

# Introducing iManifold™ Wireless Probes

- Works exclusively with Imperial iManifold device
- Increases overall transmission distance of other wireless probes or accessories when used as a repeater
- Magnetic handle - stays in place on sheet metal duct
- Maximum of 12 probes can be connected
- Includes (2) AAA batteries

## Save time - and steps!

These probes send a wireless signal from a remote location to your iManifold device, allowing techs to perform duplicate tasks simultaneously.

### 911-M

#### Humidity & Temperature



Transmit up to (4) points of wireless data including air temperature, air relative humidity, & up to (2) channels of temperature via (2) plug-in thermistor temperature probes (not included). Use with optional accessory pipe probe & air probe to calculate superheat & temperature split for fixed metering devices, or use with second 911-M to calculate total capacity (BTUh), sensible capacity, latent capacity, dehumidification & temperature split in real time with user input airflow. If electrical current & voltage are input into the application, the EER can also be calculated.

### 913-M

#### Low Pressure & Temperature



Transmit up to (3) points of data including pressure (-14.5 to 232 psig) & up to (2) channels of temperature via (2) plug-in thermistor temperature probes (not included). Use with optional accessory probes to calculate evaporator superheat & show box temperature. Use to measure oil pressure or simply as low pressure probe for remote measurement. Use with 914-M to monitor an additional compressor or multiple compressors in rack systems.

### 912-M

#### Temperature



Measure line or air temperature with up to (2) plug-in thermistor temperature probes (not included).

### 914-M

#### High Pressure & Temperature






Transmit up to (3) points of data including pressure (-14.5 to 560 psig) & up to (2) channels of temperature via (2) plug-in thermistor temperature probes (not included). Use to calculate liquid subcooling, discharge superheat, measure oil pressure, or simply use as a high pressure probe for remote measurement.

## For use with Imperial iManifold



# Wireless Probes Technical Specifications

	 <b>911-M</b> Humidity & Temperature	 <b>912-M</b> Temperature	 <b>913-M &amp; 914-M</b> Pressure (Low / High) & Temperature
<b>Temperature</b>	°F, °C	°F, °C	°F, °C, K
<b>Humidity</b>	%RH	–	–
<b>Dry Bulb &amp; Wet Bulb</b>	°F, °C	–	–
<b>Sensor Types</b>	Capacitive Relative Humidity / Band Gap Temperature Temperature: 2 x NTC thermistor (side ports)	Optional wired surface & air probes Temperature: 2 x NTC thermistor (side ports)	Temperature Compensated Ceramic Pressure Transducer Temperature: 2 x NTC thermistor (side ports)
<b>Response Time</b>			
– Relative Humidity	Max 8 Seconds with 63% of a step function valid at 77°F (25°C) & 197 FPM (1 m/s) airflow	–	–
– Temperature	Max 1 second	Max 1 second	Max 1 second (temperature & pressure)
<b>Wireless Protocol &amp; Interface</b>	ZigBee	ZigBee	ZigBee
<b>Probe Measurement Ranges</b>			
– Relative Humidity	0 to 100%	–	–
– Pressure	–	–	Low/High -14.5 to 232 psig (-1 to 17 bar) -14.5 to 580 psig (-1 to 40 bar)
– Temperature (optional)	-40 to 248°F (-40 to 120°C)	-40 to 248°F (-40 to 120°C)	-40 to 248°F (-40 to 120°C)
– Air Temperature (optional)	-40 to 248°F (-40 to 120°C)	-40 to 248°F (-40 to 120°C)	-40 to 248°F (-40 to 120°C)
– Pipe Clamp / Strap Probe Temp. (optional)	-40° to 300°F (-40 to 149°C)	-40° to 300°F (-40 to 149°C)	-40° to 300°F (-40 to 149°C)
<b>Overload Pressure</b>	–	–	Low/High 580 psi /1450 psig (40 bar relative / 100 bar relative)
<b>Burst Pressure</b>	–	–	Low/High 725 psig /1740 psig (50 bar relative / 120 bar relative)
<b>Resolution</b>	0.1% RH, 0.1°F / °C	0.1°F / °C	0.1 psi (.007 bar), 0.1°F / °C / K
<b>Accuracy</b> (nominal pressure)	–	–	<.5% full scale accuracy at 77°F (25°C)
<b>Accuracy</b> (nominal humidity)	±1.8% RH	–	–
<b>Accuracy</b> (nominal temperature)	± 0.4°F (0.2°C) or ± 0.5% of reading	± 0.4°F (0.2°C) or ± 0.5% of reading	± 0.4°F (0.2°C) or ± 0.5% of reading
<b>Measureable Medias</b>	Air temperatures & humidity	–	All refrigerants listed with iManifold. Not for use with ammonia (R717) and / or other refrigerants that contain ammonia.
<b>Measureable Medias</b> w/optional probes	Surface & air temperatures	Surface & air temperatures	Surface & air temperatures
<b>Ambient Conditions</b>			
– Operating Temperature	-4 to 140°F (-20° to 60°C) limited by batteries	-4 to 140°F (-20° to 60°C) limited by batteries	-4 to 140°F (-20° to 60°C) limited by batteries
– Storage Temperature	-20 to 140°F (-29° to 60°C)	-20 to 140°F (-29° to 60°C)	-20 to 140°F (-29° to 60°C)
– Humidity in Area of Use	0 to 100%RH (non-condensing)	0 to 100%RH (non-condensing)	0 to 100%RH (non-condensing)
<b>IP Class</b>	IP 50	IP 50	IP 50
<b>Power Supply</b>	2 x 1.5V AAA batteries rechargeable / non-rechargeable	2 x 1.5V AAA batteries rechargeable / non-rechargeable	2 x 1.5V AAA batteries rechargeable / non-rechargeable
	Micro-USB	Micro-USB	Micro-USB
<b>Standards</b>	FCC / CE / C-Tick	FCC / CE / C-Tick	FCC / CE / C-Tick
<b>Warranty</b>	1 year	1 year	1 year