## CA CONTROLLER ASSEMBLY – Non-Central communicating stand-alone controller

| | | |
|---|---|---|
| **HU3** | **Hunter PRO-C** | 4, 7, 10, 13 & 16 stations |
| **HU4** | **Hunter ACC2** | 12, 18, 24, 30, 36, 42, 48 & 54 stations |
| **HU5** | **Hunter ACC** | 12, 18, 24, 30, 36 & 42 stations |
| **HU5-99D** | **Hunter ACC 99D** | 99 stations (Two-Wire) |
| **HU6** | **Hunter I-CORE** | 6, 12, 18, 24, 30, 36, 42 stations |
| **HU6-TW** | **Hunter I-CORE Dual** | 48 stations (Two-Wire) |
| **HU7** | **Hunter X-Core** | 2, 4, 6 & 8 stations |
| **HU8** | **Hunter XC Hybrid** | 6 & 12 stations |
| **HU9** | **Hunter Pro-HC** | 6, 12 & 24 stations |
| **HU10** | **Hunter ICC2** | 8, 12, 16, 24, 32, 40, 48 & 54 stations |

**UL APPROVED ENCLOSURES** – VIT Strong Box

| CODE | MODEL | DIMENSIONS | TYPE |
|---|---|---|---|
| **1** | SB-18SS | 18”w x 36”h x 12”d | Front Entry |
| **2** | SB-18DSS | 18”w x 36”h x 24”d | Front & Rear Door |
| **3** | SB-24SS | 24”w x 36”h x 12”d | Front Entry |
| **4** | SB-24DSS | 24”w x 36”h x 24”d | Front & Rear Door |
| **5** | MPE-A16-10K | 18”w x 52”h x 32”d | Meter & Companion Enclosure |
| **6** | SB-16SS | 16”w x 38”h x 15.5”d | Top Entry |
| **7** | SB-22SS | 24”w x 38”h x 17”d | Top Entry |
| **8** | SB-36SS | 36”w x 36”h x 12”d | Double Front Entry |
| **10** | BB-18SS | 16”w x 32”h | Backboard (SB-18SS) |
| **11** | BB-24SS | 22”w x 32”h | Backboard (SB-24SS) |
| **12** | LD-16SW | 16.75”w x 30”h x 8.25”d | Light Duty Wall Mount |
| **13** | LD-16S | 16.75”w x 30”h x 8.25”d | Light Duty Front Entry |
| **14** | LD-18SW | 18”w x 18”h x 8”d | Light Duty Wall Mount |
| **15** | LD-16STS | 16.75”w x 36”h x 12”d | Light Duty Top Entry |
| **16** | SB-18SSW | 18”w x 36”h x 12”d | Front Entry Wall Mount |
| **17** | SB-24SSW | 24”w x 36”h x 12”d | Front Entry Wall Mount |
| **18** | SB-36SSW | 36”w x 36”h x 12”d | Front Entry Wall Mount |

**EXAMPLE PART NUMBER**

**CA6-HU6-12/** - Controller Assembly; 16” top entry Strong Box stainless steel enclosure with 12 station Hunter I-Core controller..

## IMMS 3.0 SOFTWARE

**HIMMS3CD** **IMMS 3.O GRAPHICS CENTRAL CONTROL SOFTWARE** - The Controller Assembly shall be provided with the IMMS Software for the purpose of operating ACC controllers remotely with hardwire direct connect, dial-up telephone, cellular, Ethernet or radio communication. The central computer is not included with the software package. The IMMS-CD operates on Windows XP or higher.

**HIMMS-ET-CD** **IMMS ET ADJUST SOFTWARE** – The Controller Assembly shall be provided with the IMMS ET software for the purpose of automatic ET adjustment. Software requires an ET Sensor at one or more ACC controller locations.

**HIMMS-CCC** **HARDWIRE CENTRAL INTERFACE** - The Controller Assembly shall be provided with a Central Communication Unit for the purpose of allowing hardwire direct connect communication from a central computer and a primary ACC controller. Only one CCC is required per computer system.

## IMMS COMMUNICATION OPTIONS

**HACC-COM-HWR** **HARDWIRE / RADIO MODULE** - The Controller Assembly shall be provided with hardwire direct connect radio communication module for purposes of receiving direct connect hardwire communication from a central computer to a primary ACC controller located on site. Supports hardwire and radio communication options. One Hardwire Communication Module is required per site and may communicate with up to 100 controllers via hardwire cable using a Hardwire Interface Module or Radio Communication equipment.

**HACC-HWIM** **HARDWIRE INTERFACE MODULE** - The Controller Assembly shall be provided with hardwire interface module for the purpose of communicating by hardwire to all ACC controllers connected in a primary ACC controller. The hardwire interface module is necessary for any controller with in or out hardwire connection. One HWIM is required per ACC controller.

**HACC-COM-POTS** **PHONE – DIAL UP MODEM MODULE** - The Controller Assembly shall be provided with phone communication module for purposes of receiving dial-up phone communication from a central computer to a primary ACC controller located on site. Phone service required.

**HACC-COM-GSM** **CSD CELLULAR MODULE** - The Controller Assembly shall be provided with CSD cellular communication module for purposes of receiving cellular telephone modem communication from a central computer to a primary ACC controller located on site. Supports GSM mobile input in addition to hardwire and radio communication sharing. Cellular Service Required.

**HACC-COM-LAN** **ETHERNET MODULE** - The Controller Assembly shall be provided with Ethernet communication module for purposes of receiving Ethernet communication from a central computer to a primary ACC controller located on site. Supports TCP/IP in Ethernet networks in addition to hardwire and radio sharing with local controllers.

**HACC-COM-GPRS** **GPRS CELLULAR DATA MODULE** - The Controller Assembly shall be provided with GPRS cellular communication module for purposes of receiving direct connect GPRS cellular communication from a central computer to a primary ACC controller located on site. Supports mobile data connection via GPRS phone.

## IMMS RADIO COMPONENTS

**HRAD3** **UHF RADIO MODULE 450-470 MHz** - The Controller Assembly shall be provided with UHF radio module and is required with communication to the central computer. Radio module for wireless connection with 450 – 470 MHz frequency and requires FCC License and antenna.

**HIMMSANT2** **ANTENNA FOR PEDESTAL MOUNT** - The Controller Assembly shall be provided with disc type directional antenna and is required with communication to the central computer. Antenna shall be used for pedestal mount applications.

**HIMMSANT3** **ANTENNA FOR WALL OR POLE MOUNT** - The Controller Assembly shall be provided with whip type directional antenna and is required with communication to the central computer. Antenna shall be used for pole mount applications.

**HIMMSANTYAGI2** **YAGI DIRECTIONAL ANTENNA FOR POLE MOUNT** – The Controller Assembly shall be provided with Yagi high efficient directional antenna and is required with communication to the central computer. Antenna shall be used for pole mount applications.

## TWO WIRE DECODERS

**ICD100** **ACC SINGLE STATION DECODER** with surge suppression and ground wire.
**ICD200** **ACC TWO STATION DECODER** with surge suppression and ground wire.
**ICD400** **ACC FOUR STATION DECODER** with surge suppression and ground wire.
**ICD600** **ACC SIX STATION DECODER** with surge suppression and ground wire
**ICDSEN** **ACC SENSOR DECODER** with surge suppression and ground wire.

## TWO WIRE COMPONENTS

**ICD-HP** **ACC DECODER PROGRAMMER** – Wireless hand-held device to program, test, and diagnose decoders without disconnecting any wires

## ET SENSORS

**HSSE**

**SOLAR SYNC MODULE AND SENSOR ASSEMBLY** - The Controller Assembly shall be provided with the SOLAR SYNC module and sensor for monitoring local weather and adjust irrigation runtimes. This assembly shall consist of a Solar-Sync® in a vandal-resistant housing mounted on the enclosure. The sensor shall be pre-wired to the controller's sensor terminals.

**HWSS**

**WIRELESS SOLAR SYNC MODULE AND SENSOR ASSEMBLY** - The Controller Assembly shall be provided with the Solar-Sync® module and wireless sensor for monitoring local weather and adjust irrigation. The assembly shall include the sensor, mounting bracket and control module. The Solar-Sync® module shall be pre-wired to the controller's sensor terminals. Maximum distance from module to sensor is 800'.

**HETSW**

**ET SYSTEM & WIND ASSEMBLY** – The Controller Assembly shall be provided with the ET Sensor to monitor and calculate evapotranspiration (ET) for an individual microclimate. The Controller Assembly shall include the ET Sensor, wind anemometer and 100' of wire. Maximum distance from module to sensor is 100'. The sensor shall only be used with ACC controllers and IMMS software.

## LINE PROTECTION

**LPP**

**LINE PRIMARY PROTECTION** - The Controller Assembly shall be provided with a Line Primary Protection assembly for the purpose of protecting the components against electrical surge coming in on the 120 volt A.C. power source wiring. This assembly shall consist of a surge arrestor installed on each leg of the 120 volt A.C. wiring that shall be housed in an electrical enclosure within the assembly. The LPP is located at the point where the electrical power enters the assembly.

## RAIN, FREEZE and WIND SENSOR SHUT OFF OPTIONS

**RSE**

**RAIN SWITCH ENCLOSURE MOUNTED ASSEMBLY** - The Satellite Assembly shall be provided with a rain switch enclosure-mounted assembly to shut down the irrigation system during rainy weather conditions. This assembly shall consist of a Mini-Clik® in a vandal-resistant housing mounted on the enclosure. The rain switch interconnect wire harness shall be pre-wired to the controller's sensor terminals**.** The rain switch shall actuate after ¼", rainfall. For two Controllers in the same enclosure use RSE2.

**RS**

**RAIN SWITCH ASSEMBLY -** The Satellite Assembly shall be provided with a remote rain switch assembly to shut down the irrigation system during rainy conditions. This assembly shall consist of a Mini-Clik® and a mounting bracket (for installation on a nearby structure). The rain switch interconnect wire harness shall be pre-wired to the controller's sensor terminals**.** The rain switch shall actuate after user-selected rainfall set-points.

**RSP**

**RAIN SWITCH POLE MOUNTED ASSEMBLY** -The Satellite Assembly shall be provided with a rain switch pole-mounted assembly to shut down the irrigation system during rainy weather conditions. This assembly shall consist of a Mini-Clik® in a vandal-resistant housing for 2" Galvanized pole mount. The rain switch interconnect wire harness shall be pre-wired to the controller's sensor terminals.

**WRS** 

**WIRELESS RAIN SWITCH ASSEMBLY** -The Satellite Assembly shall be provided with a wireless rain switch assembly to shut down the irrigation system during rainy weather conditions. This assembly shall consist of a Wireless Rain-Clik® and a mounting bracket (for installation of the sensor on a nearby structure). The receiver module is shall be pre-wired to the controller's sensor terminals.

**RFRZE** 

**RAIN & FREEZE SWITCH ENCLOSURE MOUNTED ASSEMBLY** - The Satellite Assembly shall be provided with a rain switch and freeze switch enclosure-mounted assembly to shut down the irrigation system during rainy & freezing weather conditions. This assembly shall consist of a Mini-Clik® & Freeze-Click® in a vandal-resistant housing mounted on the enclosure. The sensor interconnect wire harnesses shall be pre-wired to the controller's sensor terminals.

**FRZE** **FREEZE SWITCH ENCLOSURE MOUNTED ASSEMBLY** - The Satellite Assembly shall be provided with a freeze switch enclosure-mounted assembly to shut down the irrigation system during freezing weather conditions. This assembly shall consist of a Freeze-Click® in a vandal-resistant housing mounted on the enclosure. The sensor interconnect wire harness shall be pre-wired to the controller's sensor terminals.

**FRZ** **FREEZE SWITCH ASSEMBLY**- The Satellite Assembly shall be provided with a freeze switch assembly to shut down the irrigation system during freezing weather conditions. This assembly shall consist of a Freeze-Click® and a mounting bracket (for installation on a nearby structure). The sensor interconnect wire harness shall be pre-wired to the controller's sensor terminals.

**FRZP** **FREEZE SWITCH POLE MOUNTED ASSEMBLY** - The Satellite Assembly shall be provided with a freeze switch pole-mounted assembly to shut down the irrigation system during freezing weather conditions. This assembly shall consist of a Freeze-Clik® in a vandal-resistant housing for pole mount. The rain switch interconnect wire harness shall be pre-wired to the controller's sensor terminals

.**WRFZ** **WIRELESS RAIN & FREEZE SWITCH ASSEMBLY** - The Satellite Assembly shall be provided with a rain and freeze sensor assembly to shut down the irrigation system during rainy & freezing weather conditions. This assembly shall consist of a remote rain/freeze sensor with a mounting bracket (for installation on a nearby structure) and receiver module mounted in the satellite assembly. The module shall be pre-wired to the controller's sensor terminals.

**HWS** 

**HIGH WIND SHUT-OFF ASSEMBLY** - The Satellite Assembly shall be provided with a High Wind Shut-Off assembly to shut down the irrigation system during windy conditions. This assembly shall consist of a Wind-Clik® for pole mount. The wind sensor interconnect wire harness shall be pre-wired to an adjustable set point relay into the controller and to the controller's sensor terminals. The Wind Sensor shall actuate after winds of 12 mph to 35 mph are detected.

**EAL** 

**EXTERNAL ALARM LIGHT ASSEMBLY** - The Satellite Assembly shall be provided with an External Alarm Light assembly for use in conjunction with sensor assemblies that cause irrigation shut down. Sensor assemblies and a master valve are used to monitor and shut down the irrigation system. This assembly shall consist of an externally mounted indicator light prewired to sensor-controlled relays.

## REMOTE CONTROL

**HICRA** **RADIO REMOTE RECEIVER & TRANSMITTER KIT –** The Controller Assembly shall be provided with a Hunter receiver with enclosure mounted antenna and transmitter with carrying case for the purpose of activating irrigation valves remotely (up to 1000 feet). The HICRA is designed to work with Hunter X-Core, Pro-C, PCC, I-Core, ACC and ACC2 controllers through the SmartPort® connection

**HICRA-XL** **RADIO REMOTE RECEIVER & TRANSMITTER KIT –** The Controller Assembly shall be provided with a Hunter receiver with enclosure mounted antenna and transmitter with carrying case for the purpose of activating irrigation valves remotely (up to 2 miles line-of-sight). The HICRA-XL is designed to work with Hunter X-Core, Pro-C, PCC, I-Core, ACC and ACC2 controllers through the SmartPort® connection

# FLOW SENSING

## FS-CAB

**16 GAUGE, 1 PAIR CABLE** – The flow sensor cable shall be 16-gauge, single pair. The construction shall include tin coated copper conductors, an aluminum shield to prevent cross-talk, a drain wire for grounding the cable, and an overall PE jacket. The cable shall be listed for direct burial.

## GTFS

**FLOW SENSING ASSEMBLY** – The Satellite Assembly shall be provided with a **Creative Sensor Technology** flow sensor for use with the purpose of receiving and reacting to flow data from flow sensor. The assembly consists of a tee mounted sensor. Master valve is required for each flow sensor in order to shut down the mainline when an abnormal or unwanted flow occurs.

| Part Number | Pipe Size / Sensor Tee | | Flow Range (GPM) |
|---|---|---|---|
| GTFS-100P | 1.0” | PVC | 1 - 52 |
| GTFS-150P | 1.5” | PVC | 2 - 108 |
| GTFS-150B | 1.5” | BRASS | 3 - 90 |
| GTFS-200P | 2.0” | PVC | 3 - 170 |
| GTFS-300S | 3.0” | PP Saddle | 6 - 300 |
| GTFS-400S | 4.0” | PP Saddle | 10 – 480 |
| GTFS-600S | 6.0” | PP Saddle | 45 - 1100 |

## FSDI

**FLOW SENSING ASSEMBLY** – The Satellite Assembly shall be provided with a **Data Industrial** flow sensor for use with the purpose of receiving and reacting to flow data from flow sensor. The assembly consists of a tee mounted sensor. Master valve is required for each flow sensor in order to shut down the mainline when an abnormal or unwanted flow occurs.

| Part Number | Pipe Size / Sensor Tee | | Flow Range (GPM) |
|---|---|---|---|
| FSDI-100B | 1.0” | Brass | 2 - 40 |
| FSDI-100P | 1.0” | PVC | 5 - 54 |
| FSDI-150B | 1.5” | Brass | 4 - 80 |
| FSDI-150P | 1.5” | PVC | 5 - 100 |
| FSDI-200B | 2.0” | Brass | 10 - 100 |
| FSDI-200P | 2.0” | PVC | 10 - 200 |
| FSDI-250B | 2.5” | Brass | 16 - 160 |
| FSDI-300P | 30” | PVC | 20 - 300 |
| FSDI-400P | 40” | PVC | 40 - 500 |
| FSDI-600S | 60” | PP Saddle | 90 – 1000 |

## SFS

**SONIC FLOW SENSOR -** Uses sonic pulses to accurately gauge water movement. Excellent for systems using a combination of low flow drip and high flow rotors on a single point of connection. Comes with digital readout display. Does not include master valve.

| Part Number | Pipe Size / Sensor Tee | | Flow Range |
|---|---|---|---|
| SFS-200 | 2.0 | Cast Iron | 0.01-120 |
| SFS-300 | 3.0” | Cast Iron | 0.01-300 |
| SFS-400 | 4.0” | Cast Iron | 2-500 |
| SFS-600 | 6.0” | Cast Iron | 5-1000 |

## SFM

**SONIC FLOW METER-** Uses sonic pulses to accurately gauge water movement. Excellent for systems using a combination of low flow drip and high flow rotors on a single point of connection. Does not include master valve.

| Part Number | Pipe Size / Sensor Tee | | Flow Range |
|---|---|---|---|
| SFM-100P | 1.0” | SCH80 PVC | 0.22 - 33 |
| SFM-150P | 1.5” | SCH80 PVC | 0.55 - 82 |
| SFM-200P | 2.0” | SCH80 PVC | 0.92 - 138 |
| SFM-300P | 3.0” | SCH80 PVC | 2.06 - 309 |
| SFM-400P | 4.0” | SCH80 PVC | 3.58 - 537 |

# FLOW SENSING & MASTER VALVE

## GTFSV

**FLOW SENSING ASSEMBLY WITH NORMALLY OPEN MASTER VALVE -** The Satellite Assembly shall be provided with a Flow Sensing Assembly for use with the purpose of receiving and reacting to flow data from flow sensor. The assembly consists of a tee mounted sensor and a **Superior 3300** normally open master valve. Master valve is required for each flow sensor in order to shut down the mainline when an abnormal or unwanted flow occurs.

| Part Number | Pipe Size / Sensor Tee | | Flow Range (GPM) |
|---|---|---|---|
| GTFSV-100B | 1.0” | Brass | 2 - 30 |
| GTFSV-100P | 1.0” | PVC | 1 - 52 |
| GTFSV-150B | 1.5” | Brass | 4 - 80 |
| GTFSV-150P | 1.5” | PVC | 2 - 108 |
| GTFSV-200B | 2.0” | Brass | 10 - 100 |
| GTFSV-200P | 2.0” | PVC | 3 - 170 |
| GTFSV-250B | 2.5” | Brass | 16 - 160 |
| GTFSV-300P | 3.0” | Brass | 20 - 300 |

## GTFSVC

**FLOW SENSING ASSEMBLY WITH NORMALLY CLOSED MASTER VALVE** The Satellite Assembly shall be provided with a Flow Sensing Assembly for use with the purpose of receiving and reacting to flow data from flow sensor. The assembly consists of a tee mounted sensor and a **Superior 3200** normally closed master valve. Master valve is required for each flow sensor in order to shut down the mainline when an abnormal or unwanted flow occurs.

| Part Number | Pipe Size / Sensor Tee | | Flow Range (GPM) |
|---|---|---|---|
| GTFSVC-100B | 1.0” | Brass | 2 - 30 |
| GTFSVC-100P | 1.0” | PVC | 1 - 52 |
| GTFSVC-150B | 1.5” | Brass | 4 - 80 |
| GTFSVC-150P | 1.5” | PVC | 2 - 108 |
| GTFSVC-200B | 2.0” | Brass | 10 - 100 |
| GTFSVC-200P | 2.0” | PVC | 3 - 170 |
| GTFSVC-250B | 2.5” | Brass | 16 - 160 |
| GTFSVC-300P | 3.0” | PVC | 20 - 300 |

## NFS-PD

**NETAFIM PHOTO DIODE HYDROMETER** - Combines a master valve, flow sensor and analog volumetric water meter into a single unit. Saves space by not requiring any premeasured distances between pipe inlet and outlet. Uses a Photo Diode register for higher flow resolution. Ideal for high pressure and/or low flow systems.

**Normally Closed** – NFS-PDC-(size)
**Normally Open** – NFS-PD-(size)
**With PR Option, Normally Closed** – NFS-PDPRC-(size)
**With PR Option, Normally Open** – NFS-PDPR-(size)

| Size | Valve Size | Flow Range (GPM) |
|---|---|---|
| 150 | 1.5” | 0.02-60 |
| 200 | 2.0” | 0.02–120 |
| 300 | 3.0” | 2-300 |
| 400 | 4.0” | 5–500 |
| 600 | 6.0” | 10-1000 |

## NFS-RS

**NETAFIM REED SWITCH HYDROMETER** - Combines a master valve, flow sensor and analog water meter into a single unit. Saves space by not requiring any premeasured distances between pipe inlet and outlet. The reed switch register is a dry contact closure for communicating with control and monitoring equipment.

**Normally Closed** – NFS-RSC-(size)
**Normally Open** – NFS-RS-(size)
**With PR Option, Normally Closed** – NFS-RSPRC-(size)
**With PR Option, Normally Open** – NFS-RSPR-(size)

| Size | Valve Size | Flow Range (GPM) |
|---|---|---|
| 150 | 1.5” | 2-60 |
| 200 | 2.0” | 5-120 |
| 300 | 3.0” | 8-300 |
| 400 | 4.0” | 10-500 |
| 600 | 6.0” | 12-1000 |

## ENCLOSURE MOUNTING PAD, PEDESTALS & COOLING FAN

### EMP

**ENCLOSURE MOUNTING PAD** - The Satellite Assembly shall be provided with an Enclosure Mounting Pad assembly for the purpose of mounting to a "Strong Box" enclosure. This assembly consists of a reinforced plastic support base, a three-sixteenth inch thick 5052 H32 Marine Grade Aluminum mounting pad, and 304-grade stainless steel fastening brackets. The support base shall be installed and compacted in earth allowing the top two inches of the support base to be exposed above the grade.

| Part Number | Assembly# | Enclosure Model# |
|---|---|---|
| EMP-18 | CA1 | SB-18SS |
| EMP-18D | CA2 | SB-18DSS |
| EMP-24 | CA3 | SB-24SS |
| EMP-24D | CA4 | SB-24DSS |
| EMP-MT | CA5 | MPE |
| EMP-16 | CA6 | SB-16SS |

### PED

**OPTIONAL PEDESTAL** – The Satellite Assembly shall be provided with an optional 12" high pedestal for the purpose of mounting to a "Strong Box" enclosure.

| Part Number | Enclosure Model |
|---|---|
| PED-16SS | SA6 (Top Entry) |
| PED-18SS | SA1 (Front Entry 18") |
| PED-18DSS | SA2 (Back to Back 18") |
| PED-24SS | SA3 (Front Entry 24") |
| PED-24D | SA4 (Back to Back 24") |
| PED-36SS | SA8 (Side-by-Side 36") |

### FAN

**THERMOSTATICALLY CONTROLLED FAN** - Factory set at 90 degrees Fahrenheit the thermostat can be adjusted in the field to help maintain desired enclosure temperature. This option is for all Front Entry assemblies

### FAN-16

**THERMOSTATICALLY CONTROLLED FAN** - Factory set at 90 degrees Fahrenheit the thermostat can be adjusted in the field to help maintain desired enclosure temperature. This FAN option is specifically built for the SA6 assembly.