RAFIX FS switching element emergency stop PCB, gold, plus 1, 2 NC + 1 signaling contact



fields of application

- Measurement-control-regulation
- Electrical engineering
- Mechanical and system engineering
- Signalling systems
- Vehicle construction
- Agricultural and forestry machinery
- Construction machinery
- Handheld terminals
- Industrial robots

description

These switching elements have internal plungers and therefore can only be combined with emergency stop and mushroom pushbuttons.

The PCB switching elements are positioned on a PCB shared with other components. These can subsequently be mounted behind the front panel together with the actuators and signal indicators. The switching elements “float” directly underneath the actuators on the PCB behind the front panel and leave plenty of space for other components.
In the center channel of the switching element, there are either light conductors for the use of SMT-LEDs, or 3 mm THT LEDs can be installed for illumination.

PCB mounting depths
- 9.2 mm for RAFIX 22 FS+ and RAFIX 22 FSR
- 15.7 mm for RAFIX 30 FS+:

The NC contacts of these switching elements are forcibly separated according to IEC 60947-5-1.

- PCB switching element
- Only suitable for RAFIX 22 FS+ Emergency Stop "Plus 1
- Gold contacts (= grey housing)
- 2 Ö + 1 S (= middle contact as signal contact)
- Mounting: Soldering on printed circuit board

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technical data

general

Disassembly possible	no
Color	dark gray
Operating temperature, min.	-40 °C
Operating temperature, max.	85 °C
Storage temperature, min.	-40 °C
Storage temperature, max.	85 °C
illuminated	No
Soldering	Manual / wave
Solder heat resistance according to standard	DIN EN 60068-2-20
Packaging unit	30 pcs.
net weight	2.3 g
Operating life electrical	50.000 (10mA / 24V DC) cycles
B10 electrical	65.000 (10mA / 24V DC) cycles
B10d	130,000 cycles
Environment resistance	IEC 60068-2-14 IEC 60068-2-30 IEC 60068-2-33 IEC 60068-2-78
Shock resistance according to standard IEC 60068-2-27	15 g at 11 ms amplitude semi-sinusoidal
Vibration-resistance according to standard IEC 60068-2-6	5 g at 10 - 500 Hz
MOQ order	30 pcs.
RoHS compliant	Yes
REACH compliant	Yes

mounting diameters

Outside dimension, width	17.75 mm
Outside dimension, height	17.35 mm
Mounting depth	9.2 mm

mechanical data

Contact function	2 NC + 1 signaling contact
Contact system	Bridge contact
Contact material	Gold
Fixing	Soldering
Solderability	Yes
Terminal on the rear	THT

electrical data

Rated insulation voltage	50 V
Rated surge voltage	500 V
Rated voltage, min.	0.02 V
Rated voltage, max.	35 V
Rated current, min.	0.00001 A
Rated current, max.	0.1 A

direct links

RAFI eCatalog

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Rated power, max.	0.25 W
Categories of use	AC-15
	DC-13
Conditional short circuit current	1,000 A

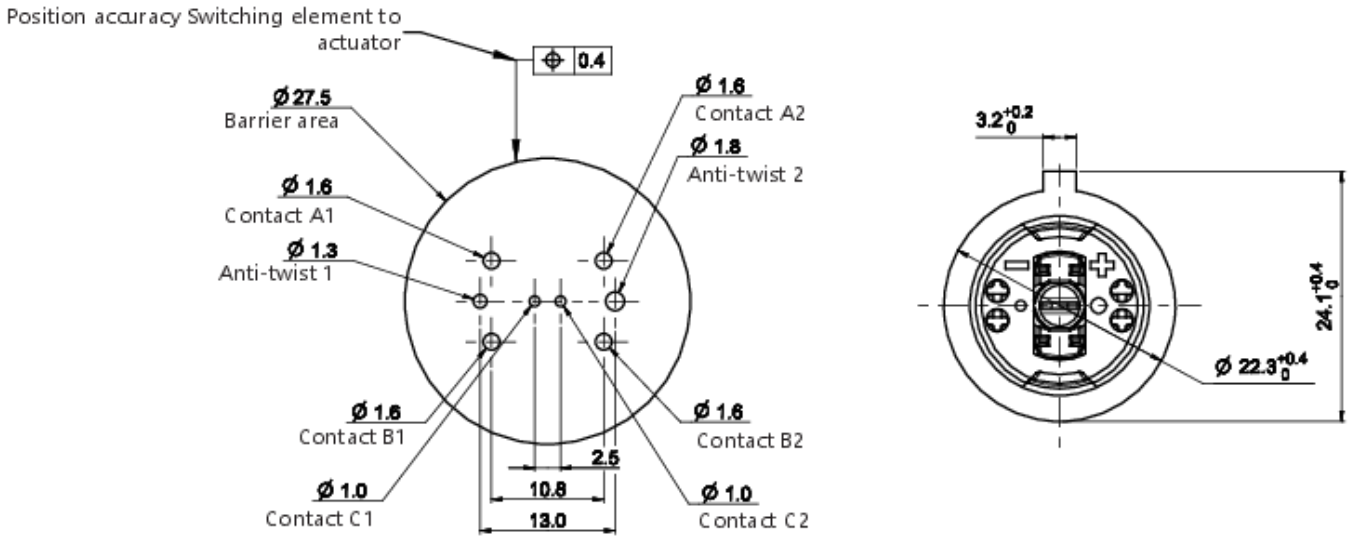
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drawings

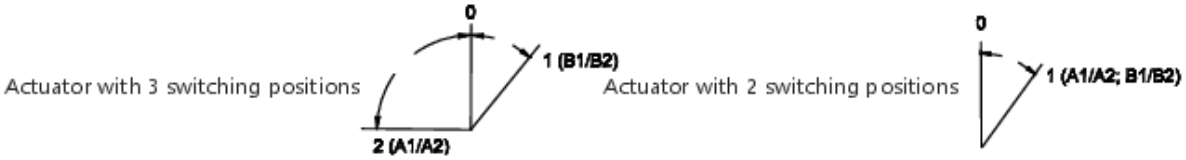
System drawing



System drawing

Variant	1NO	1NC	2NO	2NC	1NO + 1NC	Plus 1
Contact A1/A2 Connection designation 1x	1NO 13 - 14	-	1NO 13 - 14	1NC 11 - 12	1NO 13 - 14	1NC 11 - 12
Connection designation 2x Contact B1/B2	-	1NC 21 - 22	1NO 23 - 24	1NC 21 - 22	1NC 21 - 22	1NC 21 - 22
Contact C1/C2 Connection designation	LED* X1-X2	LED* X1-X2	LED* X1-X2	LED* X1-X2	LED* X1-X2	1NO 33 - 34
LED assignment when the actuator is illuminated						

The contacts are connected according to the following scheme:



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mounting

LUMOTAST 22, RAFIX 22 FS+

Betriebsanleitung Not-Halt-Befehlsgeräte (Original) | **Operating Instructions EMERGENCY STOP Control Units (Translation of the source text)** | **Mode d'emploi auxiliaires de commande d'ARRÊT D'URGENCE (Traduction original)**

(D) 1. Sicherheitshinweise

- Vor Inbetriebnahme bitte Betriebsanleitung sorgfältig lesen.
- Not-Halt-Befehlsgeräte erfüllen eine Personenschutz-Funktion. Unsachgemäßer Einbau, sachwidrige Anwendung oder Manipulationen können zu schweren Verletzungen von Personen führen!
- Not-Halt-Befehlsgeräte dürfen nicht umgangen, entfernt oder auf andere Weise unwirksam gemacht werden!
- Vor Beginn der Installation Anlage und Gerät spannungsfrei schalten!
- Vor Erst-Inbetriebnahme der Maschine oder Anlage Not-Halt-Befehlsgerät durch Testbetätigung auf korrekte Montage und Funktion überprüfen.
- Not-Halt-Befehlsgeräte mit sichtbaren Beschädigungen sind unverzüglich auszutauschen.
- Not-Halt-Funktion darf nicht als Ersatz für Schutzmaßnahmen oder andere Sicherheitsfunktionen verwendet werden.
- Not-Halt-Funktion darf die Wirksamkeit von Schutzeinrichtungen oder von Einrichtungen mit anderen Sicherheitsfunktionen nicht beeinträchtigen.

(GB) 1. Safety instructions

- Please read the operating instructions carefully prior to use.
- EMERGENCY STOP control units are designed to protect persons. Inappropriate installation, improper use or inadmissible manipulation may result in severe injuries!
- EMERGENCY STOP control units must never be bypassed, removed or disabled in any other way!
- Disconnect the power supply to the machinery and device prior to installation!
- Operate the EMERGENCY STOP control unit to test and verify proper installation and function prior to initial start-up of the machine or line.
- An EMERGENCY STOP control unit with an obvious defect must be replaced immediately.
- The emergency stop function is not to be used for safety measures or safety functions.
- The emergency stop function must not compromise the effectiveness of safety devices or devices with other safety functions.

(F) 1. Consignes de sécurité

- Il faut soigneusement lire le mode d'emploi avant la mise en service.
- Les auxiliaires de commande d'ARRÊT D'URGENCE remplissent une fonction de protection personnelle. Un montage inapproprié, une application contre-indiquée ou une manipulation peuvent causer des blessures corporelles graves!
- Il est interdit de ponter, d'enlever ou de rendre inopérants les auxiliaires de commande d'ARRÊT D'URGENCE!
- Avant d'entamer l'installation il faut mettre l'installation et l'appareil hors tension!
- Avant la première mise en service de la machine ou de l'installation, contrôler l'auxiliaire de commande d'ARRÊT D'URGENCE quant au montage et à un fonctionnement corrects.
- Les auxiliaires de commande d'ARRÊT D'URGENCE présentant des dommages visibles sont à remplacer sans tarder.
- La fonction d'arrêt d'urgence ne peut pas être utilisée en remplacement de mesures de protection ou d'autres fonctions de sécurité.
- La fonction d'arrêt d'urgence ne peut pas entraver l'efficacité de dispositifs de sécurité ou de dispositifs possédant d'autres fonctions de sécurité

(D) 2. Allgemeine Beschreibung und bestimmungsgemäße Verwendung

Not-Halt-Befehlsgeräte sind elektromechanische Schaltgeräte zum Schutz von Personen. Sie dienen der schnellen Abschaltung um Maschinen, Fahrzeuge und Anlagen in einen sicheren Zustand zu bringen, um Gefahren und Schäden für Mensch und Maschine zu vermeiden oder zu verringern.

Für die Inbetriebnahme, den Einsatz und technischen Überprüfungen gelten im speziellen folgende Vorschriften:

- Die Maschinenrichtlinie 2006/42/EG
- Die Sicherheitsvorschriften sowie
- Die Unfallverhütungsvorschriften / Sicherheitsregeln

Hersteller und Benutzer von Maschinen, an denen Not-Halt-Befehlsgeräte eingesetzt werden, tragen die Verantwortung für die Beachtung der Betriebsanleitung, wie auch für die Einhaltung der für sie geltenden Sicherheitsvorschriften und -regeln.

Für den Einbau und Betrieb von Not-Halt-Befehlsgeräten müssen zur bestimmungsgemäßen Verwendung folgende Anforderungen beachtet und eine Gefahrenbewertung durchgeführt werden:

- EN ISO 13849-1:2015
- EN ISO 13850:2008
- EN ISO 13849-2:2012
- EN 60204-1/A1:2009

(GB) 2. General description and intended use

EMERGENCY STOP control units are electromechanical switching devices designed to protect persons. They are used for instant disconnection to achieve a safe status of machines, vehicles or other equipment in order to avoid or reduce risks or damage to man and machine.

The following standards and regulations apply to their start-up, use and technical inspections, without limitation:

- Machinery Directive 2006/42/EC
- Safety standards
- Accident prevention regulations / rules for safety

Manufacturers and users of machines provided with EMERGENCY STOP control units are responsible for ensuring that the operating instructions are observed and the applicable safety standards and rules complied with.

For the installation and operation of EMERGENCY STOP control devices in line with the intended use, the following requirements must be observed and a risk assessment must be performed:

- EN ISO 13849-1:2015
- EN ISO 13850:2008
- EN ISO 13849-2:2012
- EN 60204-1/A1:2009

(F) 2. Description générale et application conforme aux prescriptions

Les auxiliaires de commande d'ARRÊT D'URGENCE sont des appareils de commutation électromécaniques pour protéger des personnes. Ils servent à couper rapidement les machines, les véhicules et les installations, à les amener dans un état de sécurité fiable pour éviter ou diminuer les risques de dommages corporels et de dégâts matériels.

Pour la mise en service, l'utilisation et les contrôles techniques, il faut respecter les prescriptions suivantes:

- La directive sur les machines selon la norme 2006/42/EG
- Les règlements de sécurité ainsi que
- Les instructions sur la prévention des accidents / règlements de sécurité

C'est aux fabricants et utilisateurs de machines où des auxiliaires de commande d'ARRÊT D'URGENCE sont utilisés, qu'incombe la responsabilité du respect du mode d'emploi ainsi que des prescriptions et règlements de sécurité en vigueur.

Pour l'installation et l'exploitation de dispositifs d'ARRÊT D'URGENCE, les exigences suivantes doivent être respectées et une évaluation des risques doit être menée en vue d'une utilisation en bonne et due forme:

- EN ISO 13849-1:2015
- EN ISO 13850:2008
- EN ISO 13849-2:2012
- EN 60204-1/A1:2009

(D) 3. Produktbeschreibung

Aufbau: Die Not-Halt-Befehlsgeräte bestehen aus einer Kombination von Betätigern mit einem oder mehreren Schaltelementen. Die Not-Halt-Befehlsgeräte gibt es als Einbauversion oder in einem Gehäuse verbaut.

Die Betätigung erfolgt durch Drücken, die Entriegelung erfolgt je nach Variante entweder durch:

- Drehbewegung in beide Richtungen nach links oder nach rechts
- Ziehen entgegen der Betätigungsrichtung

(GB) 3. Product description

Design: An EMERGENCY STOP button is an assembly of actuator combined with one or more contact blocks. EMERGENCY STOP buttons are available either as a panel mounting version or installed in a separate housing.

They are operated by pressing. Unlatching is done by one of two methods:

- Turning in either direction
- Pulling against the direction of operation

(F) 3. Description de produit

Structure: Les boutons-poussoirs d'ARRÊT D'URGENCE sont composés d'une combinaison d'actionneurs ou de plusieurs éléments de commutation. Les boutons-poussoirs d'ARRÊT D'URGENCE sont disponibles en version intégrable ou installés dans un boîtier.

L'actionnement s'effectue par appui sur ces derniers. Selon la variante, le déverrouillage s'effectue soit par:

- Un mouvement de rotation dans les deux directions, soit vers la gauche, soit à droite
- Soit en tirant dans la direction opposée de la direction d'actionnement

Produkt Product Produit	Einbau Ø mm Mounting Ø mm Montage Ø mm	Betätiger Actuator Actionneur	Schaltelement Contact block Élément de commutation
LUMOTAST 22	Ø 22,3	1.15.105.001/0000 1.15.105.011/0000 1.15.105.021/0000 1.15.105.031/0000	integriert / incl.
RARX 22 FS+	Ø 22,3	1.30.273.001/2200 1.30.273.001/2300 1.30.273.301/2200 1.30.273.501/0300 1.30.273.502/0300	1.20.126.4xx 1.20.126.5xx 1.20.126.6xx 1.20.126.7xx

(D) **Tabelle 3.1** Weitere technische Daten sind dem Katalog zu entnehmen.

(GB) **Table 3.1** For additional technical data, please refer to the catalogue.

(F) **Tableau 3.1** Pour les autres caractéristiques techniques, voir catalogue.

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