## IX600 Intruder Alarm Panel is easy to integrate

Schneider Electric Fire & Security Oy manufactured IX600 intruder panel is addressable intruder alarm panel from medium to large industrial, commercial and public facilities.

It is fully EN50131-3:2009 Grade 3 compatible and works according to Swedish SSF 1014 utgåva 4 in larmklass 2 as standalone panel in offline situations. Normally it is integrated as part of the Esmikko system.
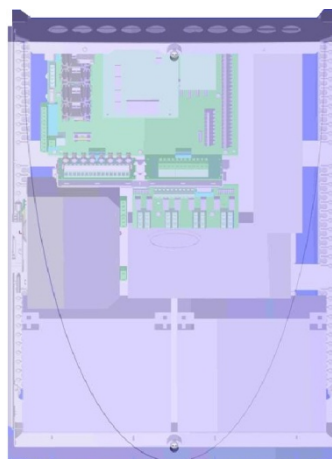
IX600 is profitable

With IX600, you can build a flexible and cost-effective system or replace existing Eskey panel:

- Detector bus structure from DBC604 units to detectors uses standard instrumentation cable, which reduces cabling costs.
- Eskey intruder panel can be replaced using IX600 with 4 DBC604s. Existing detectors and bus cabling can be re-used.
- Integrated control features and connections to other Esmi systems improve easiness of intruder use for end-users
- IX600 is reliable and immune to disturbances in the increasingly technical environments. IX600 meets the present EN 50131:2009 standards.

Long distances are easily managed

Schneider Electric has developed IX600 solution, which enables the modular expansion of intruder alarm system using RS485 bus and the same DBC604 detector bus controller as used in access control systems. DBCs can be installed in secured place and addressable detector bus goes to address units inside detectors in the area. Field devices are fully compatible with Esmikko access control system.

Esmikko and IX600 controls large areas

There is increasing need to monitor larger areas from a single control room. The demand for integrated systems, which facilitate use and increase efficiency, must be met.

IX600 is most efficient when it is part of an integrated system that contains the Esmikko access control and Pelco Digital Sentry or Endura video recording systems. These combinations provide unique user-friendliness, reliability and monitoring efficiency using Esgraf common user interface.
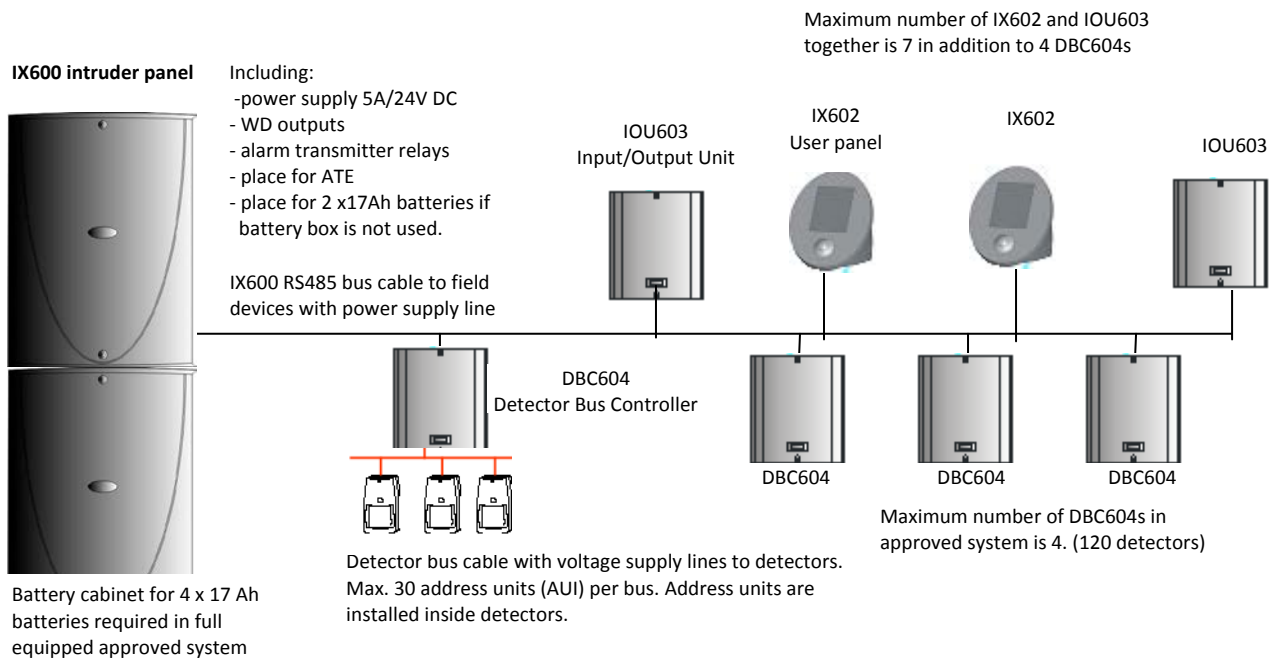
IX600s are connected to Esmikko system to create possibilities for remote programming and control. Esmikko can manage up to 120 separate IX600 panels simultaneously. Each IX600 panel contains 120 addresses and 48 independent alarm groups (zones). IX600 can be connected to company TCP/IP network so even long distances do not prevent the maintenance and management of the panel.

Centralized monitoring needs with alarm handling can be satisfied when IX600 systems are connected via Esmikko to Esgraf alarm graphics software. Esgraf workstation can also connect to Pelco video recorders so Esgraf can display recorded or live video triggered by IX600 alarms.

The alarm information can be sent re-transferred from each IX600 using SIA transmitter.

IX600 is approved according to EN 50131-3:2009 standard Class 3 in Finland, Norway, Denmark and according SSF 1014 utgåva 4 in larmklass 2 in Sweden.

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Approved System Structure

Maximum number of IX602 and IOU603 together is 7 in addition to 4 DBC604s

IX600 intruder panel

Including:
- power supply 5A/24V DC
- WD outputs
- alarm transmitter relays
- place for ATE
- place for 2 x17Ah batteries if battery box is not used.

IX600 RS485 bus cable to field devices with power supply line

IOU603 Input/Output Unit

IX602 User panel

IX602

IOU603

DBC604 Detector Bus Controller

DBC604   DBC604   DBC604

Maximum number of DBC604s in approved system is 4. (120 detectors)

Detector bus cable with voltage supply lines to detectors. Max. 30 address units (AUI) per bus. Address units are installed inside detectors.

Battery cabinet for 4 x 17 Ah batteries required in full equipped approved system

Panel fulfils EN 50131-3:2009 grade 3 requirements and environment class II.

- Number allowed of users is 900.
- Number of detector addresses is 120.
- Max number of user panels IX602 is 7.
- Number of detector groups (zones) is 48 pcs.

- Number of day type based controls is 30 for each group. 10 group controls can be calendar based.
- Two 12 V DC remotely powered WD outputs.
- One output to self powered WD.
- One input for ATS faults.

Operational environment class II

- Operating temperature   -10 C - +40 C
- Operating humidity   < 93 %
- IP-class   20

IX600 has been tested according to following standards

- EN 50131-1:2006 Intruder systems
- EN 50131-3:2009 Intruder systems
- EN 50131-5:2011 Environmental class II
- EN 50131-6:2008 Intruder power supplies

Order codes according to EN50131-3:2009

- FFS08800813 for IX600:2013 panel with IX600 46E firmware (SBSC approved).
- FFS08800803 User panel IX602:2013 v3.1 works with IX600:2013

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Technical specifications of IX600

System		Min	Nom	Max	Comment
Supply voltage	Vdc	19.5	27	29.4	CIE fully functional
Supply voltage during deep discharge	Vdc	10		19.5	Only battery monitoring circuit in IX600 gets supply from battery.
Current (without alarm condition)	A			0.85	Average consumption including all load

Inputs and outputs of IX equipments

IX600 / Main board power output		Min	Nom	Max	Comment
Voltage	Vdc	19.5	27.3	29	
Max allowed current	mA			500	Short circuit protected by fuse of 500mA (slow)
IX600 / Fuse board					
Voltage	Vdc	19.5	27.3	29	
Max allowed current	A			1	Short circuit protected by fuse of 1 A (slow)

IX600 / Main board, Inputs AN 0-1		Min	Nom	Max	Comment
Voltage in normal condition	Vdc	3	4.2	4.6	Between terminals EOL resistor 5k6 connected.
Voltage in break condition	Vdc	19.5	27.3	29	
Current supply (normal condition)	mA	0.6		0.8	With EOL (end of line) resistor 5k6.

IX600 / WDU, Warning device line for self powered devices		Min	Nom	Max	Comment
Voltage in standby condition	Vdc	12.5		14.5	This output is used to charge the battery of self powered alarm device. The minimum value is achieved by loading the output with current of 90 mA. The maximum value is achieved when loading current is 3 mA.
Stand by current	mA	3		100	
Short circuit current	mA			100	Short circuit protected by current limiter (100 mA).
Current supply (alarm condition)	mA	0.5		0.7	With EOL resistor 5k6 + serial alarm resistor 5k6
Short circuit current	mA	0.6		10	

IX600 / WDU, Warning device lines for remotely powered devices		Min	Nom	Max	Comment
Voltage in standby condition	Vdc	0	2	16.5	Reversed polarity EOL 5k6. Nominal value with eol resistors connected. Max. value is open circuit. Min. value is short circuit.
Stand by current	mA	0.3		0.5	
Voltage in activated condition	Vdc	11.4		14.7	
Line current when activated	mA	2		500	
IX600 / WDU, ATS Input		Min	Nom	Max	Comment
Voltage in normal condition	Vdc	2		2.5	Between terminals EOL resistor 5k6 connected.
Voltage in break condition	Vdc	13		16	
Current supply (normal condition)	mA	0.3		0.5	With end of line resistor 5k6.
Short circuit current	mA	0.4		0.6	

IX600 / WDU, Power outputs		Min		Max	
Voltage	Vdc	13		16	
Max allowed current	A			0.5	Short circuit protected by current limiter (500 mA).

Clean contact relay outputs in all units		Min	Nom	Max	Comment
Max allowed voltage	Vdc			30	
Max allowed current (resistive load)	A			1	

IX602 User panel		Min	Nom	Max	Comment
Supply voltage in		17	27	29.5	New SW version 3.1 required

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DBC604		Min	Nom	Max	Comment
Supply Voltage in	Vdc	17	27	29.4	
Supply Voltage out	Vdc	11		13	Supply for detectors
Maximum allowed current from Vout	mA			450	
Short circuit current	mA			550	
Address bus line normal supply	Vdc	6.1		6.3	Address pulses superimposed on the supply voltage
Address bus line pulse level	Vdc	10.5		10.9	Address pulses superimposed on the supply voltage
Address bus line reset level	Vdc			<1.3	
Short circuit current of the address bus line	mA			110	
Clean contact relay output 1 – 2					30Vmax. 1A max for contacts.
IOU603		**Min**	**Nom**	**Max**	**Comment**
Supply Voltage in	Vdc	17	27	29.5	
Input 1 – 8 (normal state)	Vdc	0.5		1.5	End of line resistor 5k6 connected
Input 1 – 8 (alarm state)	Vdc	1.5		2.5	End of line resistor 5k6 + serial alarm resistor 5k6 connected
Input 1 – 8 (break condition)	Vdc	2.5		7	line open or too high value of Eol resistor
Input 1 – 8 (short circuit)	Vdc	0		0.5	short circuit or too low value of Eol resistor
Input 1 – 8 Short circuit current	mA			0.3	
Clean contact relay output 1 – 8					30Vmax. 1Amax for contacts.

Power supply of IX panel (inside IX600)

Main supply		Min	Nom	Max	Comment
Voltage	Vac	190	230	260	
Frequency	Hz	48	50	60	
Input current	A			1.4	

Battery as secondary source		Min	Nom	Max	Comment
Voltage	Vdc	20	24	29.4	2 x 12 V in series connection
Capacity (C20)	Ah			34	2 x 17 Ah parallel
Recharging current	A	1.3		1.7	30 Ah after 24 h

Environmental data

Item		Min	Nom	Max	Comment
Operating temperature	°C	-10		+40	
Storage temperature	°C	-10		+50	
Humidity	%RH			93	Non condensing
Enclosure protection class (IP rating)	IP		20		
Environmental class II					IX600, IX602, IOU603, DBC604, AUI
Security grade 3					IX System

Mechanical data

IX600		H x W x D	Comment
Dimensions (H x W x D)	mm	580 x 425 x 130	
Weight	kg	11.5	Without batteries
Construction			Metal base, plastic cover with double metal protection for penetration of the housing.

External Battery Cabinet		H x W x D	Comment
Dimensions (H x W x D)	mm	580 x 425 x 130	
Weight	kg	6.8	Without batteries
Construction			Metal base, plastic cover

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DBC604 Detector Bus Controller		**H x W x D**	**Comment**
Dimensions (H x W x D)	mm	180 x 155 x 40	
Weight	kg	0.4	
Construction			Plastic enclosure

IX602 user panel		**H x W x D**	**Comment**
Dimensions (H x W x D)	mm	150 x 130 x 130	
Weight	kg	0.4	
Construction			Plastic enclosure

AUI address units		**H x W x D**	**Comment**
Dimensions (H x W x D)	mm	15 x 12 x 5	
Weight	kg	0.002	
Construction			Unit covered by heat shrinkable sleeve

IOU603		**H x W x D**	**Comment**
Dimensions (H x W x D)	mm	180 x 155 x 40	
Weight	kg	0.4	
Construction			Plastic enclosure

The number of variations of logical keys

The IX600 panel will generate randomly the first four digits XXXX and user selects the rest 4 digits of the eight digit code. The length of the code is eight digits (XXXXUUUU). The maximum number of users is 900. So the number of the variation will be (10E4 -1 - 12) x (10E4 - 1) / 900 = 110 955, which is over 100 000 as it is required for grade 3 panel.

Note! The master user cannot see the code on the display, only the name of the user (the code is only visible when master user creates a new user).