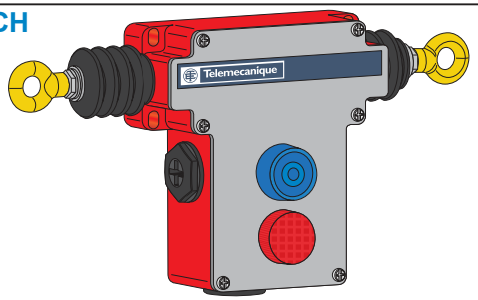
XY2CEDA●●●● / XY2CEDC●●●●

EMERGENCY STOP ROPE PULL SWITCH



Note: you can download this Instruction Sheet in different languages from our website at: **www.tesensors.com**

en	N°: NHA73027_EN	es	N°: NHA73027_ES
fr	N°: NHA73027_FR	it	N°: NHA73027_IT
de	N°: NHA73027_DE	zh	N°: NHA73027_ZH

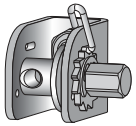
We welcome your comments about this document. You can reach us by e-mail at: **customer-support@tesensors.com**

Scan the Qr-code to access Instruction Sheets in different languages

http://qr.tesensors.com/XY0008

Accessories


XY2CZ (105 / 107 / 110)

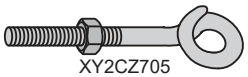

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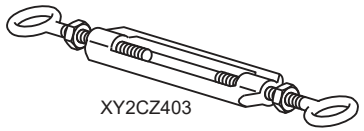

XY2CZ601

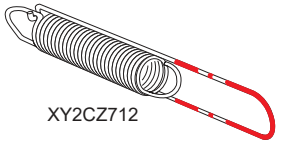

XY2CZ708


XY2CZ704


XY2CZ524


XY2CZ705


XY2CZ403


XY2CZ712

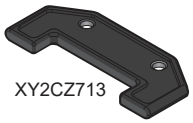

XY2CZ713

Fig.1 Mounting instructions

Fig.1A : Centered Product

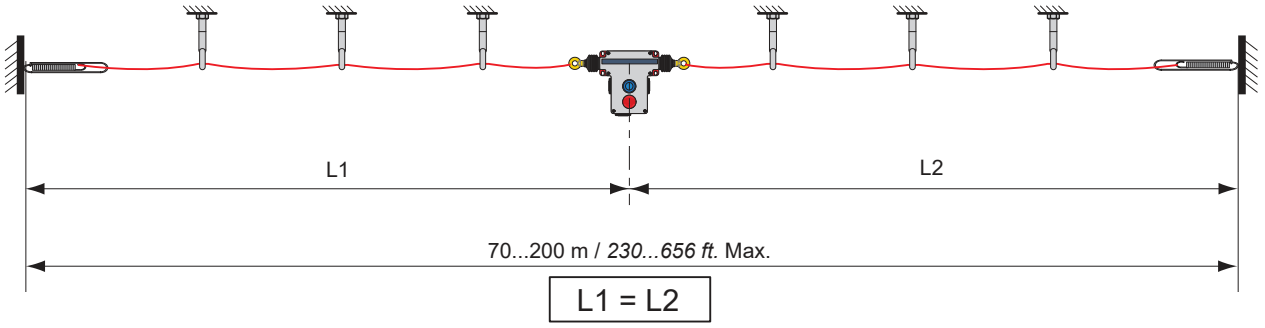
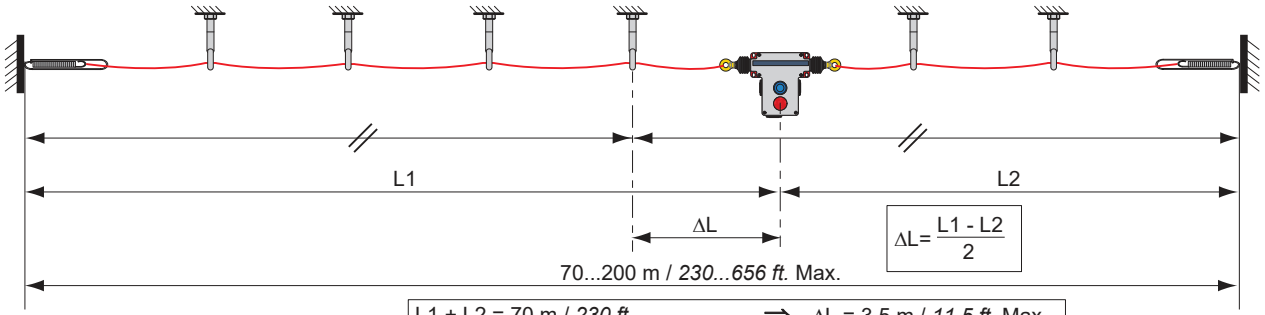


Fig.1B : Off-center product

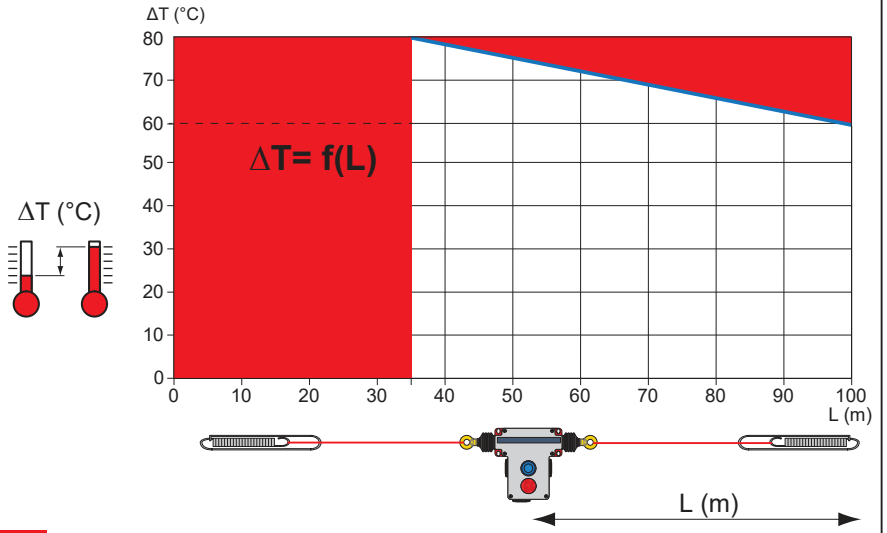


$$\Delta L = \frac{L1 - L2}{2}$$

$$\Delta L_{max.} = 10\% \times \frac{L1 + L2}{2}$$

L1 + L2 = 70 m / *230 ft.*	⇒	ΔL = 3,5 m / *11.5 ft.* Max.
L1 + L2 = 140 m / *459 ft.*	⇒	ΔL = 7 m / *23 ft.* Max.
L1 + L2 = 200 m / *656 ft.*	⇒	ΔL = 10 m / *32.8 ft.* Max.

Fig.2



Prohibited area

Fig.3 Installation

L1 + L2 ⩽ 140 m / *459 ft.* ⇒ ⑤ = XY2CZ601

L1 + L2 ⩾ 140 m (...200 m Max.) / *459 ft. (... 656 ft. Max.)* ⇒ ⑤ = XY2CZ708 + XY2CZ705 → 4,0 ± 0,5 N.m / *2.95 ± 0.369 lb.ft*

⑥ XY2CZ524 → 1,5 ± 0,1 N.m / *1.1 ± 0.074 lb.ft*

③ XY2CZ10●●

④ XY2CZ712

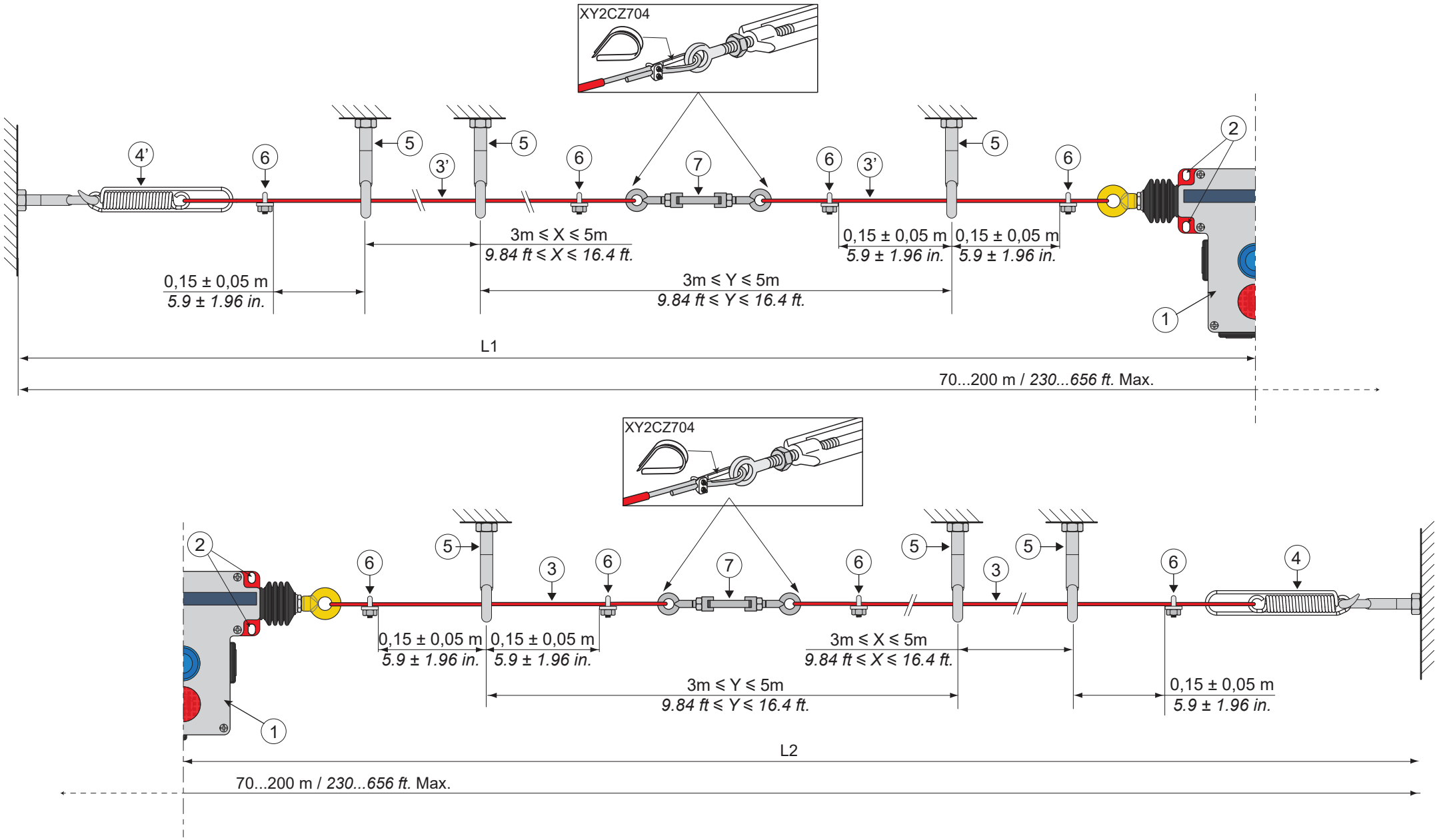


Fig.4

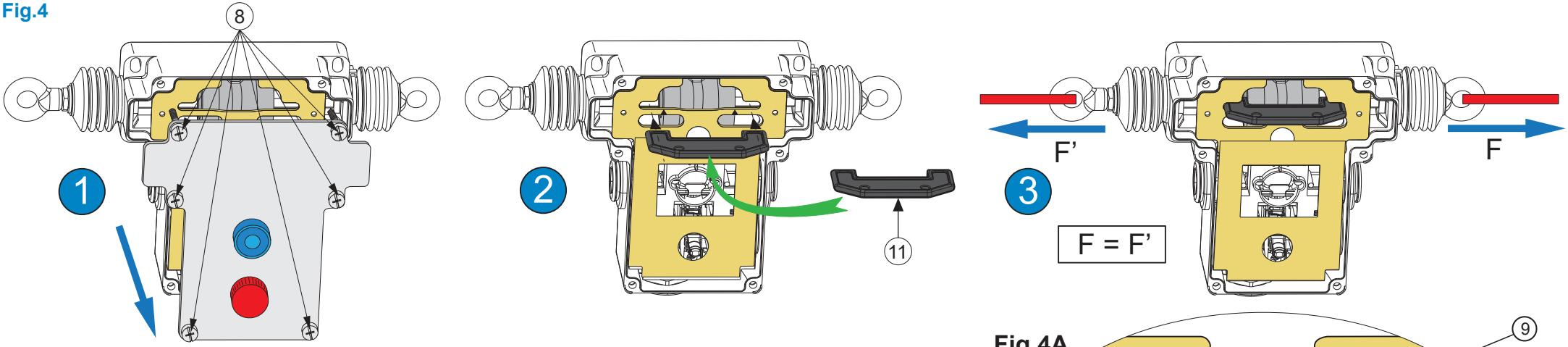
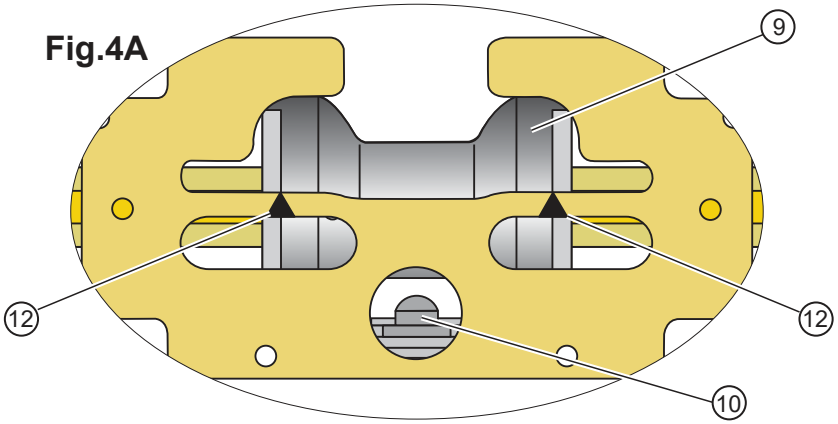
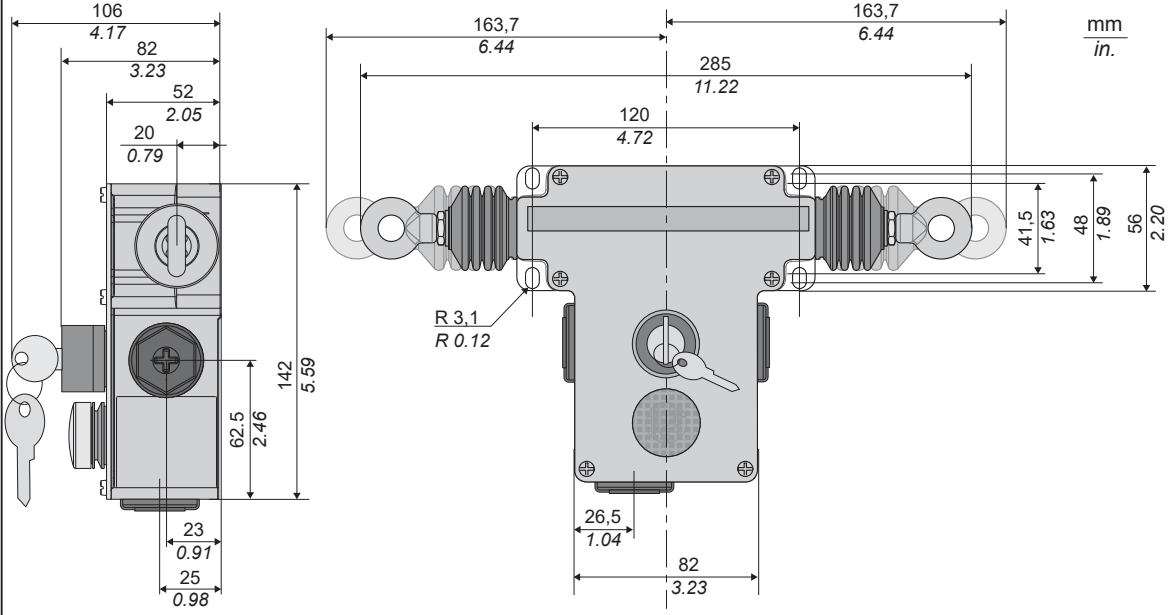


Fig.4A



Dimensions



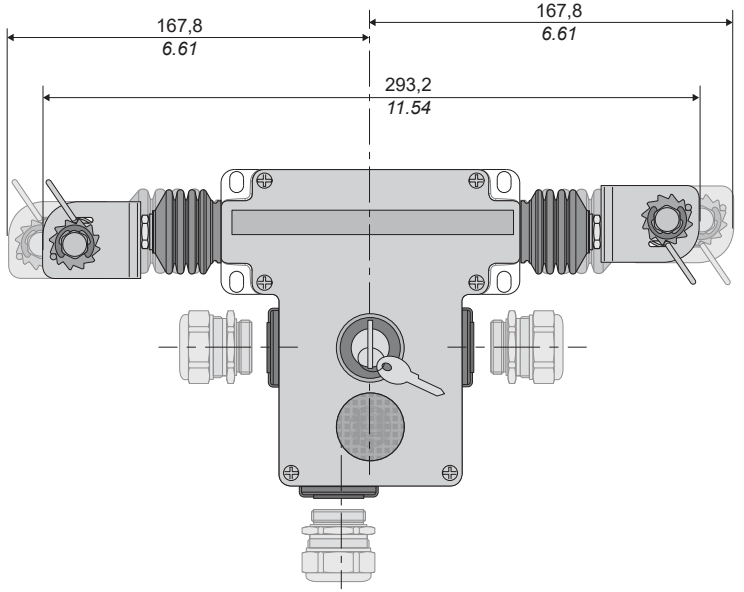


Fig.5

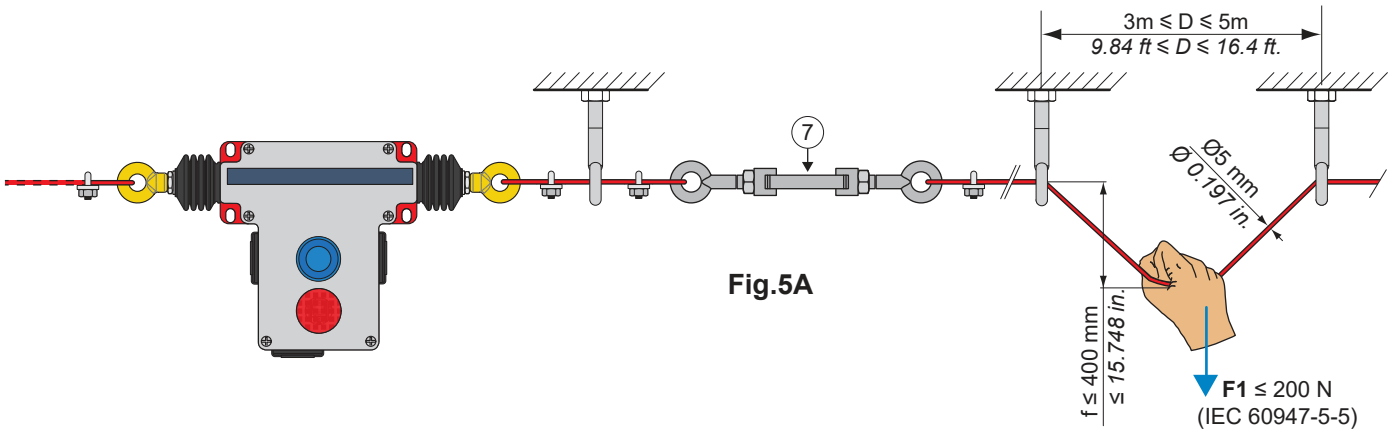


Fig.5A

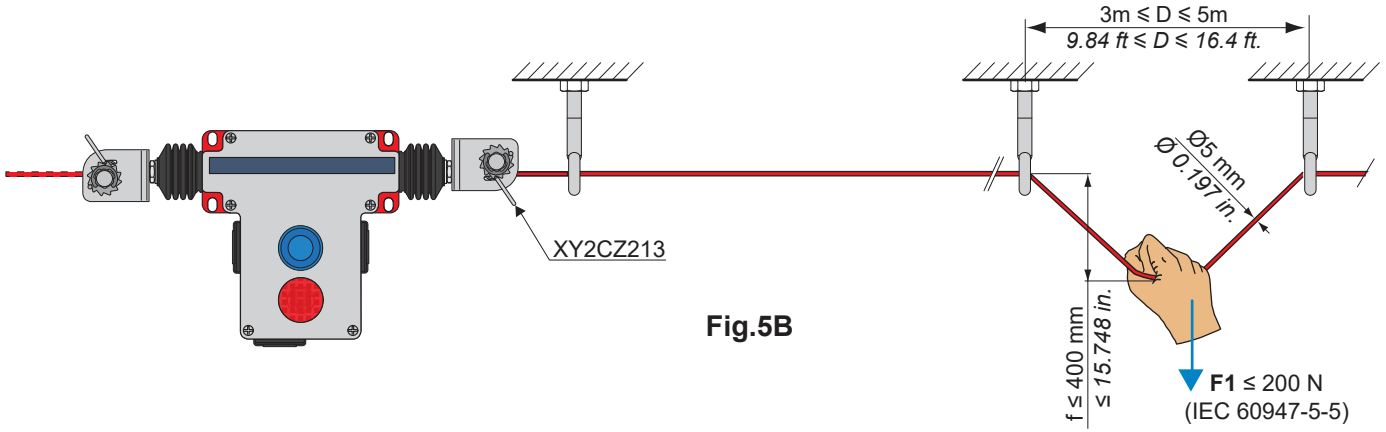
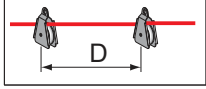


Fig.5B

Example

D = 3 m / *9.84 ft*	**2 x L** (m / *ft*)	**F1** (N)	**f** (mm / *in.*)
	2 x 70 *2 x 230*	176	290/ *11.42*
	2 x 100 *2 x 328*	190	300 / *11.81*

D = 5 m / *16.4 ft*	**2 x L** (m / *ft*)	**F1** (N)	**f** (mm / *in.*)
	2 x 70 *2 x 230*	125	370 / *14.57*
	2 x 100 *2 x 328*	126	385 / *15.16*

Fig.6 Setting with the cable tensioner

Fig.6A

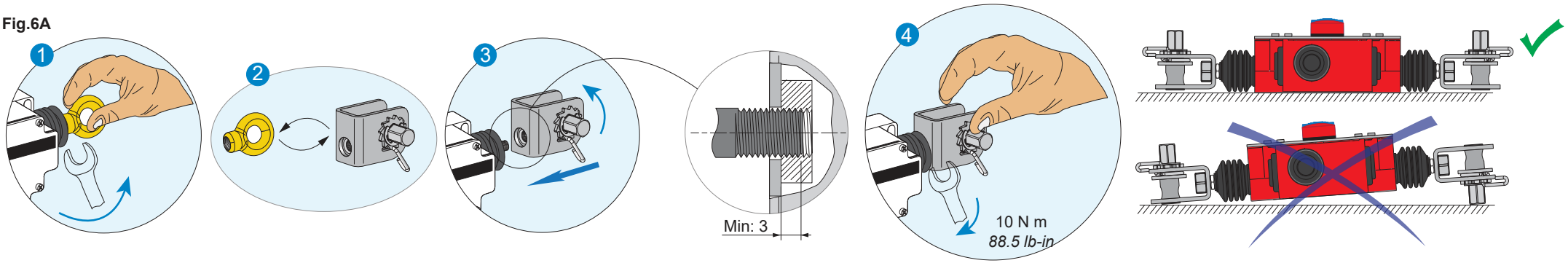


Fig.6B

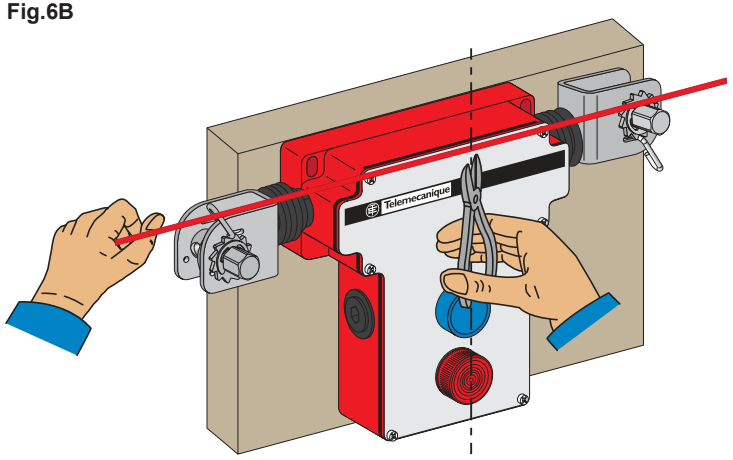


Fig.6C

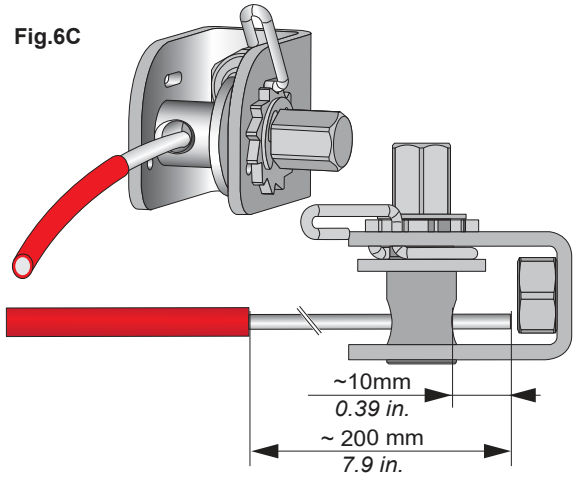


Fig.6D

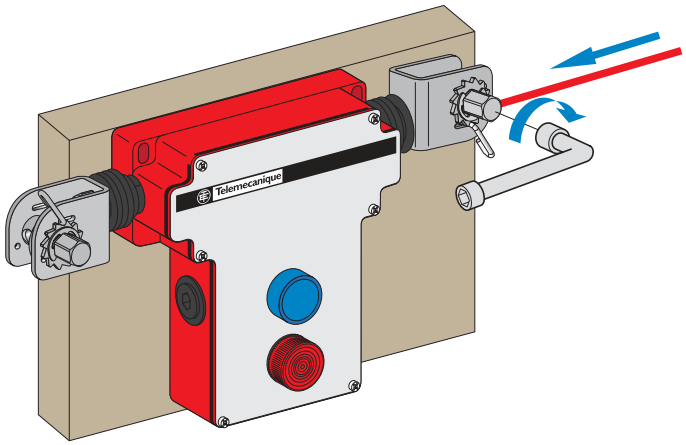


Fig.6E

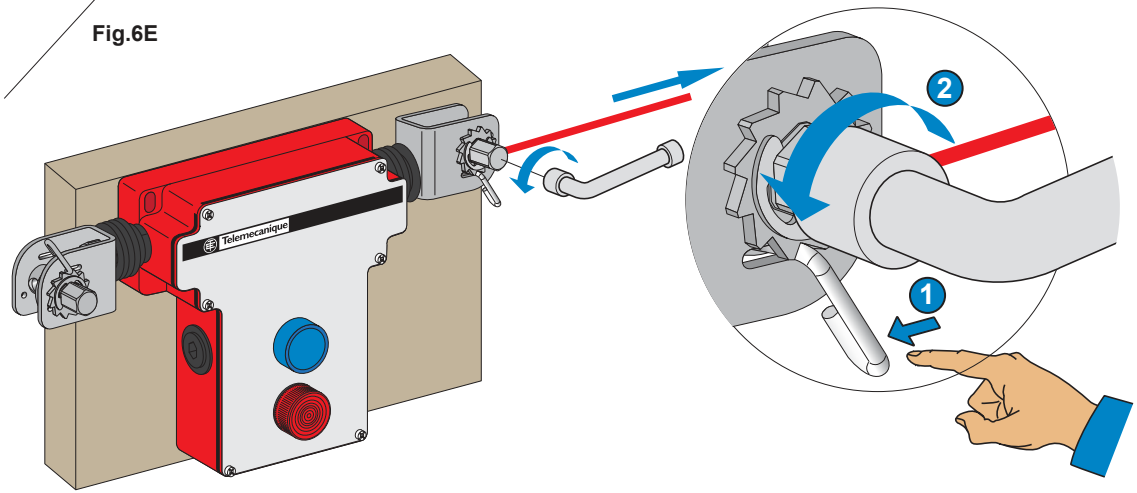
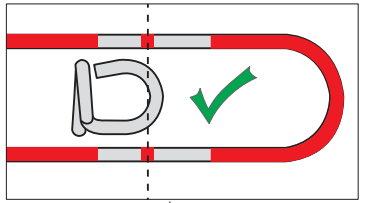
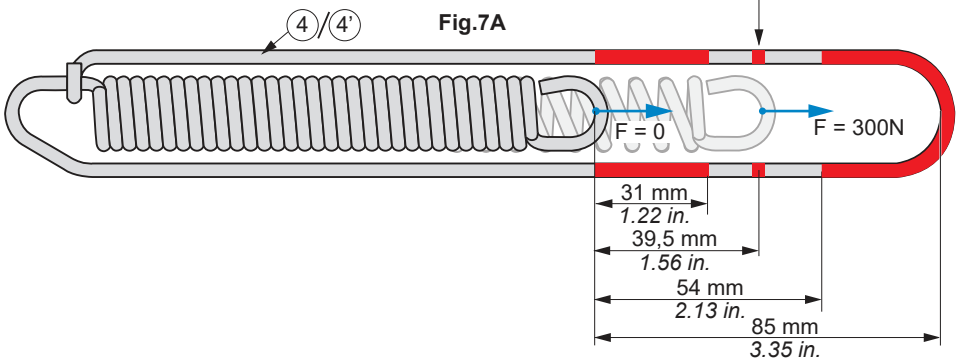


Fig.7



Setting point

Fig.7A



Operating zone

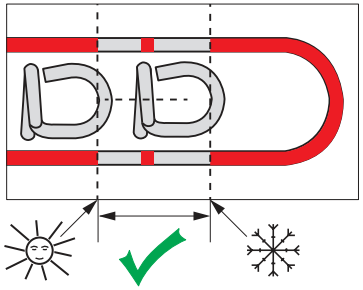


Fig.7B

Forbidden zone

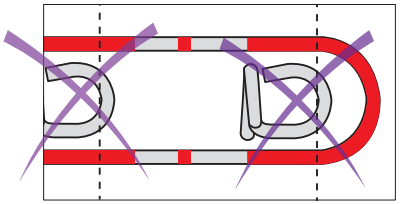


Fig.8

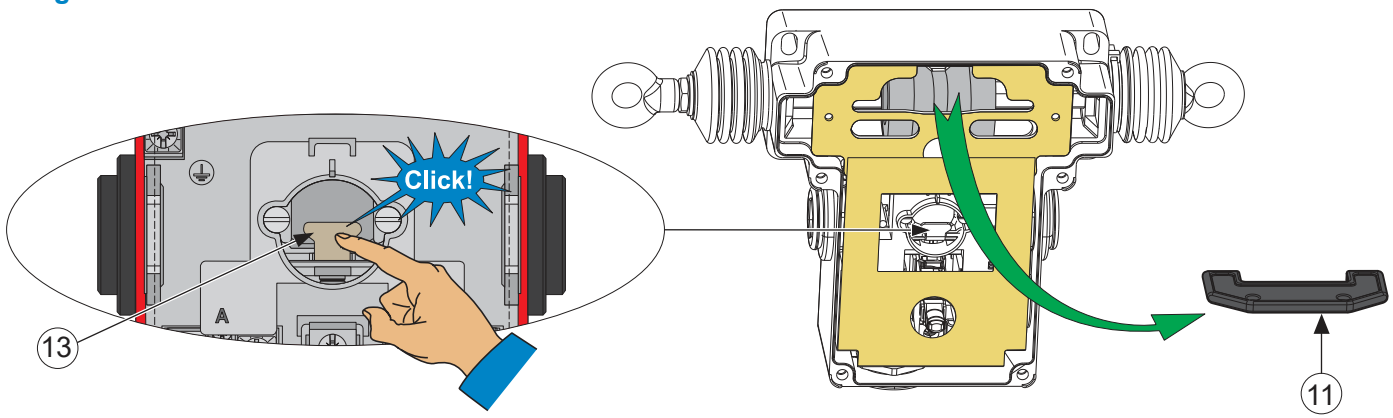


Fig.9

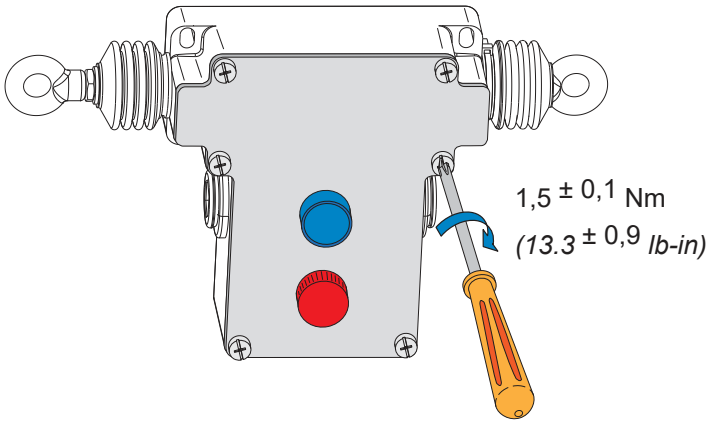


Fig.10

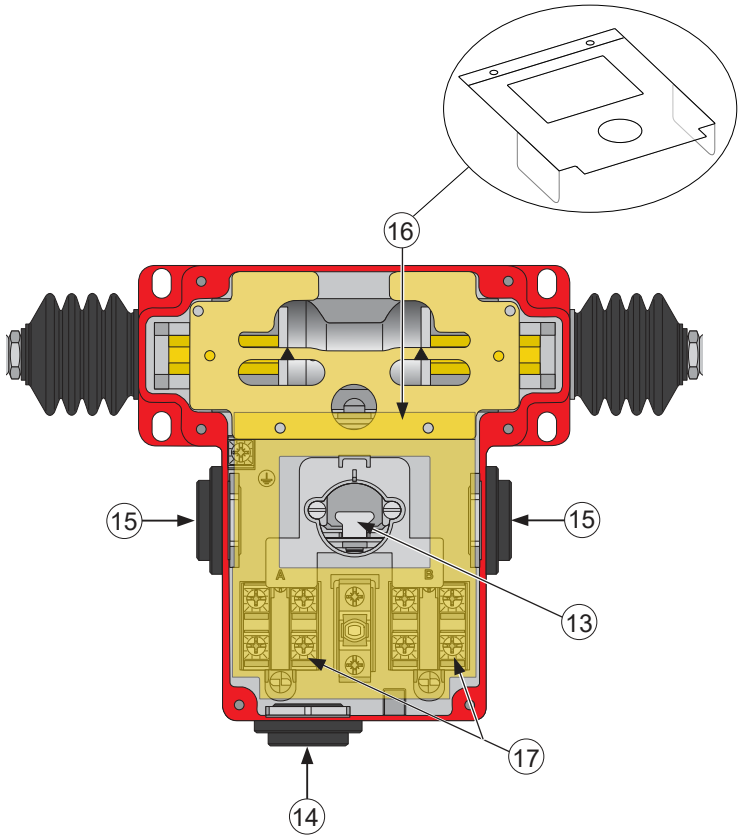


Fig.11

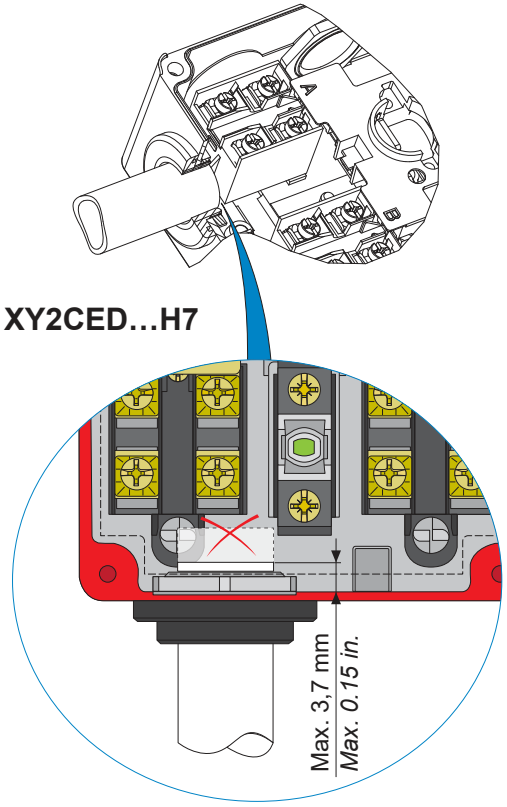
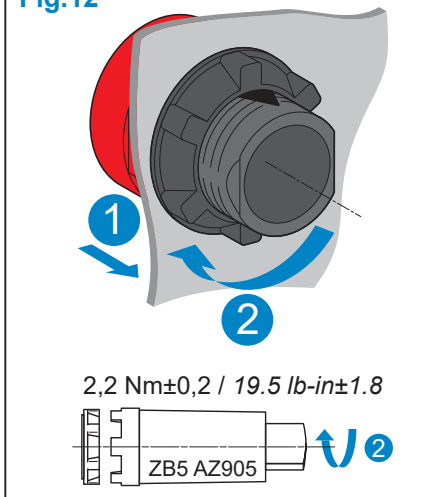
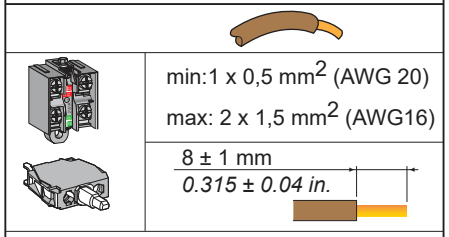


Fig.12





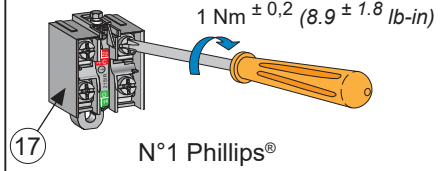
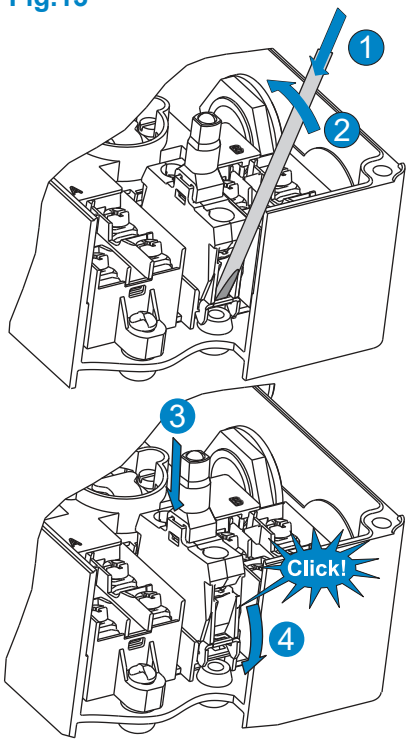
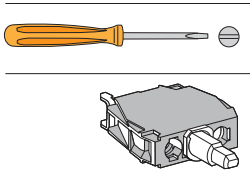


Fig.13





EMERGENCY STOP ROPE PULL SWITCHES

Mechanical endurance : 60000 operating cycles

⚠ DANGER

RISK OF PHYSICAL INJURY

- Inspect the cable in its entirety to identify the reason for the emergency stop order before restarting.
- Use only Telemecanique Sensors accessories and Telemecanique Sensors Ø 5mm cable.
- Mount the product to its support using 4 screws.
- Mount the product in compliance with the centering constraints mentioned in fig.1
- Use only NC contacts for the emergency stop safety function
- The use of 2 end-springs XY2CZ712 is mandatory.
- Place the cable guides or pulleys no less than 3 meters (*9.84 ft.*) and no more than 5 meters (*16.4 ft.*) apart from each other.
- Remove all objects placed on or masking the cable.
- Ensure that the cable is free to move.
- Ensure that the cable is accessible along the entire traction zone.
- Check that none of the device components is deformed by an electrical cable once the cover is closed.
- Check that the cover is securely closed.
- Check that the device, cable and accessories are securely mounted in place.
- Check the product installation, setting and functioning based on the information provided in this instruction manual.
- Check the proper working of the XY2CED, cables and accessories after installation and after any work is done on the installation.

Failure to follow these instructions will result in death or serious injury.

⚠⚠ DANGER

RISK OF ELECTRICAL SHOCK, EXPLOSION OR ARC FLASH

- Before any intervention, switch off the power supply of the equipment acting as the support.
- Before any work is done, switch off the power supply of the device.
- Take care not to damage the parts of the support that are normally powered.
- Visually inspect the good condition of the product.
- Use appropriate personal protective equipment (PPE) and follow the recommended instructions for electrical environments. (see NFPA 70E).
- Always use an appropriate electrical measuring device to confirm that the entire installation is powered down.
- Use an IP66 cable gland.
- Protect the installation against power surges.

Failure to follow these instructions will result in death or serious injury.

⚠ WARNING

RISK OF PHYSICAL INJURY

- Secure the cable traction zone.
- Do not pull on the cable while adjusting cable tightness.
- Check the tightness of parts such as bellows, gaskets, push button, pilot light, etc.
- Ensure that the product is anchored along the same axis as the cable.
- Configure the device based on the ambient temperature.
- Ensure that the reset button zone remains accessible.
- Remove the cable before dismantling the XY2CED.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

● Installation constraints

The installation must be horizontal and rectilinear.
The entire cable length must be visible from the emergency stop device (ISO 13850)
The maximum length of the installation must not exceed 200 m (*656 ft.*) **(fig.1).**
The minimum length of the installation must exceed 70 m (*230 ft.*) **(fig.1).**

The decentering of product ΔL must not exceed: $\Delta L_{max.}=10\% \times \frac{L1 + L2}{2}$

NOTE: Emergency stop rope pull switches with silicone bellows and booted reset push button (XY2CEDC2...) are designed for switching in a maximum operating temperature range of -40°C to 70°C / -40°F to 158°F. The emergency stop rope pull switch is only one component of the entire installation, the proper operation of the overall equipment must be checked regularly (see maintenance section). In case of particularly harsh environmental conditions, additional protection devices shall be implemented.

The installation must be performed with an ambient temperature corresponding to the average of the operating temperature range.
The maximum cable length must be compatible with acceptable temperature differences **(Fig. 2).**
Depending on the length of the installation, use the following equipment for guiding the cable:
- 2 x L = 70...140 m (*230...459 ft.*) → Rings XY2CZ601 (pulleys XY2CZ708 : also possible)
- 2 x L = 140...200 m (*459...656 ft.*) → Pulleys XY2CZ708 (mandatory)

● Installation (fig. 3)

1. Mount the device ① to a rigid support using 4 M6 cylindrical head screws through holes ② (tightening torque = $4^{\pm 0,5}$ N.m / $2.95^{\pm 0.37}$ *lb.ft*).
2. Securely fasten the cable guides ⑤ to rigid elements in compliance with the specified distance.
3. Attach the end springs ④ and ④ to a rigid element.
4. Remove the cover from the device ① by unscrewing the 6 screws ⑧ **(fig. 4).**
5. Maintain the cam ⑨ centered relative to the actuator ⑩ thanks to the adjusting shim ⑪ **(fig.4).**
6. Connect the cables ③ and ③ to the end springs ④ and ④ using a cable clamp ⑥ .
7. Pass the cables ③ and ③ through all the cable guides ⑤ .
8. Connect the cables ③ and ③ to the product ① .

8a. Turnbuckle use **(fig. 3 and 5A)**
1 - Connect the cables ③ and ③ to the turnbuckles ⑦ using a cable clamp ⑥ .
2 - Connect the 2 turnbuckles ⑦ to the device ① with a portion of cable ③ and ③ by passing through the cable guides ⑤ and using cable clamps ⑥ .
3 - Tighten the cables ③ and ③ by turning the turnbuckles ⑦.

8b. Tensioner use **(fig. 5B and 6)**
1 - Unscrew the front rings XY2CZ501 and replace them with the tensioners XY2CZ213 **(fig. 6A).**
2 - Cut the cable at the center axis of the device **(fig. 6B).**
3 - Strip the cable 200 mm / *7.87 in.* and pass it into the tensioner **(fig. 6C).**
4 - Tighten the cables ③ and ③ by turning the tensioner **(fig. 6D).**
5 - If necessary, untighten the cables **(fig. 6E).**

NOTE : The list of accessories and springs can be found in the Telemecanique Sensors catalog. A support or element may be described as "rigid" if it is capable of supporting a load of 2,000 N in all directions of stress.

● Setting

1- Tighten the cables ③ and ③ until the springs ④ and ④ reach the setting point **(fig. 7A).** When the forces are balanced, the shim can be removed
2- Remove the shim ⑪ **(fig. 8)** and ensure that the cam ⑨ remains centered relative to the actuator ⑩ using the markers ⑫ **(fig. 4A)**
3. Arm the device by pressing the lock ⑬, you will hear a "click" sound **(fig. 8)**.

⋆ Setting the 1st side:
4- Trip the device by pulling on the cable ③ **(fig. 5)**.
5. Check that the cam ⑨ remains centered relative to the actuator ⑩ using the markers ⑫ **(fig. 4A)**.
6. If necessary, repeat steps 1, 3, 4 and 5 until the installation is stable.

⋆ Setting the second side:
7. Trip the device by pulling on the cable ③ **(fig. 5)**.
8. Check that the cam ⑨ remains centered relative to the actuator ⑩ using the markers ⑫ **(fig. 4A)**.
9. If necessary, repeat steps1, 3, 7 and 8 until the installation is stable.
10. Mount the cover onto the device ① using the six screws ⑧ (tightening torque = $1.5^{\pm 0,1}$ Nm / $1.1^{\pm 0,07}$ *lb.ft*) or proceed to the wiring step **(fig. 9)**.

⋆ Temperature effect on the product.
A variation of temperature causes cables to dilate.
Spring buckles must move within the operating zone **(fig. 7B)**. and must never be found within the forbidden zone (red zone) **(fig. 7C)**.

● Wiring (fig. 10)

1. Remove the cover from the device ① by unscrewing the 6 screws ⑧ .
2. Remove the cap ⑭ or unscrew the blanking plug ⑮ depending on the desired point of entry
3. Mount the cable gland (not supplied).
4. If required, re-mount the blanking plug ⑮ and its nut into the empty hole (tightening torque = $1^{\pm 0,1}$ Nm / $0.73^{\pm 0.07}$ *lb.ft*).
5. Lift the protective sheet ⑯ without damaging it.
6. Connect the electrical cables to the yoke screw terminals ⑰ (tightening torque = $1^{\pm 0,2}$ Nm / $0.73^{\pm 0.15}$ *lb.ft*).
7. Check that there are no cables passing through the reset switch area ⑬ .
8. Carefully put back in place the protective sheet ⑯ .
9. Mount the cover onto the device ① using the 6 screws ⑧ (tightening torque = $1,5^{\pm 0,1}$ Nm / $1.1^{\pm 0.07}$ *lb.ft*).

NOTE: Version XY2CED .... H7 (rigid tube connection): see **fig. 11**.

● Maintenance

- The proper functioning of the XY2CED and its operating line must be checked on a regular basis based on the level of security required by the application (e.g. number of operations, level of environmental pollution, etc.).
- The replacement of the rearming button and/or of the pilot light must comply with the diagram **(fig. 12)**.
- The replacement of the lighting block must comply with the diagram **(fig. 13)**, i.e. operations 1 and 2 for dismantling and operations 3 and 4 for mounting.

NOTE: During regular maintenance, you must check the following:
- The tightening torque of the screws and XY2CED components as well as the other accessories (turnbuckle, cable clamp, cable guide, etc.).
- The good condition of the cable and related components (turnbuckle, cable clamp, cable guide, etc.).

The cable sheath can show signs of fair wear and tear but this must not block the moving of the cable in its accessories. If the cable sheath is damaged, change the cable.
- The good condition of the XY2CED bellows. No holes or cracks must be present. If the bellows are worn out, change the XY2CED.
- Spring tension: Spring buckles must be found within the operating zone **(fig.7B)**
- Product rearming: Pull the cable, check that the installation is stopped and rearm the product.

● Dismantling / Recycling

Dismantle the cable ③ and ③ before the XY2CED.

NOTE : The internal mechanism and electrical contact blocks are fitted with springs that may generate flying parts.

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel.
No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

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