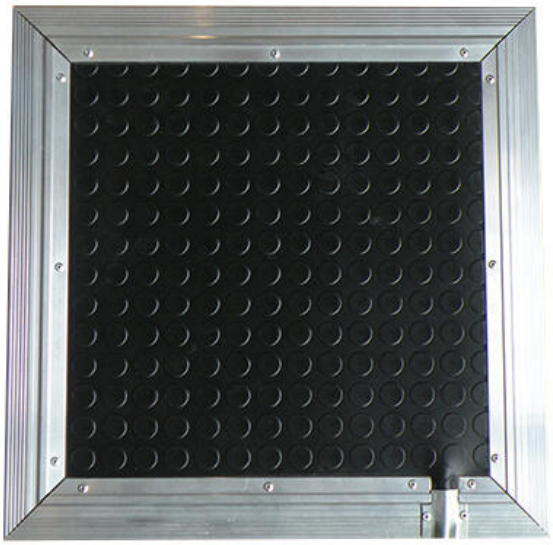
SAFETY MATS

TO-SAFETYMAT
Safety mat, PVC standard type



- Made of black PVC and aluminium
- Maximum dimensions for a single mat are 1500 x 2500mm
- Safety mats can be connected in series circuit
- Safety class 3 (PL e) with a control unit

PRODUCT DESCRIPTION

The GREIN safety mats are protections for the operators that work on the dangerous machines. Are formed by two elements: a sensor located internally to the mat and a control unit connected with it.

The sensor is like a normal open switch. In normal operation condition, the switch is open and the safety relays of the control unit are closed. When pressure is applied to the mat, the two conductors are forced together closing the switch. In this condition the safety relays are open.
The mat performance level conforms to PL e only when combines with Grein control module PS3-Ax.

Example 1 (safety mat as a primary safety device)

The user activates the safety mat, all functions causing danger stop immediately. When the user exits the mat, machine can be turned back on either automatically or manually.

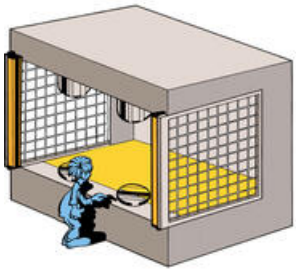
Note! If there is slightest chance that the user could enter the danger zone when exiting the mat, manual reset should always be used.



Example 2 (safety mat as a secondary safety device)

A danger zone is surrounded with a combination of fence system and light curtain. Additionally, the area is covered with a safety mat, which allows only manual run when activated. When the operator exits the mat and resets the safety system, the machine can be operated normally.

Safety mats can be installed in zones which cause differing response in the overall system.



In accordance with standard EN ISO 13856-1 the determination of the safety distance S is calculated using the following formula:
S = K x T + C
S = Horizontal minimum distance (mm) from the danger zone
K = Speed of body or body parts (mm/s), 1600mm/s
T = Overall response time t1+ t2
t1 = Safety mat and conrol unit response time (reaction time)
t2 = Machine stopping time (from signal to complete rest)
C = Extra distance (mm), 1200mm
S = (1600mm/s x T) + 1200mm

Technical spesifications

Actuating force	25 kg with Ø80 mm test rod
	45 kg with Ø200 mm test rod
Dead zone	max. 30 mm from the edges
Thickness	9 mm
Weight	n. 12 kg/m^2
Length max.	2500 mm
Width max.	1500 mm
Supply voltage	24 V DC
Current max.	1A, 24V
Cable	4-wire
Response time	40 ms
Protection rating	IP65
Temperature range	-10 °C…+60 °C
Fastening	Aluminium profile

SPECIFICATIONS

IP Class	IP65
Temperature range from	-10 °C
Temperature range to	60 °C

