

# RAMO 22 T, M12, square collar, momentary contact function, frontring black, 1 NO, bezel white

#### DISCONTINUED



#### fields of application

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

#### special features

- Key stroke with tactile feedback or mushroom pushbutton with latching actuator
- Based on the RAFI MICON 5 short-travel keyswitch with gold contacts, which has proven itself millions of times over
- > Single-part, closed housing
- Unique series with easiest Plug&Play connection
- Completely tailored design fits the RAFIX range of control components
- Installation size: 22.3 mm
- > Plug & Play connection M12
- Custom print options, including FLEXLAB bezels
- > Can be illuminated in many colors
- > Redundant version with 2 NO contacts
- > Pushbutton with black mushroom head



### description

Because it features the RAFI MICON 5 tactile switch, RAMO 22 T offers tactile feedback with a noticeable click. Due to the IP 66/ IP69K degree of protection, it is recommended in particular for plant engineering and construction. RAMO 22 T requires a mounting hole diameter of 22.3 mm.

As a further product variant, the RAMO 22 T mushroom pushbutton offers a latching pushbutton option for every application. It is characterised by form and function as for an emergency stop, but is only declared as a pushbutton. Various contact functions are possible.

#### Additional information according to UL certificate:

- > Only approved for Class 2 Power Source or Limited Voltage / Limited Current.
- > Installation only by trained specialist personnel.
- Type 4x Indoor only with cable "Cat. No. 7000-08061-0210100 PUR 4x0.25mm<sup>2</sup> with M8 connector, rated max. 30VAC/DC 4A, manufactured by Murrelektronik GmbH" and "Cat. No. 7000-12221-0340100 PUR 4x0.34mm<sup>2</sup> 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.

#### RAFI GmbH & Co. KG

## 1.10.011.101/0221

#### technical data



>	general		
	Potential free	yes	direct links
	Color	black	> RAFI eCatalog
	Bezel color	white	
	Property of bezel / mushroom	translucent	
	Collar color	black	
	Front ring color	black	
	Luminous element color	white	
	Collar shape	square	
	Operating temperature, min.	-40 °C	
	Operating temperature, max.	85 °C	
	Storage temperature, min.	-40 °C	
	Storage temperature, max.	85 °C	
	illuminated	Yes	
	Luminous elements	LED	
	Packaging	Box	
	Packaging unit	10 pcs.	
	net weight	14.2 g	
	Operating life	500,000 cycles	
	B10	650,000 cycles	
	Degree of protection, front side,	IP66	
	according to DIN EN 60529	IP67	
		IP69	
	Degree of protection, rear side,	IP66	
	according to DIN EN 60529	IP67	
	UL Enclosure Type Rating front side	type 4X indoor	
	Environment resistance	IEC 60068-2-14	
		IEC 60068-2-30	
		IEC 60068-2-33	
	Colt oprovi registance according to	IEC 60068-2-78	
	Salt-spray resistance according to standard	IEC 60068-2-11	
	Impact resistance IK	05	
	MOQ order	30 pcs.	
	Pollution degree acc. to DIN EN 61010-1	Pollution degree 2	
	RoHS compliant	Yes	
	REACH compliant	Yes	
>	mounting diameters		
	Outside dimension, length	29.8 mm	
	Outside dimension, width	29.8 mm	
	Outside dimension, height	40 mm	
	Mounting hole	22.3 mm	
	Mounting depth	30.15 mm	
	Installation height	9.95 mm	

The information in this data sheet only contains general descriptions and / or performance features, which may not apply precisely as described to the respective application, and which my change due to further product enhancements. The technical data, illustrations and other information about our products are the mere results of individual technical testing. These descriptions and other product features are only binding if they expressly agreed upon at the time of the conclusion of a binding contract. In all other cases, we reserve the right to make technical changes as well as changes of availability. Pictures and other graphic illustrations are approximations only. All product names may be trademarks or brand names of the RAFI Group or any other sub-supplier of RAFI. The use of such by any third parties for their own purposes may infringe the rights of the respective entity holding those rights. date: Sep 1, 2024 page: 2/5

#### RAFI GmbH & Co. KG

# 1.10.011.101/0221



	Grid, min.	30 mm	
>	> mechanical data		
	Actuation function	momentary contact function	
	Operating force, max.	12 N	
	Operating force, min.	5 N	
	Operating travel, max.	1 mm	
	Resistance to force on the side	300 N	
	Contact function	1 NO	
	Contact material	Gold	
	Fixing	Threaded ring	
	Threaded ring torque, max.	1.2 Nm	
	Terminal on the rear	M12 4-pin A-coded	
	PIN 1	Normally open contact 1	
	PIN 2	LED +	
	PIN 3	GND	
	PIN 4	Normally open contact 1	
>	> electrical data		
	Rated insulation voltage	250 V	
	Rated surge voltage	800 V	
	Rated operating voltage	35 V (AC-15)	
		35 V (DC-13)	
	Operating voltage of the luminous element, min.	20 V	
	Operating voltage of the luminous element, max.	28 V	
	Rated voltage, min.	0.02 V	
	Rated voltage, max.	35 V	
	Rated voltage, max. acc. to UL 60947	30 V DC (42,4 V peak)	
	Rated operating current	0.1 A	
	Rated current, min.	0.00001 A	
	Rated current, max.	0.1 A	
	Rated power, max.	1 W	
	Overvoltage category	2	
	Kind of short circuit protective device	fuse 250 V / 0,1 A / 1,5 kA gG quick	
	Conditional short circuit current	1,000 A	

The information in this data sheet only contains general descriptions and / or performance features, which may not apply precisely as described to the respective application, and which my change due to further product enhancements. The technical data, illustrations and other information about our products are the mere results of individual technical testing. These descriptions and other product features are only binding if they expressly agreed upon at the time of the conclusion of a binding contract. In all other cases, we reserve the right to make technical changes as well as changes of availability. Pictures and other graphic illustrations are approximations only. All product names may be trademarks or brand names of the RAFI Group or any other sub-supplier of RAFI. The use of such by any third parties for their own purposes may infringe the rights of the respective entity holding those rights. **date**: Sep 1, 2024 **page**: 3/5

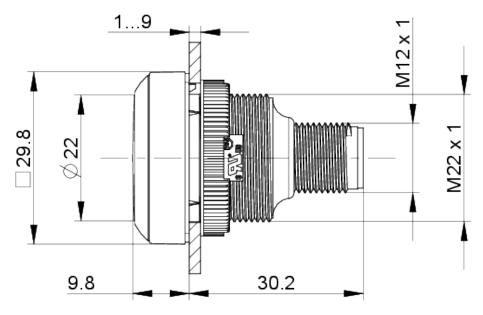
#### RAFI GmbH & Co. KG



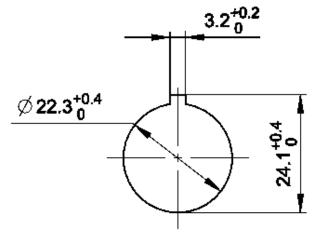


#### drawings

#### **Dimensioned drawing**



#### Mounting hole drawing



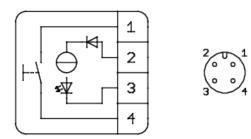
acc. to IEC 60947-5-1

#### RAFI GmbH & Co. KG





Schematic diagram



The information in this data sheet only contains general descriptions and / or performance features, which may not apply precisely as described to the respective application, and which my change due to further product enhancements. The technical data, illustrations and other information about our products are the mere results of individual technical testing. These descriptions and other product features are only binding if they expressly agreed upon at the time of the conclusion of a binding contract. In all other cases, we reserve the right to make technical changes as well as changes of availability. Pictures and other graphic illustrations are approximations only. All product names may be trademarks or brand names of the RAFI Group or any other sub-supplier of RAFI. The use of such by any third parties for their own purposes may infringe the rights of the respective entity holding those rights. **date**: Sep 1, 2024 **page**: 5/5

#### RAFI GmbH & Co. KG