

# RUKS ENGINEERING LTD

## TECHNICAL SPECIFICATIONS

### CZ8-LAN TOTAL IAQ MONITOR

1. Monitoring, Regulation, Reporting, Recording, and Auditing of Indoor Air Quality and Energy shall be performed automatically on continuous basis, by Total Air Quality Monitor.
2. The Monitor shall be suitable for tracking Total VOC, Carbon Dioxide, Temperature, and RH, by use of independent sensor to track each parameter. Each sensor shall be independently programmable.
3. Monitor shall be rated for continuous operation, in indoor ambient -4EF to 140EF (-20E to 60EC) and RH 0 to 100% non Condensing.
4. It shall be provided with 256 MB RAM, Micro Processor, Flash Memory, for Real Time Records.
5. Each Sensor shall deliver 0 – 10 VDC analog output for interface to BAS/BMS.
6. The Circuit Board shall be listed to UL 94.
7. Shall have 5 numbers of Normally Open (NO) Dry Contacts, 3 Amps 24 VAC/DC, field assignable to any sensor.
8. Monitor shall have RS 232 and Ethernet communication ports.
9. Switch to change over from duct to space mount shall be installed on the monitor. Spigots for connecting pitot tubes, if duct option is used, shall be factory provided.
10. UL listed Power Supply Adaptor shall be factory provided.
11. For fail safe and long time operation, printed circuit boards shall be immersed in 24 carat gold 3 Micron thick. This is to reduce or prevent loss of accuracy due to oxidation of the conductor surface over time.
12. All electronic parts of the Monitor shall be lead free and ROHS compliant.
13. All parts and components of the Monitor shall be housed in one neat, compact, 18 G CRS powder coated satin finish enclosure.

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14. Display of all IAQ parameters shall be accessed remotely through internet. It shall be possible to program all features, set activation / deactivation of relays, obtain reports between user selected time intervals, and perform continuous Energy and IAQ Audit, remotely through web based IP.
15. RJ 45 wall outlet, one for each monitor, shall be provided by client in close proximity to the monitor for connection to web.
16. The Monitor shall also serve as continuous IAQ and Energy Audit Device based on user set upper and lower limits of all IAQ parameters. User selected color coded alerts shall be issued instantaneously if IAQ or energy parameters are not within optimum threshold limits.

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17. It shall be possible to download the IAQ reports on MS Word, Excel, or PDF formats, remotely through web based IP.
18. Communication protocol shall be BACnet, Modbus, or EtherNet (choose one).
- 19. The IAQ Monitor shall be listed to UL 916 Standard for Safety for Energy Management Equipment, and CE Certified.**
20. The Equipment shall be of North American Manufacture, with parts and components from USA and Canada.

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