

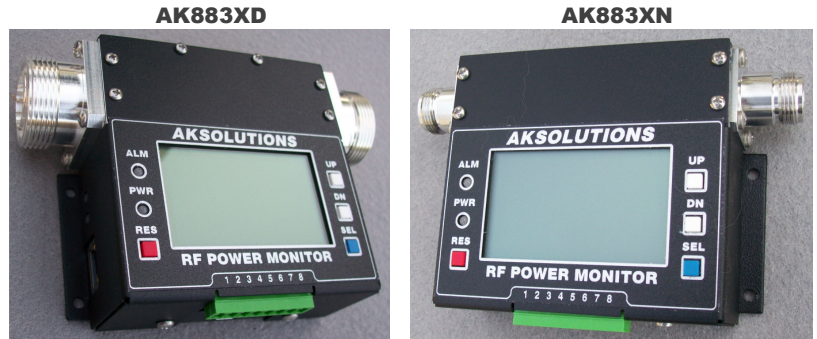
## AK883X RF POWER MONITOR

### Features:

- > **Integrated bidirectional sensor measures forward and reflected power with PIM better than -155 dBc**
- > **Available with 7/16 DIN or N connectors (DIN shown)**
- > **Integrated Ethernet with browser, Telnet and SNMP access to setup, status and control**
- > **Warning and alarm notification via email, SMS and SNMP traps**
- > **Large, backlit easy to read LCD display**
- > **Form-C alarm output – C, NO and NC, with manual and auto control**
- > **External input for temperature sensor (included)**
- > **External input for keyline or general purpose alarm sense**
- > **Available in 10W, 100W, 350W, 500W max power ranges**

### Description:

The AK883X series set a new standard for price and performance in RF transmitter/antenna system monitors. The RF processor detects equipment failures by monitoring transmit power, VSWR, temperature, supply voltage and transmit key/idle times and operates as a stand-alone monitor with alarm relay output and local display. The Ethernet processor adds powerful network capabilities, including a web server for browser access, USB, Telnet and SNMP. Alarm and warning



### Applications:

- Paging/Telemetry Systems
- SMR/Trunked Radio Systems
- Public Safety Radio Systems including Digital
- Data Links

notification can be enabled for email, SMS and SNMP traps.

Local setup is simple and intuitive; the monitor steps through each menu-driven setup parameter and stores the desired limit value in non-volatile memory. Browser access is even simpler.

If a warning level is exceeded then a warning notification will be sent. If an alarm level is exceeded the alarm relay will be activated and an alarm notification will be sent. *\*Note: the alarm relay can be controlled independently through the web interface.*

The backlit LCD displays forward and reflected power, VSWR, power supply voltage, temperature (external sensor included) and alarm status. Front panel buttons are used to adjust limits and clear alarms, as well as for basic network setup. Text menu setup and status are also available through Telnet and the USB port.

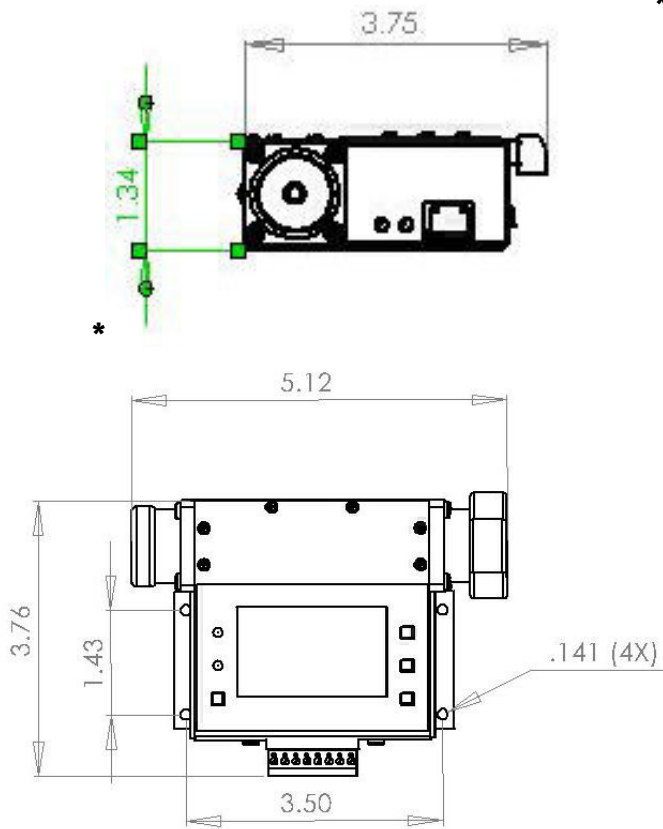
### Absolute Maximum Ratings:

|                       |              |                     |              |
|-----------------------|--------------|---------------------|--------------|
| Power Supply Voltage  | 42VDC        | RF Power FWD        | 1KW          |
| Power Supply Current  | 0.2A         | RF Power REFL       | 1KW          |
| Operating Temperature | -30C to +70C | Alarm Relay Current | 1.0A @ 30VDC |
| Storage Temperature   | -40C to +85C |                     |              |

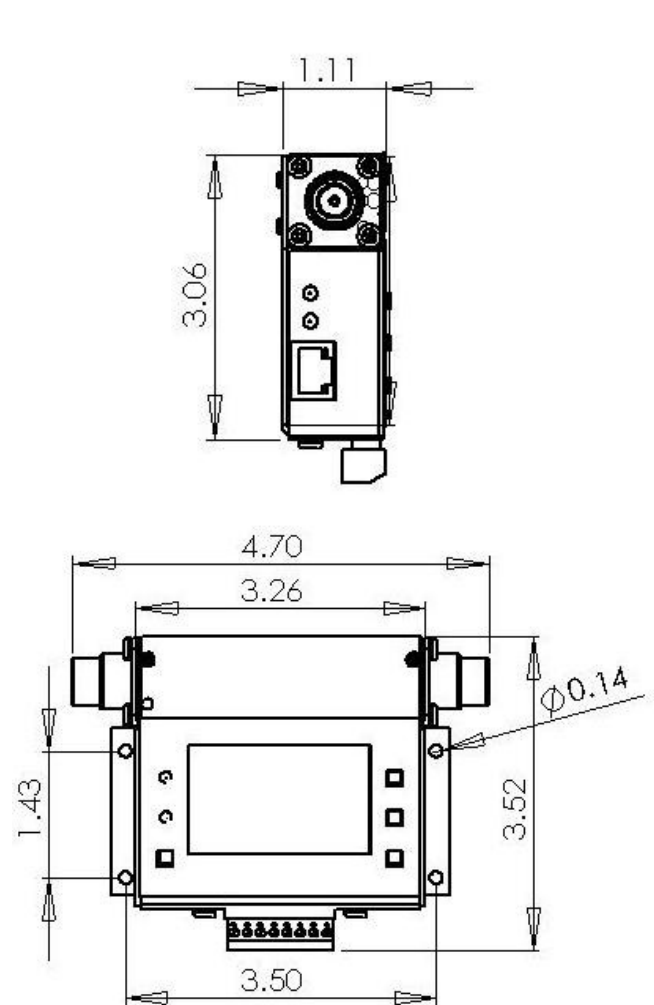
### Specifications: *\*Subject to change without notice*

| PARAMETER                      | MIN   | TYPICAL   | MAX    | UNITS    | NOTES                                    |
|--------------------------------|-------|-----------|--------|----------|--|
| <b>Input Voltage</b>           | 9     |           | 30     | Volts DC | AC Adapter included (12VDC)              |
| <b>Input Power (DC)</b>        |       |           |        |          |  |
| Relay Off                      |       | 0.5       |        | Watts    |  |
| Relay On                       |       | 1.2       |        | Watts    |  |
| <b>Operating Temperature</b>   | -30   |           | +70    | DegC     | LCD display limitation (-20C, no damage) |
| <b>Storage Temperature</b>     | -40   |           | +85    | DegC     |  |
| <b>RF Power Range</b>          |       |           |        |          |  |
| -10 Models                     | 0     |           | 10     | Watts    |  |
| -100 Models                    | 0     |           | 100    | Watts    |  |
| -350 Models                    | 0     |           | 350    | Watts    |  |
| -500 Models                    | 0     |           | 500    | Watts    | *Check with AKS about other ranges       |
| <b>RF Power Resolution</b>     |       |           |        |          |  |
| -10 Models                     |       | 0.01      |        | Watts    |  |
| -100 Models                    |       | 0.1       |        | Watts    |  |
| -350 Models                    |       | 0.1       |        | Watts    |  |
| -500 Models                    |       | 0.1       |        | Watts    |  |
| <b>RF Frequency Bands</b>      |       |           |        |          |  |
| AK883XX – C Models             | 1.8   |           | 2.7    | GHz      |  |
| AK883XX – B Models             | 406   |           | 1000   | MHz      |  |
| AK883XX – AB Models            | 300   |           | 700    | MHz      |  |
| AK883XX – A Models             | 100   |           | 325    | MHz      |  |
| AK883XX – L Models             | 30    |           | 100    | MHz      |  |
| <b>Sensor PIM</b>              | -167  | -160      | -155   | dBc      |  |
| <b>Insertion Loss</b>          | 0.05  | 0.05      | 0.1    | db       | (.1db – C models)                        |
| <b>VSWR Range</b>              | 1.0:1 |           | 24.9:1 |          | 9.9:1 on LCD                             |
| <b>Accuracy</b>                |       | 2%        |        |          | Requires site calibration                |
| <b>Temperature Sense Range</b> | -40C  |           | +85C   |          | External sensor included                 |
| <b>Alarm Relay Current</b>     | 0     |           | 1      | Amp      | @30VDC                                   |
| <b>Weight</b>                  |       | 1.5       |        | LB       |  |
| <b>Connectors</b>              |       |           |        |          |  |
| RF (N)                         |       | N Type    |        |          | Comb. F/F, F/M, M/F avail.               |
| RF(DIN)                        |       | 7/16 Type |        |          | Comb. F/F, F/M, M/F, M/M avail.          |
| Power & Alarm                  |       | 8-POS     |        |          | Depluggable terminal block               |
| USB                            |       | USB-Mini  |        |          | Cable included                           |

## Dimensions & Mounting (7/16 DIN):



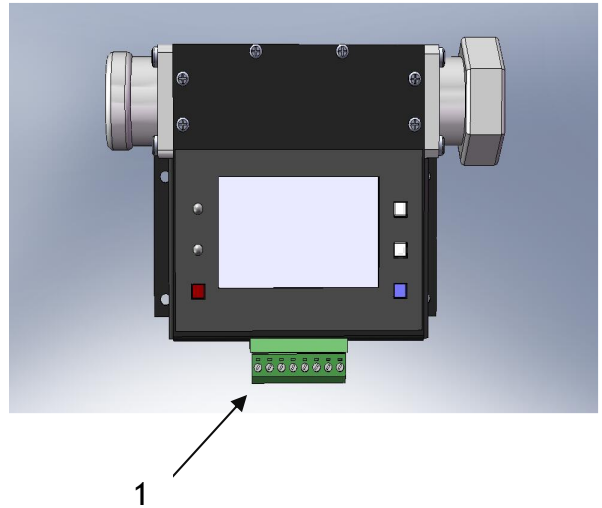
## Dimensions & Mounting (N):



## Electrical (N and D models, D shown):

Pin one of the terminal block is on the left side when viewed from the front. Pin functions are as follows:

| Pin | Function               |
|-----|------------------------|
| 1   | DC Power in, 9–30VDC   |
| 2   | Ground                 |
| 3   | Keyline+               |
| 4   | GND (common for 3 & 5) |
| 5   | Temperature+           |
| 6   | Relay NC               |
| 7   | Relay C                |
| 8   | Relay NO               |



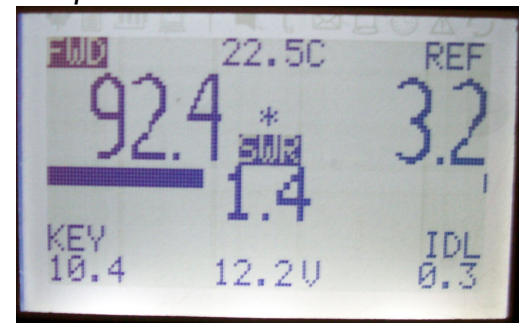
*Note 1:* The striped lead on the supplied AC adapter is positive and should be connected to pin 1 on the monitor. The other wire should connect to pin 2.

*Note 2:* Keyline+ can also be used as a general-purpose alarm input. In either case, it requires a pull-to-ground source, such as relay contacts or an open-collector transistor. Switching is at -1V. GND is shared with the temperature sensor input.

*Note 3:* NO-NC functionality is reversed if NC is selected in software.

*Note 4:* Temperature sensor is non-polarized. Ring (mounting) terminal is isolated from sensor leads.

Sample



## Ordering Info

**AK883X D/N – L/A/AB/B/C – 10/100/350/500 – F/M**

**AK883X** Base Model Number

**D/N** Connector Type: **D**in (7/16) or **N** connectors

**A/B/C** Frequency Band: **L**: 30-100 MHz **A**:100-325 MHz **AB**: 300-700 MHz **B**: 406-1000 MHz **C**: 1.8-2.7 GHz

**10/100/350/500** \*Max Power Range: **10W**, **100W**, **350W**, **500W**,

**F/M** Connector Combo: **F**emale/**F**emale, **M**ale/**F**emale, **F**emale/**M**ale, **M**ale/**M**ale\*

Example: AK883XN-B-100-FF corresponds to N type connectors, 406-1000 MHz, 100W max power, female/female connectors

\*Male/Male not available in N connector models