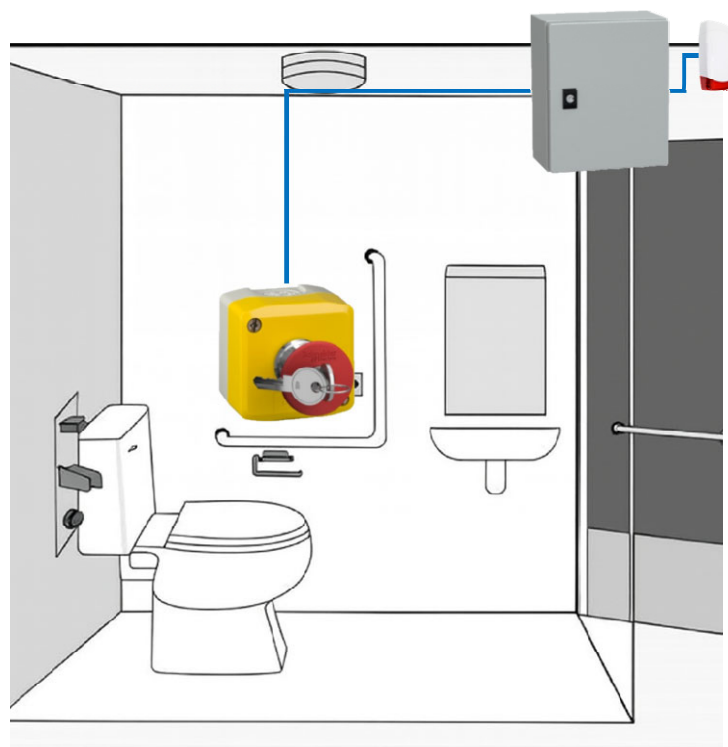


Call Bell System

The Toilet Call Bell System is a purpose-built emergency assistance solution designed for use in accessible toilets, hospitals, aged-care facilities, and public washrooms. The system ensures that users can request immediate help, while staff and caregivers receive clear, reliable alerts for rapid response.

The system is equipped with a default dry contact output for universal compatibility, allowing seamless interfacing with existing monitoring and building management systems.



This system integrates the following core components:

- Siren with combined light and sound for high-visibility alerting
- Call button for users to request help quickly and easily
- Reset button with key operation to ensure only authorized personnel can reset the alarm

While the above system is able to work standalone. The I/O module I designed in enabling cascading of multiple call bell units for centralized management. Dry-contact signal from IO Module for system integration and notification

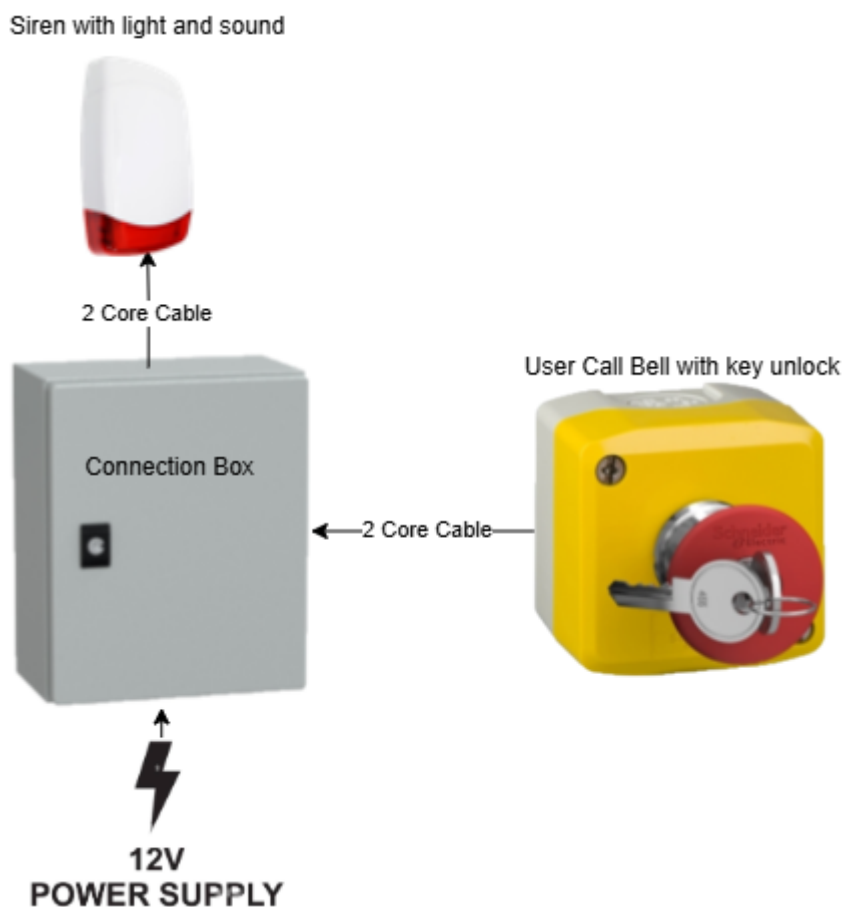
For advanced deployment scenarios, the system offers optional extensions:

- Connection of a monitor to the I/O module to access a local management portal
- Integration with the ChinoINT Edge Computing Gateway, making the system cloud-ready for remote supervision, data logging, and third-party system integration (e.g., BMS, security, or IoT platforms)

With modular design, secure reset functionality, and scalable expansion options, the Toilet Call Bell System provides a dependable, future-proof solution for safeguarding users and streamlining facility management.



Standalone Configuration



Equipment Specification - User Call Bell with key unlock
Recommended Model: Schneider XALK188



Main

Range of product	Harmony XALK
Product or component type	Complete control station
Device short name	XALK
Product destination	For XB5 Ø 22 mm control and signalling units
Control station application	Emergency switching off function Emergency stop function
Colour of base of enclosure	Light grey (RAL 7035)
Colour of cover	Yellow (RAL 1021)
Material	Polycarbonate
Operator profile	1 mushroom head push-button
Operators description	Red unmarked 1 NC
Reset	Key release
Control station composition	1 mushroom head Ø 40 mm push-button, red 1 NC unmarked marking
Contact operation	Slow-break

Complementary

Cable entry	1 knock-out for cable entry 0...14 mm 2 knock-outs for Pg 13 cable gland and ISO M20 0...12 mm
Net weight	0.188 kg
Resistance to high pressure washer	7000000 Pa at 55 °C, distance : 0.1 m
Key number	455
Positive opening	With conforming to IEC 60947-5-1 appendix K
Operating travel	1.5 mm (NC changing electrical state) 4.3 mm (total travel)
Operating force	44 N NC + NO changing electrical state
Mechanical durability	300000 cycles
Connections - terminals	Screw clamp terminals, $\leq 2 \times 1.5 \text{ mm}^2$ with cable end conforming to IEC 60947-1 Screw clamp terminals, $\geq 1 \times 0.22 \text{ mm}^2$ without cable end conforming to IEC 60947-1
Tightening torque	0.8...1.2 N.m conforming to IEC 60947-1
Shape of screw head	Cross compatible with Philips no 1 screwdriver Cross compatible with pozidriv No 1 screwdriver Slotted compatible with flat Ø 4 mm screwdriver Slotted compatible with flat Ø 5.5 mm screwdriver
Contacts material	Silver alloy (Ag/Ni)



Short-circuit protection	10 A cartridge fuse type gG conforming to IEC 60947-5-1
[Ith] conventional free air thermal current	10 A conforming to IEC 60947-5-1
[Ui] rated insulation voltage	600 V (pollution degree 3) conforming to IEC 60947-1
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947-1
[Ie] rated operational current	3 A at 240 V, AC-15, A600 conforming to IEC 60947-5-1 6 A at 120 V, AC-15, A600 conforming to IEC 60947-5-1 0.1 A at 600 V, DC-13, Q600 conforming to IEC 60947-5-1 0.27 A at 250 V, DC-13, Q600 conforming to IEC 60947-5-1 0.55 A at 125 V, DC-13, Q600 conforming to IEC 60947-5-1 1.2 A at 600 V, AC-15, A600 conforming to IEC 60947-5-1
Electrical durability	1000000 cycles, AC-15, 2 A at 230 V, operating rate <3600 cyc/h, load factor: 0.5 conforming to IEC 60947-5-1 appendix C 1000000 cycles, AC-15, 3 A at 120 V, operating rate <3600 cyc/h, load factor: 0.5 conforming to IEC 60947-5-1 appendix C 1000000 cycles, AC-15, 4 A at 24 V, operating rate <3600 cyc/h, load factor: 0.5 conforming to IEC 60947-5-1 appendix C 1000000 cycles, DC-13, 0.2 A at 110 V, operating rate <3600 cyc/h, load factor: 0.5 conforming to IEC 60947-5-1 appendix C 1000000 cycles, DC-13, 0.5 A at 24 V, operating rate <3600 cyc/h, load factor: 0.5 conforming to IEC 60947-5-1 appendix C
Electrical reliability	$\Lambda < 10\text{exp}(-6)$ at 5 V, 1 mA conforming to IEC 60947-5-4 $\Lambda < 10\text{exp}(-8)$ at 17 V, 5 mA conforming to IEC 60947-5-4

Environment

Protective treatment	TH
Ambient air temperature for storage	-40...70 °C
Ambient air temperature for operation	-40...70 °C
Overvoltage category	Class II conforming to IEC 60536
IP degree of protection	IP66 conforming to IEC 60529 IP67 IP69 IP69K
NEMA degree of protection	NEMA 13 NEMA 4X
IK degree of protection	IK03 conforming to IEC 62262
Standards	IEC 60947-5-4 CSA C22.2 No 14 IEC 60204-1 IEC 60947-5-5 UL 508 IEC 60947-5-1 ISO 13850 IEC 60364-5-53 JIS C 4520 IEC 60947-1
Vibration resistance	5 gn ($f = 12 \dots 500$ Hz) conforming to IEC 60068-2-6
Shock resistance	30 gn (duration = 18 ms) for half sine wave acceleration conforming to IEC 60068-2-27 50 gn (duration = 11 ms) for half sine wave acceleration conforming to IEC 60068-2-27



Equipment Specification - Siren with Light and Sound

Recommended Model: MiTec MSR - 230/R



MODEL	MSR - 230/R
Power Source	DC 12V±20% (Built-in NiMH Rechargeable Battery)
Current Drain	Stand by <20mA ± 2mA
	Max. 0.3 Amp.
Siren Output Rate	110dB
Operation Temp.	-20°C ~ 70°C
IP Rating	IP54
Dimension	194W x 300H x 59D mm
Back-up Battery	6V / 250mAh NiMH



Equipment Specification - Connection Box

Recommended Model: Schneider NSYCRN325150

Connection Box connects the Call Bell System equipment together. It takes in 12V DC and 1A current input.

Main

Range	Spacial
Product name	Spacial CRN
Device application	Multi-purpose
Product or component type	Compact enclosure
Enclosure nominal height	300 Mm
Enclosure nominal width	250 Mm
Enclosure nominal depth	150 Mm
Installation accessory type	Wall-mounting
Device composition	1 body 1 cable gland plate 1 door 1 lock
Door type	Plain
Mounting plate description	Without mounting plate

Complementary

Variant particularity	Sides made from a single folded section Back welded with double profile forming a protected sealed area
Number of doors	Front face: 1 door(s)
Door opening side	Reversible (120 °)
Lock type	3 mm double-bar lock
Type of gland plate	Standard
Accessibility for operation	Front
Removable parts	Door by hinges Cable gland plate by screws
Material	Body: steel
Surface finish	Epoxy-polyester powder
Colour	Grey (RAL 7035)
Standards	IEC 62208
Product certifications	UL CUL DNV-GL
Product weight	3.72 Kg

Environment

IP degree of protection	IP66 conforming to IEC 60529
IK degree of protection	IK10 conforming to IEC 62262



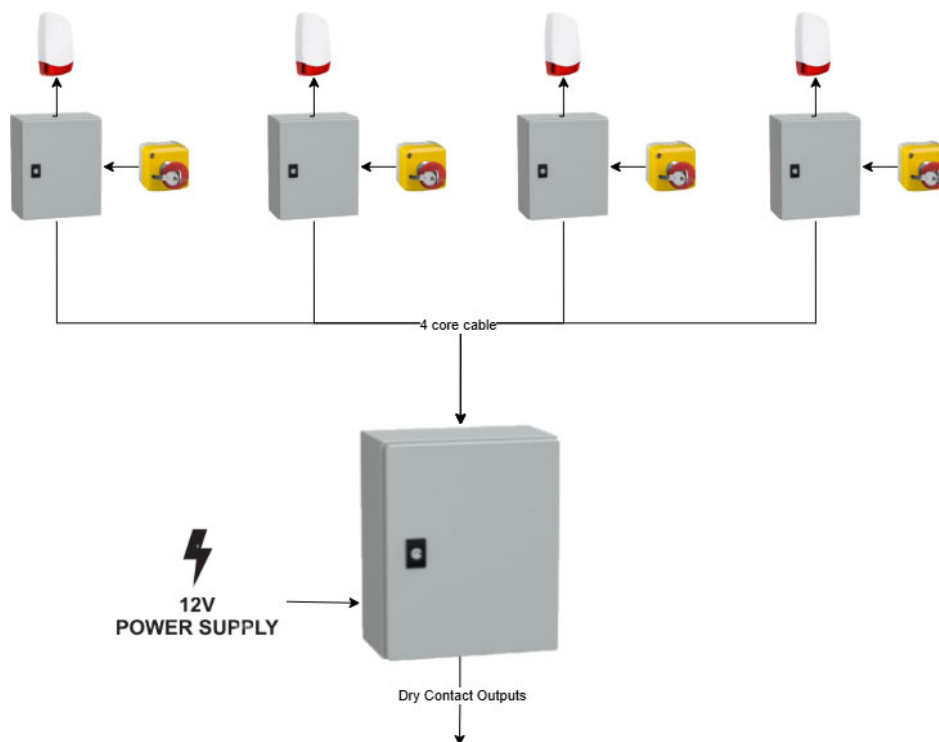
Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	17.000 Cm
Package 1 Width	26.000 Cm
Package 1 Length	31.500 Cm
Package 1 Weight	3.674 Kg
Unit Type of Package 2	PAM
Number of Units in Package 2	46
Package 2 Height	90.000 Cm
Package 2 Width	100.000 Cm
Package 2 Length	120.000 Cm
Package 2 Weight	182.004 Kg

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
China RoHS Regulation	China RoHS Declaration
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile

Cascading Configuration



Equipment Specification - IO Module

Recommended Model: Schneider NSYCRN325150

The IO Module is the connection hub of the Call Bell System. It allows Call Bell Systems connecting together, reducing system complexity. The IO Module propagates the signals to the MCS and CallBell Status Panel at once. The IO Module is able to duplicate output signals to different systems simultaneously.

Parameter	Specification
Dimension	h300 x w250 x d150 mm, Same as Connection Box
Protection	IP66 IK10, Same as Connection Box
Power	12V DC / 2A
Input	Up to 4 Call Bell System (Upgradable)
Output	Dry-contact signals to MCS and Call Bell Status Panel
Cables within	LSZH Cat6 cable

Equipment Specification - Call Annunciation Panel

This equipment is an all-in-one call annunciation panel. It is a tailor-made parts per on-site requirements. The material of the panel is 304 stainless steel. All the cables inside the IO Module utilizes LSZH Cat6 cable. We provide no external cables. This Panel accepts dry contact signal and display using LED indicators. The label for each signal can be tailor made to fit.

An illustration of the Call Annunciation Panel is shown below.



Parameter	Specification
Dimension	300 x 200 x 150 mm (tailor made to fit)
Cables within	LSZH Cat6 cable
Power	12V DC / 2A

Installation

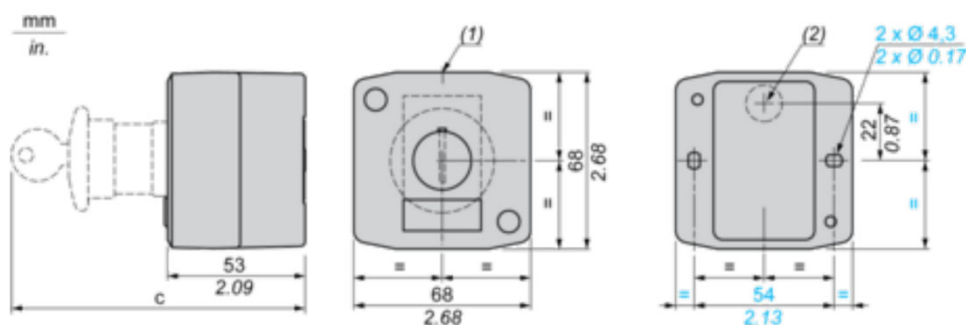
Note: We provide no external cables connecting the equipments , and no screw / accessories for installation.

The Call Bell System is designed with easy screw mount on wall. Screw holes are designed with the housing in all components that could be wall-mounted.

Installation can be done only by the professional construction personnel or authorized engineering representative. Please use the professionally qualified installation tools to guarantee the safety of the construction personnel. Installation position must be far away from the fire source, strong electric field, magnetic field etc., otherwise damage will be resulted. ChinoINT reserves the interpretation of installation.

User Call Bell Installation

Shown below is the housing structure diagram. For wall-mount, follow the diagram to find the screw holes for mounting.



- (1) 2 knock-outs for Pg 13.5 cable gland, maximum capacity 12 mm/0.47 in.
- (2) Knock-out for cable entry, maximum capacity 14 mm/0.55 in.

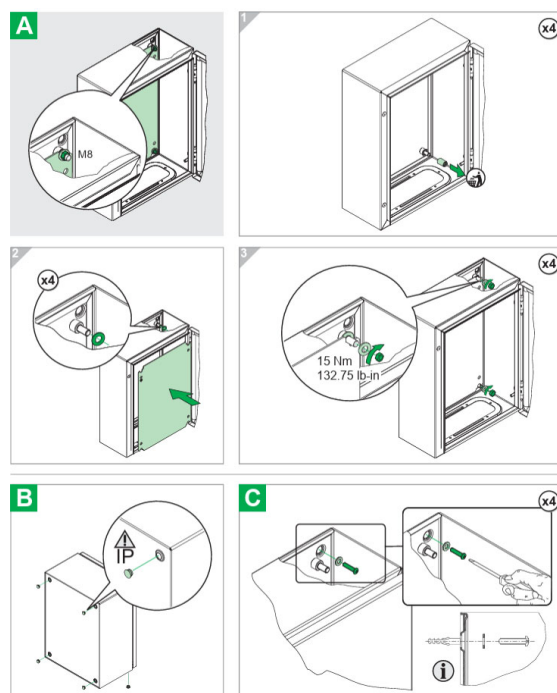
Siren with Light and Sound Installation

Shown below is the dimension and screw holes for the Siren. Wall-mount screw holes can be found at the bottom of the equipment.

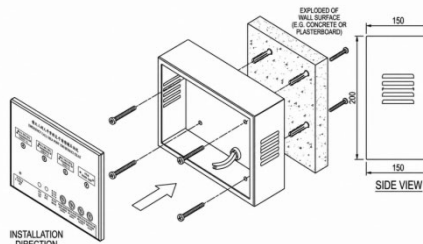


IO Module & Connection Box Installation

Shown below is the dimension and wall-mount screw hole location diagram.



Call Annunciation Panel Installation



Cable Recommendation

Cable size	Approx. AWG	Max one-way distance at 12 V, 1 A	Max one-way distance at 3.3V, 1 A
0.5 mm ²	20 AWG	~16 m	~3 m
0.75 mm ²	18 AWG	~25 m	~5 m
1.0 mm ²	17 AWG	~33 m	~6.5 m
1.5 mm ²	15 AWG	~50 m	~10 m
2.5 mm ²	13 AWG	~80 m	~16 m
4.0 mm ²	11 AWG	~130 m	~26 m
6.0 mm ²	9 AWG	~195 m	~39 m

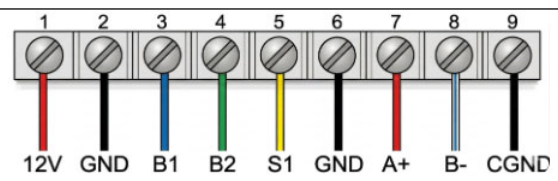
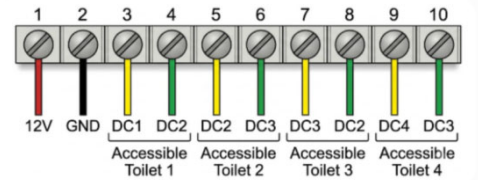
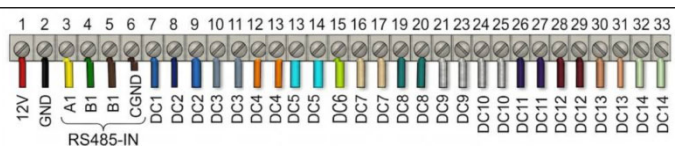
For RS485 cable, please deploy with RS-485-compliant twisted-pair cable.

For Dry Contact signals, RJ45 cable enable a general length of 30m. Better cable size and AWG allows longer length deployment.



All cables between equipment are not provided. These are provided for reference only. The actual distance depends on on-site situation and workmanship.

Connection Diagram

Device	Connection	Reference
Siren with Light and Sound	- Red wire to Connection Box S1 (#5) - Black wire to Connection Box GND (#6)	
User Call Bell	- Terminal 1 to Connection Box B1 (#3) - Terminal 2 to Connection Box B2 (#4)	
Connection Box	Connection Box Terminal Wiring illustration	
Call Annunciation Panel	Call Annunciation Panel Terminal Wiring illustration	
IO Module	IO Module Terminal Wiring Illustration	



Warning

Assumes no liability for any damage resulting from the use of this product. CHINOTECH INTERNATIONAL LIMITED reserves the right to change this data sheet at any time without notice. The information furnished by ChinoINT is believed to be accurate and reliable. However, no responsibility is assumed by ChinoINT for its use, not for any infringements of patents or other rights of third parties resulting from its use.

Product Warranty and Customer Support

ChinoINT warrants all products free from defects in material and workmanship for a period of one year from the date of shipping. During the warranty period, we will, at our position, either repair or replace any product that proves to be defective. To report any defect, please inquiry sales@chinoint.com

Unauthorized opening and improper repairs on the device may result in substantial damage to equipment or endanger the user. The product described in this documentation may be operated only by personnel qualified. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products. Always disconnect the power plug before you open the device.

Please have the model, serial number and a detailed problem description available when you call. If the problem concerns a particular reading, please have all meter readings available.

This warranty does not apply to defects resulting from unauthorized modification, misuse. If you install or exchange system expansion and damage your device, the warranty becomes void.

Product Warranty and Customer Support

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

