

Safety stop buttons

Smile, INCA and Compact

Safety stop buttons are used to safely stop a certain part of a dangerous machine.

ABB offers safety stop buttons to suit different needs of connection and communication. Models are available for e.g. external mounting or panel mounting, in compact size or robust design, adapted for the DYNlink solution or with 2 NC contacts.



Easy to install

Compact size

Models with a compact and appealing housing saves space and makes it easy to place.

Quick installation

Quick and easy installation of models with features such as centered mounting holes, removable terminal blocks and M12 connectors.

Serial connection

Tina models save cable length and installation time with serial connection.



Optimum interface

Highly adaptable

Several models to choose between depending on position, installation and function.

Reliable in extreme conditions

Robust models for use in demanding environments.



Continuous operation

LED diagnostics

Models with integrated LED diagnostics reduce downtime when troubleshooting.

Applications and features

Safety stop buttons

Applications

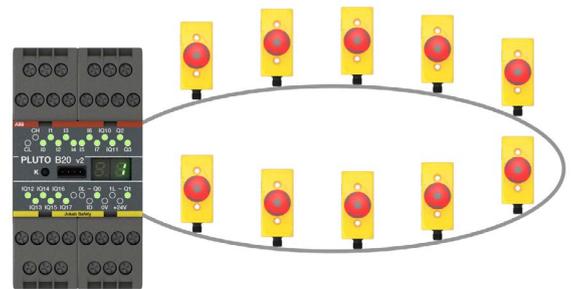
A safety stop (also called machine stop) can be used to safely stop a part of the machine, e.g. as a stop for an individual hazardous machine function. It may not be used as an emergency stop and stop the complete machine or production line. Likewise, an emergency stop with red push button should not be used as a safety stop. In order to separate the safety stop function from the emergency stop function, the safety stop buttons should be colored black.



Features

DYNlink

Safety stop buttons with Tina in their name belong to the DYNlink solution, which enables serial connection using only one channel and still reaching Cat. 4/PL e. DYNlink devices must be used with Vital safety controller or Pluto programmable safety controller. Up to 30 DYNlink devices can be connected in series to Vital and up to 10 can be connected to each input on Pluto.



Models

Safety stop buttons

Safety stop buttons for external mounting

Smile

Smile is a small and easy to install safety stop button. Its size allows mounting in reduced spaces, and its centered mounting holes makes it especially easy to mount on aluminum extrusions (e.g. Quick-Guard fencing system).

Smile has an integrated LED in the button that shows the status and simplifies error tracking.

The standard model of Smile has 2 contacts and can be used with safety controllers from all brands. The Smile Tina model belongs to the ABB DYNlink solution, with the advantages of serial connection using only one channel and still reaching Cat. 4/PL e.

Smile safety stops are identical to the corresponding Smile emergency stops apart from the color of the button.



Compact

The Compact safety stop button offers a robust enclosure with a high IP rating that fulfills the demands in severe and humid environments, such as food and beverage industry. Compact can be fitted with a Tina adapter for use in a DYNlink solution (Tina 2A, Tina 2B or Tina 3A).

Compact safety stop is identical to Compact emergency stop apart from the color of the button.



Safety stops for panel mounting

INCA

INCA is a safety stop button for panel mounting, designed for installation in 22.5 mm holes. Its removable terminal block facilitates connection and exchange.

INCA has an integrated LED in the button that shows the status and simplifies error tracking.

The standard model of INCA has 2 contacts and can be used with safety controllers from all brands. INCA Tina belongs to the ABB DYNlink solution, with the advantages of serial connection using only one channel and still reaching Cat. 4/PL e.

INCA safety stop is identical to INCA emergency stop apart from the color of the button.



Ordering information

Safety stop buttons



2TLA030054R0300

Smile 11 SA Tina



CEP1-1002



2TLA030054R0200

INCA 1S



2TLA020054R1100

Tina 8A

Safety stop buttons

Mounting	Type of safety signal	Connection type	Feature	Type	Order code
External	DYNlink	1 m cable from bottom	Status LED	Smile 11 SA Tina	2TLA030054R0300
	2 NC	1 x M12-5	Status LED	Smile 11 SA	2TLA030051R0900
	2 NC*	2 x M20 conduits	-	CEP1-1002 (Compact)	1SFA619811R1002
			With shroud	CEP1-2002 (Compact)	1SFA619811R2002
Panel	DYNlink	5 pole terminal block	Status LED	INCA 1S Tina	2TLA030054R0200
	2 NC	5 pole terminal block	Status LED	INCA 1S	2TLA030054R0300

* Can be adapted to DYNlink with Tina

Accessories

Description	Type	Order code
M12 Y-connector for serial connection of devices without StatusBus functionality.	M12-3A	2TLA020055R0000
Connection block for the serial connection of up to 4 DYNlink devices with 12-5 connectors.	Tina 4A	2TLA020054R0300
Connection block for the serial connection of up to 8 DYNlink devices with 12-5 connectors.	Tina 8A	2TLA020054R0500
Grey shroud for Compact	CA1-8054	1SFA619920R8054
Adaptation unit for DYNlink solution with M20 fitting. For e.g. Compact.	Tina 2A *	2TLA020054R0100
Adaptation unit for DYNlink solution, internal assembly. For e.g. Compact.	Tina 2B *	2TLA020054R1100
Adaptation unit for DYNlink solution with M20 fitting and M12 connector. For e.g. connecting Compact to Pluto/Vital.	Tina 3A *	2TLA020054R0200

* For more information about Tina adapter units, please see Pluto and Vital chapters.

Cable and connectors

Safety stop buttons



M12-C61

2TLC172657R0201



M12-C61HE

2TLC010003R0201

Cable with connectors

Connector	Female/male	Length	Special feature	Type	Order code
M12-5	Female	6 m		M12-C61	2TLA020056R0000
			Harsh environment, halogen free	M12-C61HE	2TLA020056R8000
		10 m		M12-C101	2TLA020056R1000
			Harsh environment, halogen free	M12-C101HE	2TLA020056R8100
	Female + male	20 m		M12-C201	2TLA020056R1400
		0.3 m		M12-C0312	2TLA020056R5800
		0.06 m		M12-C00612	2TLA020056R6300
		1 m		M12-C112	2TLA020056R2000
	3 m		M12-C312	2TLA020056R2100	
	6 m		M12-C612	2TLA020056R2200	
	10 m		M12-C1012	2TLA020056R2300	
		Angled female connector	M12-C1012V2	2TLA020056R6700	
	16 m		M12-C1612	2TLA020056R5400	
	20 m		M12-C2012	2TLA020056R2400	



M12-C01

2TLC172657R0201



C5 cable

2TLC010003R0201

Separate cables and connectors

Description	Type	Order code
Connectors		
M12-5 pole female, straight	M12-C01	2TLA020055R1000
M12-5 pole male, straight	M12-C02	2TLA020055R1100

Cable with 5 conductors

10 m cable with 5 x 0.34 shielded conductors	C5 cable 10 m	2TLA020057R0001
50 m cable with 5 x 0.34 shielded conductors	C5 cable 50 m	2TLA020057R0005
100 m cable with 5 x 0.34 shielded conductors	C5 cable 100 m	2TLA020057R0010
200 m cable with 5 x 0.34 shielded conductors	C5 cable 200 m	2TLA020057R0020
500 m cable with 5 x 0.34 shielded conductors	C5 cable 500 m	2TLA020057R0050

Technical data

Safety stop buttons

Technical data

Approvals	
Smile, INCA	
Smile Tina, INCA Tina	TÜV NORD 
Compact	  
Conformity	
Smile, INCA	CE 2006/42/EC - Machinery EN ISO 12100:2010, EN ISO 13849-1:2008/AC:2009, EN 60204-1:2006+A1:2008, EN ISO 13850:2008
Smile Tina, INCA Tina	CE 2006/42/EC - Machinery 2004/108/EC - EMC EN ISO 12100:2010, EN ISO 13849-1:2008, EN 62061:2005, EN 60204-1:2006+A1:2009, IEC 60664-1:2007, EN 61000-6-2:2005, EN 61000-6-4:2007, EN 60947-5-5:2005, EN ISO 13850:2006
Compact	CE 2006/42/EC - Machinery EN 60947-1:2007, EN 60947-5-1:2004, EN 60947-5-5:1997+A1:2005
Functional safety data	
EN 61508:2010	Up to SIL3, depending on system architecture
EN 62061:2005	Up to SILCL3, depending on system architecture
EN ISO 13849-1:2008	Up to Cat. 4, PL e, depending on system architecture
Smile, INCA	$B10_d = 100\ 000$
Smile Tina, INCA Tina	$PFH_D = 4.66 \times 10^{-9}$
Compact	$B10_d = 50\ 000$
Electrical data	
Operating voltage	
Smile, INCA	17-27 VDC +-10%
Smile Tina, INCA Tina	+24 VDC +15% -25%
Compact	230 VAC / +24 VDC
Mechanical data	
Mechanical life	>50 000 operations
Operating temperature	
Smile, INCA	-10...+55°C
Compact	-25...+70°C
Protection class	
Smile, INCA	IP65
Compact	IP66, IP67, IP69K
Weight	
Smile	65 g
INCA	45 g
Compact	108 g, 124 g (with shroud)
Material	
Smile	Polyamide PA66, Macromelt, polybutylenterephthalate PBT, Polypropene PP, UL 94 V0
INCA	Polyamide PA66, Macromelt, polybutylenterephthalate PBT, Polypropene PP, UL 94 V0
Compact	Polycarbonate

More information

For more information, e.g. the complete technical information, see product manual for:

Smile [2TLC172097M0201](#)

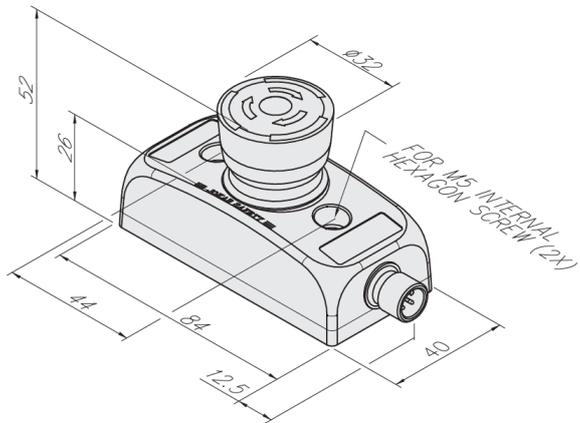
INCA [2TLC172163M0201](#)

Compact [1SFC151005C0201](#)

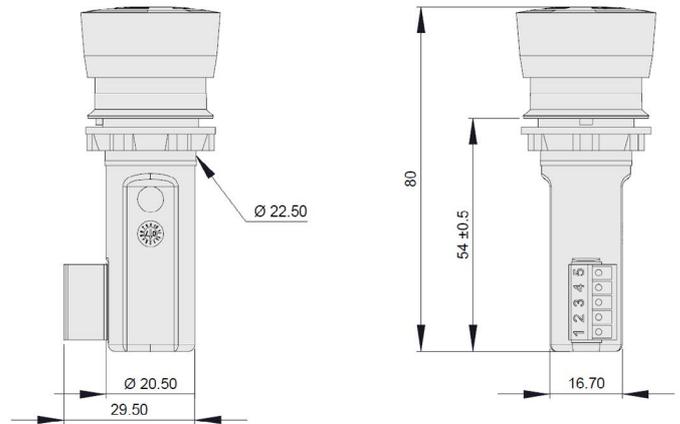
Dimension drawings

Safety stop buttons

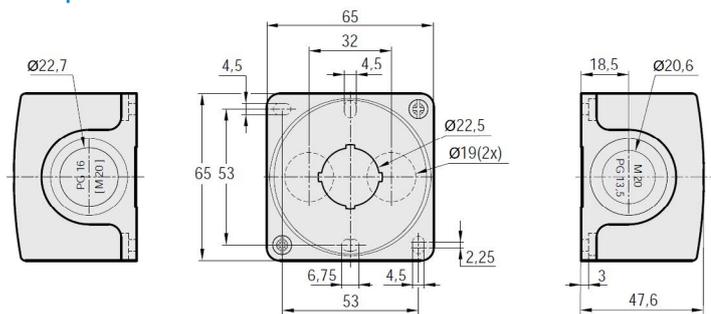
Smile



INCA



Compact



All dimensions in mm

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