

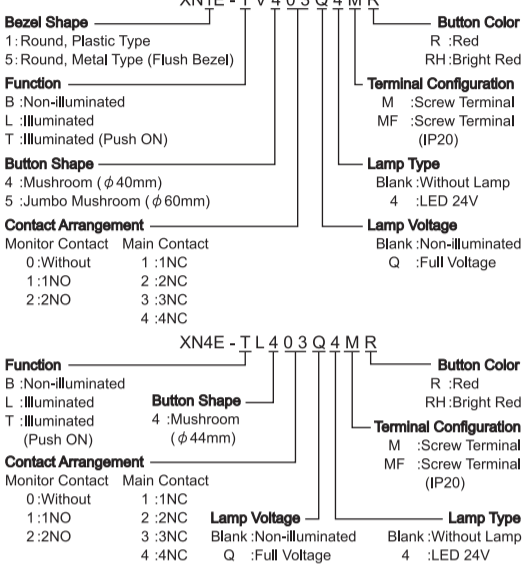
INSTRUCTION SHEET (ORIGINAL)
φ 30 Emergency Stop Switch
XN Series
Padlock Emergency Stop Switch
XN4E Series

Thank you for selecting IDEC product. Please confirm that the delivered product is what you have ordered.

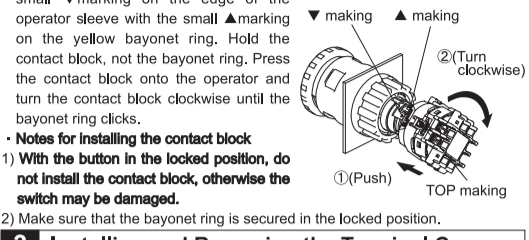
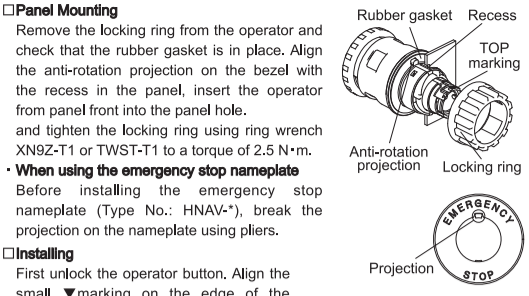
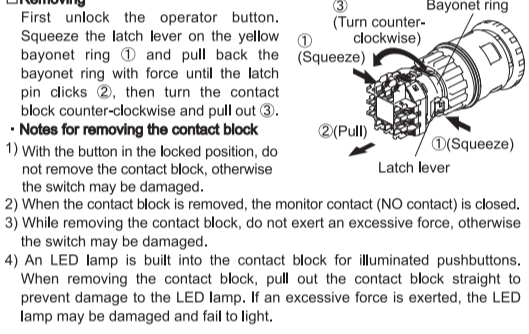
SAFETY NOTE

- Read this instruction sheet and the catalog for the XN4E series emergency stop switches to make sure of correct operation before starting installation, wiring, operation, maintenance, and inspection. Make sure that the instruction sheet is kept by the end user.
- Turn off the power to the XN4E before starting installation, wiring, maintenance and inspection of the XN4E. Failure to turn power off may cause electric shock or fire hazard.
- Use wires of a proper size to meet voltage and current requirements. Tighten the M3 terminal screws to a tightening torque of 0.6 to 1.0 N·m. Improper wires and loose terminals during operation will cause overheating and fire hazard. Provide a proper protection against electric shocks.

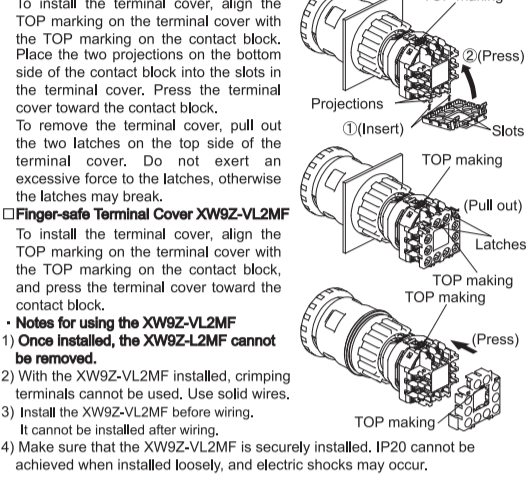
1 Type No. Development



2 Removing/Installing Contact Block and Panel Mounting



3 Installing and Removing the Terminal Cover



4 Notes for Operation

When using the emergency stop switch for safety-related equipment in a control system, refer to the safety standards and regulations in each country and region depending on the application purpose of the actual machines and installations to make sure of correct operation. Before using the emergency stop switch, perform risk assessment to make sure of safety.

Wiring
Tighten the terminal screws to a torque of 0.6 to 1.0 N·m.

Contact Chatter/Bounce
When the button is reset by pulling or turning, the NC main contacts will chatter. When pressing the button, the NO monitor contacts will chatter. When designing a control circuit, take the contact chatter time into consideration (reference value: 20 ms). Do not expose the switch to external shocks, otherwise the contacts will bounce.

LED Illuminated Switches
The LED lamp is built into the contact block and cannot be replaced.

Handling
Do not operate the switch using a tool. Do not expose the switch to excessive shocks and vibrations, otherwise the switch may be deformed or damaged, causing malfunction or operation failure.

Padlock Emergency Stop
The padlockable emergency stop switches can be reset by turning only, and cannot be pulled to reset. Do not attempt to pull to reset, otherwise damage or malfunction may result.

5 Contact Ratings [Main Contact (NC:black) and Monitor Contact (NO:blue)]

Rated Insulation Voltage(Ui)	250V				
Conventional Free Air Thermal Current (Ith)	5A				
Rated Operational Voltage (Ue) (Use)	30V	125V	250V		
Main Contact	AC	Resistive Load (AC-12)	-	5A	3A
	DC	Inductive Load (AC-15)	-	3A	1.5A
Monitor Contact	AC	Resistive Load (DC-12)	2A	0.4A	0.2A
	DC	Inductive Load (DC-13)	1A	0.22A	0.1A

6 Built-in LED Ratings

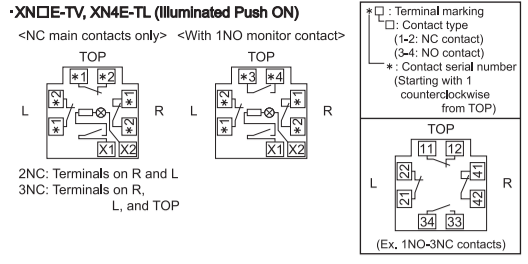
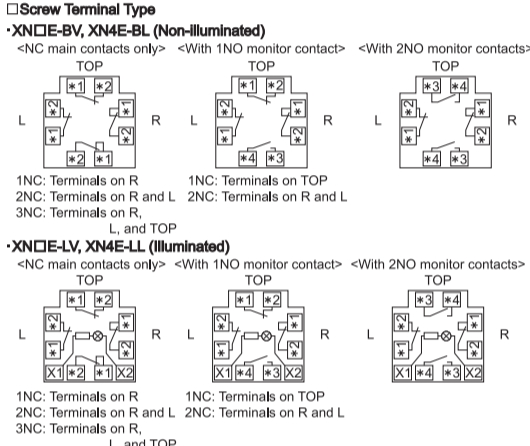
Rated Voltage	Operating Voltage	Operating Current
24V AC/DC	24V AC/DC ± 10%	15 mA

7 Specifications

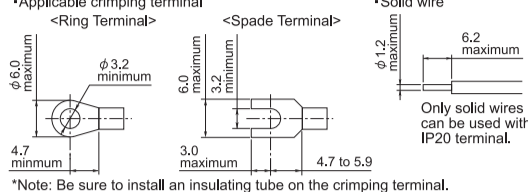
Applicable Standard	IEC 60947-5-1, EN 60947-5-1, JIS C8201-5-1, IEC 60947-5-5 ⁽¹⁾ , EN 60947-5-5 ⁽¹⁾ , JIS C8201-5-5 ⁽¹⁾ , UL508, UL991, NFPA79, CSA C22.2 No.14, GB/T14048.5		
Standard Operating Conditions	Operating temperature: Non illuminated: -25 to +60°C (no freezing), LED illuminated: -25 to +55°C (no freezing), Relative humidity: <45 to 85% RH (no condensation), Storage temperature: -45 to +80°C (no freezing)		
Minimum Direct Opening Force	80 N		
Minimum Direct Opening Travel	4.0 mm		
Maximum Travel	4.5 mm		
Contact Resistance	50 mΩ maximum (initial value)		
Insulation Resistance	100 MΩ minimum (500V DC megger)		
Overvoltage Category	II		
Impulse Withstand Voltage	2.5 kV		
Pollution Degree	3		
Operating Frequency	900 operations/hour		
Mechanical Life	250,000 operations minimum		
Electrical Life	100,000 operations minimum 250,000 operations minimum (24V AC/DC, 100mA)		
Shock Resistance	Operating extremes: 150m/s ² , Damage limits: 1,000 m/s ²		
Vibration Resistance	Operating extremes: 10 to 500 Hz, amplitude 0.35 mm, acceleration 50 m/s ² ; 10 to 500 Hz, amplitude 0.35 mm, acceleration 50 m/s ²		
Degree of Protection	Panel front: IP65 (IEC 60529)		
Terminal Protection	IP20 (Screw Terminal type when installing XW9Z-VL2MF)		
Short-circuit Protective Device	250V/10A fuse (Type aM IEC 60269-1 / IEC 60269-2)		
Conditional Short-circuit Current	1,000 A		
Recommended Tightening Torque	0.6 to 1.0 N·m (Screw Terminal type)		
Recommended Tightening Torque of Locking Ring	2.5 N·m		
Applicable Wire	0.75 to 1.25 mm ² (AWG18 to 16)		
Total Weight of Padlock and Hasp (Padlock type only)	1500g maximum		
Reinforced Insulation (IEC 60664-1)	Between live parts and Bezel		

⁽¹⁾ only for using emergency stop switches (Button color: Red and bright red)

8 Terminal Arrangement (Bottom View)



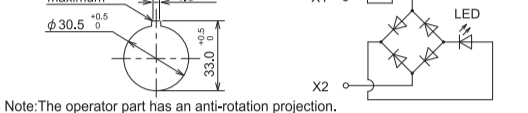
9 Applicable Wire (Screw terminal type)



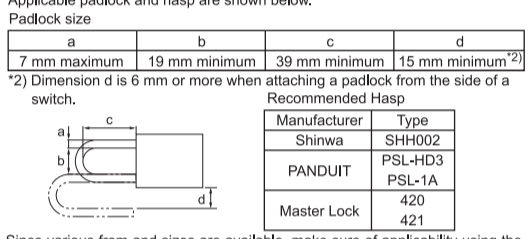
10 Mounting Hole Dimensions



11 LED unit internal circuit



12 Padlock and Hasp



Since various form and sizes are available, make sure of applicability using the actual padlock and hasp before use. The total weight of the padlock and hasp can be a maximum of 1500g. When the total weight exceeds this limit, the switch may malfunction or fail.

13 Precaution for Disposal

Dispose of the XN or XN4E Emergency Stop Switch as an industrial waste.

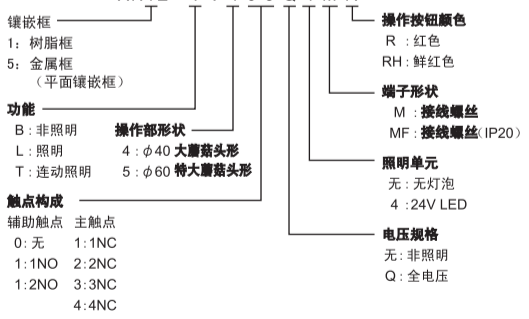
使用说明书
φ 30紧急停止开关
XN系列
挂锁加锁式紧急停止开关
XN4E系列

承蒙购买 IDEC 产品，谨此衷心致谢！
请确认本产品是否为您所订购的产品后，按照下列项目要求正确使用。

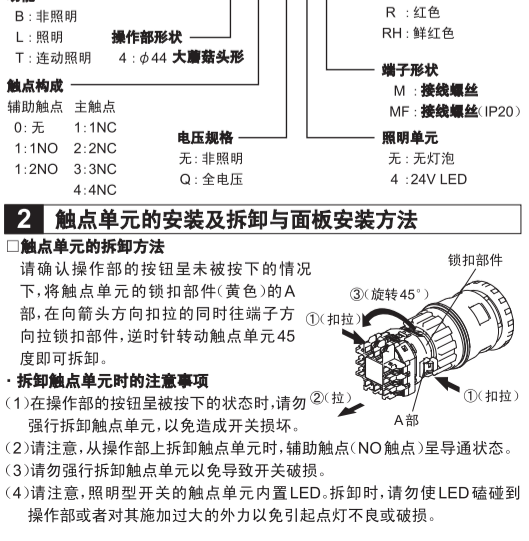
安全注意事项

- 在安装、接线作业、运转以及维修保养本产品之前，请仔细阅读本使用说明书以及本公司的产品样本后正确使用。
- 另外，请提醒最终用户妥善保管本使用说明书。
- 在安装、接线作业、运转以及维修保养本产品之前，请务必先切断电源，以免引起触电或发生火灾的危险。
- 接线时，请使用符合施加电压、通电电流的电线。
- 请按照推荐拧紧扭矩（0.6 ~ 1.0N·m）拧紧接线螺丝（M3）。切勿使用不符合要求的电线或在螺丝松动的状态下使用，以免因异常发热而导致火灾发生的危险。
- 另外，请采取适当的触电预防措施，以免引起触电或发生火灾的危险。

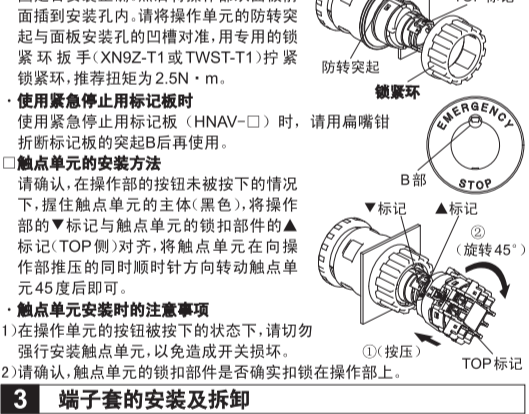
1 型号说明



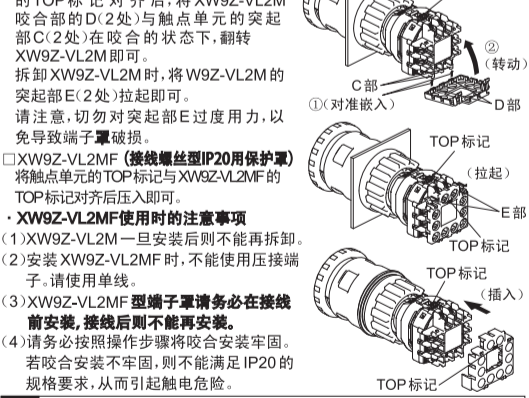
2 触点单元的安装及拆卸与面板安装方法



安装至面板的方法



3 端子套的安装及拆卸



4 使用注意事项

在本产品用于控制系统的安全设备时，请根据机械设备实际使用的各国或地区的相对应的安全标准或规定正确使用。且，在使用前请实施危险性评估确认。

接线注意事项
请使用0.6 ~ 1.0N·m的推荐扭矩拧紧接线螺丝的接线螺丝（M3）。

触点反锁
在主触点（NC触点）实施复位（拉出/旋转复位）操作时，辅助触点（NO触点）在操作按钮时会发生触点反锁，请考虑防止措施。（参考值：20ms）
另，开关遭受外界冲击时也会发生触点反锁，请注意切勿对其施加外界冲击。
使用LED照明型时的注意事项
LED与触点单元为一体结构，不能拆卸及更换。

其他注意事项
请勿使用工具操作开关，或向开关施加过度的冲击，以及施加振动，以免引起开关变形或损坏而导致动作运转不良或性能低下。

挂锁加锁型注意事项
挂锁加锁型的复位操作与其他机种不同，仅可通过旋转复位，不能进行拉出复位。请勿通过拉出按钮进行复位操作。若强制拉出按钮进行操作可能引起开关被锁或动作故障，请勿实施。

5 触点容量 [主触点(NC触点:黑色)/辅助触点(NO触点:蓝色)]

额定绝缘电压(Ui)	250V				
额定通用电流(Ith)	5A				
额定使用电压(Ue)	30V	125V	250V		
主触点	AC	电阻性负载(AC-12)	-	5A	3A
	DC	感性负载(AC-15)	-	3A	1.5A
辅助触点	AC	电阻性负载(DC-12)	2A	0.4A	0.2A
	DC	感性负载(DC-13)	1A	0.22A	0.1A

6 内置LED容量

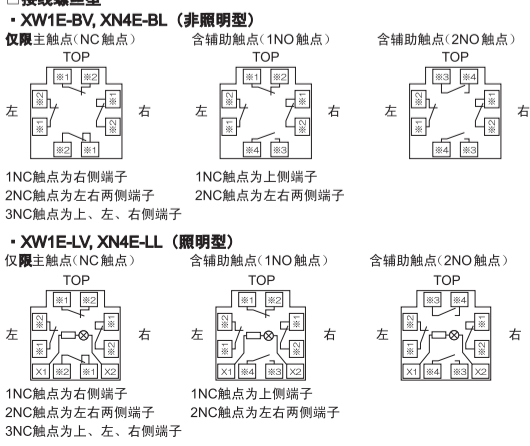
额定电压	使用电压	额定电流
24V AC/DC	24V AC/DC±10%	15mA

7 性能·规格

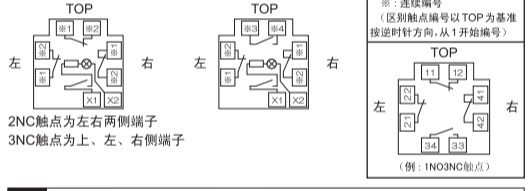
对应标准	IEC 60947-5-1, EN 60947-5-1, JIS C8201-5-1, IEC 60947-5-5 ⁽¹⁾ , EN 60947-5-5 ⁽¹⁾ , JIS C8201-5-5 ⁽¹⁾ , UL508, UL991, NFPA79, CSA C22.2 No.14, GB/T14048.5		
标准使用状态	环境温度: 非照明: -25 ~ +60°C (无结冰), LED照明: -25 ~ +55°C (无结冰), 相对湿度: 45 ~ 85%RH (无结露), 保存环境温度: -45 ~ +80°C (无结冰)		
最小直接开路动作力	80N		
至直接开路动作功能的最小动作距离	4.0mm		
最大动作距离	4.5mm		
接触电阻	50mΩ以下 (初始值)		
绝缘电阻	100MΩ以上 (500V DC兆欧表)		
过电压类型	II		
脉冲耐受电压	2.5kV		
污染等级	3		
切换频率	900次/小时		
机械性使用寿命	25万次以上		
电气性使用寿命	10万次以上 (24V AC/DC 100mA) 25万次以上 (初始值)		
抗冲击性	误动作: 150m/s ² , 耐久性: 1000m/s ²		
耐振动	误动作: 10 ~ 500 Hz, 单振幅0.35 mm, 加速度50 m/s ² , 耐久性: 10 ~ 500 Hz, 单振幅0.35 mm, 加速度50 m/s ²		
操作部保护等级	面板前面: IP65 (IEC 60529)		
端子部保护等级	IP20 (安装XW9Z-VL2MF时)		
短路保护装置	250V/10A保险丝 (Type aM IEC 60269-1 / IEC 60269-2)		
条件性短路电流	1000A		
接线螺丝推荐拧紧扭矩	0.6 ~ 1.0N·m (螺丝端子型)		
锁紧环推荐拧紧扭矩	2.5 N·m		
对应电线	0.75 ~ 1.25mm ² (AWG18 ~ 16)		
挂锁与HASP的总重量 (仅限挂锁)	1500g以内		
强化绝缘 (IEC 60664-1)	带电部与金属框间		

注1) 仅限紧急停止用 (操作按钮颜色: 红色、鲜红色)。

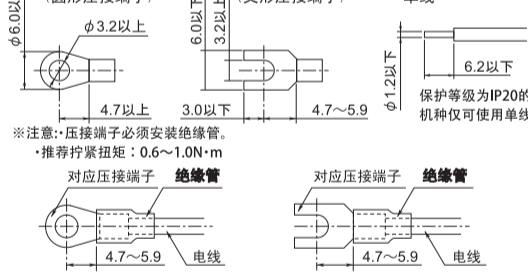
8 触点排列图 (底视图)



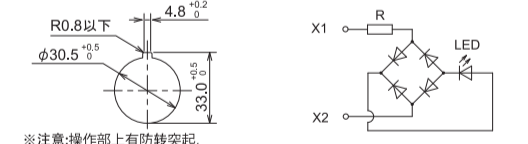
9 XW1E-TV, XN4E-TL (联动照明型)



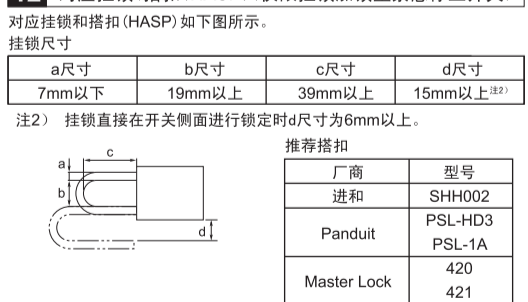
9 接线螺丝型对应压接端子



10 安装孔加工图



12 对应挂锁、搭扣(HASP)(仅限挂锁加锁型紧急停止开关)



市面销售的挂锁和搭扣(HASP)有各种形状、尺寸，使用前请务必确认实物。使用的挂锁和搭扣(HASP)的总重量为1500g以下，使用时请勿超过此规定重量，以免引起开关的误动作或损坏。

13 报废处理时的注意

·本产品的报废处理，须作为工业废品处理。

合格证	本产品经验合格
紧急停止开关	对应标准: GB/T14048.5