

MAXICOM™

Satellite Assembly Options

MASTER LIST FOR RAIN BIRD® SATELLITE ASSEMBLY OPTIONS
(All MAXICOM™ Controllers)

RELAYS

PART #	DESCRIPTION
MVR	MASTER VALVE RELAY ASSEMBLY
PSR	PUMP START RELAY ASSEMBLY

SURGE PROTECTION AND MASTER VALVE TIMER EQUIPMENT

PART #	DESCRIPTION
CCU28	SURGE PROTECTION – 120V.
MVP	MASTER VALVE POWER (VARIABLE TIMER) ASSEMBLY
GR-8	8' GROUND ROD, CABLE, and CLAMP KIT (Ground Rods will be supplied with all Assemblies)

REMOTE CONTROL EQUIPMENT AND ACCESSORIES

PART #	DESCRIPTION
RRC	REMOTE RECEIVER CONNECTOR ASSEMBLY (Included with Satellite Assemblies)
RECX	RADIO REMOTE RECEIVER & TRANSMITTER KIT
RCX	RADIO REMOTE TRANSMITTER KIT ONLY
RC	RADIO REMOTE RECEIVER CARD ONLY
RCA	RADIO REMOTE RECEIVER CARD AND ANTENNA
RC2AT	RADIO REMOTE RECEIVER CARDS (2), ANTENNA, AND TEE CONNECTOR
TCON	RADIO REMOTE TEE CONNECTOR

MULTIPLEXER COMMUNICATION SHARING DEVICE - CCU

PART #	DESCRIPTION
SSRO-7	SPREAD SPECTRUM RADIO COMMUNICATION WITH 7 dB GAIN ANTENNA
SSROP-7	SPREAD SPECTRUM RADIO COMMUNICATION WITH 7 dB GAIN POLE ANTENNA
SSROP-3	SPREAD SPECTRUM RADIO COMMUNICATION WITH 3 dB GAIN POLE ANTENNA
SSRLP	SPREAD SPECTRUM RADIO COMMUNICATION WITH 3 dB GAIN DOME ANTENNA
SSRW	SPREAD SPECTRUM RADIO COMMUNICATION WITH LOW GAIN WHIP ANTENNA

Satalite Assembly Options

Master List For Rain Bird® Satellite Assembly Options (Cont.)

ETHERNET COMMUNICATION – CENTRAL COMPUTER TO CCU, and CCU to SATELLITE

PART #	DESCRIPTION
TACSOFT	TACTICAL SOFTWARE SERIAL/IP REDIRECTOR SOFTWARE FOR COMPUTER
ETH-PME	PRIMARY ETHERNET DEVICE FOR CLUSTER CONTROL UNIT
ETH-SE	SECONDARY ETHERNET DEVICE FOR CCU or SATELLITE (LINK MODEL ONLY)

ENCLOSURE MOUNTING OPTIONS

PART #	DESCRIPTION
MP16	MOUNTING PAD – 16” WIDE TOP ENTRY ENCLOSURE
MP22	MOUNTING PAD – 22” WIDE TOP ENTRY ENCLOSURE
MP18	MOUNTING PAD – 18” WIDE FRONT ENTRY ENCLOSURE
MP18D	MOUNTING PAD – 18” DOUBLE-WIDE FRONT ENTRY ENCLOSURE
MP24	MOUNTING PAD – 24” WIDE FRONT ENTRY ENCLOSURE
MP24D	MOUNTING PAD – 24” DOUBLE-WIDE FRONT ENTRY ENCLOSURE
MP36	MOUNTING PAD – 36” WIDE DOUBLE FRONT ENTRY ENCLOSURE
MP-MT	MOUNTING PAD – 28” WIDE METER + CONTROLLER ENCLOSURE
MP-M	MOUNTING PAD – 18” WIDE METER ENCLOSURE ONLY

DATA COLLECTION – Applies to all satellites

PART #	DESCRIPTION
DAT-XX	MAXICOM SITE DATA COLLECTION FOR 12-40 STATION SATELLITE

Satalite Assembly Options

Master List For Rain Bird® Satalite Assembly Options (Cont.)

MAXICOM™ Two-Wire System Options Only

SENSOR EQUIPMENT

IMPERIAL PART #	DESCRIPTION
FS/FSO-XXX	FLOW SENSING ASSEMBLY
FSM/FSMO-XXX	FLOW SENSING and MONITOR ASSEMBLY
FSV-XXXB	FLOW SENSING and MASTER VALVE ASSEMBLY - Bermad®
FSV-XXXN	FLOW SENSING and MASTER VALVE ASSEMBLY - Netafim®
SRG	SATELLITE RAIN GAUGE ASSEMBLY
SRGP	SATELLITE RAIN GAUGE POLE MOUNTED ASSEMBLY
SRSE	SATELLITE RAIN SENSOR ENCLOSURE MOUNTED ASSEMBLY
SRS	SATELLITE RAIN SENSOR ASSEMBLY

SURGE PROTECTION – COMMUNICATION CABLE

PART #	DESCRIPTION
MSP	MAXICOM SURGE PIPE ASSEMBLY

DECODERS

PART #	DESCRIPTION
SED	SENSOR DECODER ASSEMBLY
PUD	PULSE DECODER ASSEMBLY

Satalite Assembly Options

Master List For Rain Bird® Satellite Assembly Options (Cont.)

MAXICOM™ Two-Wire System Options Only

TWO WIRE COMMUNICATION and FLOW SENSING CABLE (Specified and purchased separately)

IMPERIAL PART #	DESCRIPTION
P-7072D**	PAIGE ELECTRIC COMMUNICATION CABLE – 14 AWG/2 Conductor “MAXI” Cable with two type UF wires with a PE outer jacket. The colors of the outer jacket shall be as called-for in the irrigation plans and specifications.
P-7073D-3**	PAIGE ELECTRIC COMMUNICATION CABLE – 3 Pair 19 AWG Multi-conductor shall be individual solid annealed bare copper conductors twisted into pairs with varying lays to minimize crosstalk. The conductors shall be electrically continuous thick polymer coated, corrugated aluminum tape applied longitudinally with overlapped edges and flooded with a flooding compound and jacketed in black polyethylene.
P- P-7073D-6**	PAIGE ELECTRIC COMMUNICATION CABLE – 6 Pair 19 AWG Multi-conductor shall be individual solid annealed bare copper conductors twisted into pairs with varying lays to minimize crosstalk. The conductors shall be electrically continuous thick polymer coated, corrugated aluminum tape applied longitudinally with overlapped edges and flooded with a flooding compound and jacketed in black polyethylene.
P-7162D**	PAIGE ELECTRIC FLOW SENSING CABLE – 2 conductor 16 AWG stranded annealed copper covered with a .004 wall of stabilizing nylon. The conductors shall be twisted and encased in a single outer jacket of .050”. The two conductors shall be color coded with one conductor yellow and the other grey. Maximum distance is 2000’.

**It is recommended that Communication and Flow Sensing Cable be installed in conduit with pull boxes located every 250’ and at all crossings. Please refer to the customers requirements for specific conduit size and pull box requirements.

MAXICOM™ Link Radio System Options Only

SENSOR EQUIPMENT

PART #	DESCRIPTION
LFS/LFSO-XXX	LINK FLOW SENSOR ASSEMBLY
LFSM /LFSMO-XXX	LINK FLOW SENSOR & FLOW MONITOR
LFSMA	LINK FLOW SENSOR ASSEMBLY & FLOW MONITOR (NO SENSOR)
LSRSE	LINK SATELLITE RAIN SENSOR ENCLOSURE MOUNTED ASSEMBLY
LSRS	LINK SATELLITE RAIN SENSOR ASSEMBLY
LSRG	LINK SATELLITE RAIN GAUGE ASSEMBLY
LSRGP	LINK SATELLITE RAIN GAUGE AND ASSEMBLY
LETG	LINK SATELLITE ET GAUGE ASSEMBLY
LETGP	LINK SATELLITE ET GAUGE & POLE ASSEMBLY
LETGE	ET GAUGETM WITH ENCLOSURE

Satellite Assembly Options

Master List For Rain Bird® Satellite Assembly Options (Cont.)

MAXICOM™ Link Radio System Options Only

LINK RADIO COMMUNICATION – CCU TO SATELLITE ONLY

PART #	DESCRIPTION
RD	RADIO, MODEM & DOME ANTENNA ASSEMBLY
RDC	RADIO, MODEM, DOME, ANTENNA & CAM ASSEMBLY
RLP	RADIO, MODEM & LOPRO ANTENNA ASSEMBLY
RW	RADIO, MODEM, & INTERNAL WHIP ANTENNA ASSEMBLY
RCW	RADIO, MODEM, CAM, & INTERNAL WHIP ANTENNA ASSEMBLY
RCLP	RADIO, MODEM, LOPRO ANTENNA & CAM ASSEMBLY
RO	RADIO, MODEM & OMNI ANTENNA ASSEMBLY
ROP	RADIO, MODEM, OMNI ANTENNA & POLE ASSEMBLY
RCOP	RADIO, MODEM, CAM, OMNI ANTENNA & POLE ASSEMBLY
RY	RADIO, MODEM & YAGI (Directional) ANTENNA ASSEMBLY
RYP	RADIO, MODEM & YAGI (Directional) ANTENNA & POLE ASSEMBLY
RCY	RADIO, MODEM, CAM, & YAGI (Directional) ANTENNA ASSEMBLY

SPECIAL SENSOR EQUIPMENT (FOR SYNTHETIC TURF FIELD TEMPERATURE MEASUREMENT)

PART #	DESCRIPTION
HTSM	HIGH TEMPERATURE & MONITOR ASSEMBLY
GW101	WATER TEMPERATURE PROBE ASSEMBLY

MAXICOM™

Satellite Assembly Options

SPECIFICATIONS FOR FACTORY INSTALLED SATELLITE ASSEMBLY OPTIONS (All MAXICOM™ Controllers)

Relays

PART #	DESCRIPTION
	MASTER VALVE RELAY ASSEMBLY
MVR	The Satellite Assembly shall be provided with a Master Valve Relay assembly for the purpose of multiple satellite operation of a single normally closed master valve. This assembly shall consist of a relay mounted on the terminal interface board. One MVR is required for each and all controllers sharing a single master valve. Master Valve Relays are not required for normally open master valves. If a controller is intended to control or operate a booster pump, the MVR may be used concurrently. No Pump Start Relay will be necessary in this case. This applies to normally open master valves only. With normally open master valves, an extra station on the controller will be necessary to utilize system shut-off capabilities.
	PUMP START RELAY ASSEMBLY
PSR	The Satellite Assembly shall be provided with a Pump Start Relay assembly for the purpose of controller initiated pump operation. This assembly shall consist of a relay pre-wired to a terminal strip. One PSR is required for each controller. A PSR is not required when Master Valve Relay(s) are being used simultaneously. The MVR may be used in lieu of the PSR.

Surge Protection and Master Valve Timer Equipment

PART #	DESCRIPTION
	SURGE PROTECTION – 120V.
SP	The Satellite Assembly shall be provided with a 110V. Surge 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 arrester installed on each leg of the 120 volt A.C. wiring to the MAXICOM equipment and housed in an electrical enclosure within the assembly. The SP is located at the point where the electrical power enters the assembly.
	MASTER VALVE POWER (VARIABLE) ASSEMBLY
MVP	The Satellite Assembly shall be provided with a Master Valve Power assembly for the purpose of powering the master valve circuit independent of controller operation to pressurize the mainline for supplemental watering. This assembly shall consist of a timing module (with variable timing in thirty minute increments for up to three hours) mounted to the face of the backboard and pre-wired to a terminal interface board.
	8' GROUND ROD and CLAMP (Ground Rods will be supplied with all Assemblies)
GR-K	The Satellite Assembly shall be provided with an 8' Ground Rod and Clamp for the purpose of providing grounding protection to the controller electrical components.

Satellite Assembly Options

SPECIFICATIONS FOR FACTORY INSTALLED SATELLITE ASSEMBLY OPTIONS (All MAXICOM™ Controllers)

MAXICOM™ Satellite Assembly Options Only

Remote Controls

PART #	DESCRIPTION
RRC	<p>REMOTE RECEIVER CONNECTOR ASSEMBLY</p> <p>RRC's will be included with all Satellite Controllers. Do not include in the Assembly specification.</p>
RECX	<p>TRC RADIO REMOTE RECEIVER & TRANSMITTER KIT</p> <p>The Satellite Assembly shall be provided with a TRC Radio Remote Transmitter and Receiver Kit for the purpose of activating irrigation valves remotely for a distance of approximately one mile from the controller location that is to be activated. The receiver shall have up to 32 outputs and a master valve output and is adaptable to any controller using 24 VAC and Remote Ready Connector (RRC). The Receiver and Transmitter Kit include antennas and carrying case.</p>
RCX	<p>TRC RADIO REMOTE TRANSMITTER KIT ONLY</p> <p>The Satellite Assembly shall be provided with a TRC Radio Remote Transmitter-only kit for the purpose of activating irrigation valves remotely for a distance of approximately one mile from the controller location that is to be activated. One transmitter shall be capable of communicating up to 199 receiver group cards (#TRC-RC). Receiver Cards must be installed in each Controller Assembly that transmitter is to activate</p>
RC	<p>TRC RADIO REMOTE RECEIVER CARD ONLY</p> <p>The Satellite Assembly shall be provided with a TRC Radio Remote Receiver Card for the purpose of activating irrigation valves remotely for a distance of approximately one mile with the use of a TRC transmitter (#TRC-XMT). The receiver card shall be capable of activating up to 56 stations; seven stations plus master valve simultaneously. Receiver Cards shall have access to 9999 security group codes. The TRC-RC shall be pre-mounted in each controller (one per controller). A Maxon type antenna is included with each receiver card. The TRC-RCA is available for Rain Bird ESP-MC, Irritrol MC+, Hunter ICC, and Superior Sterling controllers only.</p>
RCW	<p>TRC RADIO REMOTE RECEIVER CARDS (2), ANTENNA, AND TEE CONNECTOR</p> <p>The Satellite Assembly shall be provided with TRC Radio Remote Receiver Cards (2), Antenna, and Tee Connector for the purpose of activating irrigation valves remotely for a distance of approximately one mile with the use of a TRC transmitter (#RCX). The receiver card shall be capable of activating up to 56 stations; seven stations plus master valve simultaneously. Receiver Cards shall have access to 9999 security group codes. A #RC (Receiver Card) shall be pre-mounted in each of two controllers (one per). An enclosure mount dome type antenna shall be included along with a tee type connector to allow both Receiver Cards to share a single dome type antenna. The 2RCAT is available for Rain Bird® ESP-MC™, Irritrol®, Hunter® ICC™, and Superior® Sterling™ controllers only.</p>
TCON	<p>TRC RADIO REMOTE TEE CONNECTOR</p> <p>The Satellite Assembly shall be provided with a TRC Tee Connector for the purposes of connecting two TRC Receiver Cards to one antenna. This is typically done where two or more controllers are located adjacent to each other. The TRC-TCON shall be pre-mounted for each Receiver Card (one per #RC).</p>

Satalite Assembly Options

SPECIFICATIONS FOR FACTORY INSTALLED SATELLITE ASSEMBLY OPTIONS (All MAXICOM™ Controllers)

MAXICOM™ Satellite Assembly Options Only

Multiplexer Communication Sharing Device

PART #	DESCRIPTION
MPLX	<p>MULTIPLEXER</p> <p>The Satellite Assembly shall be provided with a Multiplexer device for the purpose of connecting multiple satellites to a CCU via multiple communications. The MPLX is designed to connect to a CCU and up four (4) local ESP Link Satellites using serial cables as well as UHF or Spread Spectrum to remote Link Satellites. Other methods of communication using MPLX are available. Contact your local ITS Representative for information.</p>
MPLX-INV	<p>MULTIPLEXER INVERTER</p> <p>The Satellite Assembly shall be provided with a Multiplexer Inverter for the purpose of inverting serial connection for modem to MPX ports on MPLX</p>
MPLX-PWR	<p>MULTIPLEXER POWER</p> <p>The Satellite Assembly shall be provided with a Multiplexer Power for the purpose of providing 9VDC when using multiple communication modems are connected to the MPLX.</p>
MPLX-CBL	<p>MULTIPLEXER CABLE</p> <p>The Satellite Assembly shall be provided with a Multiplexer Cable for the purpose of connecting modems to the MPX internal port on MPLX.</p>

Satellite Assembly Options

SPECIFICATIONS FOR FACTORY INSTALLED SATELLITE ASSEMBLY OPTIONS (All MAXICOM™ Controllers)

MAXICOM™ Satellite Assembly Options Only

Spread Spectrum Communication – CCU to Satellite

PART #	DESCRIPTION
SSRO-7	<p>SPREAD SPECTRUM RADIO COMMUNICATION WITH 7 dB GAIN ANTENNA</p> <p>The Satellite Assembly shall be provided with a 925 Mhz Spread Spectrum Radio Modem with 7 dB Gain Omni Antenna for the purposes of communicating to a Cluster Control unit or Site Sat from a central computer. The Spread Spectrum Radio shall be pre-wired to a Cluster Control unit or Site Satellite Modem and consists of full duplex wireless Spread Spectrum mounted in the Cluster Control unit or Site Satellite. One Spread Spectrum Radio and Modem is required at the Central Computer location and each of the Cluster Control Unit locations. The SSRO-7 shall consist of a Free Wave™ FGR-115RC Spread Spectrum, Antenex™ 7 dB Gain Omni Antenna, and 50' of LMR-400 cable. Please consult with your Imperial representative for site specific information requirements.</p>
SSROP-3	<p>SPREAD SPECTRUM RADIO COMMUNICATION WITH 7 dB GAIN POLE ANTENNA</p> <p>The Satellite Assembly shall be provided with a 925 Mhz Spread Spectrum Radio Modem with 7 dB Gain Omni Antenna for the purposes of communicating to a Cluster Control unit or Site Sat from a central computer. The Spread Spectrum Radio shall be pre-wired to a Cluster Control unit or Site Satellite Modem and consists of full duplex wireless Spread Spectrum mounted in the Cluster Control unit or Site Satellite. One Spread Spectrum Radio and Modem is required at the Central Computer location and each of the Cluster Control Unit locations. The SSROP-7 shall consist of a Free Wave™ FGR-115RC Spread Spectrum, Antenex™ 7 dB Gain Omni Antenna with a ten foot 1 ½" EMT pole. Please consult with your Imperial representative for site specific information requirements.</p>
SSRLP	<p>SPREAD SPECTRUM RADIO COMMUNICATION WITH 3 dB GAIN POLE ANTENNA</p> <p>The Satellite Assembly shall be provided with a 925 Mhz Spread Spectrum Radio Modem with 3 dB Gain Omni Antenna for the purposes of communicating to a Cluster Control unit or Site Sat from a central computer. The Spread Spectrum Radio shall be pre-wired to a Cluster Control unit or Site Satellite Modem and consists of full duplex wireless Spread Spectrum mounted in the Cluster Control unit or Site Satellite. One Spread Spectrum Radio and Modem is required at the Central Computer location and each of the Cluster Control Unit locations. The SSRLP shall consist of a Free Wave™ FGR-115RC Spread Spectrum, Antenex™ 3 dB Gain Omni Antenna with a ten foot 1 ½" EMT pole. Please consult with your Imperial representative for site specific information requirements.</p>
SSRW	<p>SPREAD SPECTRUM RADIO COMMUNICATION WITH 3 dB GAIN DOME ANTENNA</p> <p>The Satellite Assembly shall be provided with a 925 Mhz Spread Spectrum Radio Modem with 3 dB Gain LoPro Dome Antenna for the purposes of communicating to a Cluster Control unit or Site Sat from a central computer. The Spread Spectrum Radio shall be pre-wired to a Cluster Control unit or Site Satellite Modem and consists of full duplex wireless Spread Spectrum mounted in the Cluster Control unit or Site Satellite. One Spread Spectrum Radio and Modem is required at the Central Computer location and each of the Cluster Control Unit locations. The SSRLP shall consist of a Free Wave™ FGR-115RC Spread Spectrum and LoPro 3 dB Gain Dome Antenna. Please consult with your Imperial representative for site specific information requirements.</p>

Ethernet Communication Primary – Central Computer to CCU

PART #	DESCRIPTION
TACSOFT	<p>TACTICAL SOFTWARE SERIAL/IP REDIRECTOR SOFTWARE FOR COMPUTER ONLY</p> <p>The Satellite Assembly shall be provided with a Tactical software (download) for purposes of communicating from a central computer to Cluster Control (or Site Sat) Unit. This is for the computer side only.</p>
ETH-PME	<p>ETHERNET COMMUNICATION FROM CENTRAL COMPUTER TO CCU/Site Satellite</p> <p>The Satellite Assembly shall be provided with a primary communication Ethernet device for purposes of communicating from a central computer to Cluster Control (or Site Sat) unit and RS232 serial communication to TCP/IP. The Ethernet device shall be pre-wired to receive a CAT 5/6 cable installed by others. A static IP address, Subnet Mask, and Gateway must be provided by the IT Staff. This is for the Cluster Control Unit (CCU) side only.</p>

Satalite Assembly Options

SPECIFICATIONS FOR FACTORY INSTALLED SATELLITE ASSEMBLY OPTIONS (All MAXICOM™ Controllers)

MAXICOM™ Satellite Assembly Options Only

Ethernet Communication Primary – Central Computer to CCU

PART #	DESCRIPTION
TACSOFT	<p>TACTICAL SOFTWARE SERIAL/IP REDIRECTOR SOFTWARE FOR COMPUTER ONLY</p> <p>The Satellite Assembly shall be provided with a Tactical software (download) for purposes of communicating from a central computer to Cluster Control (or Site Sat) Unit. This is for the computer side only.</p>
ETH-PME	<p>ETHERNET COMMUNICATION FROM CENTRAL COMPUTER TO CCU/Site Satellite</p> <p>The Satellite Assembly shall be provided with a primary communication Ethernet device for purposes of communicating from a central computer to Cluster Control (or Site Sat) unit and RS232 serial communication to TCP/IP. The Ethernet device shall be pre-wired to receive a CAT 5/6 cable installed by others. A static IP address, Subnet Mask, and Gateway must be provided by the IT Staff. This is for the Cluster Control Unit (CCU) side only.</p>

Ethernet Communication Secondary – CCU to Satellite

PART #	DESCRIPTION
ETH-SE	<p>ETHERNET COMMUNICATION FROM CCU TO SATELLITE</p> <p>The Satellite Assembly shall be provided with a secondary communication Ethernet device for purposes of communicating from a Cluster Control Unit (secondary side) to a Link Satellite and RS232 serial communication to TCP/IP. The ETH-SE device shall be necessary for both CCU and Link Satellites. The Ethernet device shall be pre-wired to receive a CAT 5/6 cable installed by others. A static IP address, Subnet Mask, and Gateway must be provided by the IT Staff.</p>

Mounting Pad for Enclosures

PART #	DESCRIPTION
MP16	<p>MOUNTING PAD – 16” WIDE TOP ENTRY ENCLOSURE</p> <p>The Satellite/Controller Assembly shall be provided with an Enclosure Mounting Pad assembly for the purpose of mounting a 16” wide top entry 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.</p>
MP22	<p>MOUNTING PAD – 22” WIDE TOP ENTRY ENCLOSURE</p> <p>The Satellite/Controller Assembly shall be provided with an Enclosure Mounting Pad assembly for the purpose of mounting a 22” wide top entry 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.</p>
MP18	<p>MOUNTING PAD – 18” WIDE FRONT ENTRY ENCLOSURE</p> <p>The Satellite/Controller Assembly shall be provided with an Enclosure Mounting Pad assembly for the purpose of mounting an 18” wide front entry 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.</p>
MP18D	<p>MOUNTING PAD – 18” DOUBLE-WIDE FRONT ENTRY ENCLOSURE</p> <p>The Satellite/Controller Assembly shall be provided with an Enclosure Mounting Pad assembly for the purpose of mounting an 18” double-wide back-to-back entry 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.</p>

Satalite Assembly Options

For **Two-Wire System and Link Radio specific Options**, please refer to the following pages.

MAXICOM™ Two-Wire System Options

Specific to Two-Wire (hardwire) Communication only

Sensor Equipment – Two-Wire (hardwire) Communication Systems

PART #	DESCRIPTION
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FS/FSO-XXX

FLOW SENSING ASSEMBLY
 The Satellite Assembly shall be provided with a Flow Sensing assembly for use with a MAXICOM™ central control system in conjunction with a master valve for the purpose of monitoring flow and to shut down the system main line or zone valve(s) in the event of an excess flow condition. This assembly shall consist of a Data Industrial tee mounted sensor, a Rain Bird® pulse decoder and a Data Industrial® pulse output transmitter #322 pre-wired to a terminal strip.

Part #	Pipe Size	Tee Style	Velocity (FPS)	Flow Range
FS-100	1"	Brass	1/2 -15 FPS	2-30 GPM
FS-125	1 1/4"	Brass	1/2 -15 FPS	4-50 GPM
FS-150	1 1/2"	PVC	1 - 10 FPS	6-60 GPM
FS-200	2"	PVC	1 - 10 FPS	10-130 GPM
FS-250	2 1/2"	Brass	1/2 -15 FPS	15-175 GPM
FS-300	3"	PVC	1 - 10 FPS	23-300 GPM
FS-400	4"	PVC	1 - 10 FPS	40-500 GPM
FS-600	6-10"	PVC	1 - 10 FPS	90-1000 GPM

* Note: The FS-600+ Series shall include an insert sensor only. A tee or saddle in not included. The contractor shall be responsible for providing the appropriate tee or saddle type (brass, pvc, flanged etc.).

Sensor Equipment – Two-Wire (hardwire) Communication Systems

PART #	DESCRIPTION
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FSM/FSMO-XXX

FLOW SENSING and MONITOR ASSEMBLY
 The Satellite Assembly shall be provided with a Flow Sensing and Monitor assembly for use with a MAXCOM™ central control system in conjunction with a master valve(s) for the purpose of digital monitoring of current and total flow inputs, and to shut down the system main line or zone valve(s) in the event of excess flow conditions. This assembly shall consist of a Data Industrial® tee mounted sensor, a Rain Bird® pulse decoder and a Data Industrial® Model #1502 Flow Monitor pre-wired to a terminal strip.

Part #	Pipe Size	Tee Style	Velocity (FPS)	Flow Range
FS-100	1"	Brass	1/2 -15 FPS	2-30 GPM
FS-125	1 1/4"	Brass	1/2 -15 FPS	4-50 GPM
FS-150	1 1/2"	PVC	1 - 10 FPS	6-60 GPM
FS-200	2"	PVC	1 - 10 FPS	10-130 GPM
FS-250	2 1/2"	Brass	1/2 -15 FPS	15-175 GPM
FS-300	3"	PVC	1 - 10 FPS	23-300 GPM
FS-400	4"	PVC	1 - 10 FPS	40-500 GPM
FS-600	6-10"	PVC	1 - 10 FPS	90-1000 GPM

* Note: The FSM-600+ Series shall include an insert sensor only. A tee or saddle in not included. The contractor shall be responsible for providing the appropriate tee or saddle type (brass, pvc, flanged etc.).

Satalite Assembly Options

For **Two-Wire System and Link Radio specific Options**, please refer to the following pages.

MAXICOM™ Two-Wire System Options

Specific to Two-Wire (hardwire) Communication only

Sensor Equipment – Two-Wire (hardwire) Communication Systems

PART #	DESCRIPTION			
FSV/FSO-XXXB	BERMAD™ FLOW SENSOR/MASTER VALVE ASSEMBLY (Hydrometer) The Controller Assembly shall be provided with a combination flow meter and master valve (Hydrometer) assembly for the purpose of monitoring flow and shutting down the system main line or zone valve(s) in the event of excess flow conditions. This assembly shall consist of a Bermad™ flow meter/master valve combination for installation in the piping system. The sensor/meter includes a standard meter register for totalizing flow (GPM) and leak detection. The Flow Sensor/Master Valve may also be ordered with pressure reducing capabilities. Indicate –PR after FSV(-PR)-XXXB or FSV0(-PR)-XXXB.			
	Part #	Sensor/Valve Size	Velocity (FPS)	Flow Range
	FSV/FSO-150B	1 ½" MPT	5 – 7.5 FPS	2-30 GPM
	FSV/FSO-200B	2" FPT	5 – 7.5 FPS	4-50 GPM
	FSV/FSO-300B	3" Flanged	5 – 7.5 FPS	6-60 GPM
	FSV/FSO-400B	4" Flanged	5 – 7.5 FPS	10-130 GPM
	FSV/FSO-600B	6" Flanged	5 – 7.5 FPS	15-175 GPM
	FSV/FSO-800B	8" Flanged	5 – 7.5 FPS	23-300 GPM

Note: The flow range is based on accuracy of +/-5%, Friction loss ranges from .01 (lower flow) to 5.8 psi (higher flow).

Sensor Equipment – Two-Wire (hardwire) Communication Systems

PART #	DESCRIPTION			
FSV/FSVO-XXXN	NETAFIM™ FLOW SENSOR/MASTER VALVE ASSEMBLY (Hydrometer) The Controller Assembly shall be provided with a combination flow meter and master valve (Hydrometer) assembly for the purpose of monitoring flow and shutting down the system main line or zone valve(s) in the event of excess flow conditions. This assembly shall consist of a Netafim™ flow meter/master valve combination for installation in the piping system and Flow Sensor Adapter Board (FSB) for compatibility with any controller. The sensor/meter includes a standard meter register for totalizing flow (GPM) and leak detection. The Flow Sensor/Master Valve may also be ordered with pressure reducing capabilities. Indicate –PR after FSV(-PR)-XXXN or FSV0(-PR)-XXXN.			
	Part #	Sensor/Valve Size	Velocity (FPS)	Flow Range
	FSV/FSO-150N	1 ½" MPT	5 – 7.5 FPS	1.8-55 GPM
	FSV/FSO-200N	2" FPT	5 – 7.5 FPS	5.3-95 GPM
	FSV/FSO-300N	3" Flanged	5 – 7.5 FPS	14-220 GPM
	FSV/FSO-400N	4" Flanged	5 – 7.5 FPS	21-380 GPM
	FSV/FSO-600N	6" Flanged	5 – 7.5 FPS	53-860 GPM
	FSV/FSO-800N	8" Flanged	5 – 7.5 FPS	97-1500 GPM

Note: The flow range is based on accuracy of +/-5%, Friction loss ranges from .01 (lower flow) to 5.8 psi (higher flow).

Satalite Assembly Options

For **Two-Wire System and Link Radio specific Options**, please refer to the following pages.

MAXICOM™ Two-Wire System Options

Specific to Two-Wire (hardwire) Communication only

Sensor Equipment – Two-Wire Communication Systems Cont.

PART #	DESCRIPTION
SRG	<p>SATELLITE RAIN GAUGE ASSEMBLY</p> <p>The Satellite Assembly or Cluster Control Unit Assembly shall be provided with a Satellite Rain Gauge Assembly for the purpose of measuring rain fall, and to shut down the irrigation system; This assembly shall consist of a tipping rain gauge with bracket and a Rain Bird® Pulse Decoder pre-wired to a terminal strip (the rain gauge is designed for mounting on a remote structure). Only one SRG is required for each cluster control unit</p>
SRGP	<p>SATELLITE RAIN GAUGE POLE MOUNTED ASSEMBLY</p> <p>The Satellite Assembly or Cluster Control Unit Assembly shall have a Satellite Rain Gauge Pole Mounted Assembly for the purpose of measuring rain fall, and to shut down the irrigation system. This assembly shall consist of a tipping rain gauge with bracket, twelve foot by two inch galvanized steel pole, and Rain Bird® Pulse Decoder pre-wired to a terminal strip (the pole mounted rain gauge is designed for installation adjacent to or remote from the Satellite or Cluster Control Unit location). Only one SRGP is required for each cluster control unit.</p>
SRSE	<p>SATELLITE RAIN SENSOR ENCLOSURE MOUNTED ASSEMBLY</p> <p>The Satellite or Cluster Control Unit Assembly shall be provided with a Satellite Rain Sensor Enclosure Mounted Assembly for the purpose of shutting down the irrigation system during rainy weather. This assembly shall consist of a Rain Bird® Sensing Decoder, Mini-Click II rain switch (in a stainless steel, vandal resistant housing mounted on the right hand side of the enclosure) and a relay pre-wired to the communication wire terminal strip. Only one SRSE is required for each cluster control unit. The SRSE shall be UL Listed and Approved for each cluster control unit.</p>
SRS	<p>SATELLITE RAIN SENSOR ASSEMBLY</p> <p>The Satellite Assembly shall be provided with a Rain Sensor Assembly for the purpose of shutting down the irrigation system during rainy weather. This assembly shall consist of a Rain Bird® Sensing Decoder, Mini-Click II™ rain sensor (for remote mounting) and a relay pre-wired to the communication wire terminal strip. Only one SRS is required for each cluster control unit.</p>
SETG	<p>SATELLITE ET GAUGETM</p> <p>The Satellite Assembly or Cluster Control Unit Assembly shall have a ET Gauge Assembly for the purposes of measuring EvapoTranspiration (ET) and to adjust the irrigation system watering schedules. This assembly shall consist of an Et Gauge and Rain Bird® Pulse Decoder pre-wired to a terminal strip (the ET Gauge is designed for mounting on a remote structure).</p>
SETGP	<p>SATELLITE ET GAUGETM POLE MOUNTED ASSEMBLY</p> <p>The Satellite Assembly or Cluster Control Unit Assembly shall have a ET Gauge Assembly for the purposes of measuring EvapoTranspiration (ET) and to adjust the irrigation system watering schedules. This assembly shall consist of an Et Gauge with bracket, twelve foot by two inch galvanized steel pole and Rain Bird® Pulse Decoder pre-wired to a terminal strip (the ET Gauge is designed for mounting on a remote structure).</p>
SETGE	<p>SATELLITE ET GAUGETM with Enclosure</p> <p>The Satellite Assembly or Cluster Control Unit Assembly shall have a ET Gauge Assembly for the purposes of measuring EvapoTranspiration (ET) and to adjust the irrigation system watering schedules. This assembly shall consist of an ET Gauge, Rain Bird® Pulse Decoder and Round Stainless Steel Enclosure.</p>

Satalite Assembly Options

For **Two-Wire System and Link Radio specific Options**, please refer to the following pages.

MAXICOM™ Two-Wire System Options

Specific to Two-Wire (hardwire) Communication only

Surge Protection – Communication Cable

PART #	DESCRIPTION
MSP	<p>MAXICOM SURGE PIPE ASSEMBLY</p> <p>The Satellite Assembly shall be provided with a MAXICOM™ Surge Pipe assembly for the purpose of protecting the components against electrical surge that may come in on the communication wire. This assembly shall consist of a surge arrester mounted to the backboard and pre-wired to a terminal strip. The MSP assembly is recommended for use when the communication wire links remote satellites to each other or to the cluster control unit.</p>

Decoders

PART #	DESCRIPTION
SED	<p>SENSOR DECODER ASSEMBLY</p> <p>The Satellite Assembly shall be provided with a Sensor Decoder assembly for the purpose of providing feedback from sensing devices (moisture sensors, etc.) to the system. This assembly shall consist of a Rain Bird® Sensor Decoder pre-wired to a terminal strip. The SED for use with Rain Bird's MAXICOM™ system only.</p>
PUD	<p>PULSE DECODER ASSEMBLY</p> <p>The Satellite Assembly shall be provided with a Pulse decoder assembly for the purpose of monitoring and recording performance information such as rain, flow, wind, etc. This assembly shall consist of a Rain Bird® Pulse Decoder pre-wired to a terminal strip. The PUD is for use with the Rain Bird® MAXICOM™ system only.</p>

Satalite Assembly Options

For **Two-Wire System and Link Radio specific Options**, please refer to the following pages.

MAXICOM™ LINK RADIO System Options

Specific to Link Radio Communication only

Sensor Equipment – Link Communication Systems

PART #	DESCRIPTION			
LFS	LINK FLOW SENSOR ASSEMBLY The Satellite Assembly shall be provided with a Flow Sensing assembly for use with a MAXICOM™ central control system in conjunction with a master valve for the purpose of monitoring flow and to shut down the system main line or zone valve(s) in the event of an excess flow condition.			
Part #	Pipe Size	Tee Style	Velocity (FPS)	Flow Range
FS-100	1"	Brass	1/2 -15 FPS	2-30 GPM
FS-125	1 1/4"	Brass	1/2 -15 FPS	4-50 GPM
FS-150	1 1/2"	PVC	1 - 10 FPS	6-60 GPM
FS-200	2"	PVC	1 - 10 FPS	10-130 GPM
FS-250	2 1/2"	Brass	1/2 -15 FPS	15-175 GPM
FS-300	3"	PVC	1 - 10 FPS	23-300 GPM
FS-400	4"	PVC	1 - 10 FPS	40-500 GPM
FS-600+	6-10"	PVC	1 - 10 FPS	90-1000 GPM

* Note: The FS-600+ Series shall include an insert sensor only. A tee or saddle in not included. The contractor shall be responsible for providing the appropriate tee or saddle type (brass, pvc, flanged etc.).

Sensor Equipment – Link Communication Systems

PART #	DESCRIPTION			
LFSM	LINK FLOW SENSOR & MONITOR The Satellite Assembly shall be provided with a Flow Sensing and Monitor assembly for use with a MAXCOM™ central control system in conjunction with a master valve(s) for the purpose of digital monitoring of current and total flow inputs, and to shut down the system main line or zone valve(s) in the event of excess flow conditions. .			
Part #	Pipe Size	Tee Style	Velocity (FPS)	Flow Range
FS-100	1"	Brass	1/2 -15 FPS	2-30 GPM
FS-125	1 1/4"	Brass	1/2 -15 FPS	4-50 GPM
FS-150	1 1/2"	PVC	1 - 10 FPS	6-60 GPM
FS-200	2"	PVC	1 - 10 FPS	10-130 GPM
FS-250	2 1/2"	Brass	1/2 -15 FPS	15-175 GPM
FS-300	3"	PVC	1 - 10 FPS	23-300 GPM
FS-400	4"	PVC	1 - 10 FPS	40-500 GPM
FS-600	6-10"	PVC	1 - 10 FPS	90-1000 GPM

* Note: The FSM-600+ Series shall include an insert sensor only. A tee or saddle in not included. The contractor shall be responsible for providing the appropriate tee or saddle type (brass, pvc, flanged etc.).

Satalite Assembly Options

For **Two-Wire System and Link Radio specific Options**, please refer to the following pages.

MAXICOM™ LINK RADIO System Options

Specific to Link Radio Communication only

Sensor Equipment – Link Communication Systems Cont.

PART #	DESCRIPTION
LSRSE	<p>LINK SATELLITE RAIN SENSOR ENCLOSURE MOUNTED ASSEMBLY</p> <p>The Satellite or Cluster Control Unit Assembly shall be provided with a Site Rain Sensor Enclosure Mounted Assembly for the purpose of shutting down the irrigation system during rainy weather. This assembly shall consist of a Mini-Click II rain switch (in a stainless steel, vandal resistant housing mounted on the right hand side of the enclosure) and a relay pre-wired to the communication wire terminal strip. Only one LSRSE is required for each cluster control unit. The LSRSE shall be UL Listed and Approved for any UL Listed and Approved stainless steel enclosure.</p>
LSRGP	<p>LINK SATELLITE RAIN SENSOR ASSEMBLY</p> <p>The Satellite Assembly shall be provided with a Rain Sensor Assembly for the purpose of shutting down the irrigation system during rainy weather. This assembly shall consist of a Mini-Click II™ rain sensor (for remote mounting) and a relay pre-wired to the communication wire terminal strip. Only one LSRS is required for each cluster control unit</p>
SRSE	<p>LINK SATELLITE RAIN GAUGE ASSEMBLY</p> <p>The Satellite Assembly or Cluster Control Unit Assembly shall be provided with a Site Rain Gauge Assembly for the purpose of measuring rain fall, and to shut down the irrigation system. This assembly shall consist of a tipping rain gauge with bracket (the rain gauge is designed for mounting on a remote structure). Only one LSRG is required for each cluster control unit.</p>
LETG	<p>LINK SATELLITE RAIN GAUGE AND ASSEMBLY</p> <p>The Satellite Assembly or Cluster Control Unit Assembly shall have a Site Rain Gauge Pole Mounted Assembly for the purpose of measuring rain fall, and to shut down the irrigation system. This assembly shall consist of a tipping rain gauge with bracket and ten foot EMT 1 1/2" pole (the pole mounted rain gauge is designed for installation adjacent to or remote from the Satellite or Cluster Control Unit location). Only one LSRGP is required for each cluster control unit.</p>
LETGP	<p>LINK SATELLITE ET GAUGE ASSEMBLY</p> <p>The Satellite Assembly or Cluster Control Unit Assembly shall have an ET Gauge Assembly for the purposes of measuring EvapoTranspiration (ET) and to adjust the irrigation system watering schedules. This assembly shall consist of an ET Gauge (the ET Gauge is designed for mounting on a remote structure).</p>
LETGE	<p>LINK SATELLITE ET GAUGE & POLE ASSEMBLY</p> <p>The Satellite Assembly or Cluster Control Unit Assembly shall have an ET Gauge Assembly for the purposes of measuring EvapoTranspiration (ET) and to adjust the irrigation system watering schedules. This assembly shall consist of an ET Gauge with bracket and ten foot EMT 1 1/2" pole.</p>

Satellite Assembly Options

For **Two-Wire System and Link Radio specific Options**, please refer to the following pages.

MAXICOM™ LINK RADIO System Options

Specific to Link Radio Communication only

Link Radio Communication – CCU to Satellite

PART #	DESCRIPTION
RD	RADIO, MODEM & DOME ANTENNA ASSEMBLY The Satellite Assembly shall be provided with a radio, modem and dome antenna assembly for the purpose of communicating to a Cluster Control Unit via Link line-of-site Radio. This assembly shall consist of a 450-470 MHz radio and UHF transit dome antenna.
RCD	RADIO, MODEM, DOME, ANTENNA & CAM ASSEMBLY The Satellite Assembly shall be provided with a radio, modem, dome antenna and cluster adapter module assembly for the purpose of communicating to a Cluster Control Unit via Link line-of-site Radio. This assembly shall consist of a 450-470 MHz radio, UHF transit dome antenna and Cluster Adapter Module (CAM).
RLP	RADIO, MODEM & LOPRO ANTENNA ASSEMBLY The Satellite Assembly shall be provided with a radio, modem and LoPro antenna assembly for the purpose of communicating to a Cluster Control Unit via Link line-of-site Radio. This assembly shall consist of a 450-470 MHz radio, and 445-470 MHz LoPro antenna.
RW	RADIO, MODEM, & INTERNAL WHIP ANTENNA ASSEMBLY The Satellite Assembly shall be provided with a radio, modem and internal whip antenna assembly for the purpose of communicating to a Cluster Control Unit via Link line-of-site Radio. This assembly shall consist of a 450-470 MHz radio, and 445-470 MHz internal mounted whip antenna.
RCW	RADIO, MODEM, CAM, & INTERNAL WHIP ANTENNA ASSEMBLY The Satellite Assembly shall be provided with a radio, modem, internal whip antenna, and Cluster Adapter Module (CAM) assembly for the purpose of communicating to a Cluster Control Unit via Link line-of-site Radio. This assembly shall consist of a 450-470 MHz radio, and 445-470 MHz internal mounted whip antenna.
RCLP	RADIO, MODEM, LOPRO ANTENNA & CAM ASSEMBLY The Satellite Assembly shall be provided with a radio, modem, LoPro antenna and Cluster Adapter Module (CAM) assembly for the purpose of communicating to a Cluster Control Unit via Link line-of-site Radio. This assembly shall consist of a 450-470 MHz radio, 445-470 MHz LoPro antenna and Cluster Adapter Module and twenty-one foot galvanized 2" pole.
RO	RADIO, MODEM, LOPRO ANTENNA & CAM ASSEMBLY The Satellite Assembly shall be provided with a radio, modem, LoPro antenna and Cluster Adapter Module (CAM) assembly for the purpose of communicating to a Cluster Control Unit via Link line-of-site Radio. This assembly shall consist of a 450-470 MHz radio, 445-470 MHz LoPro antenna and Cluster Adapter Module and twenty-one foot galvanized 2" pole.
ROP	RADIO, MODEM & OMNI ANTENNA ASSEMBLY The Satellite Assembly shall be provided with a radio, modem and Omni antenna assembly for the purpose of communicating to a Cluster Control Unit via Link line-of-site Radio. This assembly shall consist of a 450-470 MHz radio, and Larson Omni type antenna.
RCOP	RADIO, MODEM, OMNI ANTENNA & POLE ASSEMBLY The Satellite Assembly shall be provided with a radio, modem, Omni antenna and galvanized pole assembly for the purpose of communicating to a Cluster Control Unit via Link line-of-site Radio. This assembly shall consist of a 450-470 MHz radio, Larson Omni type antenna and ten foot EMT 1 1/2" pole.

Satalite Assembly Options

For **Two-Wire System and Link Radio specific Options**, please refer to the following pages.

MAXICOM™ LINK RADIO System Options

Specific to Link Radio Communication only

Link Radio Communication – CCU to Satellite Cont.

PART #	DESCRIPTION
	RADIO, MODEM & YAGI ANTENNA ASSEMBLY
RY	The Satellite Assembly shall be provided with a radio, modem and Yagi antenna assembly for the purpose of communicating to a Cluster Control Unit via Link line-of-site Radio. This assembly shall consist of a 450-470 MHz radio, and 445-470 MHz Yagi type antenna.
	RADIO, MODEM & YAGI ANTENNA ASSEMBLY
RYP	The Satellite Assembly shall be provided with a radio, modem and Yagi antenna assembly for the purpose of communicating to a Cluster Control Unit via Link line-of-site Radio. This assembly shall consist of a 450-470 MHz radio, 445-470 MHz Yagi type antenna, and ten foot EMT 1 1/2" pole.
	RADIO, MODEM, CAM, & YAGI ANTENNA ASSEMBLY
RCY	The Satellite Assembly shall be provided with a radio, modem, Yagi antenna assembly, and Cluster Adapter Module (CAM) assembly for the purpose of communicating to a Cluster Control Unit via Link line-of-site Radio. This assembly shall consist of a 450-470 MHz radio, and 445-470 MHz Yagi type antenna.

Special Sensor Equipment – High Temperature Sensor for Synthetic Turf Fields

PART #	DESCRIPTION
	HIGH TEMPERATURE AND MONITOR ASSEMBLY
HTSM	The Satellite Assembly shall be provided with a High Temperature and Monitor Assembly for the purpose of measuring synthetic field temperatures via MAXICOM utilizing sensor probes # GW101. The HTSM shall consist of a Model 3100 Flow Monitor and Power Supply pre-mounted within Satellite Assembly.
	WATER TEMPERATURE PROBE ASSEMBLY
GW101	The Satellite Assembly shall be provided with Water Temperature Probe Assembly for the purpose of measuring synthetic field temperatures via MAXICOM connected to High Temperature Monitor #HTSM. The GW101 shall consist of two WQ101 Temperature Sensors and 25 feet of cable for installing in the field.