



# RAMO FAMILY

Product presentation

Distributed by:



[www.texim-europe.com](http://www.texim-europe.com)

**RAFI**

Distributed by [www.texim-europe.com](http://www.texim-europe.com)

# ORIGIN MOTIVATION



## **Saving costs**

eliminate complex wiring process, accelerate assembly

- ▶ work effort ↓ error rate ↓



## **Multiple using**

usage of M8 / M12 connectors for actuators and sensors

- ▶ established and industrial approved, many manufactures available



## **Decentralized control units**

compact machine interfaces without housing

- ▶ all side sealed



## **Flexibility**

components tend to be individual

- ▶ easy labeling / easy to change





# TOTAL COST OF OWNERSHIP

---

**Cost reduction of the complete application in comparison to a standard solution with control components**



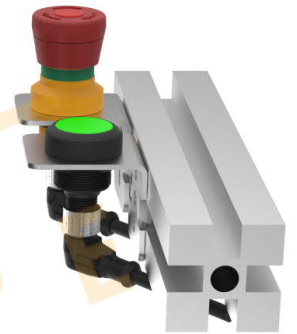
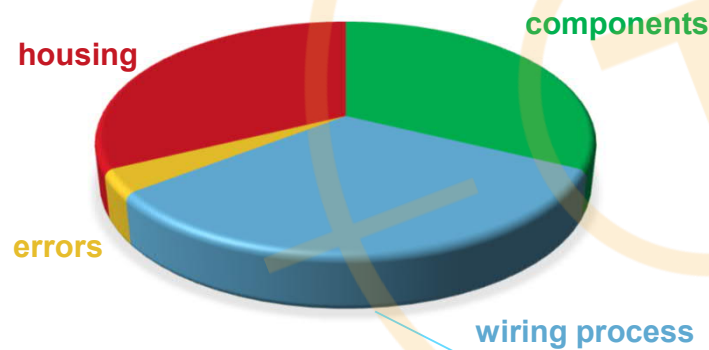


# TOTAL COST OF OWNERSHIP

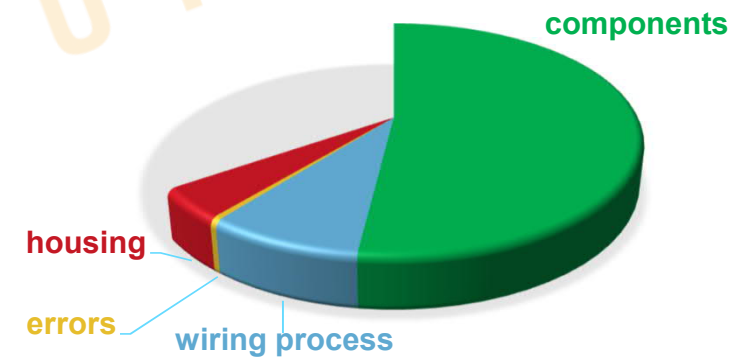
Cost reduction of the complete application in comparison to a standard solution with control components



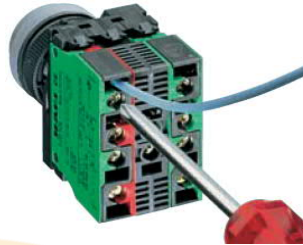
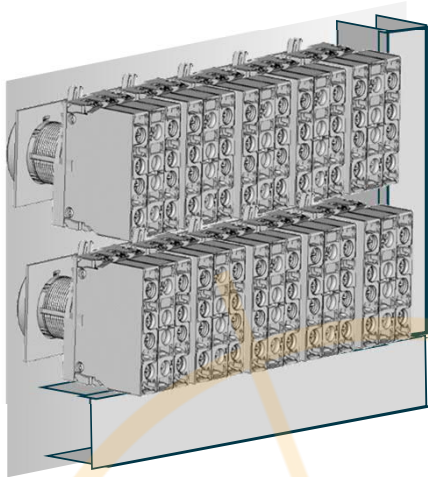
STANDARD SOLUTION TOTAL COSTS



RAMO SOLUTION TOTAL COSTS

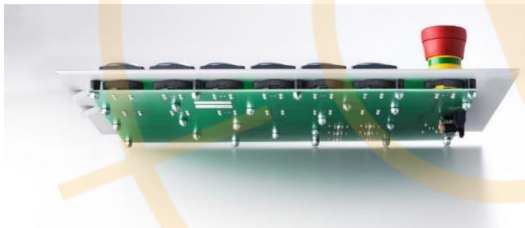


# TRADITIONAL CONNECTION



conventional wiring

wiring with Quick Connect



PCB

## EASY MOUNTING PROCESS – PLUG & PLAY

---

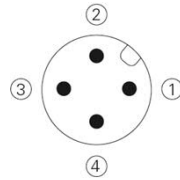


**As simple as possible**

**Less wiring errors occur**

**No tools needed**

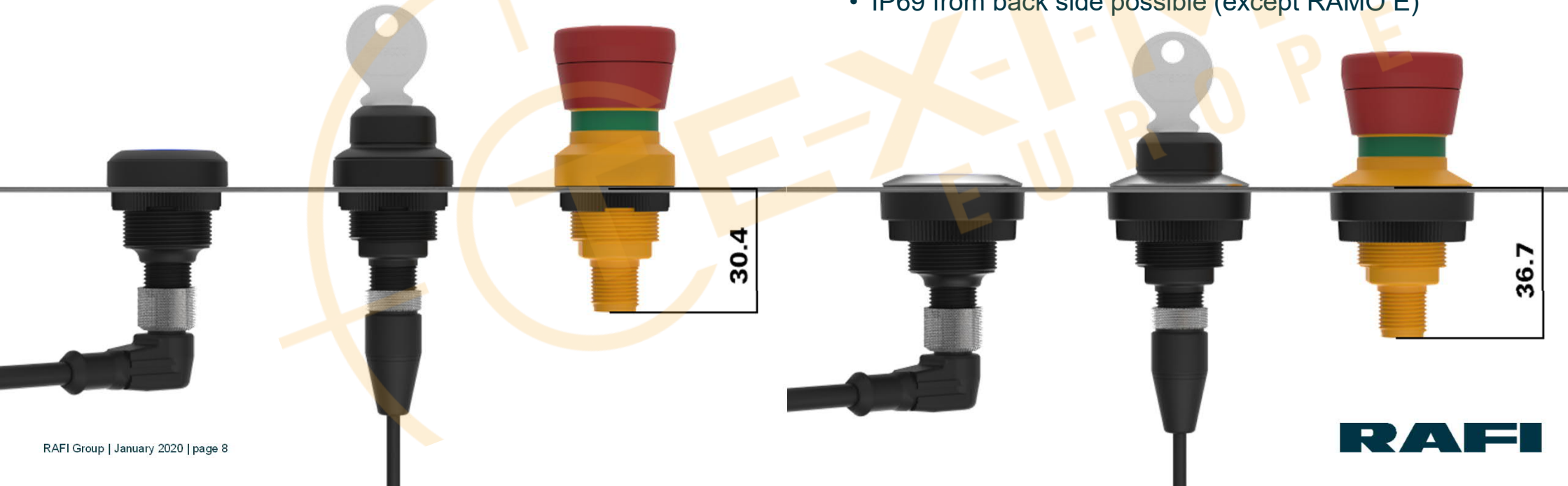
# DIMENSIONS



**M12**

## Arguments

- Plug & play without wiring
- cable preparation before mounting process
- Multi using of standard sensor cables
- Many manufacturers available
- IP69 from back side possible (except RAMO E)



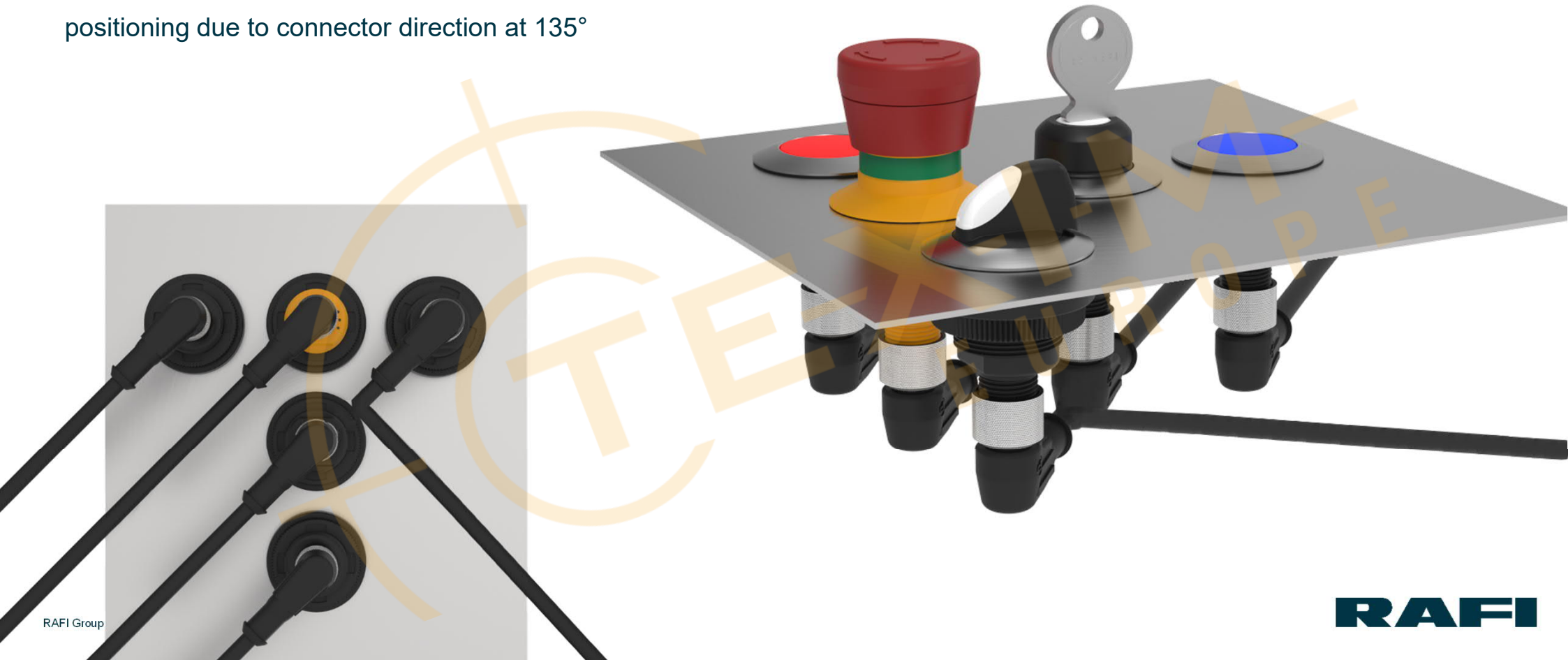


# DIMENSIONS

---

## Arguments

- No collision with angled connector in horizontal or vertical positioning due to connector direction at 135°



RAFI Group

**RAFI**

# THE BIG FAMILY



**RAMO T**  
Tactile switch

**RAMO E**  
Emergency stop

**RAMO I**  
Signal lamp

**RAMO S**  
Selector switch

**RAMO K**  
Key lock switch

**RAMO F**  
Feed-through

# RAMO T – TACTILE SWITCH

---

- Contacts 1 NO
- Illumination SMT LEDs
- Operation force 5 N
- Operation life time 500.000 cycles
- Switched voltage max. 35 V DC
- Switching current max. 100 mA
- LED voltage 24 V DC
- Colors red, green, blue  
white, yellow
- Connection M8, 4-pole, a-coded  
M12, 4-pole, a-coded



## RAMO 30 T – DESIGN EDITION

- Contacts 1 NO
- Illumination SMT LEDs
- Operation force 5 N
- Operation life time 500.000 cycles
- Switched voltage max. 35 V DC
- Switching current max. 100 mA
- LED voltage 24 V DC
- Colors red, green, blue  
white, yellow
- Connection M12, 4-pole, a-coded



## RAMO E – EMERGENCY STOP

---

- Contacts 2 NC
- Illumination none
- Switched voltage max. 35 V DC
- Switching current max. 100 mA
- LED voltage 24 V DC
- Connection M12, 4-pole, a-coded  
M12, 5-pole, a-coded

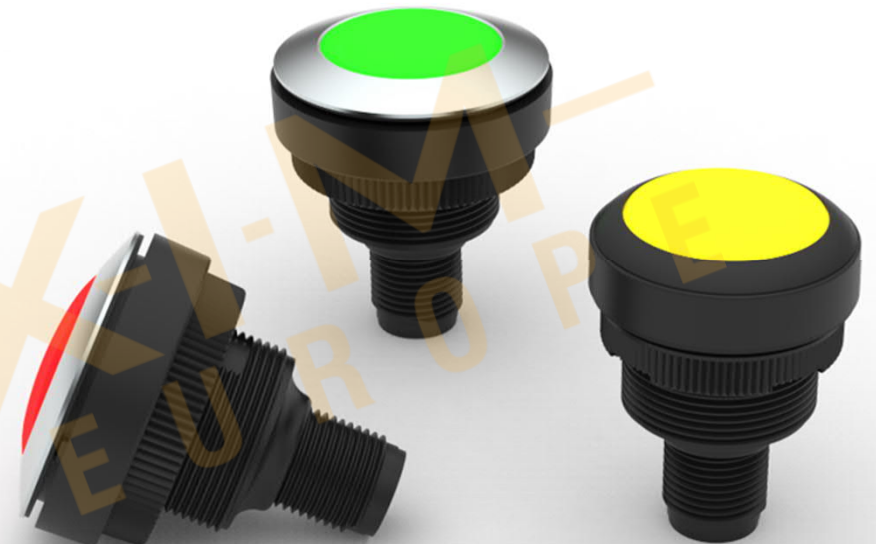




# RAMO I – SIGNAL LAMP

---

- Illumination SMT LEDs
- LED voltage 24 V DC
- Colors red, green, blue  
white, yellow
- Connection M12, 4-pole, a-coded



# RAMO S – SELECTOR SWITCH

---

- Contacts 1 NO / 2 NO / 1 NO + 1 NC
- Illumination SMT LEDs
- Operation life time 200.000 cycles
- Switched voltage max. 32 V
- Switching current max. 200 mA
- LED voltage 24 V DC
- Rotating angle various combinations  
momentary / latching
- Connection M12, 4-pole, a-coded  
M12, 8-pole, a-coded



# RAMO K – KEY LOCK SWITCH

- Contacts 1 NO / 2 NO / 1 NO + 1 NC
- Illumination none
- Operation life time 300.000 cycles
- Switched voltage max. 32 V
- Switching current max. 100 mA
- Rotating angle various combinations  
momentary / latching
- Connection M12, 4-pole, a-coded  
M12, 8-pole, a-coded



## RAMO F – FEED-THROUGH

---

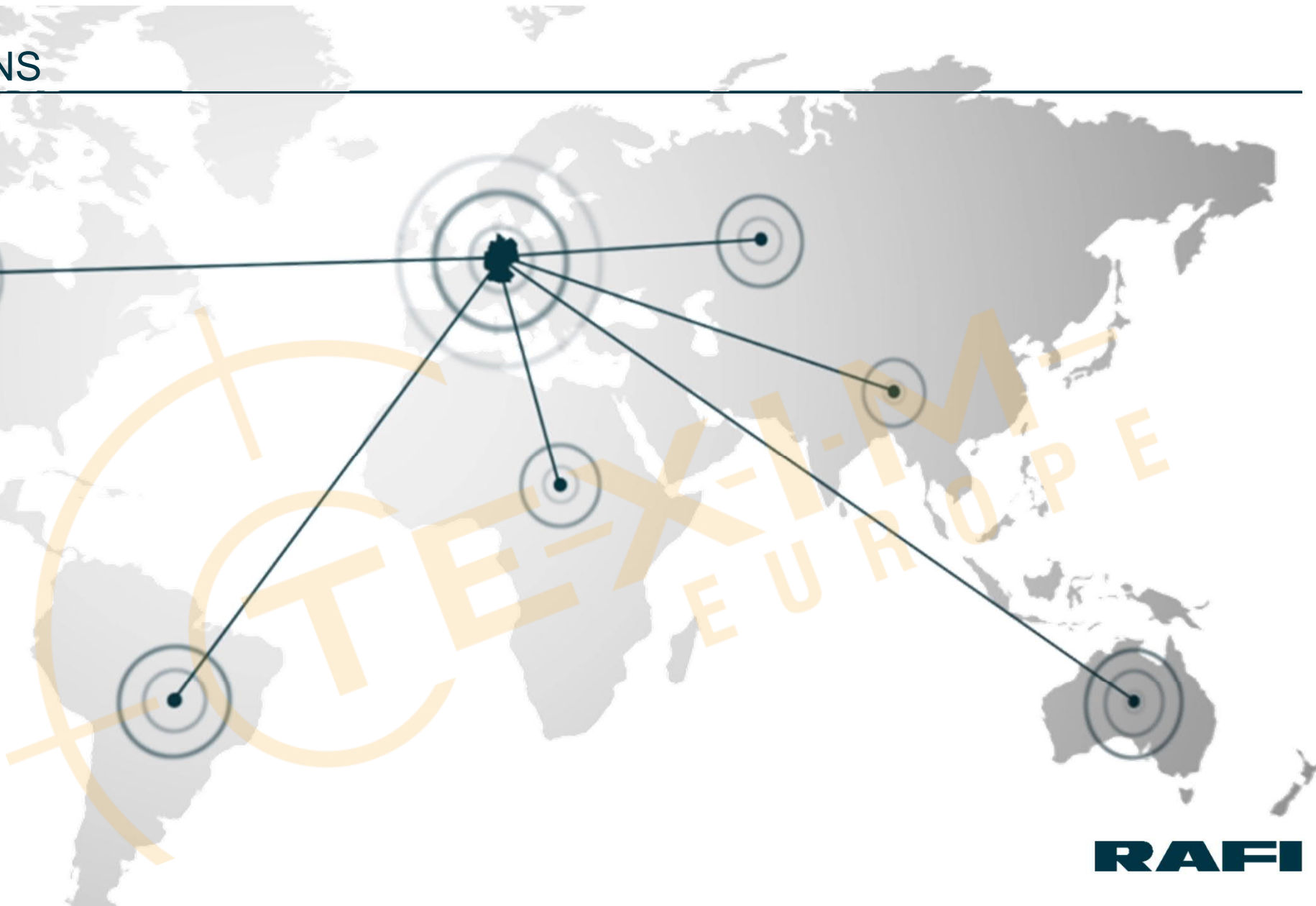
- Connection                      USB 3.0 SuperSpeed type A  
   RJ45 CAT 5



# APPLICATIONS

---

- **Machines**
- **Automation**
- **AGVs**
- **Logistics**
- **Vehicles**





# SYMBOLS & LABELING

---

## FLEXLAB

- Do-it-yourself with labeling template
- Printed lenses from RAFI

## Pad printing

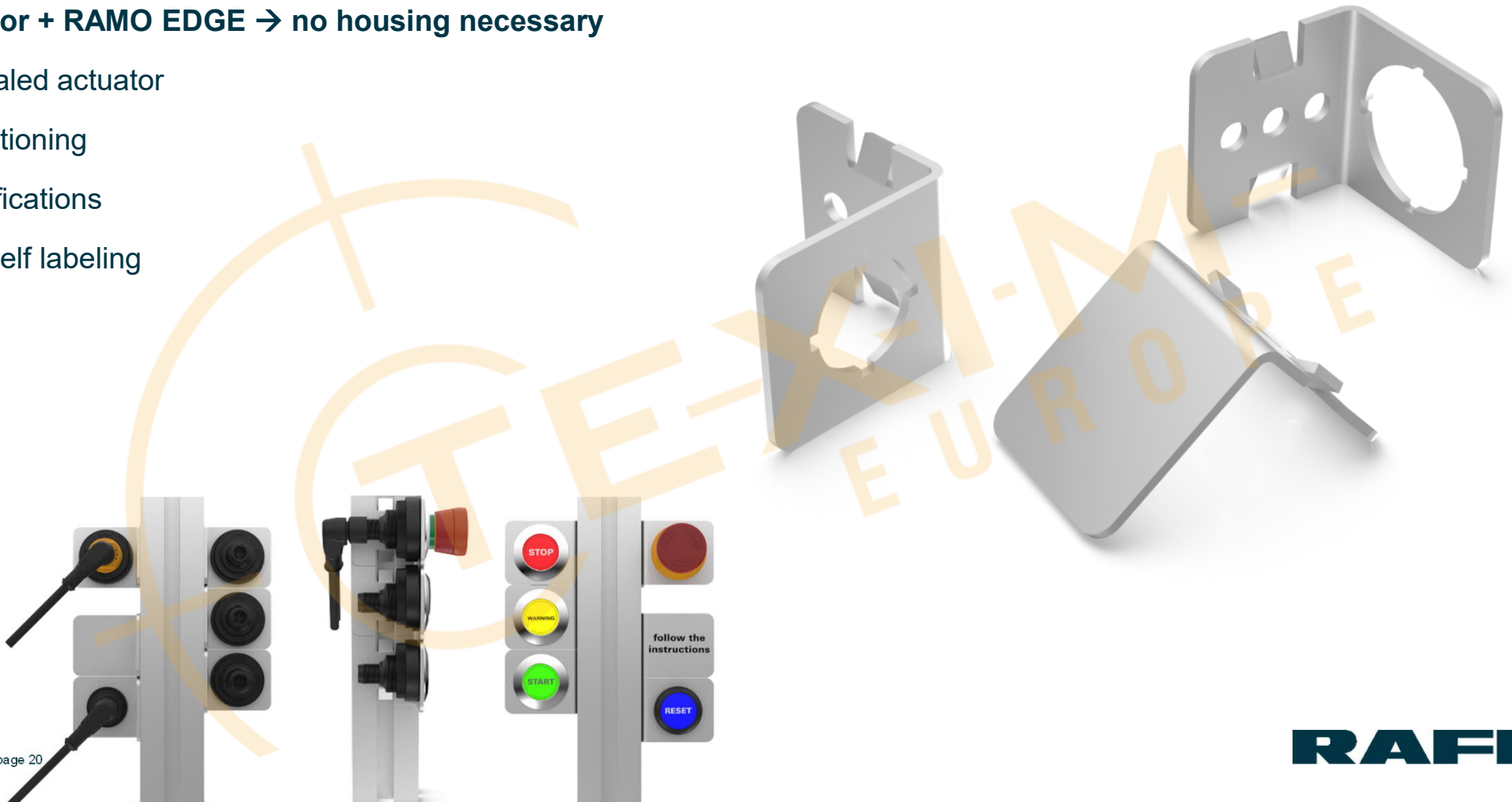
## Laser



# RAMO EDGE

**RAMO actuator + RAMO EDGE → no housing necessary**

- All-side-sealed actuator
- 4-side-positioning
- Easy modifications
- Do-it-yourself labeling



## FURTHER INFORMATION



RAMO family - image movie



RAMO T / I – product movie



Website



Technical data

[components@rafi-group.com](mailto:components@rafi-group.com)

Technical support

**+49 751 89-6500**  

**eCatalog**

**PDF**

**RAFI**



## Headquarters & Warehouse

Elektrostraat 17  
NL-7483 PG Haaksbergen  
The Netherlands

T: +31 (0)53 573 33 33  
E: [info@texim-europe.com](mailto:info@texim-europe.com)  
Homepage: [www.texim-europe.com](http://www.texim-europe.com)



## The Netherlands

Elektrostraat 17  
NL-7483 PG Haaksbergen

T: +31 (0)53 573 33 33  
E: [nl@texim-europe.com](mailto:nl@texim-europe.com)



## Belgium

Zuiderlaan 14, box 10  
B-1731 Zellik

T: +32 (0)2 462 01 00  
E: [belgium@texim-europe.com](mailto:belgium@texim-europe.com)



## UK & Ireland

St Mary's House, Church Lane  
Carlton Le Moorland  
Lincoln LN5 9HS

T: +44 (0)1522 789 555  
E: [uk@texim-europe.com](mailto:uk@texim-europe.com)



## Germany - North

Bahnhofstrasse 92  
D-25451 Quickborn

T: +49 (0)4106 627 07-0  
E: [germany@texim-europe.com](mailto:germany@texim-europe.com)



## Germany - South

Martin-Kollar-Strasse 9  
D-81829 München

T: +49 (0)89 436 086-0  
E: [muenchen@texim-europe.com](mailto:muenchen@texim-europe.com)



## Austria

Warwitzstrasse 9  
A-5020 Salzburg

T: +43 (0)662 216 026  
E: [austria@texim-europe.com](mailto:austria@texim-europe.com)



## Nordic

Søndre Jagtvej 12  
DK-2970 Hørsholm

T: +45 88 20 26 30  
E: [nordic@texim-europe.com](mailto:nordic@texim-europe.com)



## Italy

Via Matteotti 43  
IT-20864 Agrate Brianza (MB)

T: +39 (0)39 9713293  
E: [italy@texim-europe.com](mailto:italy@texim-europe.com)



# RAFI