

APPLICATIONS

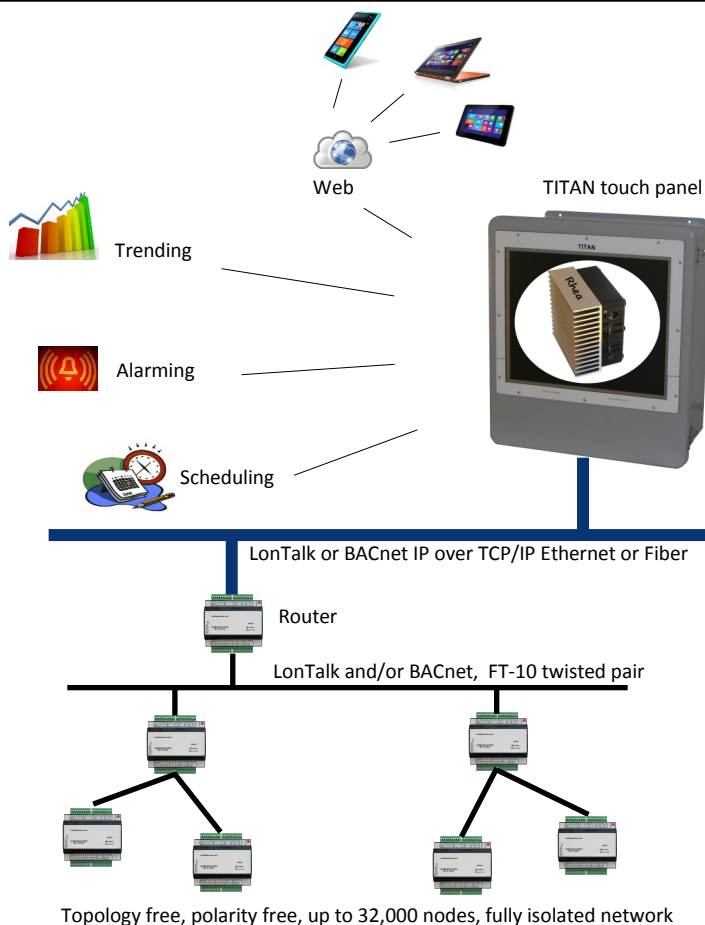
- AHU — Air Handling Units
- MZN — Multi-zone AHU
- CHW — Chillers, Cooling Towers
- HHW — Boilers
- PMP — Pumps
- EF— Exhaust Fans
- FCU — Fan Coil Units
- HPU — Heat Pump Units
- RTU — Roof Top Units
- VAV — VAV and VVT Terminal Equipment
- NRG —Energy Shedding, manager
- BTU —Energy (BTU) Calculator
- IRR —Irrigation
- CMP — Air Compressor
- CMPZN — Compressed Air Zones—Point of use
- LTG— Lighting

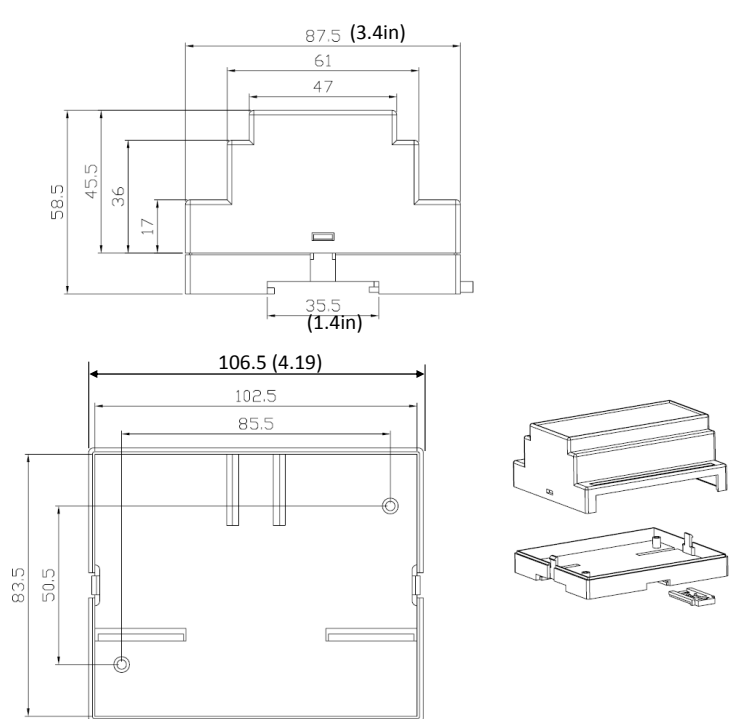
OVERVIEW

The Q1 Series are microprocessor based configurable and programmable controllers designed to control, optimize and improve energy efficiency of variety of equipment. All controller features are adjustable with DeviceEditor (part of NetworkManager) software that is free to our customers. The Q1 uses FT-10 transceiver for best in its class networking over twisted pair of wires. FT-10 networks are polarity and topology free. The network utilizes open standard LonTalk and BACnet/IP protocols for interoperability and ease of data exchange.

Q1 features 10 PID loops that are either used by software applications, or when available, are exposed as generic PID for free use with spare I/O.

Q1 supports variety of sensors including thermistors Type II (recommended), and Type III, and custom thermistor array. 4-20mA sensors are well supported with on-board 20VDC output. All sensors types are software configurable.



I/O CONFIGURATION		MECHANICAL	
NOTE: No Hardware Jumpers required to configure I/O		Hardware	
2 x Analog Inputs	The first two inputs accept resistive signals only.	Processor	FT-5000, 8bits, 80MHZ
Resistive	Thermistor 10KΩ Type II and Type III (Type II is recommended)	Memory	48k application memory
	Potentiometer with custom scaling	Transceiver	FTT-10; 78kbps
	Dry contact	Indicators	Multicolor LED, power, status
		Comm Ports	RJ11, LON, TTL
10 x Universal Inputs	All inputs have 12 bit resolution	Power	
Resistive	Same as above	Supply Voltage	24VAC; 50/60Hz; Class II
Voltage	0-10V DC	Max	30VA
Current	0-20mA DC	Typical	6VA plus peripherals
8 x Digital Outputs		Fuse	1.85A auto-resettable
	Triac rated at 1A @ 24V AC w/ external power supply	Enclosure	
4 x Analog	20mA max at 30°C, 8bit resolution	Material	ABS
	0 or 10VDC Digital / Binary	Color	Black
	0-10V DC adjustable , linear	Installation	35mm DIN
		Connectors	Removable (Green)
STATUS LIGHTS		Environment	
LED		Temperature	0°-70°C (32°-158°F)
Device status GREEN	Pulsing green = Normal Off = No power or other fault	Humidity	0-90% non-condensing
Service pin GREEN	OFF = Normal, running ON = No application	Storage	-20°- 70°C (-4° - 158°F)
AGENCY APPROVALS			
Safety Certifications	UL916 Energy Management Equipment CSA C22.2#205 Issue 1983/06/01 (R2009) Signal Equipment standard		
