

Flow Sensors – BSP

Flow Sensing for Maxicom², SiteControl[™], IQ[™] v2.0, LXD, LXME, LXMEF

Rain Bird flow sensors send flow data to central control or stand-alone control systems for precise and accurate flow monitoring. Rain Bird flow sensors enable you to capitalize on the advantages of Flow Management functionality. Use Rain Bird Flow Sensors with Rain Bird Maxicom², SiteControl and IQ v2.0 central control applications or in standalone systems using Rain Bird LXD, LXME and LXMEF controllers to benefit from:

Flo-Watch[™]. Flo-Watch constantly monitors for low flow and excess flow conditions caused by broken lines or heads, automatically quarantines and shuts down the problem area and continues to irrigate non affected areas. Saves water, saves plant material and enables irrigation programs to continue and complete.

Learned Flow. The controller automatically learns station flow rates resulting in more accurate flow rates. The automatic collection prevents you from having to manually enter data from drawings or physically visiting each valve to collect flow data and manually entering the data into a controller.

FloManager[®]. FloManager determines the optimal station irrigating sequence. The system runs at its fullest capacity until programs are complete. The controller automatically selects and runs multiple valves at the same time within hydraulic parameters allowing for shorter water windows. Pressure and flow rates may be manually measured and entered into the controller to utilize FloManager functionality. Using a flow sensor and learned flow capabilities can help to optimize system performance.

Customers with ESP-LXME units only need to purchase a Flow Smart Module for the ESP-LXME to capitalize on Flo-Watch, Learned Flow and FloManager. Add IQ v2.0 to remotely manage your ESP-LXD, ESP-LXMEF and ESP-LXME controllers. Centrally managing your controllers with IQ v2.0 saves labor and time by eliminating constant monitoring of the site and trips to the controllers. Retrieve alarms or receive alarms via email regarding problem areas to dispatch maintenance personnel to check and repair.

Configuration

Maxicom² and SiteControl - (Hard Wire)

Two-Wire Satellite Systems: The Flow Sensor is installed with a Pulse Transmitter and a Rain Bird Pulse Decoder (DECPULLR).

Maxicom² - Link Radio Satellite Systems: The Flow Sensor is installed with a Pulse Transmitter (no decoder required).

SiteControl - Decoder System: Software version 2.X or lower, the flow sensor is installed with a Pulse Transmitter and a Two-Wire Decoder Sensor Decoder (SD211TURF). Software version 3.X or higher, the flow sensor is installed with a Two-Wire Decoder Sensor Decoder (pulse transmitter is optional).

IQ v2.0 - (Hard Wire) Two-Wire Systems: The Flow Sensor is installed with a Two-Wire Decoder Sensor Decoder (SD211TURF) (no pulse transmitter required).

IQ2 v2.0 - Traditional Wired Systems: Only the flow sensor is installed (no pulse transmitter, no decoder required).

LXD - (Hard Wire) Two-Wire Systems: The Flow Sensor is installed with a Two-Wire Decoder Sensor Decoder (SD211TURF) (no pulse transmitter required).

LXMEF - Traditional Wired Systems: Only the flow sensor is installed (no pulse transmitter, no decoder required).

Surge protection (FSSURGEKIT) is recommended for all systems - One at the Flow Sensor, and if more than 50' of wire run, one at the Pulse Transmitter.

Features (Sensors)

- Simple six-bladed impeller design
- Designed for outdoor or underground applications
- Available in PVC, brass or stainless steel construction
- Pre-installed in tee or insert versions

Features (Transmitters)

- Reliable solid-state design
- Display or signal-alone versions
- Easy-to-program, menu-driven design
- Programmable from a laptop computer (PT322)
- Operates with both MAXILink[™] and (hard wire) two-wire satellite systems
- Mounted in optional NEMA enclosure (PT3002 only)



How To Specify

IFS - 100 - P - BSP

IFS = International Flow Sensor

BSP = Female BSP
FL = Din Flanged

B = Brass
P = Plastic (PVC)
SS = Stainless Steel

150 = 40mm (1 1/2")
200 = 50mm (2")
300 = 75mm (3")

400 = 110mm (4")
350 = 75mm (3")
and higher

PT - 322 (Pulse Transmitters)

PT = Pulse Transmitter

322 = No read out
3002 = Digital readout

Operating Specifications (Sensors)

- Accuracy: ± 1% (full scale)
- Velocity: 1/2 - 30 feet (0,15 - 9,2 meters) per second, depending on model
- Pressure: 400 psi (27,5 bars) (max) on metal models; 100 psi (6,9 bars) (max) on plastic models
- Temperature: 220° F (105° C) (max) on metal models; 140° F (60° C) (max) on plastic models

Operating Specifications (Transmitters)

- Input required:
 - 12-30 VDC/VAC on PT322
 - 10.5-26 VAC (12-24 VAC rec.) on PT 1502
 - 12-24 VAC/VDC on PT 3002
- Output: pulse output
- Operating Temp: -4° F-158° F (-20° C to 70° C)

Rain Bird Flow Sensor K, Offset and Suggested Operating Range

The following tables indicate the suggested flow range for Rain Bird Flow Sensors. Rain Bird Sensors will operate both above and below the indicated flow rates. However, good design practice dictates the use of this range for best performance. Sensors should be sized for flow rather than pipe size.

| Flow Sensor Models | | | |
|---------------------------|--------------|--|--------------------------------|
| Part Number | Model Number | Description | Dimensions |
| Plastic Tee's | | | Length x Width x Height |
| M80118 | IFS400PFL | 4" (110mm) PVC Tee flow sensor with DIN Flanged ends | 340 mm x 220 mm x 240 mm |
| M80117 | IFS300PBSP | 3" (75mm) PVC Tee flow sensor with Female BSP straight threaded ends | 248 mm x 114 mm x 176 mm |
| M80116 | IFS200PBSP | 2" (50mm) PVC Tee flow sensor with Female BSP straight threaded ends | 225 mm x 89 mm x 151 mm |
| M80115 | IFS150PBSP | 1 1/2" (40mm) PVC Tee flow sensor with Female BSP straight threaded ends | 213 mm x 89 mm x 145 mm |
| M80114 | IFS100PBSP | 1" (25mm) PVC Tee flow sensor with Female BSP straight threaded ends | 172 mm x 63.5 mm x 132 mm * |
| M80113 | IFS075PBSP | ¾" (20mm) PVC Tee flow sensor with Female BSP straight threaded ends | 172 mm x 63.5 mm x 130 mm * |
| M80112 | IFS050PBSP | ½" (12mm) PVC Tee flow sensor with Female BSP straight threaded ends | 155 mm x 50.8 mm x 121 mm * |
| Inserts | | | Length x Diameter |
| M80106 | FS350SS | Stainless Steel Insert | 181 mm x 76 mm |
| M80105 | FS350B | Brass Insert | 181 mm x 76 mm |
| Wind Sensor | | | Length x Width x Height |
| M80302 | ANEMOMETER | Wind Speed Monitor - Anemometer | 56 cm x 20 cm x 20 cm |
| Pulse Transmitters | | | Length x Width x Height |
| M80201 | PT322 | Pulse Transmitter, no display | 93 mm x 56 mm x 44 mm |
| M80206 | PT3002 | Pulse Transmitter, LCD display | 96 mm x 56 mm x 96 mm |
| M80202 | PT322SW | PT322 Programming Software | - |
| M80204 | PTPWRSUPP | Pulse Transmitter Power Supply | - |
| M80205 | NEMACAB | NEMA Enclosure for PT3002 (only) | - |
| Accessories | | | |
| M80303 | FSTINSERT | Flanged Irrigation PPS Insert Assembly | - |
| M80301 | FSSURGEKIT | Flow Sensor Surge Protection Kit | - |
| M13012 | SD211TURF | Sensor Decoder for Decoder Systems | - |
| M51200 | DECPULLR | Pulse Decoder For Two Wire Satellites | - |

| K Value, Offset and Suggested Operating Range | | | | | | |
|---|--|---|---------|--|---|---|
| Model | Description | K Value | Offset | Suggested Operating Range (Gallons/Minute) | Suggested Operating Range (Liters/Minute) | Suggested Operating Range (Cubic Meters/Hour) |
| Plastic Tee's | | | | | | |
| IFS400PFL | 4" (110mm) PVC Tee flow sensor with DIN Flanged ends | 13.7424 | 0.23707 | 40 - 500 | 150 - 1890 | 9.1 - 113.6 |
| IFS300PBSP | 3" (75mm) PVC Tee flow sensor with Female BSP straight threaded ends | 8.309 | 0.227 | 20 - 300 | 78 - 1134 | 4.5 - 68.1 |
| IFS200PBSP | 2" (50mm) PVC Tee flow sensor with Female BSP straight threaded ends | 2.8429 | 0.1435 | 10 - 200 | 36 - 756 | 2.3 - 45.4 |
| IFS150PBSP | 1 1/2" (40mm) PVC Tee flow sensor with Female BSP straight threaded ends | 1.697 | -0.316 | 5 - 100 | 18 - 378 | 1.1 - 22.7 |
| IFS100PBSP | 1" (25mm) PVC Tee flow sensor with Female BSP straight threaded ends | 0.26112 | 1.2 | 5.4 - 53.9 | 20.4 - 204 | 1.2 - 12.2 * |
| IFS075PBSP | ¾" (20mm) PVC Tee flow sensor with Female BSP straight threaded ends | 0.1563 | 0.9 | 3.3 - 33.2 | 12.6 - 125.8 | 0.75 - 7.5 * |
| IFS050PBSP | ½" (12mm) PVC Tee flow sensor with Female BSP straight threaded ends | 0.078 | 0.9 | 1.9 - 18.9 | 7.2 - 71.7 | 0.43 - 4.3 * |
| Inserts | | | | | | |
| FS350B | Brass Insert Flow Sensor | Depends on Pipe Type and Size - See Chart Below | | | | |
| FS350SS | Stainless Steele Insert Flow Sensor | Depends on Pipe Type and Size - See Chart Below | | | | |

* discontinued models

FS350B and FS350SS: K Value, Offset and Suggested Operating Range

| Pipe Size | Pipe O.D. | Pipe I.D. | K Value | Offset | Suggested Operating Range (Gallons/Minute) | Suggested Operating Range (Liters/Minute) | Suggested Operating Range (Cubic Meters/Hour) |
|----------------------|-----------|-----------|---------|--------|--|---|---|
| 3 inch Sch 10S | 3.500" | 3.260" | 5.009 | 0.09 | 12-400 | 50-1500 | 0-90 |
| Std. Wt., Sch 40 | 3.5" | 3.068" | 4.362 | 0.063 | 12-400 | 50-1500 | 0-90 |
| Extra Strong, Sch 80 | 3.5" | 2.900" | 3.858 | 0.043 | 12-400 | 50-1500 | 0-90 |
| PVC Class 125 | 3.5" | 3.284" | 5.094 | 0.093 | 12-400 | 50-1500 | 0-90 |
| PVC Class 160 | 3.5" | 3.230" | 4.902 | 0.085 | 12-400 | 50-1500 | 0-90 |
| PVC Class 200 | 3.5" | 3.166" | 4.682 | 0.076 | 12-400 | 50-1500 | 0-90 |
| 4 inch Sch 10S | 4.5" | 4.260" | 9.597 | 0.241 | 20-600 | 80-2300 | 0-140 |
| Std. Wt., Sch 40 | 4.5" | 4.026" | 8.34 | 0.229 | 20-600 | 80-2300 | 0-140 |
| Extra Strong, Sch 80 | 4.5" | 3.826" | 7.354 | 0.188 | 20-600 | 80-2300 | 0-140 |
| PVC Class 125 | 4.5" | 4.224" | 9.396 | 0.24 | 20-600 | 80-2300 | 0-140 |
| PVC Class 160 | 4.5" | 4.154" | 9.013 | 0.24 | 20-600 | 80-2300 | 0-140 |
| PVC Class 200 | 4.5" | 4.072" | 8.578 | 0.239 | 20-600 | 80-2300 | 0-140 |
| 5 inch Sch 10S | 5.563" | 5.295" | 16.305 | 0.25 | 30-900 | 110-3400 | 10-200 |
| Std. Wt., Sch 40 | 5.50" | 5.047" | 14.674 | 0.248 | 30-900 | 110-3400 | 10-200 |
| Extra Strong, Sch 80 | 5.50" | 4.813" | 13.165 | 0.246 | 30-900 | 110-3400 | 10-200 |
| 6 inch Sch 10S | 6.625" | 6.357" | 24.089 | 0.26 | 50-1,500 | 190-5700 | 10-340 |
| Std. Wt., Sch 40 | 6.5" | 6.065" | 21.574 | 0.257 | 50-1,500 | 190-5700 | 10-340 |
| Extra Strong, Sch 80 | 6.5" | 5.761" | 19.457 | 0.254 | 50-1,500 | 190-5700 | 10-340 |
| PVC Class 125 | 6.625" | 6.217" | 22.853 | 0.258 | 50-1,500 | 190-5700 | 10-340 |
| PVC Class 160 | 6.625" | 6.115" | 21.968 | 0.257 | 50-1,500 | 190-5700 | 10-340 |
| PVC Class 200 | 6.625" | 5.993" | 21.068 | 0.256 | 50-1,500 | 190-5700 | 10-340 |
| 8 inch Sch 10S | 8.625" | 8.329" | 43.914 | 0.286 | 80-2,500 | 300-9500 | 20-570 |
| Sch 20 | 8.625" | 8.125" | 41.653 | 0.283 | 80-2,500 | 300-9500 | 20-570 |
| Sch 30 | 8.625" | 8.071" | 41.063 | 0.283 | 80-2,500 | 300-9500 | 20-570 |
| Std. Wt., Sch 40 | 8.625" | 7.981" | 40.086 | 0.281 | 80-2,500 | 300-9500 | 20-570 |
| Sch 60 | 8.625" | 7.813" | 38.288 | 0.279 | 80-2,500 | 300-9500 | 20-570 |
| Extra Strong, Sch 80 | 8.625" | 7.625" | 36.315 | 0.276 | 80-2,500 | 300-9500 | 20-570 |
| PVC Class 125 | 8.625" | 8.095" | 41.324 | 0.283 | 80-2,500 | 300-9500 | 20-570 |
| PVC Class 160 | 8.625" | 7.961" | 39.869 | 0.281 | 80-2,500 | 300-9500 | 20-570 |
| PVC Class 200 | 8.625" | 7.805" | 38.203 | 0.279 | 80-2,500 | 300-9500 | 20-570 |
| 10 inch Sch 10S | 10.75" | 10.420" | 70.195 | 0.321 | 125-4,000 | 470-15100 | 30-910 |
| Sch 20 | 10.75" | 10.250" | 67.668 | 0.318 | 125-4,000 | 470-15100 | 30-910 |
| Sch 30 | 10.75" | 10.136" | 66.069 | 0.316 | 125-4,000 | 470-15100 | 30-910 |
| Sch 40, Std.Wt. | 10.75" | 10.020" | 64.532 | 0.314 | 125-4,000 | 470-15100 | 30-910 |
| Extra Strong, Sch 60 | 10.75" | 9.750" | 61.016 | 0.309 | 125-4,000 | 470-15100 | 30-910 |
| Sch 80 | 10.75" | 9.564" | 58.644 | 0.306 | 125-4,000 | 470-15100 | 30-910 |
| PVC Class 125 | 10.75" | 10.088" | 65.431 | 0.315 | 125-4,000 | 470-15100 | 30-910 |
| PVC Class 160 | 10.75" | 9.924" | 63.272 | 0.312 | 125-4,000 | 470-15100 | 30-910 |
| PVC Class 200 | 10.75" | 9.728" | 60.733 | 0.309 | 125-4,000 | 470-15100 | 30-910 |
| 12 inch Sch 10S | 12.75" | 12.390" | 104.636 | 0.367 | 175-5,000 | 660-18900 | 40-1140 |
| Sch 20 | 12.75" | 12.250" | 102.553 | 0.364 | 175-5,000 | 660-18900 | 40-1140 |
| Sch 30 | 12.75" | 12.090" | 99.347 | 0.36 | 175-5,000 | 660-18900 | 40-1140 |
| Std. Wt., Sch 40S | 12.75" | 12.000" | 97.576 | 0.358 | 175-5,000 | 660-18900 | 40-1140 |
| Sch 40 | 12.75" | 11.938" | 96.369 | 0.356 | 175-5,000 | 660-18900 | 40-1140 |
| Sch 60 | 12.75" | 11.625" | 90.441 | 0.348 | 175-5,000 | 660-18900 | 40-1140 |
| Extra Strong | 12.75" | 11.750" | 92.775 | 0.351 | 175-5,000 | 660-18900 | 40-1140 |
| Sch 80 | 12.74" | 11.376" | 85.922 | 0.342 | 175-5,000 | 660-18900 | 40-1140 |
| PVC Class 125 | 12.75" | 11.966" | 96.912 | 0.357 | 175-5,000 | 660-18900 | 40-1140 |
| PVC Class 160 | 12.75" | 11.770" | 93.152 | 0.352 | 175-5,000 | 660-18900 | 40-1140 |
| PVC Class 200 | 12.75" | 11.538" | 88.842 | 0.346 | 175-5,000 | 660-18900 | 40-1140 |
| 14 inch Sch 10S | 14.00" | 13.500" | 122.307 | 0.391 | 200-6,000 | 760-22700 | 50-1360 |
| Sch 20 | 14.00" | 13.375" | 120.216 | 0.388 | 200-6,000 | 760-22700 | 50-1360 |
| Std. Wt., Sch 30 | 14.00" | 13.250" | 118.151 | 0.385 | 200-6,000 | 760-22700 | 50-1360 |
| Sch 40 | 14.00" | 13.124" | 116.096 | 0.382 | 200-6,000 | 760-22700 | 50-1360 |
| Sch 60 | 14.00" | 12.814" | 111.148 | 0.376 | 200-6,000 | 760-22700 | 50-1360 |
| Extra Strong | 14.00" | 13.00" | 114.098 | 0.33 | 200-6,000 | 760-22700 | 50-1360 |
| Sch 80 | 14.00" | 12.50" | 106.299 | 0.369 | 200-6,000 | 760-22700 | 50-1360 |
| 16 inch Sch 10S | 16.00" | 15.500" | 159.243 | 0.44 | 300-9,000 | 1140-34100 | 70-2040 |

FS350B and FS350SS: K Value, Offset and Suggested Operating Range

| Pipe Size | Pipe O.D. | Pipe I.D. | K Value | Offset | Suggested Operating Range (Gallons/Minute) | Suggested Operating Range (Liters/Minute) | Suggested Operating Range (Cubic Meters/Hour) |
|--------------------------|-----------|-----------|---------|--------|--|---|---|
| Sch 20 | 16.00" | 15.375" | 156.742 | 0.436 | 300-9,000 | 1140-34100 | 70-2040 |
| Std. Wt., Sch 30 | 16.00" | 15.250" | 154.267 | 0.433 | 300-9,000 | 1140-34100 | 70-2040 |
| Sch 60 | 16.00" | 14.688" | 143.456 | 0.419 | 300-9,000 | 1140-34100 | 70-2040 |
| Extra Strong, Sch 40 | 16.00" | 15.000" | 149.394 | 0.427 | 300-9,000 | 1140-34100 | 70-2040 |
| Sch 80 | 16.00" | 14.314" | 136.548 | 0.41 | 300-9,000 | 1140-34100 | 70-2040 |
| 18 inch Sch 10S | 18.00" | 17.500" | 202.739 | 0.498 | 350-10,000 | 1320-37900 | 80-2270 |
| Sch 20 | 18.00" | 17.375" | 199.828 | 0.494 | 350-10,000 | 1320-37900 | 80-2270 |
| Sch 30 | 18.00" | 17.124" | 194.061 | 0.486 | 350-10,000 | 1320-37900 | 80-2270 |
| Std. Wt. | 18.00" | 17.250" | 196.943 | 0.49 | 350-10,000 | 1320-37900 | 80-2270 |
| Sch 40 | 18.00" | 16.876" | 188.464 | 0.479 | 350-10,000 | 1320-37900 | 80-2270 |
| Sch 60 | 18.00" | 16.500" | 180.171 | 0.469 | 350-10,000 | 1320-37900 | 80-2270 |
| Extra Strong | 18.00" | 17.000" | 191.25 | 0.482 | 350-10,000 | 1320-37900 | 80-2270 |
| Sch 80 | 18.00" | 16.126" | 172.152 | 0.457 | 350-10,000 | 1320-37900 | 80-2270 |
| 20 inch Std. Wt., Sch 20 | 20.00" | 19.25" | 246.179 | 0.555 | 400-12,000 | 1510-45400 | 90-2730 |
| Sch 40 | 20.00" | 18.812" | 234.836 | 0.54 | 400-12,000 | 1510-45400 | 90-2730 |
| Extra Strong, Sch 30 | 20.00" | 19.000" | 239.666 | 0.547 | 400-12,000 | 1510-45400 | 90-2730 |
| Sch 80 | 20.00" | 17.938" | 213.14 | 0.511 | 400-12,000 | 1510-45400 | 90-2730 |
| 22 inch Std. Wt., Sch 20 | 22.00" | 21.25" | 301.975 | 0.621 | 500-15,000 | 1890-56800 | 110-3410 |
| Extra Strong, Sch 30 | 22.00" | 21.00" | 294.642 | 0.616 | 500-15,000 | 1890-56800 | 110-3410 |
| Sch 80 | 22.00" | 19.75" | 259.513 | 0.573 | 500-15,000 | 1890-56800 | 110-3410 |
| 24 inch Std. Wt., Sch 20 | 24.00" | 23.25" | 364.331 | 0.666 | 600-18,000 | 2270-68100 | 140-4090 |
| Extra Strong | 24.00" | 23.00" | 356.178 | 0.66 | 600-18,000 | 2270-68100 | 140-4090 |
| Sch 40 | 24.00" | 22.624" | 344.109 | 0.652 | 600-18,000 | 2270-68100 | 140-4090 |
| Sch 80 | 24.00" | 21.562" | 311.271 | 0.628 | 600-18,000 | 2270-68100 | 140-4090 |
| 26 inch Sch 10 | 26.00" | 25.376" | 437.809 | 0.719 | 700-21,000 | 2650-79500 | 160-4770 |
| Std. Wt. | 26.00" | 25.25" | 433.247 | 0.716 | 700-21,000 | 2650-79500 | 160-4770 |
| Sch 20, Extra Strong | 26.00" | 25.00" | 424.274 | 0.709 | 700-21,000 | 2650-79500 | 160-4770 |
| 28 inch Sch 10 | 28.00" | 27.376" | 513.698 | 0.774 | 900-23,000 | 3410-87100 | 200-5220 |
| Std. Wt. | 28.00" | 27.25" | 508.723 | 0.77 | 900-23,000 | 3410-87100 | 200-5220 |
| Extra Strong, Sch 20 | 28.00" | 27.00" | 498.93 | 0.763 | 900-23,000 | 3410-87100 | 200-5220 |
| 30 inch Sch 10 | 30.00" | 29.376" | 596.147 | 0.833 | 1,000-30,000 | 3790-113600 | 230-6810 |
| Std. Wt. | 30.00" | 29.25" | 590.759 | 0.829 | 1,000-30,000 | 3790-113600 | 230-6810 |
| Sch 20, Extra Strong | 30.00" | 29.00" | 580.146 | 0.822 | 1,000-30,000 | 3790-113600 | 230-6810 |
| 32 inch Sch 10 | 32.00" | 31.376" | 685.156 | 0.897 | 1,200-35,000 | 4540-132500 | 270-7950 |
| Std. Wt. | 32.00" | 31.25" | 679.355 | 0.893 | 1,200-35,000 | 4540-132500 | 270-7950 |
| Sch 20, Extra Strong | 32.00" | 31.00" | 667.922 | 0.885 | 1,200-35,000 | 4540-132500 | 270-7950 |
| Sch 40 | 32.00" | 30.624" | 650.919 | 0.873 | 1,200-35,000 | 4540-132500 | 270-7950 |
| 34 inch Sch 10 | 34.00" | 33.312" | 777.566 | 0.964 | 1,300-40,000 | 4920-151400 | 300-9080 |
| Std. Wt. | 34.00" | 33.25" | 774.511 | 0.962 | 1,300-40,000 | 4920-151400 | 300-9080 |
| Extra Strong, Sch 20 | 34.00" | 33.00" | 762.258 | 0.953 | 1,300-40,000 | 4920-151400 | 300-9080 |
| Sch 40 | 34.00" | 32.624" | 744.022 | 0.94 | 1,300-40,000 | 4920-151400 | 300-9080 |
| 36 inch Sch 10 | 36.00" | 35.376" | 882.855 | 1.04 | 1,500-45,000 | 5680-170300 | 340-10220 |
| Std. Wt. | 36.00" | 35.25" | 876.227 | 1.035 | 1,500-45,000 | 5680-170300 | 340-10220 |
| Sch 20, Extra Strong | 36.00" | 35.00" | 863.154 | 1.025 | 1,500-45,000 | 5680-170300 | 340-10220 |
| Sch 40 | 36.00" | 34.50" | 837.315 | 1.007 | 1,500-45,000 | 5680-170300 | 340-10220 |

Specifications

Model IFS150PBSP, IFS200PBSP, or IFS300PBSP Flow Sensor

The flow sensor shall be an in-line type with a non-magnetic, spinning impeller (paddle wheel) as the only moving part. The electronics housing shall be glass-filled PPS. The impeller shall be glass-filled nylon or Tefzel with a UHMWPE or Tefzel sleeve bearing. The shaft material shall be tungsten carbide. The electronics housing shall have two, ethylenepropylene O-Rings and shall be easily removed from the meter body. The sensor electronics will be potted in an epoxy compound designed for prolonged immersion. Electrical connections shall be 2 single conductor 18 AWG leads 48 inches (1,2 meters) long. Insulation shall be direct burial "UF" type colored red for the positive lead and black for the negative lead. The sensor shall be capable of operating in line pressure up to 100 psi (6,9 bars) and liquid temperatures up to 140° F (60° C), and operating in flows of 1/2 foot (0,15 meters) per second to 30 feet (9,2 meters) per second with linearity of $\pm 1\%$ and repeatability of $\pm 1\%$. The meter body shall be fabricated from Schedule 80 PVC Tees, available in 40mm (1 1/2"), 50mm (2") and 75mm (3") with Female BSP straight threaded end connections. This flow sensor shall be Rain Bird Model IFS150PBSP, IFS200PBSP, or IFS300PBSP.

Model IFS400PFL Flow Sensor

The flow sensor shall be an in-line type with a non-magnetic, spinning impeller (paddle wheel) as the only moving part. The electronics housing shall be glass-filled PPS. The impeller shall be glass-filled nylon or Tefzel with a UHMWPE or Tefzel sleeve bearing. The shaft material shall be tungsten carbide. The electronics housing shall have two, ethylenepropylene O-Rings and shall be easily removed from the meter body. The sensor electronics will be potted in an epoxy compound designed for prolonged immersion. Electrical connections shall be 2 single conductor 18 AWG leads 48 inches (1,2 meters) long. Insulation shall be direct burial "UF" type colored red for the positive lead and black for the negative lead. The sensor shall be capable of operating in line pressure up to 100 psi (6,9 bars) and liquid temperatures up to 140° F (60° C), and operating in flows of 1/2 foot (0,15 meters) per second to 30 feet (9,2 meters) per second with linearity of $\pm 1\%$ and repeatability of $\pm 1\%$. The meter body shall be fabricated from Schedule 80 PVC Tees, available in 110mm (4") with DIN Flanged end connections. This flow sensor shall be Rain Bird Model IFS400PFL.

Model FS350B & FS350SS Flow Sensors

The flow sensor shall be an insertion type with a nonmagnetic, spinning impeller (paddle wheel) as the only moving part. The sensor sleeve will be brass (or 316 stainless steel) with the sensor housing being PPS. The impeller shall be glassfilled nylon or Tefzel with a UHMWPE or Tefzel sleeve. The shaft material shall be tungsten carbide. The sensor will be supplied with a 2" (50mm) NPT adapter for installation into any commercially available weld-on fitting or pipe saddle. The adapter shall have two, ethylenepropylene O-Rings. The sensor electronics will be potted in an epoxy compound designed for prolonged immersion. Electrical connections shall be 2 single conductor 18AWG leads 48 inches (1,2 meters) long. Insulation shall be direct burial "UF" type colored red for the positive lead and black for the negative lead. Insertion of the sensor into any pipe size shall be 1 1/2" (40mm) from the inside wall to the end of the sensor housing. The sensor shall be capable of operating in line pressures up to 400 psi (27,5 bars) and liquid temperatures up to 220° F (105° C), and operating in flows of 1/2 foot (0,15 meters) per second to 30 feet (9,2 meters) per second. This flow sensor shall be Rain Bird Model FS350B (FS350SS).

Model PT322 Pulse Output Transmitter

The Pulse Output Transmitter shall receive signals for any Rain Bird flow sensor and produce a dry contact closure in units of measure that can be defined by the user. Calibration shall be achieved by connecting to a computer with Rain Bird PT322SW software. All information set in the software is sent to the PT322 via a supplied cable. The PT322 shall feature two diagnostic LED's, one corresponding to the input signal and one corresponding to the output signal. Model PT322 transmitter shall operate on 12-30 VDC/VAC power. Models shall be provided in epoxy filled enclosures. The Pulse Output Transmitter shall be Rain Bird Model PT322.

Model PT3002 Flow Monitor

The flow monitor shall be a microprocessor based digital unit capable of calculating and displaying both rate of flow and total flow on a two line by sixteen character alpha-numeric LCD. The flow monitor shall accept digital inputs or optional sine wave or analog signal and may be field configured to display rate and total values in any unit of measure. All data shall be entered via five keys mounted on the front panel. The monitor shall feature a software lock to protect the entered data from unauthorized changes. A nonvolatile memory, requiring no battery backup shall protect the data from electronic losses. The Model PT3002 shall conform to DIN standard dimensions for panel mounting, and shall feature a NEMA 4X rated front panel, in an optional NEMA 4 wall mount cabinet. Monitor shall operate on power of 12-24 VAC/VDC. The flow monitor shall feature standard open collector transistor outputs, one based on rate and one based on total. Set points or time delays for rate, scaling or pulse width for total may be configured in the field. Options shall include analog inputs, analog output, or control relays, all programmable from the keypad. The flow monitor shall be Rain Bird Model PT3002.

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