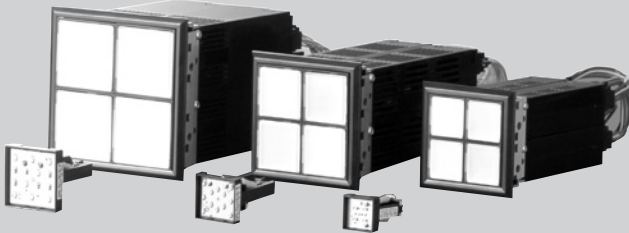




ANNUNCIATOR RELAY

XK TYPE

**Indicators built in relays help
reduction of auxiliary relays in the panel**



FEATURES

High brightness by 4 elements LED (Al InGap-LED)

4 elements LED (Al InGap-LED)
improves brightness.
(new one is 4 times as bright as
the previous model)



(XK44 Type)



(LK44 Type)

Easy wiring by built in relays

High performance and reliability of
built in relays reduce wiring work.



Various sequence type are available

Almost all standard pattern
sequence circuits are lined up, which
helps speed up of circuit design.

24mm, 30mm, 40mm square windows are available

Three different size windows are
available for various application needs,
and XK units and XL units can be mixed
in one assembly.



Easy setting of alarm output

Each alarm output (bell, buzzer,
chime) can be easily selected by
the switch on the rear side.



A new structural lens

A label film indicated words can be
installed with a single motion.

Insertable size of label film (mm)

- XK44TYPE ... (H)35.0×(W)33.5
- XK33TYPE ... (H)25.0×(W)23.5
- XK22TYPE ... (H)19.0×(W)17.5



* Label film is gold optionally.

SPECIFICATIONS (RATING, PERFORMANCE / NORMAL SERVICE CONDITION)

Specification		XK22	XK33	XK44
Rating	Rated insulation voltage (Ui)	250V		
	Rated operating voltage	24V DC	100 / 110V DC	110V DC
	Input signal time	20ms or more (at rated voltage)		
	Insulated resistance	10MΩ or more (between electrical circuit and ground)		
	Power frequency withstand voltage	2,000V AC / 1min. (between electrical circuit and ground)		
	Impulse withstand voltage (Uimp)	±4.5kV (1.2 / 50μs) each pole (between electrical circuit and ground)		
Performance	Permissible continuous input ^{*1}	50% of the total number of windows in the assembly (staggered arrangement input) ^{*2}		
	Visibility of light flashing	Mounted side brightness: 1,000Lx, Visible distance: 10m		
	Degree of protection	IP40 (at illuminating portion)		
	Terminal size	M3 screw or Faston tab #187		
	Vibration resistance	Frequency: 10Hz Amplitude: 5mm (vertical direction: 2.5mm) Time: 30sec. (3 axial direction)		
	Shock resistance	Frequency: 16.7Hz Amplitude: 0.4mm Time: 600sec. (3 axial direction)		
Normal service condition	Power consumption (1 unit)	Approx. 1W	Approx. 1W (110V DC)	Approx. 2W (110V DC, 1 relay) Approx. 3W (110V DC, 2 relays)
	Operating temperature	0 to 40°C (−10 to 50°C allowed for a few hours in a day)		
	Storing temperature	−20 to 60°C		
	Relative humidity	30 to 80%		
	Altitude	2,000 m max. no freeze / no condensation		

^{*1} All relays continuously excitation and the lamps are lit.
^{*2} Except for a few minutes of temporary input, such as ramp test.

HOW TO ORDER

[XK TYPE]

XK22 - 01 S - 02 × 02 - DC024 - O W

No.	Item	Code	Description	Note
①	Basic type	XK22	□24	—
		XK33	□30	—
		XK44	□40	—
②	Circuit code	01	XK22, XK44 only	—
		02	XK22 only	—
		03	XK44 only	When Circuit code is 03 and 04, the basic type is XK44M (short body).
		04	XK33, XK44 only	
		05	XK44 only	—
		06	XK44 only	—
		07	XK44 only	—
③	Terminal type	S	Screw M3×6	—
		F	Faston tab #187	—
④	No. of columns	01 to 15	—	—
⑤	No. of rows	01 to 15	—	—
⑥	Rated operating voltage	DC024	DC24V	XK22, XK33 only
		DC110	DC110V	XK44 only
		DC110	DC100/110V	XK33 only
		MIX ^{*2}	Combination of different voltage	Special
⑦	Display color	R	Red	—
		O	Orange	—
		W	White	Standard
		G	Green	
		Y	Yellow	—
		B	Blue	Special
		M	Mix	

^{*1} The choice of all white lens is also available.
^{*2} In case the control power supply voltage and lamp voltage are different, please consult with us. (Some types are available).

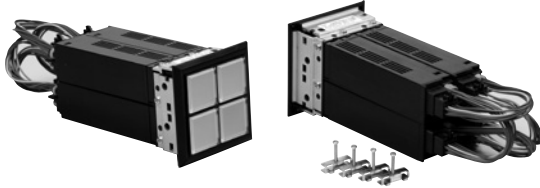


ANNUNCIATOR RELAY

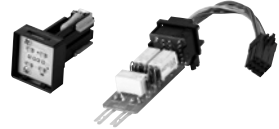
XK TYPE

STANDARD PRODUCTS

XK22-01

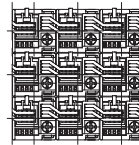
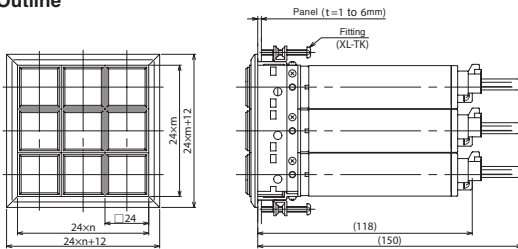


■Lamp, Inner element

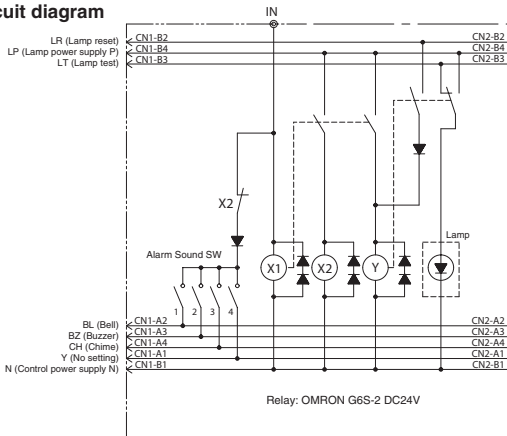


Standard attachment : fitting tool (XL-TK)

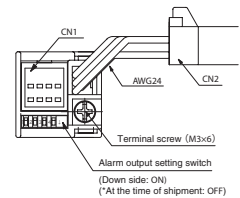
■Outline



■Circuit diagram



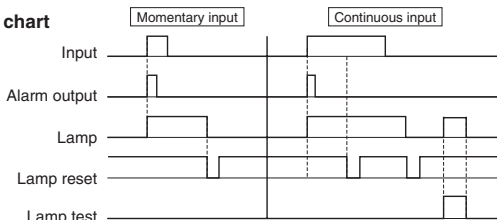
■Rear side



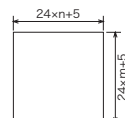
■Function

External output	—
Output	b contact
Type	Pulse output
Sound	4 type (BL, BZ, CH, Y)
Input holding circuit	—

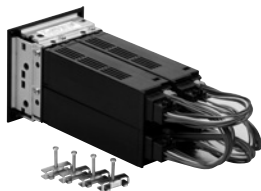
■Operation chart



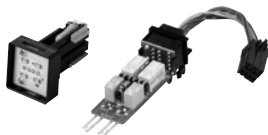
■Mounting hole size



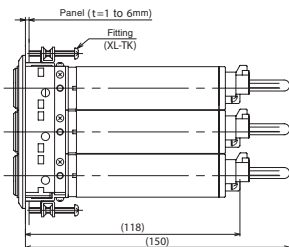
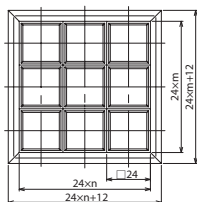
XK22-02



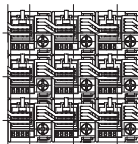
■ Lamp, Inner element



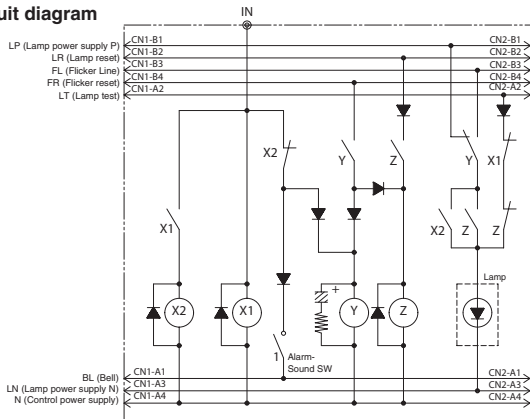
■ Outline



Standard attachment : fitting tool (XL-TK)

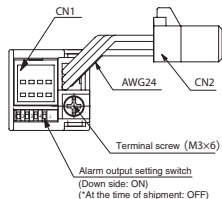


■ Circuit diagram



* Alarm setting switch must be on in case of combination use with interface unit (UKTF2).

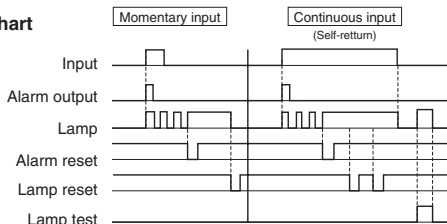
■ Rear side



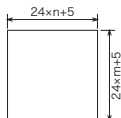
■ Function

External output		—
Alarm	Output	b contact
	Type	Pulse output
	Sound	1 type (BL)
Interface unit		UKTF2

■ Operation chart



■ Mounting hole size





ANNUNCIATOR RELAY

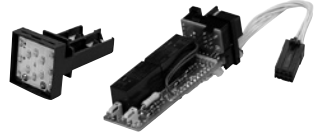
XK TYPE

STANDARD PRODUCTS

XK33-04

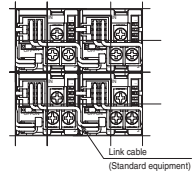
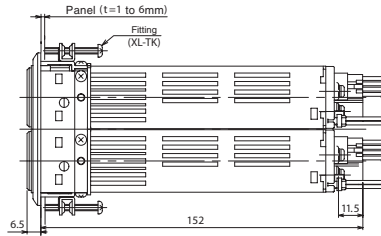
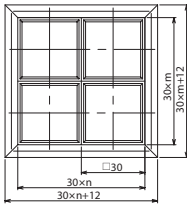


■ Lamp, Inner element

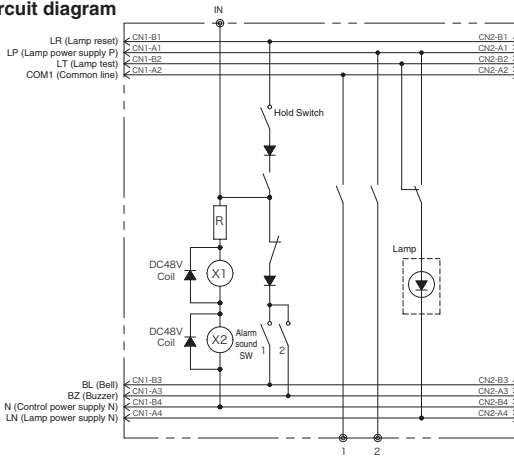


Standard attachment : fitting tool (XL-TK)

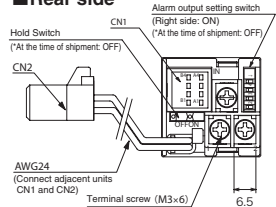
■ Outline



■ Circuit diagram



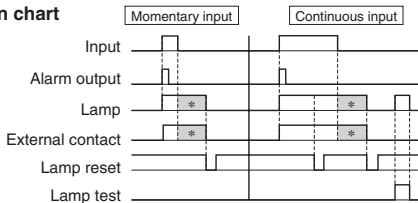
■ Rear side



■ Function

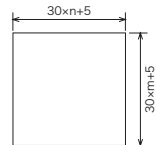
External output	2 a contact
Output	b contact
Alarm	Type Pulse output
Sound	2 type (BL, BZ)
Input holding circuit	available

■ Operation chart

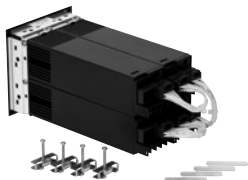


* When hold switch is ON

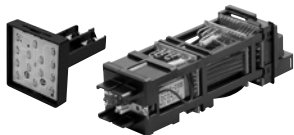
■ Mounting hole size



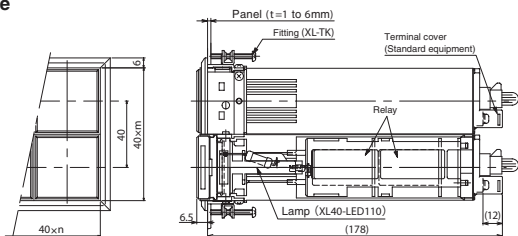
XK44-01



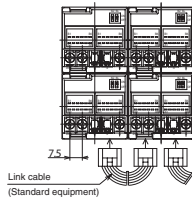
■ Lamp, Inner element



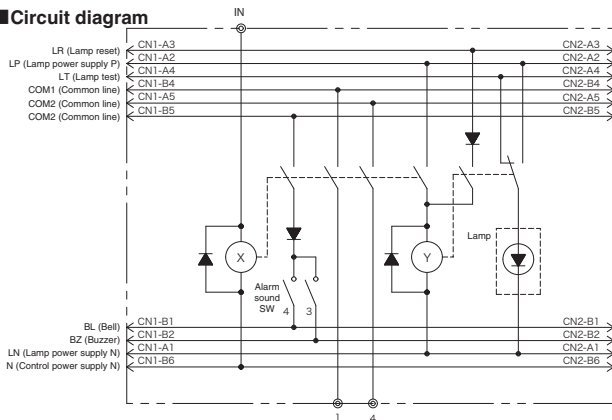
■ Outline



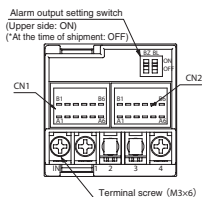
Standard attachment : fitting tool (XL-TK),
terminal cover (XK-CV)



■ Circuit diagram



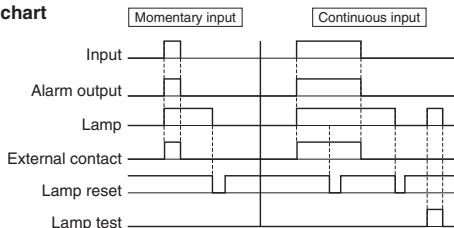
■ Rear side



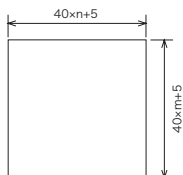
■ Function

External output	2 a contact
Output	a contact
Alarm	Type Sync with input
	Sound 2 type (BL, BZ)
Input holding circuit	—

■ Operation chart



■ Mounting hole size





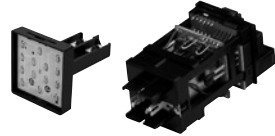
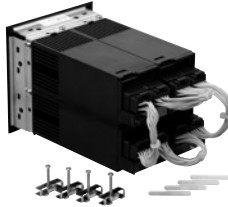
ANNUNCIATOR RELAY

XK TYPE

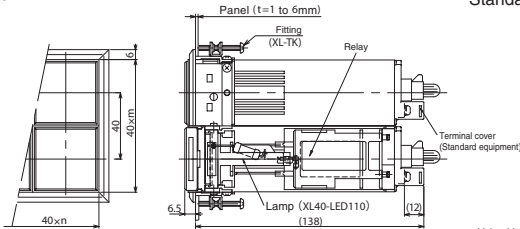
STANDARD PRODUCTS

XK44M-03

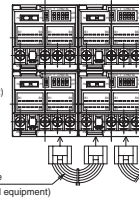
■ Lamp, Inner element



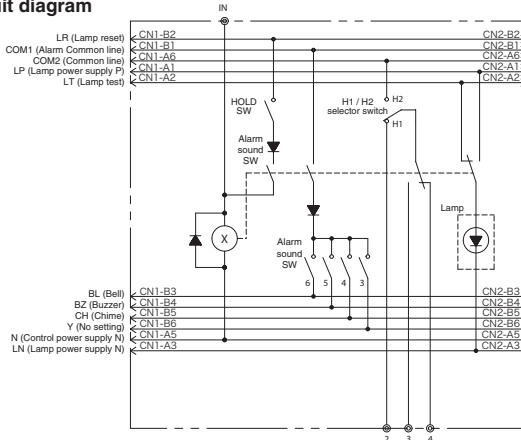
■ Outline



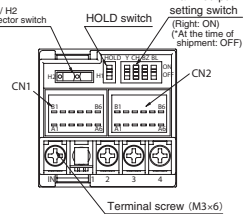
Standard attachment : fitting tool (XL-TK), terminal cover (XK-CV)



■ Circuit diagram



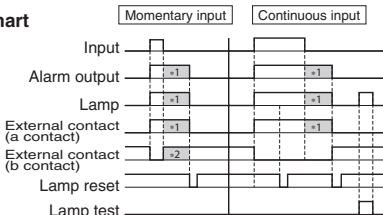
■ Rear side



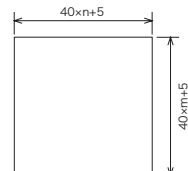
■ Function

Alarm	External output	1 c contact
	Output	a contact
	Type	Sync with input
	Sound	4 type (BL, BZ, CH, Y)
Input holding circuit		available

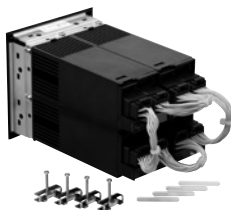
■ Operation chart



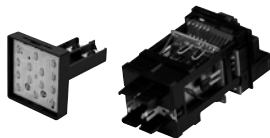
■ Mounting hole size



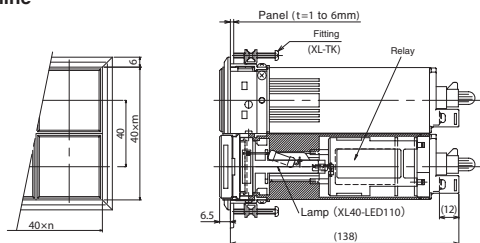
XK44M-04



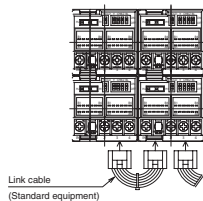
■ Lamp, Inner element



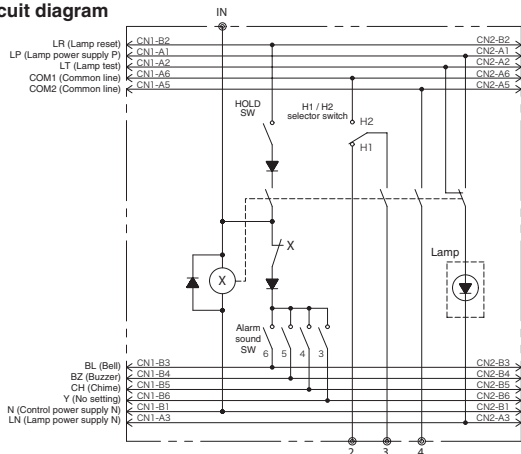
■ Outline



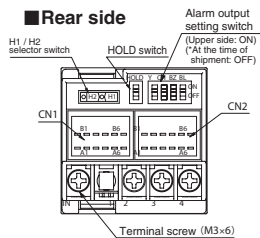
Standard attachment : fitting tool (XL-TK),
terminal cover (XK-CV)



■ Circuit diagram



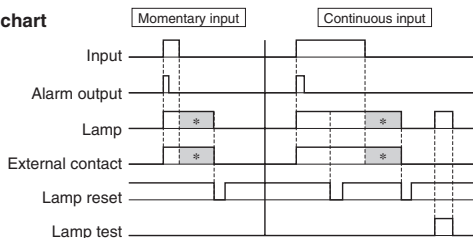
■ Rear side



■ Function

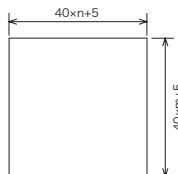
External output		2 a contact
Alarm	Output	b contact
	Type	Pulse output
	Sound	4 type (BL, BZ, CH, Y)
Input holding circuit		available

■ Operation chart



* When HOLD switch is ON, the operation is shown as * shadows.

■ Mounting hole size



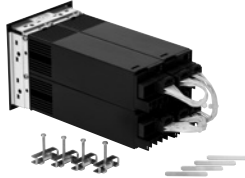


ANNUNCIATOR RELAY

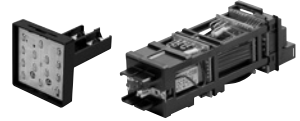
XK TYPE

STANDARD PRODUCTS

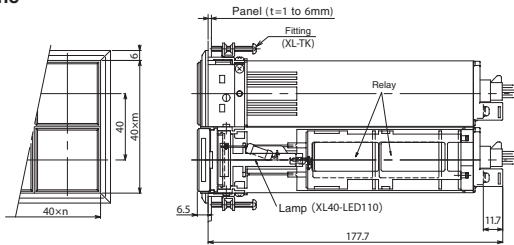
XK44-05



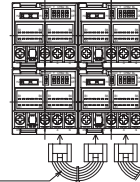
■ Lamp, Inner element



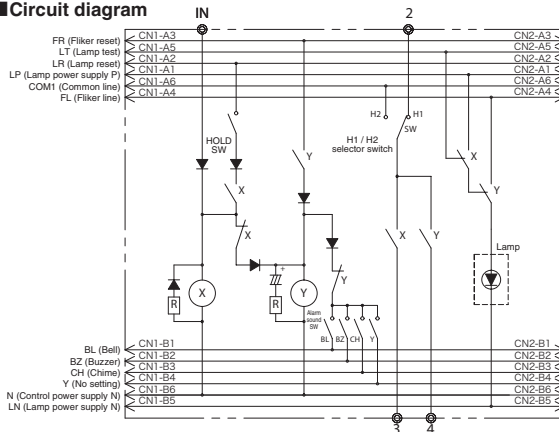
■ Outline



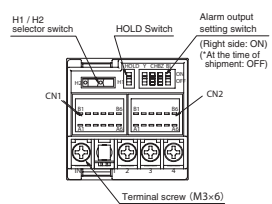
Standard attachment : fitting tool (XL-TK),
terminal cover (XK-CV)



■ Circuit diagram



■ Rear side

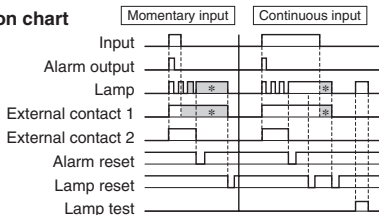


■ Function

External output	2 a Contact
Output	b Contact
Alarm	Type Pulse output
Sound	4 type (BL, BZ, CH, Y)
Input holding circuit	available

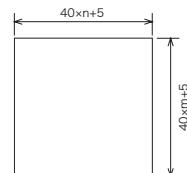
* Rated operating voltage: 100 / 110V DC

■ Operation chart



* When HOLD switch is ON, the operation is shown as * shadows.

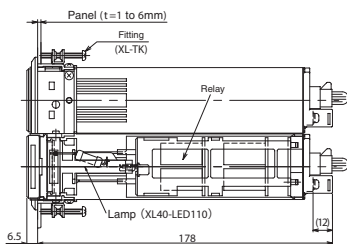
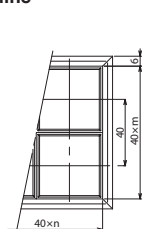
■ Mounting hole size



XK44-06



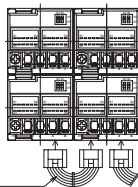
■ Outline



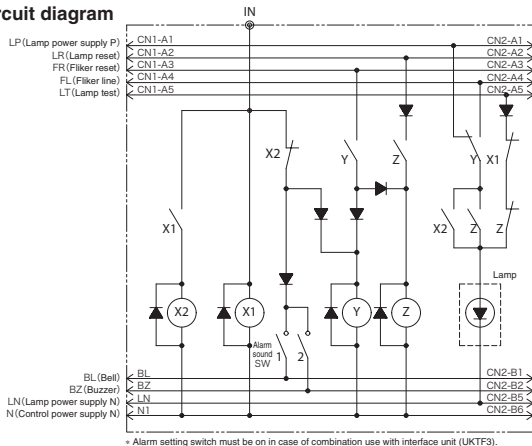
■ Lamp, Inner element



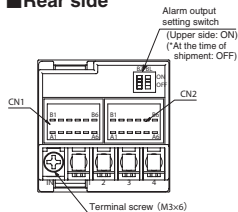
Standard attachment : fitting tool (XL-TK), terminal cover (XK-CV)



■ Circuit diagram



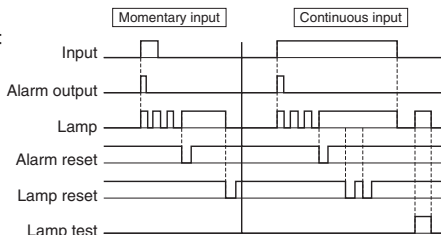
■ Rear side



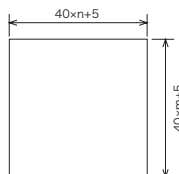
■ Function

External output	Output	—
Alarm	Type	b Contact
	Sound	Pulse output
		2 type (BL, BZ)
Interface unit		UKTF3

■ Operation chart



■ Mounting hole size



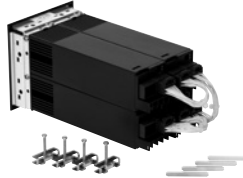


ANNUNCIATOR RELAY

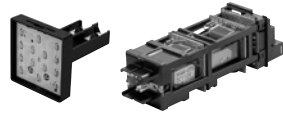
XK TYPE

STANDARD PRODUCTS

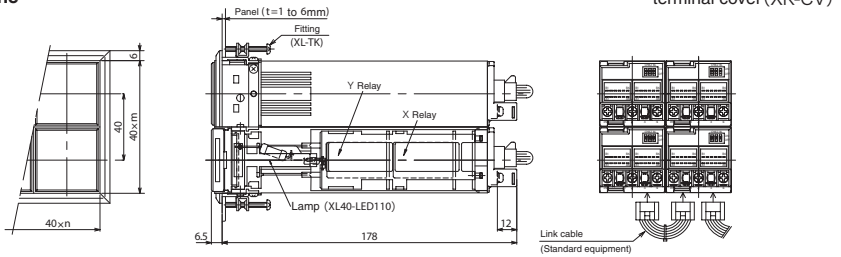
XK44-07



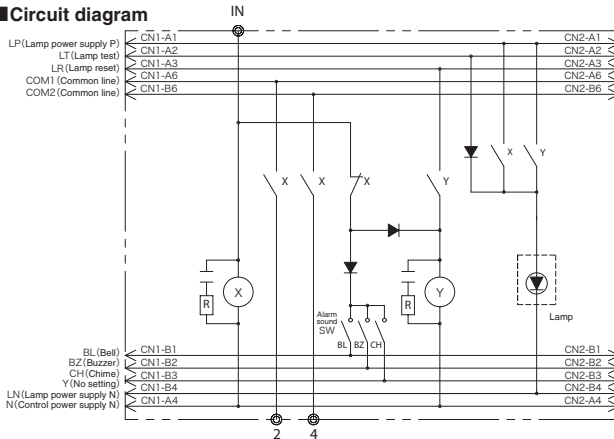
■ Lamp, Inner element



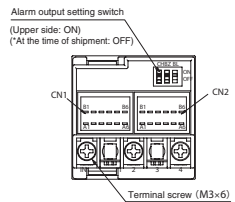
■ Outline



■ Circuit diagram



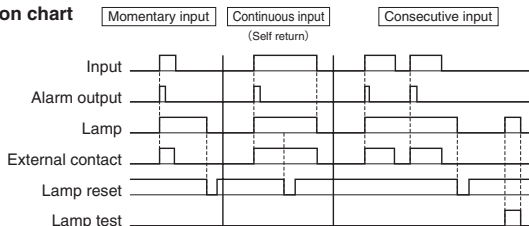
■ Rear side



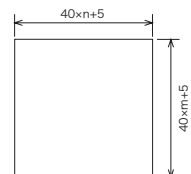
■ Function

External output	2 a Contact
Output	b Contact
Alarm Type	Pulse output
Sound	3 type (BL, BZ, CH)
Input holding circuit	available

■ Operation chart



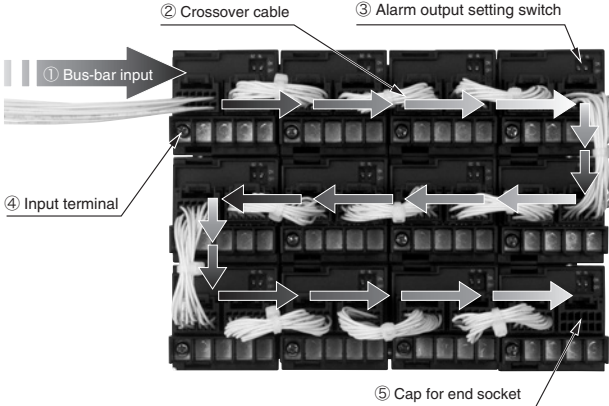
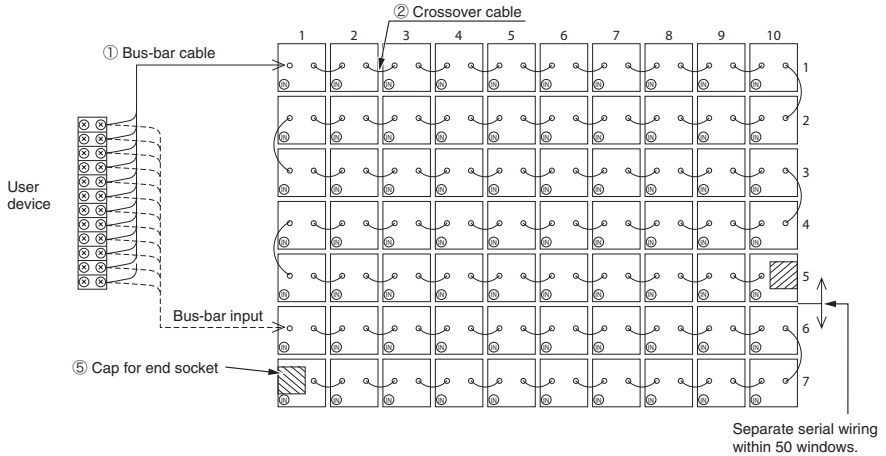
■ Mounting hole size



TECHNICAL DATA

Please refer to the following examples for many unit wiring ways.

■ Example of wiring (XK44)



- ① Bus-bar cable (Individual sale)
Code : XKK44-□□-14□□□
- ② Crossover cable (Attachment)
Code : XKK44-11008Y
- ③ Alarm output setting switch
BL/BZ/CH/Y
- ④ Input terminal
- ⑤ Cap for end socket (Individual sale)
Code : XK44-CAP

* Maximum unit number of skipping
with standard crossover cable.

XK22	2 units
XK33	1 unit
XK44	1 unit

■ Precautions

- Install products and alarm output setting switch under the no voltage condition.
- Use applicable wires for connection.
- Install this product considering heat influence to adjacent products.
- When many input signals come at the same time, relay characteristics change by temperature rise.
- In case of many unit installation, consider vibration or shock among transportation, and reinforce the mounting panel or do other operation.
- This product is exchangeable partly such as a element (relay and terminal) and an LED unit. In case of exchange caused by malfunction, disconnect them by using applicable tools.



ANNUNCIATOR RELAY

XK TYPE

XK33 type and XK44 type annunciator relay replacement procedure

●How to replace LEDs

*The photo shows the XL type multi-window indicator, but the replacement procedure for the XK type is the same.

How to remove



① Press the suction cup of the removing tool (XL-NQ) against the lens and then remove the lens.



② Hook the wider claw of the removing tool (XL-NQ) onto the LED unit removing slit and then pull out the LED unit horizontally.

How to mount



③ Assemble the lens to the LED unit and then insert them together into the main body. Sufficiently press the lens with your finger until it stops.

Note: Do not try to directly press the LED unit with your fingers.

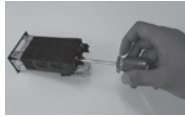
How to replace the element part

●XK33 type

(1) How to remove the element



Refer to the white line at the bottom for the insertion position.



Removal tool for inner element (XK33-Q1)

① Remove the screw fastened at the rear of the product (white frame in the photo on the left) using a phillips screwdriver.



② After removing the screw, insert the removal tool for inner element (XK33-Q1) according to the insertion position.



③ Turn the tightening screw of the removal tool for inner element (XK33-Q1) until it stops. Then, pull out the element using the extraction tool.

(Note) A little force is required to pull it out. Be careful not to injure yourself when pulling it out. The lens and LED unit may recoil and fall out when the element is pulled away from the main body. Remove the lens and LED unit in advance, or fix the lens surface with tape, etc., before pulling off the element. Please remove the lens and LED unit in advance, or fix the lens surface with tape, etc., before pulling off the element.

(2) How to mount the element



④ After removing the extraction tool, insert the element into the case until it clicks into place. After that, fasten the screws on the product part.

●XK44 type

(1) How to remove the element



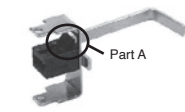
Removal tool for inner element (XK44-Q)

① From the rear side of the product, align the two holes and connectors and insert the removal tool for inner element (XK44-Q).

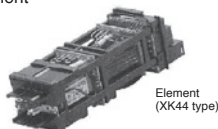
② After confirming the "click" lock sound of the connector, pull it to the rear and separate it from the main unit.

(Note) A little force is required to pull it out. Be careful not to injure yourself when pulling it out. The lens and LED unit may recoil and fall out when the element is pulled away from the main body. Remove the lens and LED unit in advance, or fix the lens surface with tape, etc., before pulling off the element. Please remove the lens and LED unit in advance, or fix the lens surface with tape, etc., before pulling off the element.

③ Insert a flat-blade screwdriver into part A of the removal tool (XK44-Q) to unlock the connector and separate the element and the removal tool.



(2) How to mount the element



④ Insert the element into the case until it clicks into place.



ANNUNCIATOR RELAY

XK TYPE

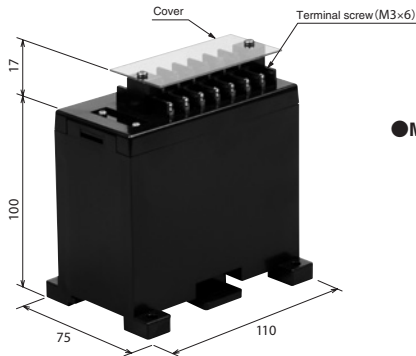
ACCESSORIES

Interface unit

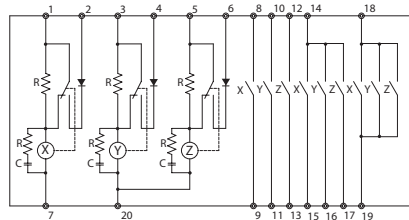
●How to order

UKTG-S DC110V

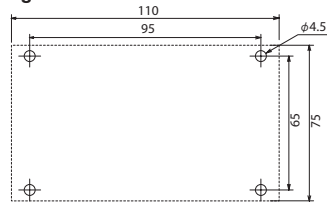
Basic type Terminal type Rated voltage



●Circuit drawing



●Mounting hole size



* Mounting on DIN rail is also available

Interface unit

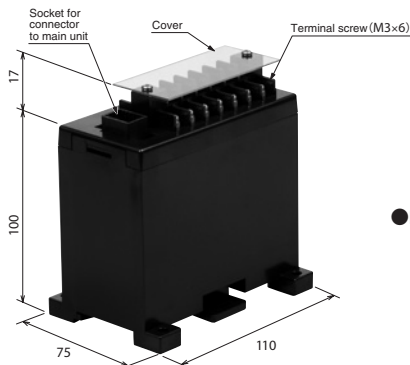
●How to order

UKTF ☐ -S-DC110V

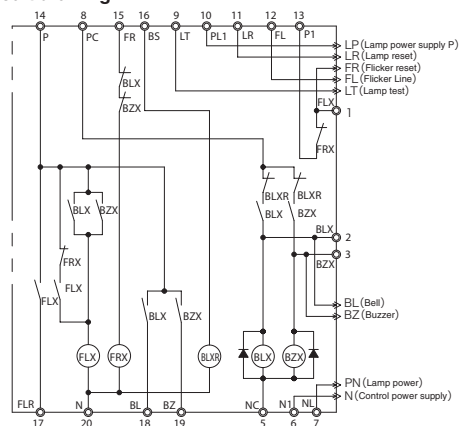
Basic type Terminal type Rated voltage

Specification

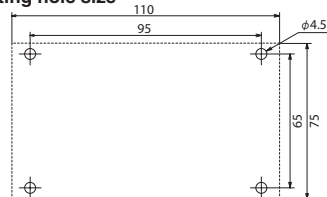
- 2 Only for XK22-02
- 3 Only for XK44-06



●Circuit drawing



●Mounting hole size



* Mounting on DIN rail is also available

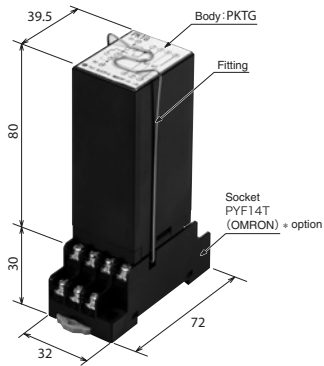
* This picture and circuit diagram are UKTF3 type.
Please contact us about outline and circuit diagram.

Interface unit

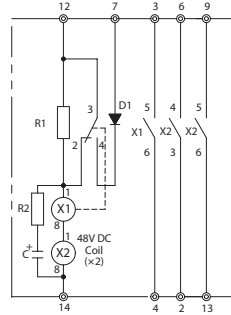
●How to order

PKTG - DC110V

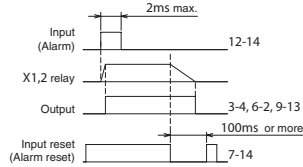
Basic type Rated voltage (110V DC: 100 / 110V DC)



●Circuit drawing



●Time chart

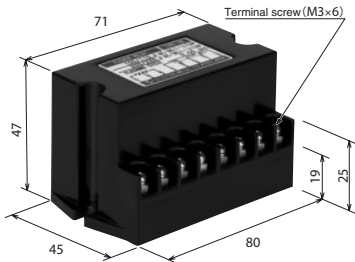


Flicker relay unit

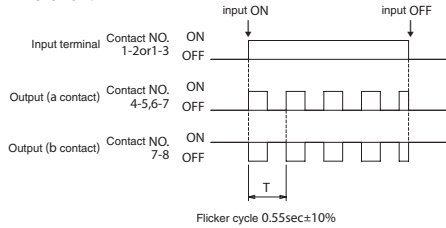
●How to order

FK - 110/220

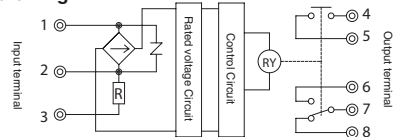
Basic type Rated voltage (common AC / DC)



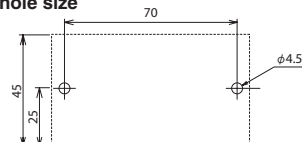
●Time chart



●Circuit drawing



●Mounting hole size





ANNUNCIATOR RELAY

XK TYPE

ACCESSORIES

LED Unit (Applicable type: XK22, XK33, XK44)

(Order unit: 10)



●How to order

XL40-LED110-R

Basic type

Type	Rated operating voltage	Code	Size (mm)
XK22	DC024	XL20	24×24
XK33	DC024	XL30	30×30
	DC110	XL3040	30×30
XK44	DC110	XL40	40×40

Rated voltage

Code	Voltage
024	24V DC
110	100 / 110V DC

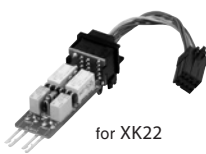
Display color

Code	Color	Code	Color
R	Red	G	Green
O	Orange	Y	Yellow
W	White	B	Blue

* Check the main circuit voltage for power supply voltage.

Inner element (Applicable Type: XK22, XK33, XK44)

(Order unit: 1)



for XK22



for XK33



for XK44M



for XK44

●How to order

XK22-01S DC024-ELMT

Basic type

Type	Rated operating voltage	Code	Size (mm)
XK22	DC024	XL20	24×24
XK33	DC024	XL30	30×30
	DC110	XL3040	30×30
XK44	DC110	XL40	40×40

Circuit code

Code	Spec
S	Screw
F	Faston

Terminal type

Code	Spec
S	Screw
F	Faston

Rated voltage^{*2}

Code	Voltage
024	24V DC
110	100 / 110V DC

*1 Basic type is XK44M.

*2 Check the main circuit voltage for power supply voltage.
Only 100 / 110V DC is available for XK44-05.

Lens

(Order unit: 10)



Applicable Type			
	XK22	XK33	XK44
Red	XL20-LENS-R	XL30-LENS-R	XL40-LENS-R
Orange	XL20-LENS-O	XL30-LENS-O	XL40-LENS-O
White	XL20-LENS-W	XL30-LENS-W	XL40-LENS-W
Green	XL20-LENS-G	XL30-LENS-G	XL40-LENS-G
Yellow	XL20-LENS-Y	XL30-LENS-Y	XL40-LENS-Y
Blue	XL20-LENS-B	XL30-LENS-B	XL40-LENS-B

Cap for end socket (Applicable type: XK44)

●XK44-CAP

(Order unit: 1)



Terminal cover (Applicable type: XK44)

●XK-CV

(Order unit: 10)



* Standard equipment

Removal tool for inner element

(Order unit: 1)



* XK44-Q1

code	Type
XK22	XK22-Q1
XK33	XK33-Q1
XK44	XK44-Q1

Removal tool (Lens, LED unit)

●XL-NQ

(Order unit: 10)



Fitting to a panel

(Order unit: 10)

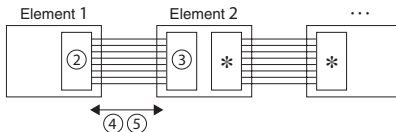
●XL-TK



* Standard equipment

Crossover cable

(Order unit: 1)



●How to order

XKK44-11 008Y

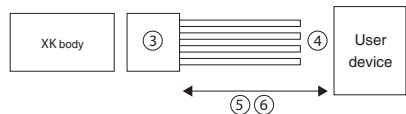
① ② ③ ④ ⑤

- ① : Basic type (XKK22, XKK33, XK44)
- ② : Element 1 side cable processing (1: Receptacle housing)
- ③ : Element 2 side cable processing (1: Receptacle housing)
- ④ : Cable length (008: 80mm, 01: 100mm, 02: 200mm
05: 500mm, 10: 1000mm, 15: 1500mm)
- ⑤ : Cable color (Y: Yellow, BL: Blue)

(Standard equipment for XK44 is "XKK44-11008Y".)

Bus input cable

(Order unit: 1)



●How to order

XKK44-□□-1410Y

① ② ③ ④ ⑤ ⑥

- ① : Basic type (XKK33^{*1}, XKK44)
- ② : Circuit code (No need to choose for XKK22 and XKK33)
- ③ : XK body side cable processing (1: Receptacle housing)
- ④ : User device side cable processing (4: Cut off processing)
- ⑤ : Cable length (008: 80mm, 01: 100mm, 02: 200mm
05: 500mm, 10: 1000mm, 15: 1500mm)
- ⑥ : Cable color (Y: Yellow, BL: Blue)^{*2}

^{*1}: The bus input cables used for XKK22 and XKK33 are the same, so when using XKK22, select "XKK33" as the basic model.

^{*2}: Standard color is "Y".



ANNUNCIATOR RELAY

XK TYPE

TECHNICAL INFORMATION

STANDARD

JEM 1406	(2002)	Fault indication systems for switchgear and controlgear assemblies
JEC-2500	(1987)	Protective relays for electric power systems
B-402	(1997)	Digital Protective Relays and Protective Equipment
NECA C 8151	(2002)	Indicator lights for industry use
JIS C 2811	(1995)	Terminal Blocks for Industrial and Similar Use
JIS C 8201-1	(1998)	Low-voltage switchgear and controlgear -- Part 1: General rules

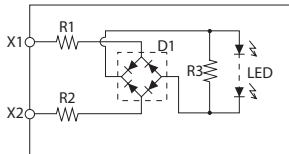
* This product is tested by the applicable items in the above standards.

XK'S INDICATOR

XL 2000 / XL 3040 / XL 4000 type standard LED are adopted for XK series. One point lighting spec and inclination window spec are available for XK44 as special specification. Parts exposed outside panels (Lens, Frame, Body case) are made from the anti-flammable material (oxygen index: 26 or more), and compliant to fire low.

CIRCUIT INSIDE THE INDICATOR

■ Circuit diagram 24V DC, 100 / 110V DC rated voltage products



R1: Limit Resistor 1

R2: Limit Resistor 2

R3: Bypass resistor

D1: Rectifier diode

LED: Light Emitting diode