

RAMO 22 E, M12, round collar, 2 NC, Gold, M12 5-pin A-coded, reset by rotating, Mushroom head red, arrows red



fields of application

- > Measurement-control-regulation
- > Electrical engineering
- > Mechanical and system engineering
- > Automotive
- Signalling systems
- > Vehicle construction
- > Chemical industry
- > Industrial robots

special features

- > One-piece enclosed housing for protection classes of at least IP 65
- > Plug & Play with M12 connection
- > RAMO EDGE: mounting bracket for decentralized installation
- > Design matching the RAFIX command devices











description

Emergency stop with M12 connection: RAMO E switches are designed with two NC contacts for a switching voltage of 35 V. They comply with all applicable ISO and IEC standards and are characterized by their simple, time-saving installation. Like the entire RAMO series, the emergency stop switches feature installation-friendly M12 plug-in connections that reduce wiring effort to a minimum.

Additional information according to UL certificate:

For Class 2 Power Source or Limited Voltage / Limited Current only Installation only by trained specialist personnel.

Type 4x Indoor only with cable "Cat. No. 7000-08061-0210100 PUR 4x0.25mm2 with M8 connector, rated max. 30VAC/DC 4A, manufactured by Murrelektronik GmbH" and "Cat. No. 7000-12221-0340100 PUR 4x0.34mm2 with M12 connector, rated max. 30VAC/ DC 4A, manufactured by Murrelektronik GmbH"

For Use on a Flat Surface of a Type 1 or 4x indoor only Enclosure.

technical data

>	general	
	Potential free	yes
	Color of mushroom	red
	Legending color	red
	Collar color	yellow
	Collar shape	round
	Operating temperature, min.	-40 °C
	Operating temperature, max.	85 °C
	Storage temperature, min.	-40 °C
	Storage temperature, max.	90 °C
	illuminated	No
	Packaging	Box

RAFI GmbH & Co. KG

direct links

> RAFI eCatalog

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Packaging unit 2 pcs. net weight 27.8 g

Operating life 50,000 cycles
B10 65,000 cycles
B10d 130,000 cycles

Degree of protection, front side, according to DIN EN 60529 IP66

Degree of protection, rear side, according to DIN EN 60529 IP67

UL Enclosure Type Rating front type 4X indoor

side

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

50 g at 11 ms amplitude semi-sinusoidal

Salt-spray resistance according to

standard

IEC 60068-2-11

Impact resistance IK 07 side 08 frontal

oscillation restistance according

to standard IEC 60068-2-6

5 g at 10...500 Hz

MOQ order 2 pcs.

Pollution degree acc. to DIN EN

61010-1

Pollution degree 2

RoHS compliant Yes
REACH compliant Yes

> mounting diameters

Outside dimension, length 30 mm
Outside dimension, width 30 mm
Outside dimension, height 69.7 mm
Mounting hole 22.3 mm
Mounting depth 30.1 mm
Installation height 39.6 mm
Grid, min. 30 mm

> mechanical data

Threaded ring torque, max.

Actuation function latching
Resistance to force on the side 300 N
Contact function 2 NC
Contact material Gold
Resetting by rotating
Fixing Threaded ring

Terminal on the rear M12 5-pin A-coded

PIN 1 Normally closed contact 1
PIN 2 Normally closed contact 2
PIN 4 Normally closed contact 1

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1.2 Nm

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PIN 5 Normally closed contact 2

> electrical data

Rated insulation voltage 250 V Rated surge voltage 2,500 V Rated operating voltage 35 V (AC-15)

35 V (DC-13)

Rated voltage, min. 1 V Rated voltage, max. 35 V Voltage type DC Rated operating voltage 1-35 V Rated current, min. 0.001 A Rated current, max. 0.1 A

0.00080 W Power loss

Overvoltage category

Kind of short circuit protective fuse 250 V / 0,1 A / 1,5 kA gG quick

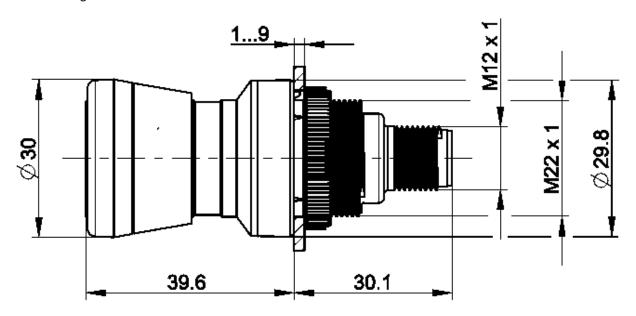
device

1,000 A Conditional short circuit current

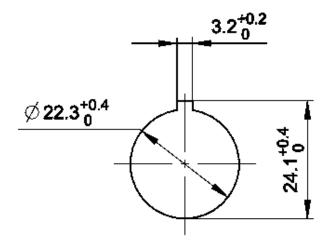


drawings

Dimensioned drawing



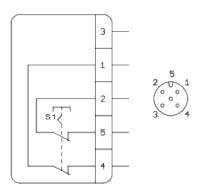
Mounting hole drawing



acc. to IEC 60947-5-1



Schematic diagram





mounting

LUMOTAST 16, LUMOTAST 22, LUMOTAST 25, RAMO 22, RAMO 30

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)

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
- Not-Halt-Befehlsgeräte dürfen nicht umgangen, entfernt oder auf andere Weise unwirksam
- 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 Sicherheitsfunk-
- Not-Halt-Funktion darf die Wirksamkeit von Schutzreinrichtungen oder von Einrichtungen mit anderen Sicherheitsfunktionen nicht beeinträchtigen.

(GB) 1. Safety instructions

- se read the operating instructions carefully prior to use
- EMERGENCY STOP control units are designed to protect persons. Inappropriate installation, D 3. Produktbeschreibung
 - improper use or inadmissible manipulation may result in severe injuries!

 EMERGENCY STOP control units must never be bypassed, removed or disabled in any other

 - 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 protec-
- tion 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 Schältgeräte zum Schutz von Personen. Sie dienen der schnellen Abschältung um Maschinen, Fährzeuge und Anlagen in einen sicheren Zu-stand zu bringen, um Gefahren und Schäden für Mensch und Maschine zu vermeiden oder zu

Für die Inbetriebnahme, den Einsatz und technischen Überprüfungen gelten im speziellen fol

- Die Maschinenrichtlinie 2006/42/EG
- Die Sicherheitsvorschriften sowie
 Die Unfallverhütungsvorschriften / Sicherheitsregeln Hersteller und Benutzer von Maschinen, an denen Not-Halt-Befehlsgeräte eingesetzt werden, tra

gen 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

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

(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
- Accident prevention regulations / rules for safety

Manufacturers and users of machines provided with EMERGENCY STOP control units are resp sible 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 13850:2015

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

F) 2. Description générale et application conforme aux prescriptions

Les auxiliaires de commande d'ARRÉT D'URGENCE sont des appareils de commutation élec-tromécaniques 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 13850:2015
- EN ISO 13849-2:2012

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

- /ariante entweder durch:
 Drehbewegung in beide Richtungen nach links oder nach rechts

- Ziehen entgegen der Betätigungsrichtung
"Aktiv/laktiv"-Varianten: "Aktiv": beleuchtet, rot, Not-Halt Funktion gegeben; "Inaktiv": unbeleuchtet, transparent, keine Not-Halt Funktion.

(B) 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
- "Aktiv/Inaktiv"-Variants: "Aktiv": illuminated red, Emergency Stop function given; "Inaktiv": not illuminated, transparent, no Emergency Stop function.

Structure: Les boutons-poussoirs d'ARRÊT D'URGENCE sont composés d'une combinaisor d'actionneurs ou de plusieurs éléments de commutation. Les boutons-poussoirs d'ARRÉT 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 en tirant dans la direction opposée de la direction d'actionnement
- "Aktiv/Inaktiv"-Variantes: "Aktiv": lit rouge, d'arrêt d'urgence fonction donné; "Inaktiv": pas lit,

Produkt Product Produit	Einbau Ø mm Mounting Ø mm Montage Ø mm	Betätiger Actuator Actionneur	Schaltelement Contact block Elément de commutation
LUMOTAST 16	Ø 16,2	1.15.213.001/0000 1.15.213.1024 1.15.213.002/0000 1.15.213.1024 1.15.213.002/0000 1.15.213.014 1.15.213.002/0000 1.15.213.014 1.15.213.014/0000 1.15.213.014 1.15.213.014/0000 1.15.213.014 1.15.213.014/0000 1.15.213.014 1.15.213.014/0000 1.15.213.014 1.15.213.014/0000 1.15.213.014 1.15.213.014/0000 1.15.213.014 1.15.213.061/0000 1.15.213.014 1.15.213.061/0000 1.15.213.404 1.15.213.061/0000 1.15.213.404 1.15.213.061/0000 1.15.213.404 1.15.213.061/0000 1.15.213.404 1.15.213.061/0000 1.15.213.404 1.15.213.061/0000 1.15.213.404 1.15.213.061/0000 1.15.213.404 1.15.213.061/0000 1.15.213.404 1.15.213.061/0000 1.15.213.414 1.15.213.061/0000 1.15.213.414 1.15.213.061/0000 1.15.213.414 1.15.213.061/0000 1.15.213.414 1.15.213.061/0000 1.15.213.414 1.15.213.014.000 1.15.213.414	0000 0000 0000 0000 0000 0000 0000 0000 0000
LUMOTAST 22	Ø 22,3	1.15.105.002/0000 1.15.105.032/0 1.15.105.012/0000 1.15.105.112/0 1.15.105.022/0000	
LUMOTAST 25	Ø 16,2	1.15.154.006/0301 1.15.154.016/0301	integriert / incl.
RAMO 22	Ø 22,3	1.10.031.001/0000 1.10.031.004/0330 1.10.031.022/0330 1.10.031.101/0000	integriert / incl.
RAMO 30	Ø 30,3	1.11.031.001/0000 1.11.031.004/0330 1.11.031.022/0330 1.11.031.101/0000	integriert / incl.

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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