

Tina 10A/B/C – Adaptor unit

[EN] The complete original instructions can be found at:

[DE] Die komplette Originalbetriebsanleitung finden Sie unter:

[SV] Den kompletta bruksanvisningen i original finns på:

[FR] La notice originale intégrale est disponible sur :

www.abb.com/jokabsafety

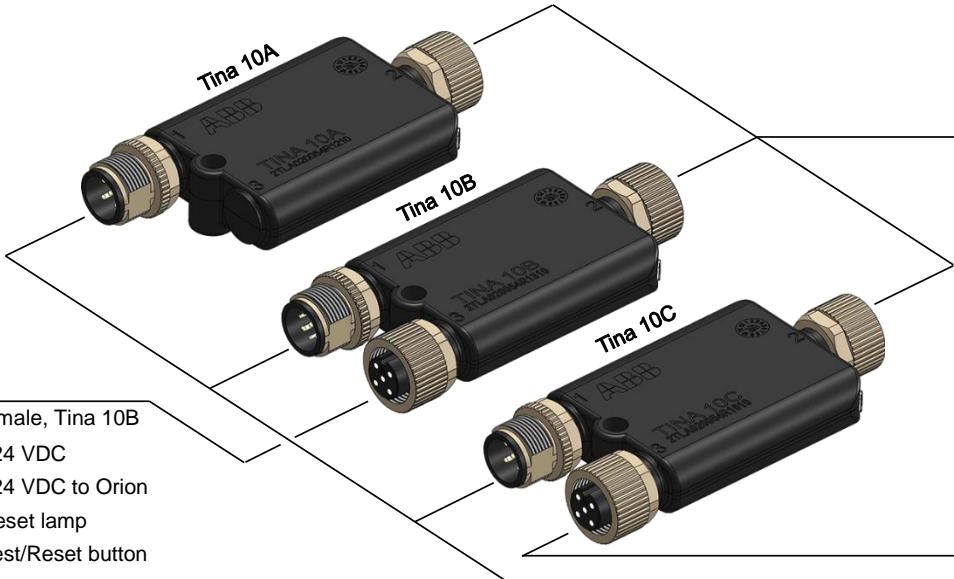
General description

Tina 10A, -B and -C are used to adapt Orion or Focus light beams and light curtains with OSSD outputs to the DYNlink safety circuit. This also enables complete external interconnections using cables with M12 connectors only, which reduces the cabling to and connections in the apparatus enclosure.

All Tina 10 units have an 8-pole female M12 connector for easy connection to an Orion receiver and a 5-pole male M12 connector for quick installation to the DYNlink safety circuit. Tina 10B has an extra 5-pole female M12 connector that enables local reset with a Smile reset button. The Tina 10C also has an extra 5-pole female M12 connector but the extra connector is instead used to connect an Orion transmitter (for power supply instead of using an extra M12-3B).

The Tina 10A/B/C safety adaptor is intended for use in safety circuits in accordance with EN 60204-1.

Connections



Smile:
M12 5-pole female, Tina 10B

- 1) Brown: +24 VDC
- 2) White: +24 VDC to Orion
- 3) Blue: Reset lamp
- 4) Black: Test/Reset button
- 5) Grey: (Muting lamp)

Orion Receiver:
M12 8-pole female, Tina 10A/B/C

- 1) White: +24 VDC
Tina 10B: Test/Reset
- 2) Brown: +24 VDC
- 3) Green: -
- 4) Yellow: -
- 5) Grey: OSSD1
- 6) Pink: OSSD2
- 7) Blue: 0 V
- 8) Red: (LMS)

Orion Transmitter:
M12 5-pole female, Tina 10C

- 1) Brown: +24 VDC
- 2) White: -
- 3) Blue: 0 V
- 4) Black: -
- 5) Grey: -

Vital / Pluto:
M12 5-pole male, Tina 10A/B/C

- 1) Brown: +24 VDC
- 2) White: DYNlink signal input
- 3) Blue: 0 V
- 4) Black: DYNlink signal output
- 5) Grey: Information

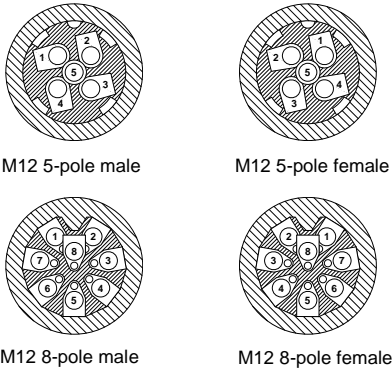
Smile reset button depending on Orion model





Orion	Smile, order code
Orion1 Base	Smile 11RO1, 2TLA022316R3000
Orion2 Base Orion2 Extended Orion3 Extended	Smile 11RO2, 2TLA022316R3100
Orion3 Base	Smile 11RO3, 2TLA022316R3200
Orion1 Extended	—

Cable between Orion and Tina 10A/B/C depending on Orion model

Orion	Cable, order code	Tina 10A/C	Tina 10B
Orion1 Base	M12-CTO1BA, 2TLA022315R3000	√	—
	M12-CTO1BM, 2TLA022315R3100	—	√
Orion2 Base Orion2 Extended Orion3 Extended	M12-C134, 2TLA020056R5000 M12-C334, 2TLA020056R5100	√	√
Orion3 Base	M12-CTO3B, 2TLA022315R3200	√	√
Orion1 Extended	—	—	—


Connector seen from cable side




-  **Warning!** The information channel output shall never be used for the safety purpose(s).
-  **Warning!** The OSSD connections shall not be used for purposes other than intended. All loading or tampering with loops can lead to serious risk of life.
-  **Caution!** All cable colours according to ABB Jokab Safety standard cables.
-  **Caution!** The use of shielded cable is mandatory between this unit and the rest of the safety circuit.

Installation precautions

First attach the cable or device to the M12 connector on Tina, then gently hold the Tina unit to the mounting surface and attach the unit using an M4 bolt.

-  **Warning!** All the safety functions shall be tested before starting up the system.

Maintenance

-  **Warning!** The safety functions and the mechanics shall be tested regularly, at least once every year to confirm that all the safety functions are working properly (EN 62061:2005+A2:2015).

LED indication

LED	Indication	Description	Input signal on pin-2
LED on Tina	Green	Safety circuit closed (protection OK)	DYNlink signal in
	Green-Red (flash)	Safety circuit open (protection OK)	0 V in
	Red	Safety circuit interrupted (protection open)	+24 VDC in <u>or</u> safety circuit interrupted


Information output signal attributes


When OSSD1 and OSSD2 are both high, the information output signal depends on the input signal according to the table below. Note that if the safety is interrupted on the device connected to this unit, the information output signal is always low.

Input signal (pin-2)	DYNlink signal	No DYNlink signal	+24 VDC	0 V
Information output signal (pin-5)	High	High	Low	High

Information output signal switch delay	High → Low	Low → High
Delay for switching information output signal	~ 160 ms	~ 2 ms

Technical data

Manufacturer		Size	77 x 36 x 15 mm (L x W x H)
Address	ABB AB / JOKAB SAFETY Varlabergsvägen 11 SE-434 39 Kungsbacka Sweden	Weight	~ 40 g
Safety / Harmonized standards		Safety / Harmonized standards	
Conformity	European Machinery Directive 2006/42/EC EN ISO 12100:2010, EN 60204-1:2006+A1:2009, EN 62061:2005+A2:2015, EN ISO 13849-1:2015, EN 61496-1:2013	IEC/EN 61508-1...7	SIL3, PFH ₀ = 4.50·10 ⁻⁹
Required type	PELV/SELV	EN 62061	SIL3
Operating voltage	+24 VDC ±20 %	EN ISO 13849-1	Performance level: PL _e , category 4
Total current consumption	Nominal: 25 mA Maximal: 35 mA	Certificates	TÜV Nord
Information Output		Information for use in USA/Canada	
Output voltage high low	Typical: 22 VDC < 2 VDC	Power source	A suitable isolating source must be used in conjunction with a fuse in accordance with UL248. The fuse must be rated max. 4 A and installed in the +24 VDC power supply, to limit the available current.
Output current	Maximal: 10 mA	Certificate	
General		Pollution degree	2
Protection class	IP67	Altitude	2000 m (max)
Ambient temperature	Storage: -10...+55°C Operation: -10...+55°C	Humidity	80% max for temperatures up to 31°C
Humidity range	35 to 85 % (with no icing or condensation)	Use statement	For indoor use only
Housing material	TPU		



Descriptions and examples show how the product works and can be used. It does not mean that it fulfills the requirements for all types of machines and processes. The buyer/user is responsible for installing and using the product according to applicable standards and regulations. We reserve the right to make changes to the product and the documentation without prior notice.