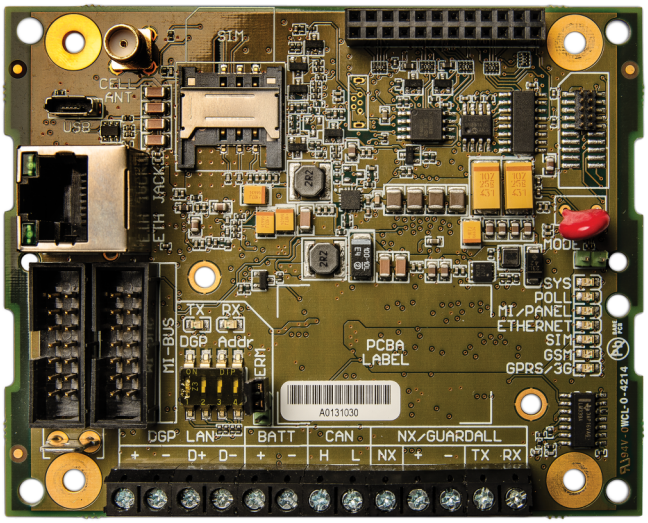
TDA7420-4

Alarm dialler communicating via IP for ATS panels

Introduction

TDA74xx-4 Series are Ethernet and 4G diallers that are connected to the MI bus of an ATS control panel. The TDA7420 comes only with IP support.



Mounting

TDA74xx-4 must be mounted inside ATS panel housing.
To avoid personal injury or death from electrocution, remove all sources of power and allow stored energy to discharge before installing or removing equipment.

Reporting mode

The following reporting modes are available:
• IRIS: IRIS compatible reporting protocol
• OH: Osborne-Hoffman protocol
• VdS: VdS compatible reporting protocol

IRIS Protocol

The polling / alarm mechanism used on the Chiron IRIS system is highly secure and flexible.
It has been independently certified as compliant to the highest level of security available – Grade 4, ATS6 – within the EN 50131 standard for alarm systems.
The IRIS system is unique in its ability for the polling frequency to be varied which means that the polling profile can be adjusted as necessary to take into account the grade of security required and the traffic bandwidth available.

Key features are:
• Independently certified as compliant with EN 50131-1 Grade 4 ATS configuration SP6 for single path and DP4 for Dual path communications.
• All polling and alarms are authenticated by the receiver (Polling Engine) using the secure and sophisticated “Challenge Handshake” mechanism as used in military and credit card applications. Each remote IRIS dialler proves its authenticity using a 256 bit security key. A new
random number generated by the receiver (Polling Engine) is used for every poll so it is not possible to substitute the dialler using playback or sequence prediction.
• All data transferred for polling and alarms is encrypted using the same security key used for authentication.
• Unlike other systems each dialler can have a unique security key which can be changed at the Monitoring Centre any time as required. For additional security the installer never needs to load the key or be aware of what it is.
• Also unlike other systems, the polling frequency is not fixed and can be varied by the Monitoring Centre at any time, from a period of 10 seconds for high security systems down to once a week for low security systems. This means that polling rates can be optimised to

deliver the grade of service required and minimise the bandwidth required.

• Polling and alarms are carried over the TCP/IP protocol that gives end-to-end error protection. This removes the possibility with other protocols such as UDP that data packets are lost or resequenced in the network leading to
false alarms.

• All polling and alarms are outbound from the dialler location to the Monitoring Centre and do not require the IP address of the dialler to be known. No special set-up is required at the customer's router, such as port mapping
for incoming calls. This feature is essential for operation with networks with dynamic addressing and standard GPRS networks.

• Background communication path polling is also configurable at the Monitoring Centre and enables the IRIS dialler to periodically poll over the backup communication path, and any faults with this communication will be reported back to the IRIS SecureApps system.

• Each poll transaction is very small and with the authentication protocol is only about 500 bytes of data, including all traffic in both directions. For fixed line IP networks there are no traffic costs.

• Communications with the receiver (Polling Engine) uses EN 50136-2 pass-through mode.

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Technical specifications

General

Product line	Advisor Advanced, ATS Master

Network

Communicator type	IP

Reporting

Supported receivers	IRIS Secure Apps (Chiron), Osborne Hoffman (OH), Vds-IP

Interfaces

Ethernet	RJ-45 10/100 Mbps self-adaptive Ethernet interface

Electrical

Power supply value	12 ±3 V

Environmental

Operating temperature	−10 to +55°C
Relative humidity	95% max., non-condensing

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