ALERTON
TECHNOLOGIES INC

APLC2

ALERTON
TECHNOLOGIES, INC.

MADE IN USA

1 — SENS(B)
2 — COM. (W) MICROSET/
3 — SP (R) W/ JUMPER @ DEFAULT
4 — IN 3
5 — COM
6 — IN 4
7 — IN 5
8 — COM
9 — IN 6
10 — IN 7

24VAC — 21
GND — 22
DO 1 — 23
DO 2 — 24
DO 3 — 25
DO 4 — 26
DO 5 — 27
DO 6 — 28
DO 7 — 29
DO 8 — 30

24VAC LOAD 0.5A MAX

INPUT JUMPER SETTINGS
1 2 3 4 5 6 7
0 – 5VDC
0 – 10VDC
4 – 20mA
10K ohm THERMISTOR/ DRY CONTACT INPUTS 1&2
3K ohm THERMISTOR/ DRY CONTACT (DEFAULT)

11 — COM
12 — IN 8
13 — IN 9
14 — COM
15 — IN 10
16 — IN 11
17 — COM
18 — 24VDC @ 250mA
19 — ⊕ (B) COMM.
20 — ⊖ (W) TRUNK

FUSE, AGC–6 AMP FAST
CLASS 2 WIRING DEVICE
POWER:
  MAX LOAD – 110VA
  NO DO'S – 20VA
USE COPPER CONDUCTORS ONLY
SUITABLE FOR PLENUM MOUNTING
FOR INDOOR USE ONLY
AO SWITCH VALUE
  ON=4–20mA
  OFF=0–10VDC

ANALOG OUTPUT

AO1 — 31
COM — 32
AO2 — 33
AO3 — 34
COM — 35
AO4 — 36
AO5 — 37
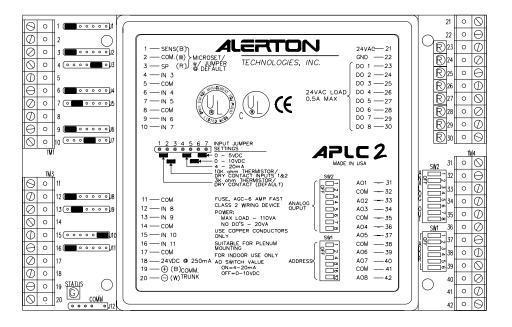COM — 38
AO6 — 39
AO7 — 40
COM — 41
AO8 — 42

ADDRESS

STATUS
COMM

The Alerton® APLC2 is a high performance, programmable logic controller designed for control of HVAC and industrial equipment. Applications include central plant, air handling units, clean rooms and fume hoods. It operates either as a stand-alone controller or as part of a site-wide DDC system.

The APLC2 control logic is programmed using Alerton's easy-to-learn block programming language. This self documenting software includes a complete library of control functions and provides totally flexible strategies to be implemented. A single APLC2 may contain multiple control loops for the development of complex control strategies.

The APLC2 is designed for high-speed data processing, with an internal DDC loop cycle time of 100 msec. Programmable timers have a resolution of 100 msec. Analog inputs are high resolution 10 bit inputs. Each is field adjustable for 3K or 10K thermistors, dry contact, 0–5 VDC, 0–10 VDC or 0–20mA.

The APLC2 supports the Alerton Microset™, an intelligent wall mounted zone temperature sensor with a digital display and simple push-button controls. All input and output values can be viewed at the Microset.

Reliable and stable operation is provided with CMOS circuitry, four layer circuit board with separate ground plane, hardware and software input filtering and power supply noise filters. The communication trunk is optically isolated to prevent ground loop problems. The CMOS processor incorporates an internal watchdog monitor. The power supply voltage is monitored to provide automatic shutdown and data backup. All program data is stored in non-volatile EEPROM memory.

The APLC2 communicates with the Alerton global controller over a 2-wire communication trunk at 9600, 4800, or 1200 baud. It can also be directly connected to the PC that is running the development software.

Product Number

TX-APLC2

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Specifications

APLC2

Power	Requires 24 VAC @ 20 VA plus digital output loads (110 VA max.). Utilizes a half-wave rectifier, which allows multiple APLC2s to be powered from a single transformer. One leg of 24 VAC connects to earth (panel) ground.
Inputs	11 inputs with 10-bit resolution. Inputs 1 and 2 support a Microset™. Inputs 1 - 11 are jumper selectable for dry contacts, 3K or 10KΩ thermistors, potentiometers, 0-5 VDC, 0-10 VDC, or 4-20 mA signals.
Digital Outputs	8 outputs, each rated at 24 VAC, 0.5 A. The outputs utilize hot-switched triacs, which have a common connection to the fused 24 VAC supply.
Analog Outputs	8 outputs with 8-bit resolution. Each is switch-selectable for 0-10 VDC or 4-20 mA. 4-20 mA outputs are sourced by the APCL2. Connected loads must return to APLC2 ground. Maximum 4-20 mA load resistance is 1kΩ. Minimum 0-10 VDC load resistance is 500Ω.
24 VDC Supply	Up to 250 mA of 24 VDC power is provided to power transducers or other devices.
Processor and EEPROM	CMOS processor with RAM and ROM. Provides non-volitile program and data storage.
Maximum Dimensions	4.6" (117 mm) H X 7.0" (178 mm) W X 1.25" (32 mm) D.
Terminations	Removable header-type screw terminals accept 14-20 AWG wire.
Envrionmental	32-158°F (0-70°C). 0-95% RH, non-condensing.
Communications	Optically isolated 9600, 4800, and 1200 baud. Access port for laptop computer with Alerton AC-26050 cable.
Ratings	Listed Underwriters Laboratory for Open Energy Management Equipment (PAZX) under the UL Standard for Safety 916. FCC Part 15. Subpart J, Class A. EMC Directive 89/336/EEC (European CE Mark).

Specifications subject to change without notice.

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