

SAFETY PRODUCTS

ASK

Safety Mat

Data Sheet

ASK Safety mats are pressure sensitive safety devices used to detect the presence of people in hazardous areas.

Safety mats are placed on the floor to detect if someone is in an area. They are mostly used inside hazard zones around e.g. presses, robots and production lines to prevent the machine from running when someone is in the hazard zone.



Easy to install

Preassembled

Safety mats are ordered in standard or custom sizes with or without molded ramp rail. Preassembled with a single cable.

Serial connection

Able to connect several devices in series.



Continuous operation

Good material resistance

The surface material of the safety mat is a Euro Dot slip-free rubber with excellent resistance against oil, water and grease



Speed up your projects

A complete offering with few order codes

With minimum order codes we provide a compact offering that still contains a complete range of pressure sensitive devices, available in custom sizes to suit all applications.

Ordering Information

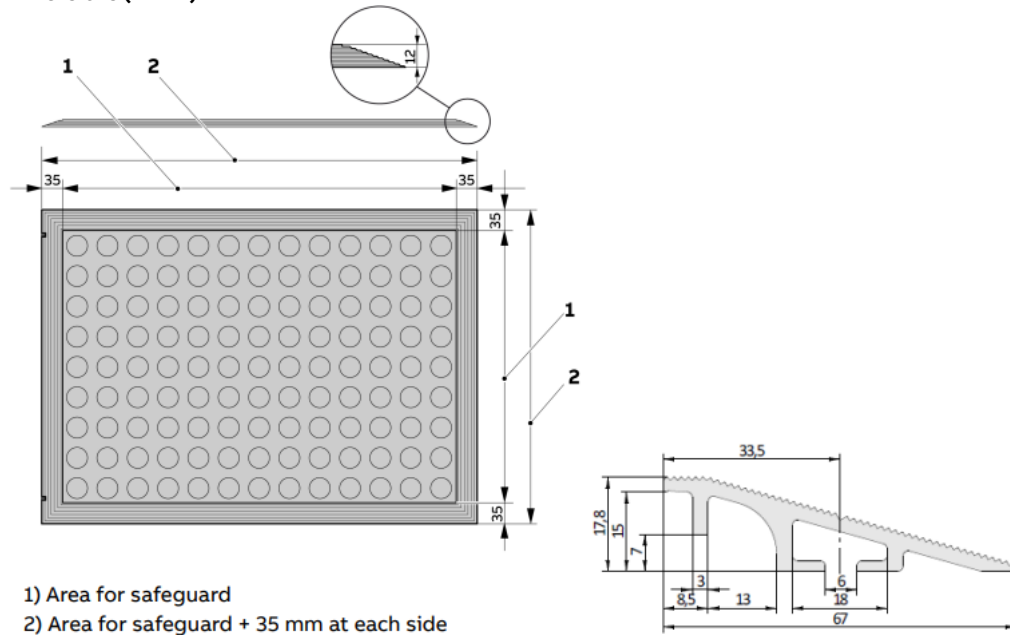
Description	Type	Order code
Safety Mat 12" x 12", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858003R2800
Safety Mat 24" x 24", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R3800
Safety Mat 24" x 30", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R3900
Safety Mat 24" x 36", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R4000
Safety Mat 24" x 42", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R4100
Safety Mat 24" x 48", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R4200
Safety Mat 24" x 60", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R4300
Safety Mat 30" x 30", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R4400
Safety Mat 30" x 36", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R4500
Safety Mat 30" x 42", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R4600
Safety Mat 30" x 48", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R4700
Safety Mat 36" x 36", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R4800
Safety Mat 36" x 42", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R4900
Safety Mat 36" x 48", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R5000
Safety Mat 36" x 60", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R5100
Safety Mat 42" x 42", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R5200
Safety Mat 42" x 48", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R5300
Safety Mat 48" x 48", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R5400
Safety Mat 48" x 60", 10m cable, without built in ramp rail	Safety mat ASK-U	2TLA858002R5500
Safety Mat 12" x 12", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858003R2900
Safety Mat 24" x 24", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R5600
Safety Mat 24" x 30", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R5700
Safety Mat 24" x 36", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R5800
Safety Mat 24" x 42", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R5900
Safety Mat 24" x 48", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R6000
Safety Mat 24" x 60", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R6100
Safety Mat 30" x 30", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R6200
Safety Mat 30" x 36", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R6300
Safety Mat 30" x 42", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R6400
Safety Mat 30" x 48", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R6500
Safety Mat 36" x 36", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R6600
Safety Mat 36" x 42", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R6700
Safety Mat 36" x 48", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R6800
Safety Mat 36" x 60", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R6900
Safety Mat 42" x 42", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R7000
Safety Mat 42" x 48", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R7100
Safety Mat 48" x 48", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R7200
Safety Mat 48" x 60", 10m cable, with built in ramp rail	Safety mat ASK-T	2TLA858002R7300

NOTE: Custom mats available. Contact ABB for pricing.

Ordering Information - Accessories

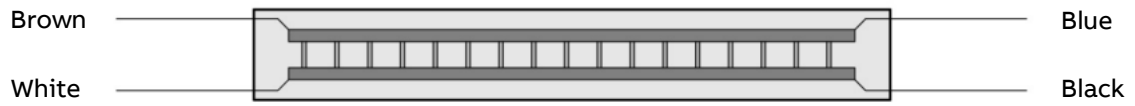
Description	Type	Order code
Trim Corner Connector	Corner	2TLA858002R7400
Aluminum Trim 4-foot piece	Trim	2TLA858009R2800
Aluminum Trim 7-foot piece	Trim	2TLA858009R2900

Dimensions (in mm)



- 1) Area for safeguard
- 2) Area for safeguard + 35 mm at each side

Wiring



NOTE: Single 10m cable 4 conductors prewired into the safety mat. It comes out of the middle of the long side.

Technical Data	
Manufacturer	
Address	ABB Electrification Sweden AB SE-721 61 Västerås Sweden
Technical Data	
Max Area	Entire safety mat = 2350 x 1350 mm, 10 m ² , (divided safety mat) Rec. relation max 3:1, Min. 120 x 120 mm
Height	14mm
Weight	U 24,9 Kg/m ² ; T 26 Kg/m ²
Inactive area	Nominally 10 mm from the safety mat ramp rail
Switching force	Nominally 150 N (Round body 80 mm)
Max. Pressure	2000 N over Ø 80 mm
Material	25mA Max.
Protection class	IP65
Electrical capacity	24 V, 100 mA
Switching cycles	Min. 1 Mio. (B10D: 2 000 000) Tested according to EN 13856-1
Response time	
Including Sentry	< 20 ms
Including Pluto (single Pluto)	< 30 ms
Including Pluto incl. Pluto bus	Normal condition: < 40 ms At fault condition: < 70 ms
Ambient air temperature	-10 °C to +55 °C
Chemical resistance	
Oil, grease	Good
Fuel	Resistant
Solvent	Sufficient
10% acid	Resistant
10% alkaline (caustic) solutions	Resistant
Cable	10 m; 4 x 0.34 mm ² PU sheathed
Mechanical life	>1.0 x 10 ⁶ Load shifting
Standard compliance and approvals	
European Directives	2006/42/EC, 2014/30/EU, 2011/65/EU, 2015/863
Applied harmonized standards, Machinery Directive	EN ISO 13856-3:2013, EN ISO 13849-1:2015, PLd/Cat 4*, EN 62061:2005+A1:2013, SIL CL 2
* According to EN ISO 13849-2:2012, Table D.8, a fault exclusion for that the contacts in a pressure sensitive device will not close, can be made. This fault exclusion is limited up to PLd.	
Other applied standards	
Electrical safety	EN 60204-1:2006+A1:2009
Electromagnetic compatibility	EN 61326-1:2008
Approvals	TÜV Nord, cULus
Information for use in USA/Canada	
Intended use	Applications according to NFPA79
Mounting	
Cabinet	The safety control unit shall be mounted in a cabinet with IP rating of at least IP54
Maximum cable length	Sentry 25m Pluto 100 m
Max no. of safety mats/evaluation unit	Sentry 10 Pluto N/A (see "Max safety mat area")
Max safety mat area/evaluation unit	Sentry 2.5 m ² Pluto 2 m ²

Additional information can be found in the [ASK Safety Mat Product Manual](#).

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