



**AQUAMONIX**  
Measure. Monitor. Master.

## TWO-WIRE HYBRID DECODER : 2-WIRE TECHNOLOGY

### **Tonick** **Watering** Two Wire Technology

The Aquamonix range of 2-Wire Decoders is marketed globally under Tonick Watering.

Our 2-wire and wireless products can be used in various industries and tailored to specific project needs. All our 2-wire decoder systems and 2-wire irrigation controllers can be applied to a wide range of applications including irrigated agriculture, commercial landscapes, water infrastructure, smart cities and golf and sports turfs.

The Hybrid decoder is an innovative solution for master valve or filter flush applications, and are designed specifically for large, complex applications.



### FEATURES

- A switching solenoid output
- A multi-coloured LED that provides feedback, reducing troubleshooting time
- An analogue voltage input
- A digital input for pulse or frequency
- Heavy duty, fully potted construction with the ability to be directly buried
- Tropical Rated
- Re-addressable - decoders can be reprogrammed numerous times using the Tonick programming tool
- Versatile - tolerant of earth leakage in the existing cables, retrofit possible, including bunched multi-wire to make 2-wire path
- Suitable for use with the complete Tonick BT2 twin translator family
- Voltage supply for sensor inputs

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IRRIGATION  
AUTOMATION



WATER  
MANAGEMENT



REMOTE  
MONITORING

[www.aquamonix.com.au](http://www.aquamonix.com.au)

## ELECTRICAL

- True A/C system not harmful to cable and joints
- Operating voltage 19VAC-32Vac, 50 Hz or 60 Hz
- Idle current (typical) - 5 mA
- Holding current (maximum) - 300mA
- Analogue (pressure) supply voltage of 4.4V, 10mA max
- Analogue input signal 0 to 2.5V
- Digital (flow) supply voltage of 9V, max 15mA
- Digital input range 0.1 to 255Hz

## OPERATION

- Version 1 station addresses 62, 63, 126, 127
- Version 2 station addresses 1 through 127
- Station address determines sensor addresses
- Compatible with other Tonick decoders on the same 2-wire path
- Compatible with the Tonick range of sensor decoders for moisture, pressure, water level, flow and digital inputs

### Version 1 WM-protocol

DECODER	FLOW FREQUENCY	FLOW PULSE	PRESSURE
127	14	13	12
126	11	10	9
63	14	13	12
62	11	10	9

### Version 2 MKIII-protocol

DECODER	FLOW FREQUENCY	FLOW PULSE	PRESSURE
1 @ 0x01	0x0201	0x0301	0x0401
2 @ 0x02	0x0202	0x0302	0x0402
etc	0x02**	0x03**	0x04**
127 @ 0x7F	0x027F	0x037F	0x047F

## SPECIFICATIONS











- Length: approx. 93mm (not including cables)
- Diameter: 42mm OD
- Fully potted to waterproof the electronics

## PROTECTION

- Internal lightning protection
- No grounding required along 2-wire path

## WIRING

- Low smoke type 99, AWG20, stranding\_ 19/0.20mm, modified polyester insulated, 600V, 300mm length. Mil Std 681

TWO WIRE		WIRE DESCRIPTION
	Red	19 - 32 Vac 50 / 60Hz
	Black	19 - 32 Vac 50 / 60Hz
SOLENOID		WIRE DESCRIPTION
	Brown	24Vac Solenoid
	Violet	24Vac Solenoid
PRESSURE		WIRE DESCRIPTION
	Orange	+4.4Vdc Transducer Supply
	White	0 - 2.5V Transducer Signal
	Blue	0V Transducer Common
FLOW		WIRE DESCRIPTION
	Yellow	+9Vdc Transducer Supply
	Green	Pulse or Contact Closure
	Grey	0V Pulse Common or Contact Closure



## Approvals

- RoHS (European) compliant and lead free

## Certificate of Origin

- Manufactured in the EU

## Warranty

- 5-year warranty including damage by lightning

Please refer to the Tonick OEM Guide for integration information.