

# Emergency stop with indication Smile Tina



## Smile Tina - small and cost effective E-stop

In order to fulfill the need for a small and easy to install E-stop, Smile has been developed. The size of the device makes it possible to be installed wherever you want. With M12 connections or cable and centralised mounting holes Smile is very easy to install, especially on aluminium extrusions. Smile is available for E-stops in both dynamic and static safety circuits i.e. for interfacing to Vital system/Pluto safety PLC and Safety relays. Each version is available with either one or two M12 connections or cable. Two M12 connectors are used to enable the connection of E-stops in series, which is often used with dynamic safety circuits fulfilling safety category 4. In the top of the Smile Tina E-stop unit, LEDs show the actual status according to the dynamic system:

Green = everything is OK

Red = E-stop activated.

Flashing Red/Green = Stop activated from another preceding device.

Smile is also available with black push button and used as a safety stop. See section on safety stops.

## The Smile Tina emergency stop is available in four versions:

1. Smile 10 EA Tina has a 1 m cable connected via the base of the unit.
2. Smile 11 EA Tina has a 5-pole M12 connector on the end of the unit.
3. Smile 12 EA Tina has two 5-pole M12 connectors, one on each end of the unit.
4. Smile 11 EAR Tina has one 5-pole M12 connector at one end of the unit.

Approvals:

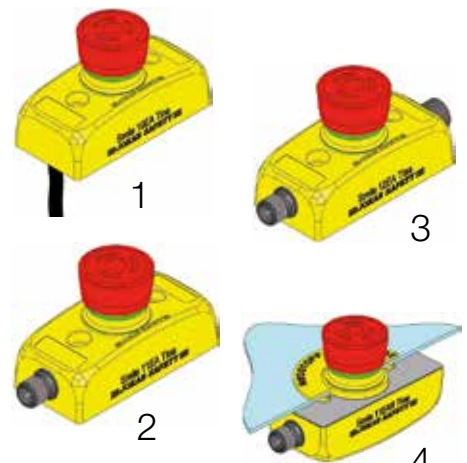


Application:

- To stop a machine or a process

Features:

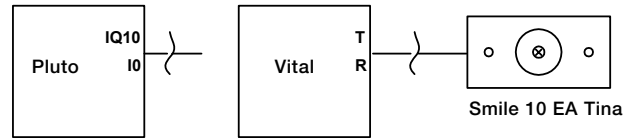
- Emergency push button up to PL e/Cat. 4 acc. to EN ISO 13849-1
- Light grids, emergency stop and Eden in the same safety circuit together with Vital or Pluto gives PL e/Cat. 4 acc. to EN ISO 13849-1
- With LED indication on push button
- Robust
- Info-signal from each emergency stop
- IP65
- Available as safety stop (black push button)



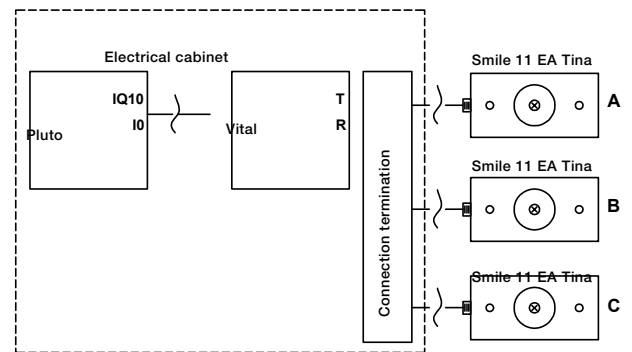
# Smile Tina

## Connection examples

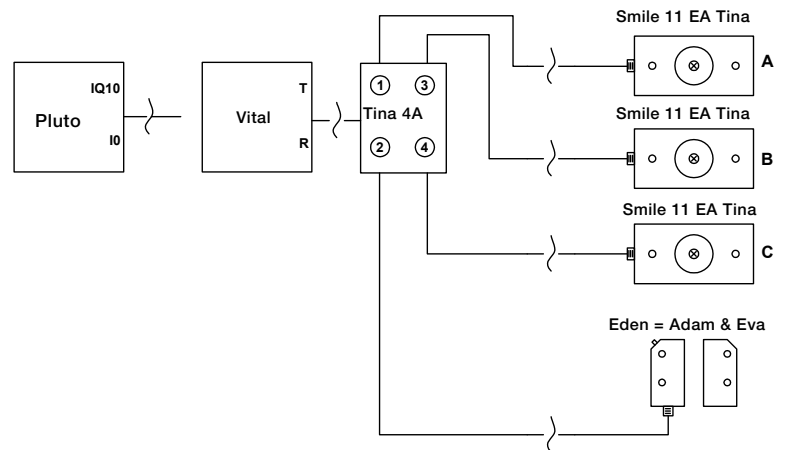
**Smile 10 EA Tina** connected to either a Pluto or Vital system with LED indication/information. The connection cable exits from underneath the unit. Safety circuit category 4.



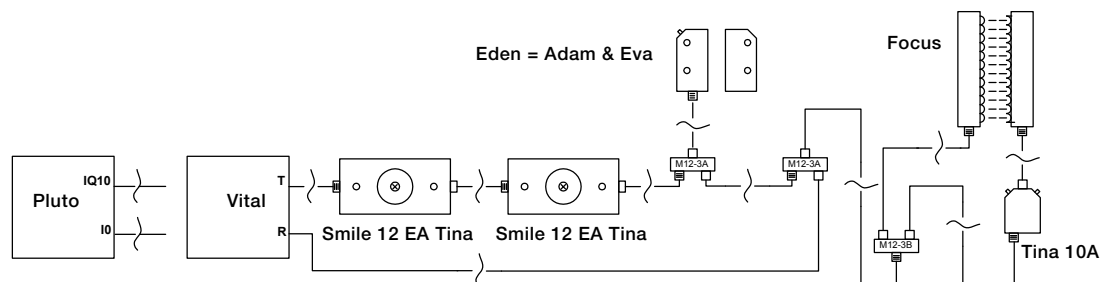
**Smile 11 EA Tina** connected to either a Pluto or Vital system with LED indication/information. Three Smile 11 EA Tina units connected via M12 connectors in a serie via connection terminals in the electrical cabinet. Safety circuit category 4.



**Smile 11 EA Tina** connected to either a Pluto or Vital system with LED indication/information. Three Smile 11 EA Tina units and one Eden connected via M12 connectors in a serie via a Tina 4A connection block. Safety circuit category 4.



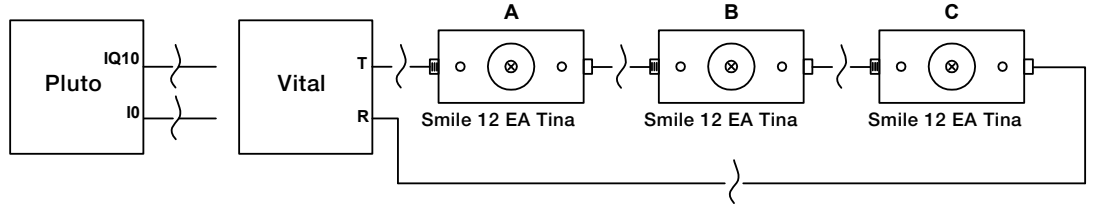
**Smile 12 EA Tina** connected to either a Pluto or Vital system with LED indication/information. Two Smile 12 EA Tina's, one Eden sensor and one Focus Light Curtain connected via M12 connectors in a serie. Safety circuit category 4.



# Smile Tina

## Connection examples

**Smile 12 EA Tina** connected to either a Pluto or Vital system with LED indication/information. Three Smile 12 EA Tina units connected via M12 connectors in a serie. Reconnection to the Pluto/safety relay is made via a separate cable. Safety circuit category 4.



E-Stop Button status				LED Indication		
A	B	C		A	B	C
R	R	R	↔	G	G	G
R	R	P	↔	G	G	Rd
R	P	R	↔	G	Rd	F
R	P	P	↔	G	Rd	Rd
P	R	R	↔	Rd	F	F
P	R	P	↔	Rd	F	Rd
P	P	R	↔	Rd	Rd	F
P	P	P	↔	Rd	Rd	Rd

**LED Indication** for the connection example above, where three Smile 12 EA Tina units are connected in series, is showed in the following table (applies for all Smile Tina).

A = Smile 12 EA Tina  
B = Smile 12 EA Tina  
C = Smile 12 EA Tina

R = Released  
P = Pressed  
G = Green light  
Rd = Red light  
F = Flashes, changing between red and green light.

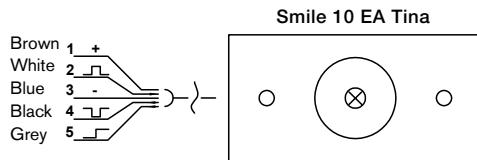
E-Stop Button status				Information output signal		
A	B	C		A	B	C
R	R	R	↔	H	H	H
R	R	P	↔	H	H	L
R	P	R	↔	H	L	H
R	P	P	↔	H	L	L
P	R	R	↔	L	H	H
P	R	P	↔	L	H	L
P	P	R	↔	L	L	H
P	P	P	↔	L	L	L

**Information output signal** for the connection example above, where three Smile 12 EA Tina units are connected in series, is showed in the following table (applies for all Smile Tina). The status information signal can be connected to e.g. PLC input. **Note.** The information signal must not be used as a safety signal. The signal should only be used to indicate the status of connected devices.

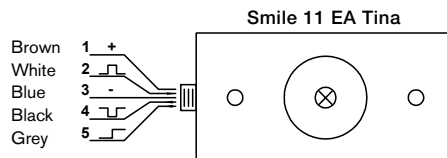
A = Smile 12 EA Tina  
B = Smile 12 EA Tina  
C = Smile 12 EA Tina

R = Released  
P = Pressed  
H = High (i.e. supply voltage)  
L = Low (= 0 VDC)

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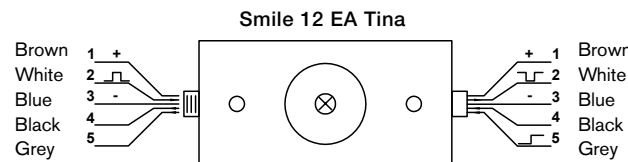


1. Input voltage, 17-27 VDC ripple +/- 10%
2. Dynamic input signal
3. 0 VDC
4. Dynamic output signal
5. Information output



1. Input voltage, 17-27 VDC ripple +/- 10%
2. Dynamic input signal
3. 0 VDC
4. Dynamic output signal
5. Information output

1. Input voltage, 17-27 VDC ripple +/- 10%
2. Dynamic input signal
3. 0 VDC
4. Not used
5. Not used



1. Output voltage to next unit
2. Dynamic output signal (To next Smile or to Pluto or Vital system)
3. 0 VDC
4. Not used
5. Information output

## Technical data – Smile Tina

<b>Article number</b>	Smile 10 EA Tina Smile 11 EA Tina Smile 12 EA Tina Smile 11 EAR Tina	2TLA030050R0400 2TLA030050R0000 2TLA030050R0200 2TLA030050R0100
<b>Note.</b>	There are versions for use with relay technology (without Tina).	
<b>Impact resistance (half sinusoidal)</b>	max. 150 m/s <sup>2</sup> , pulse width 11 ms, 3-axis, as per EN IEC 60068-2-27	
<b>Vibration resistance (sinusoidal)</b>	max. 50 m/s <sup>2</sup> at 10 Hz, 10 cycles, 3-axis, as per EN IEC 60068-2-6	
<b>Climate resistance</b>	<p>Damp heat, cyclical</p> <p>Damp heat, sustained</p> <p>Dry heat</p> <p>Cooling</p> <p>Salt mist</p>	
<b>Level of safety</b>	<p>EN ISO 13849-1</p> <p>EN 62061</p> <p>IEC/EN 61508-1...7</p>	
<b>PFH<sub>D</sub></b>	4.66E-09	
<b>Colour</b>	Yellow, red and black	
<b>Weight</b>	Approx. 65 grams	
<b>Size</b>	<p>Length: 84 mm + M12 contact(s) (12.5 mm each)</p> <p>Width: 40 mm Height: 52 mm</p>	
<b>Material</b>	Polyamid PA66, Macromelt, Polybutylenterephthalate PBT, Polypropylen PP, UL 94 V0	
<b>Ambient temperature</b>	-10°C to +55°C (operation) -30°C to +70°C (stock)	
<b>Protection class</b>	IP65	
<b>Mounting</b>	Two M5 hexagon socket screws, L ≥25 mm. Hole centres: 44 mm	
<b>LED on E-Stop</b>	<p>Green: Safety device OK, Safety circuit OK</p> <p>Flashing: Safety device OK, safety circuit previously interrupted</p> <p>Red: This button is pressed, and the safety circuit is interrupted</p>	
<b>Time delay</b>	1:1.5 (Two Smile units are equal to three Edens in time delay)	
<b>Operating voltage</b>	17-27 VDC ripple ±10%	

<b>Current consumption</b>	47 mA (57mA with max. current from information output)	
<b>Current from information output</b>	10 mA max	
<b>Actuating force</b>	22±4 N	
<b>Actuator travel</b>	Approx. 4 mm to latch	
<b>Material, contacts</b>	Silver alloy gold plated	
<b>Mechanical life</b>	> 50 000 operations	
<b>Accessories</b>	<p>Emergency Stop Sign S DK FIN, 32.5 mm</p> <p>Emergency Stop Sign EN F D, 32.5 mm</p> <p>Smile side shield</p>	
<b>Conformity</b>	<p>EN ISO 12100:2010</p> <p>EN ISO 13849-1:2008</p> <p>EN 62061:2005,</p> <p>EN 60204-1:2006+A1:2009</p> <p>IEC 60664-1:2007</p> <p>EN 61000-6-2:2005</p> <p>EN 61000-6-4:2007</p> <p>EN 60947-5-5:2005</p> <p>EN ISO 13850:2006</p>	



Smile side shield

Sign for emergency stop

