



Xenta® 102-EF

VAV Controller with Electrical Reheat

Xenta 102-EF is a zone controller for VAV heating and cooling applications that use electrical reheat fan and on/off control. The relay output may also be used to control radiator thermal actuators. The controller keeps a constant temperature in the zone by controlling the air flow with the aid of a Belimo® VAV Compact.

For heating, the electrical reheat with the optional fan is used. Through a carbon dioxide sensor, the air quality can be controlled in the zone.

The controller is a LonMark compliant device that communicates on a LonTalk TP/FT-10 network via a twisted-pair, polarity insensitive cable. It is able to operate both as a stand-alone unit and as part of a system. All network variables can be monitored and configured via the Xenta OP, if the OP version is 3.11 or higher.

STR 100 is a range of wall modules intended to be used together with Xenta 102.

There are plug-in terminal blocks available for the Xenta 100 series which can be attached to the existing terminals.

TECHNICAL DATA

Supply voltage	24 V AC -10% +20%, 50–60 Hz
Power consumption:	
Controller with TAC Xenta OP	4 VA
Actuator supply	max. 12 VA
Digital output	max. 19 VA
Total	max. 35 VA

Ambient Temperature

Storage	0 °C to +50 °C (32 °F to 122 °F)
Operation	-20 °C to +50 °C (-4 °F to 122 °F)
Humidity	max. 90% RH non-condensing

Mechanical

Enclosure	ABS/PC
Enclosure rating	IP 30
Flammability class, materials	UL 94 5VB
Dimensions	see Fig. 1
Weight	0.4 kg (0.88 lb.)

Inputs/Outputs

Inputs for occupancy sensor and window contact, X2–X3:	
Voltage across open contact	23 V DC ±1 V DC
Current through closed contact	4 mA
Minimum pulse input duration X2/X3	250 ms / 15 sec.
Output for fan on/off control, V1:	
Minimum output voltage	supply voltage – 1.5 V
Maximum load	0.8 A
Input for bypass button on wall module, X1:	
Minimum pulse input duration	250 ms
Maximum current, LED	2 mA, for STR 100 series
Input for temperature sensor, B1:	
Thermistor type	NTC, 1800 Ω at 25 °C (77 °F)
Measuring range	-10 °C to 50 °C (14 °F to 122 °F)
Accuracy	±0.2 °C (±0.36 °F)
Inputs for air flow and carbon dioxide sensor, Z1–Z2:	
Measuring range	0–10 V DC
Accuracy	0.05 V

Input setpoint adjustment on wall module, R1:

Type	10 kΩ linear potentiometer
Adjustment range	±5 °C (±9 °F)
Accuracy	±0.1 °C (±0.18 °F)

Output for air flow controller, Y1:

Output range	0–10 V DC
Maximum current	2 mA
Inaccuracy	0.2 V

Relay output for electrical reheat or radiator thermal actuators, K1 and KC1:

Thermal actuator	NC/NO
Maximum voltage	250 V AC
Maximum load	2 A

Application Program

Cycle time

15 sec.

Indication LED Colors

Power On	green
Service	red

LonMark Standard

.....	LonMark Interoperability Guidelines
.....	LonMark Functional Profile: VAV Controller

Communication protocol

LonTalk

Physical channel

TP/FT-10, 78 kbps

Neuron type

3150, 10 MHz

Agency Compliances

Emission:

CE

EN 61000-6-3, C-Tick, FCC Part 15

Immunity:

CE

EN 61000-6-1

Safety:

CE

EN 61010-1

UL 916, C-UL US, Open Energy Management Equipment

Approved for plenum installations

RoHS directive

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