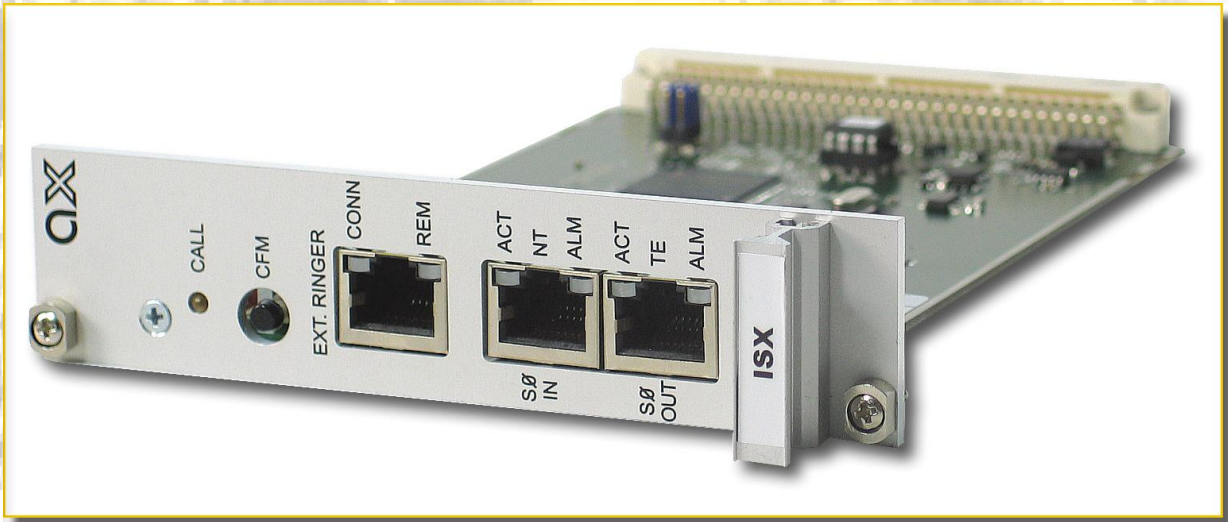


## ISDN-Sniffer ISX & ISX-Bell



### Short Description

The ISDN-Sniffer ISX is an unmanaged device, which detects and signals activity on an ISDN S0-bus. It is designed to signal incoming, outgoing and missed calls, to allow remote control of ISDN-phones.

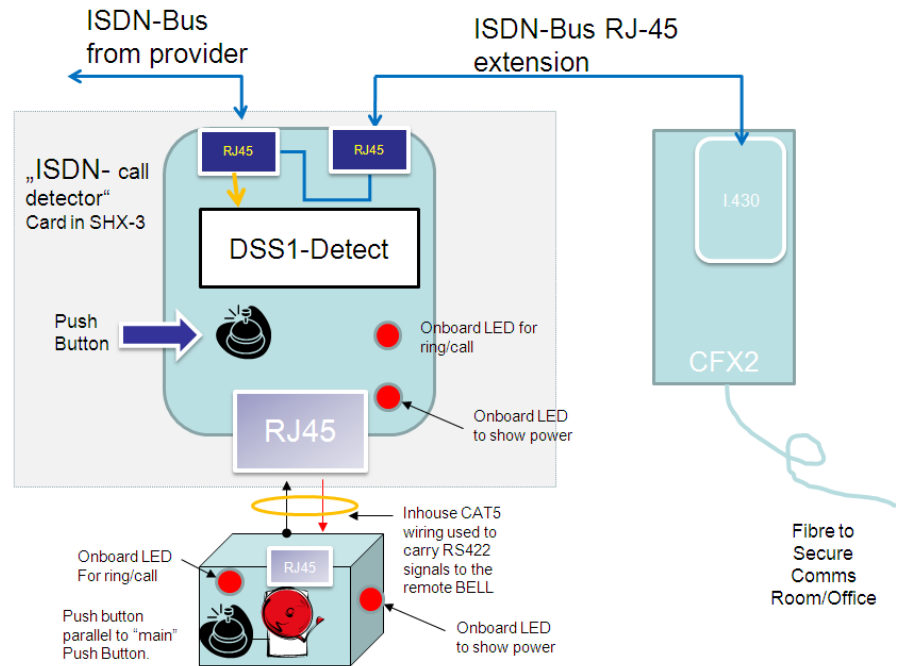
Optical as well acoustic indicators are available. A remote ringer ("ISX-Bell") can be connected to allow even far away from the S0-bus a control unit.

ISX is an easy to install and easy to operate device, which needs almost no configuration.

As part of arcutronix Multi Service Platform (axMSP) the ISX can be housed in small footprint single-slot housing or 19" rack to achieve high density on small footprint.

## Application Example

The ISX is used at control tool on an S0-bus.  
 Together with CFX2-I.430 it builds a unit to transport the calls to a special place, still having the chance to check outside for activity.



## Connectors, Indicators and Controls

### Front Panel

The front panel of the ISX does have interfaces to the S0-bus (in and out), and an interface to the remote ringer (ISX-Bell). A red LED is used for optical information and the push-button allows resetting the sounder.

Integrated LEDs in the connectors show status of ISDN bus and the connection to the ISX-Bell. At least one LED is always on, if no LED is on, the ISX has no power supply!!

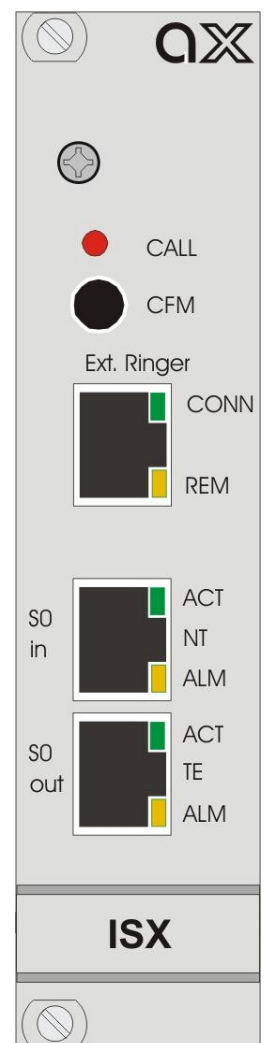
**CALL-LED:** Indicates incoming, missed and outgoing calls

**CFM-Button:** Confirm Button to stop onboard ringer

**Ext. Ringer:** Connection to remote ringer ISX-Bell. Use a standard CAT5-cable for connection. A distance of ~600m can be spread. The CONN-LED does indicate that an ISX-Bell is properly connected. The REM-LED does indicate the ISX-Bell is ringing.

**S0in:** Connection for S0 input. The ACT-LED does indicate the proper activation of **S0in**. The ALM-LED does indicate that no S0-signal is detected.

**S0out:** Connection for S0 output. The ACT-LED does indicate the proper activation of **S0out**.



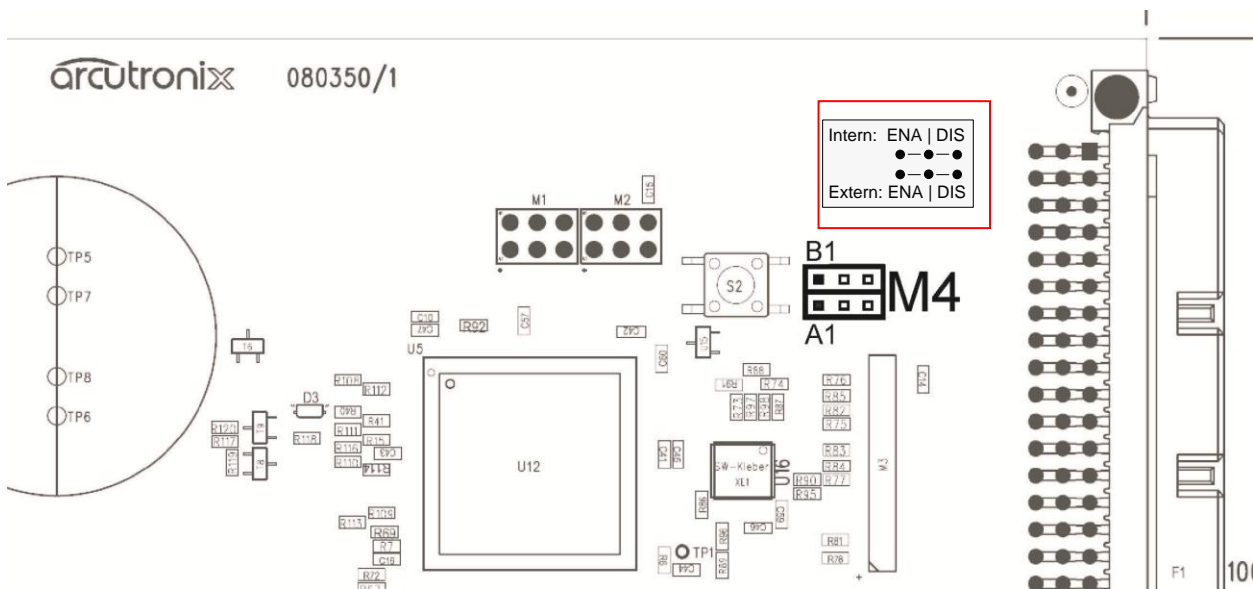
## Unit Setup

The ISDN-Sniffer ISX is a “plug’n’play” unit, which needs no special setup or knowledge. Installation in single-slot housing (SHX) or system rack (SRX) must be done according the specification of these devices. After installation of the ISX in the housing, attach CAT5 (better CAT5e) cable to interfaces.

Two jumpers on the ISX allow

- to disable the onboard ringer on ISX permanently.
- to disable the remote ringer on ISX-Bell permanently.

There is a label on the ISX-PCBA, to show how the settings of these two jumpers (called M4) are to enable and disable the internal and/or external ringer to sound.



Configuration M4 in more detail:

B	Ringer intern
<b>1-2</b>	<b>enable</b>
2-3	disable
A	Ringer extern
<b>1-2</b>	<b>enable</b>
2-3	disable

Rem.: The Default Settings are **BOLD**.

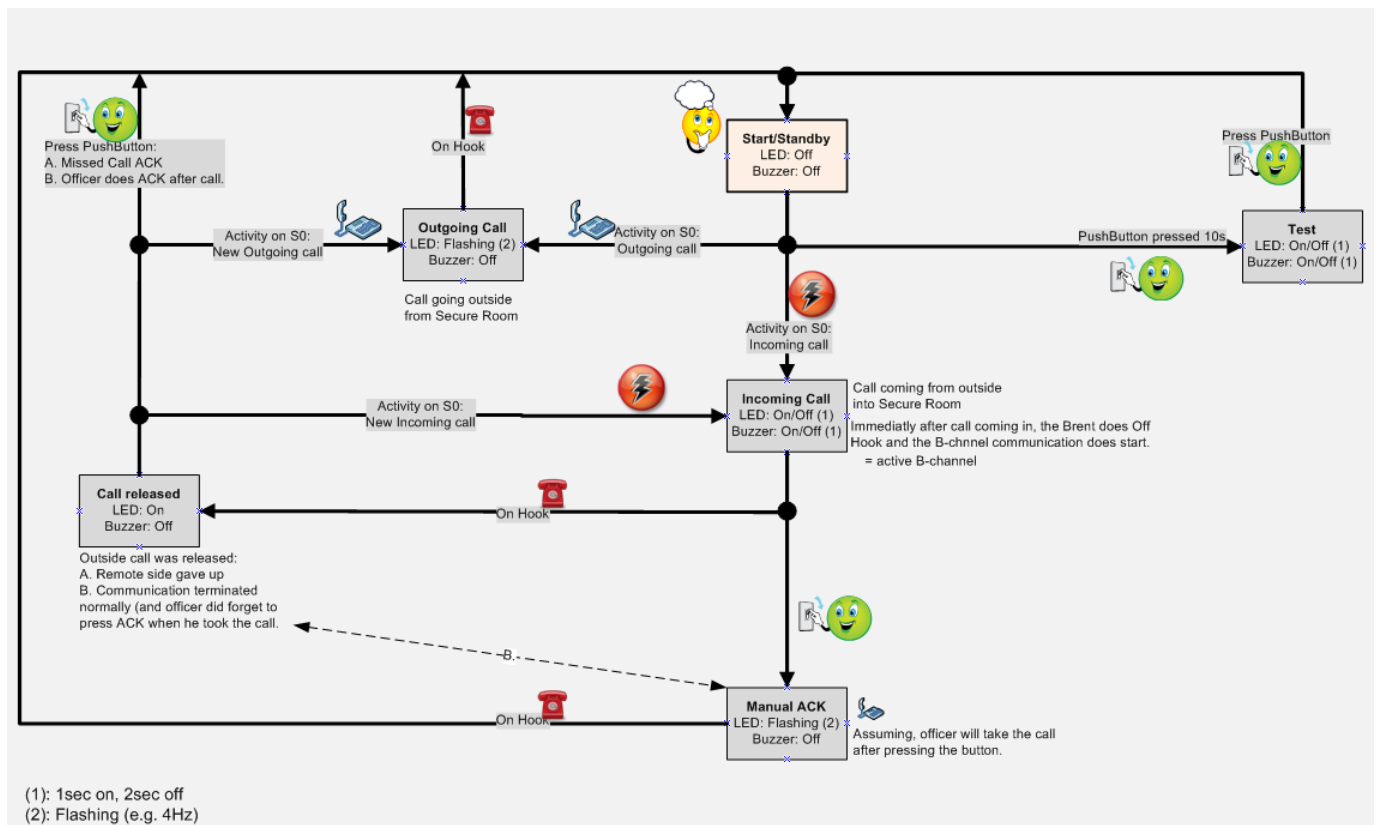
## Unit's Usage

The ISX is designed to work in a secure installation together with security BRENT phone. The ISX signals an incoming call, a missed call and the outgoing call. A test mode can be invoked to check for proper operation and installation.

The remote unite (ISX-Bell) can be connected with the main unit via standard CAT5 cable, making it easy to be used and installed in buildings with existing infra-structure.

The ISX-Bell does carry a push-button and a LED, which are completely in parallel to the main unit. So pressing the push-button on the remote unit does have the same effect as if the button on the main unit is pressed.

The below picture shows the different states, which can be signaled by the ISX and the action, the secure officer should take:



- 1.) In Standby, the ISX is quiet and waits for activity on the ISDN line or to be set into Test-Mode.
- 2.) If a call is going out (from secure room) the ISX's LED is flashing and the buzzer is idle.
- 3.) When a call is coming in from outside, the ISX's LED is blinking and the buzzer honking with same frequency (~1.5Hz).
  - a. This state is reached, as soon as the incoming call is detected and will be kept, no matter the key exchange is successful or not!

- 4.) When the incoming call is recognized by secure officer, he must press the CFM button on ISX and then go into secure room to take the call. After pressing the CFM button, the ISX will signal an active call by flashing the LED (4Hz).
- 5.) If the incoming call was not recognized by officer and the caller gives up, the ISX shows this by permanent LED and buzzer in idle state.
  - a. Pressing the CFM button will clear the state and the officer can call back if necessary.
  - b. A new incoming call will also clear the state "Call missed" and the new state is signaled.

## ISX-Bell

If a supervision of the ISDN-bus far away from the ISX's location is needed, the ISX-Bell can be used to allow remote signaling (LED and sound) and remote control. The ISX-Bell acts as a copy of the ISX concerning the buzzer and the LED's signal. An onboard push-button on the ISX-Bell is identical to the push-button on the ISX, allowing remote service.

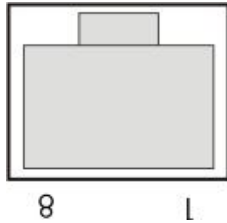
The ISX-Bell is easily connected to the ISX via standard CAT5 cable, which is used in many installations. A distance up to 600m can be spread from the ISX to the ISX-Bell.



The drilling template to wall-mount ISX-Bell is presented at the end of this document.

## RJ45 Pinouts (Female)

### S0in, S0out

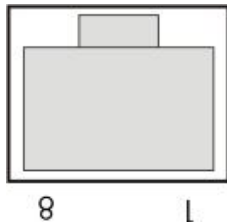


ISDN S0 RJ45

Basic Rate I/F

Pin	Signal
1	-
2	-
3	RX-
4	TX-
5	TX+
6	RX+
7	-
8	-

### Ext. Ringer



proprietary

Pin	Signal
1	SG
2	Com1
3	Com2
4	Com3
5	SG
6	PWR
7	Com4
8	PWR

## Technical Data

### ISDN S0 I/Fs

- 2x I.430
- Signaling DSS1
- Termination 100Ω/open
- Connector: 2x RJ-45

### Service I/F (Ext. Ringer)

- 1x proprietary
- Connector: RJ-45

### Features

- ISDN-Sniffer
- Easy Configuration via DIP-switches
- Plug-n-Play installation
- Low power consumption
- S0 cut through for easy installation
- Support Remote Ringer ISX-Bell
- LEDs on front to indicate status

### ISX-Bell

- External remote ringer
- 1x proprietary service interface
- Connector: RJ45
- Distance: max. 600m from ISDN-Sniffer (ISX) via in-house Cat5 wiring

### Environmental

- Operating: +5 to +40°C (ETS300019-1-3; class3.1)
- Transport: -25 to +70°C (ETS300019-1-2; class2.2)
- Storage: -25 to +55°C (ETS300019-1-1; class1.2)
- Humidity: 10 to 90%, non-condensing
- Safety-Norm: acc. to EN60950
- EMC
- Emission: EN55022 class B
- Immunity: EN61000-4-3 10V/m

### Power

- Supply Voltage: +5VDC (4,8 to 5,2 V) from BP
- Power Consumption: < 3 VA, over current protected
- Voltage/Lightning Protection: ITU-T K.20
- Power supply via system rack SRX or housing SHX

### Physical

- Weight: < 200g
- Dimensions:
  - 130mm H x 30mm W x 190mm D
  - 45mm H x 145mm W x 260mm D (in SHX3)
- 19" rack: 10 slots available in SRX10 rack



## General Safety Precautions

### Transport, Installation and Operation

- Avoid excessive vibration and shocks.
- Avoid contact with water, dust, and dirt.
- Avoid excessive direct sunlight.
- Ensure sufficient cooling.
- Prevent loose items from falling into the device.

### Fiber Optics

- Looking into the fiber optic output can cause injury to the eye. When observation is necessary, precaution must be taken to avoid exceeding the limits recommended in ANSI Z136.1-1981.
- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

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Drilling Template

**ISX-Bell**  
Bohrschablone  
center mark template  
Dimension: = mm  
A/A = drill 5mm  
Maßstab : M=1:1  
fule size M=1:1

0803 5100 36-1

