

STB-100

Smart transformer breather



Reduce maintenance costs with learned transformer breathing patterns and self-regenerating desiccant

- User customization through configurable frequency or pre-programmed RH thresholds
- Local and remote communication options provide for any application
- Bright LED display and alarming capabilities indicate breather status
- Constructed with robust materials that provide for multiple mounting options

Product Summary

Description Moisture from the atmosphere may cause damage to transformer insulation over time. Excess humidity in the air can degrade the insulation properties of the bladder, oil and transformer insulation. This negatively affects both the solid (paper) and liquid insulation (transformer oil) reducing the overall life and performance of the asset.

Application The Qualitrol STB-100 is a transformer accessory which removes moisture from air entering oil-filled transformer or LTC conservators. Silica gel is the desiccant used to absorb moisture. The system is automated to regenerate the desiccant at a user selectable interval of 5, 10, 20 or 40 days or when a relative humidity level is exceeded.



QUALITROL[®]
Defining Reliability

STB-100 Smart transformer breather

Reduce maintenance costs with learned transformer breathing patterns and self-regenerating desiccant

- Extend asset life and reduce maintenance costs

User customization through through configurable frequency or pre-programmed RH thresholds

- The STB-100 has many desiccant regeneration options
- Desiccant regeneration frequency can be configured by the user at the installation site for 5, 10, 20 or 40 days regardless of the relative humidity (RH) setting
- The RH threshold level is pre-programmed to 50% but may be configured by the user providing flexibility in regeneration capability

Local and remote communication options provide for any application

- Multiple communication options including 4-20 mA, RS-485 MODBUS and local USB port provide for a variety of monitoring solutions for any application

Bright LED display and alarming capabilities indicate breather status

- Bright LED lights of green, amber and red indicate breather status and alarm capabilities

Constructed with robust materials that provides for multiple mounting options

- Constructed of a robust aluminum shell and polycarbonate tube, the STB-100 is hardy and ideal for transformer applications
- Multiple mounting options for new or retrofit installations

STB-100 Smart transformer breathers are available in two variants

STB-100-1

- Transformer capacity: 8,000 gallons (30,000 L)
- Desiccant capacity: 1 kg

STB-100-2

- Transformer capacity: 18,000 gallons (68,000 L)
- Desiccant capacity: 2 kg





TECHNICAL SPECIFICATIONS

Electrical	Voltage / frequency	100 - 240 VAC, 50 / 60 Hz
	Inrush control	Staged heating at 10 seconds (dual heater unit only)
	Conducted / radiated emissions	EN55011
	Immunity tests	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
	Harmonics and flicker tests	EN61000-3-2 AND EN61000-3-3
	Dielectric isolation	1500 VAC for 60 seconds to ground
Functions	Regeneration frequency setting	5, 10, 20, 40 days
	Solenoid valve	12 VDC
	Humidity range	RH 2% to 100%
	Pressure sensing	Normally open, approximately 0.5 inch H ₂ O to close
	Status indication	LEDs – green, amber, red
	Regeneration frequency control	2 position DIP switch
	Relative humidity trigger level	User configurable: 50% default value
	Regeneration cycle	3 hours full power, 1 hour cool-down
	Regeneration status monitoring	Relay – 4A, 30 VDC, normally closed
	Failure detection	RH sensor, pressure switch, heater, solenoid
	Analog output signal	4 - 20 mA @ maximum 500 Ohms for RH
	Communication	MODBUS (remote) and USB (local)
	Operating conditions	Temperature
Relative humidity		> 90 %
Enclosure protection		IP55
Vibration		50/60 Hz @ .004" displacement



Don't see what you need?

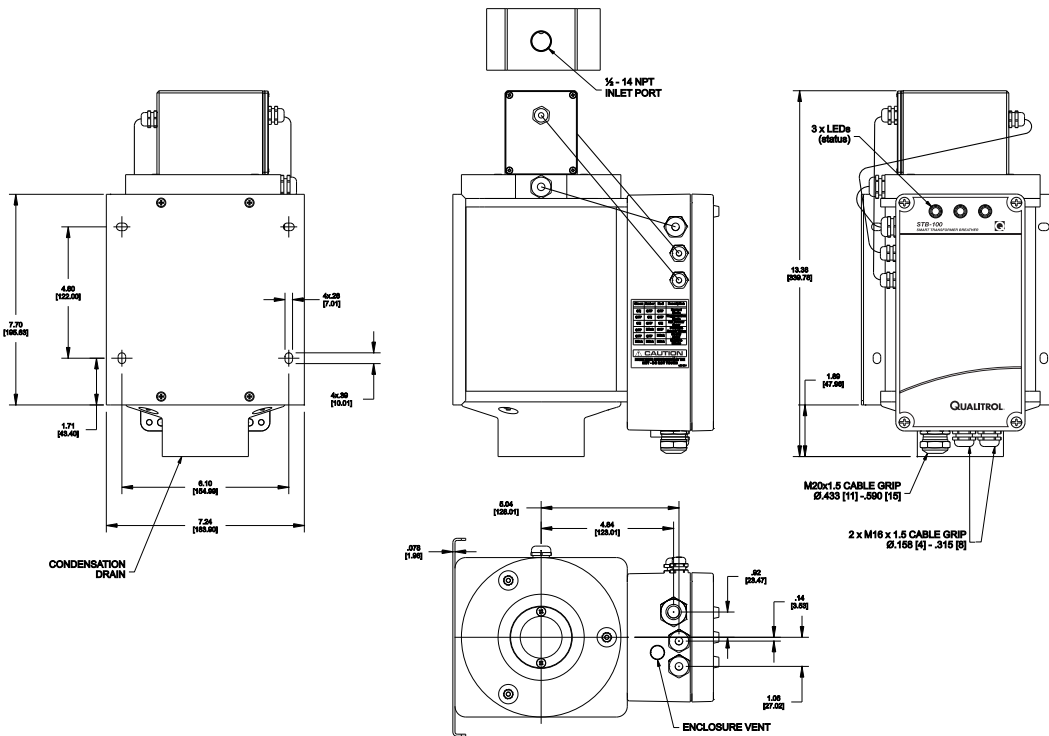
Qualitrol regularly creates models with special customer requirements. Contact your local sales representative or Qualitrol Applications Engineer to review your special requirements.

STB-100... reduce transformer maintenance costs

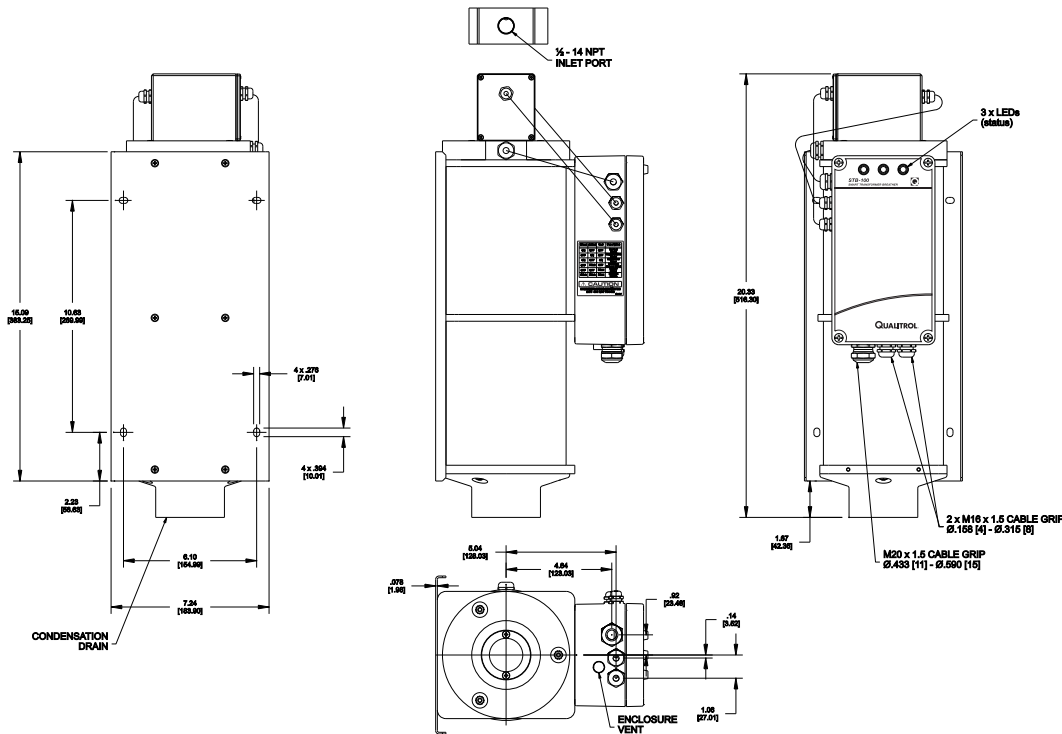


STB-100 Smart transformer breather

STB-100-1 Smart transformer breather - standard capacity



STB-100-2 Smart transformer breather - large capacity



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