been designed specifically to accommodate the IMMS™, Hunter's affordable water management tool that can monitor and control a network of irrigation systems from a single location. For the ACC-99D to access the virtues of the IMMS, just plug a convenient module into the con-

troller. No external boxes, hook-ups, or messy wiring is necessary. The module features a separate LCD readout and program buttons for simple viewing. And, everything you need fits neatly into the cabinet or pedestal, including your radio or modem connections, if needed.

SPECIFICATION GUIDE

EXAMPLE: **ACC - 99D - PED**

MODEL	FEATURES	OPTIONS USER INSTALLED
ACC	**99D** = 2-Wire Decoder Controller with 99 Station Capacity, Metal Cabinet* **99DPP** = 2-Wire Decoder Controller with 99 Station Capacity, Plastic Pedestal*	**PED** = Optional Metal Pedestal
ICD	**100** = Single-station Decoder with Surge Suppression and Ground Wire **200** = Two-station Decoder with Surge Suppression and Ground Wire **400** = Four-station Decoder with Surge Suppression and Ground Wire **600** = Six-station Decoder with Surge Suppression and Ground Wire **SEN** = Two Input Sensor Decoder with Surge Suppression and Ground Wire	
IDWIRE1 **IDWIRE2** **HFS**	14 Awg Decoder Wire (Up to 10,000 Ft./3km) 12 Awg Decoder Wire (Up to 15,000 Ft./4.5km Hunter Flow Sensor, requires an FCT-xxx	
ACC-COM* **ACC-HWIM** **RAD3**	**HWR** = Hardwire Connection Communication Module for "Satellite" Installations **POTS** = Regular Dial-up Telephone (RJ-11) Connection Communication Module for "Satellite" Installations **GSM** = Cellular Connection Communication Module for "Satellite" Installations Terminal for Hardwire Connections (In- and Outbound Wire) UHF Radio Communications Module (Antenna not Included)	

* Available March 2006