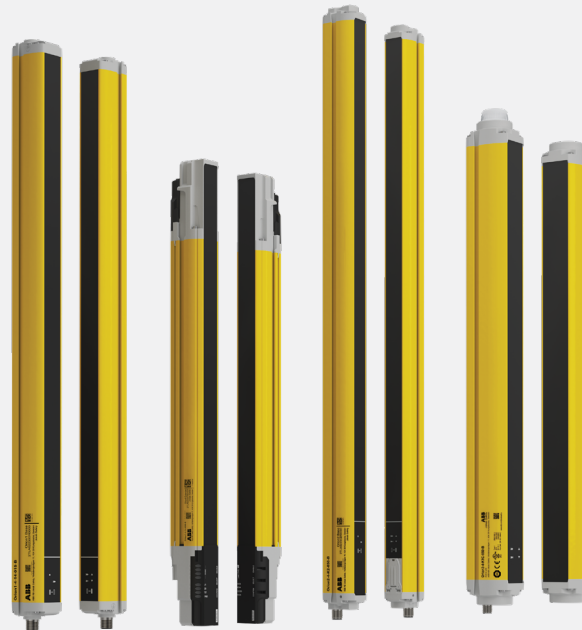


SAFETY PRODUCTS

Connection diagrams

Orion light guards



Important information

Orion connection diagrams

The connection diagrams in this document are only general recommendations from ABB. The conditions of a specific application could make alternative connections more suitable.

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Orion Base models

General information

The base models of Orion are cost effective models that only have basic features such as automatic or manual reset.

DYNlink

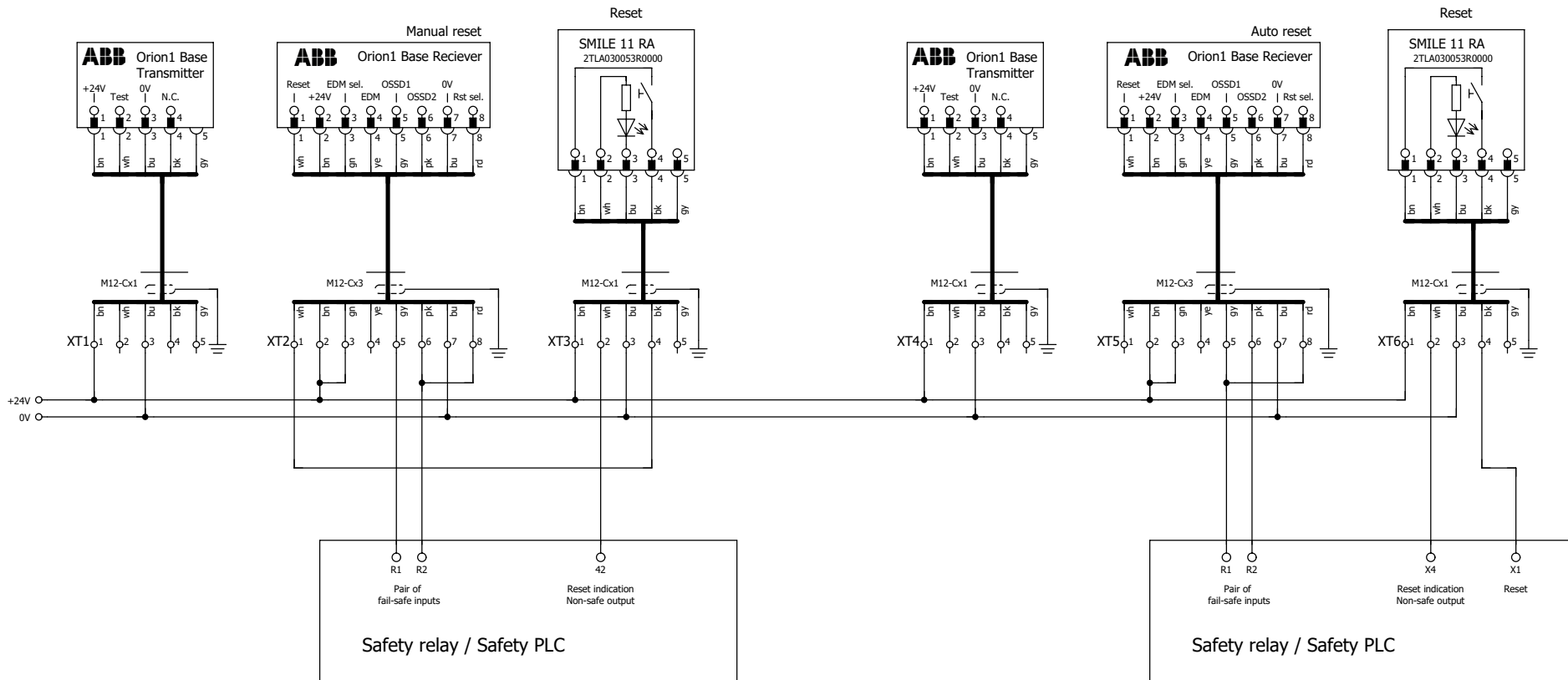
DYNlink is a simple but clever type of signal using only one wire but still getting the highest level of safety for connected sensors.

OSSD

OSSD is a 2-wire communication method that is compatible with most safety controllers on the market.

DYNlink and OSSD are used by both the Base and Extended models of Orion.



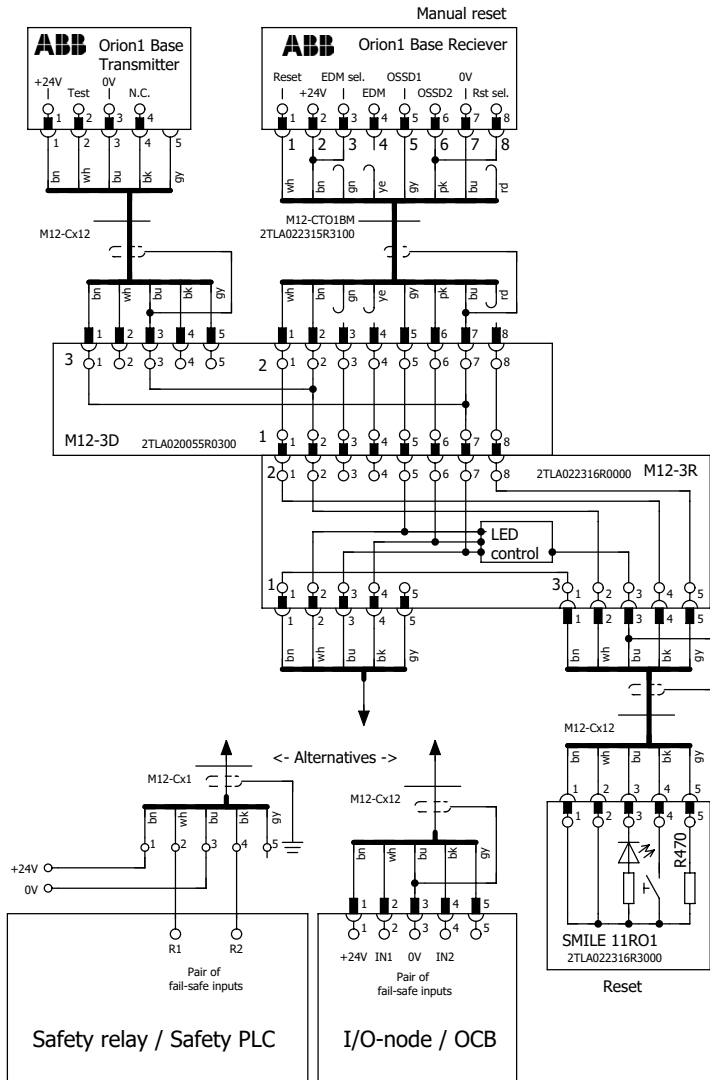


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			Appr.		Orion				
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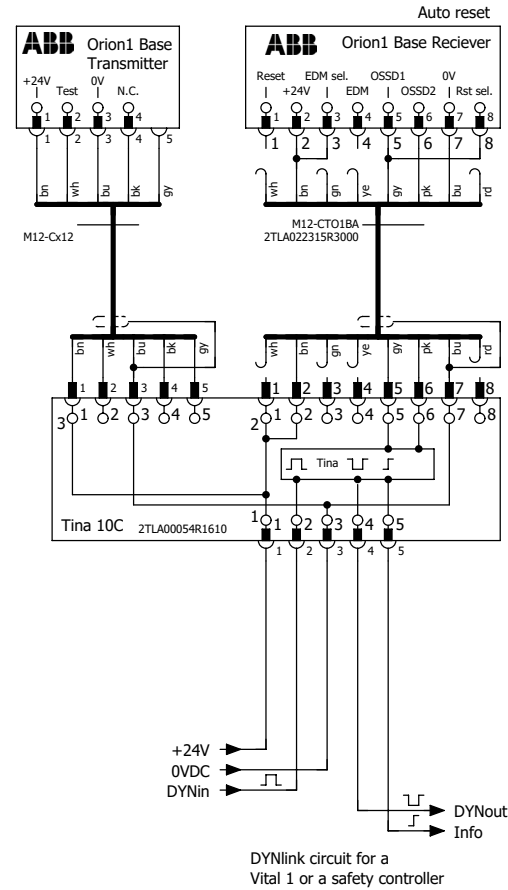
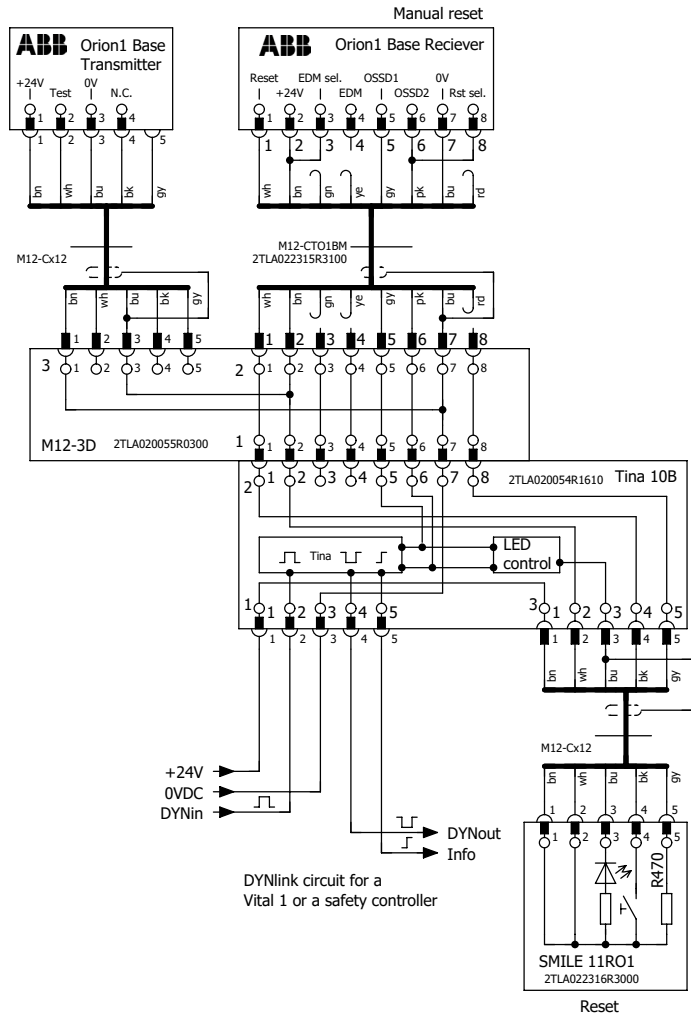


ABB EL, ELS, SPMS

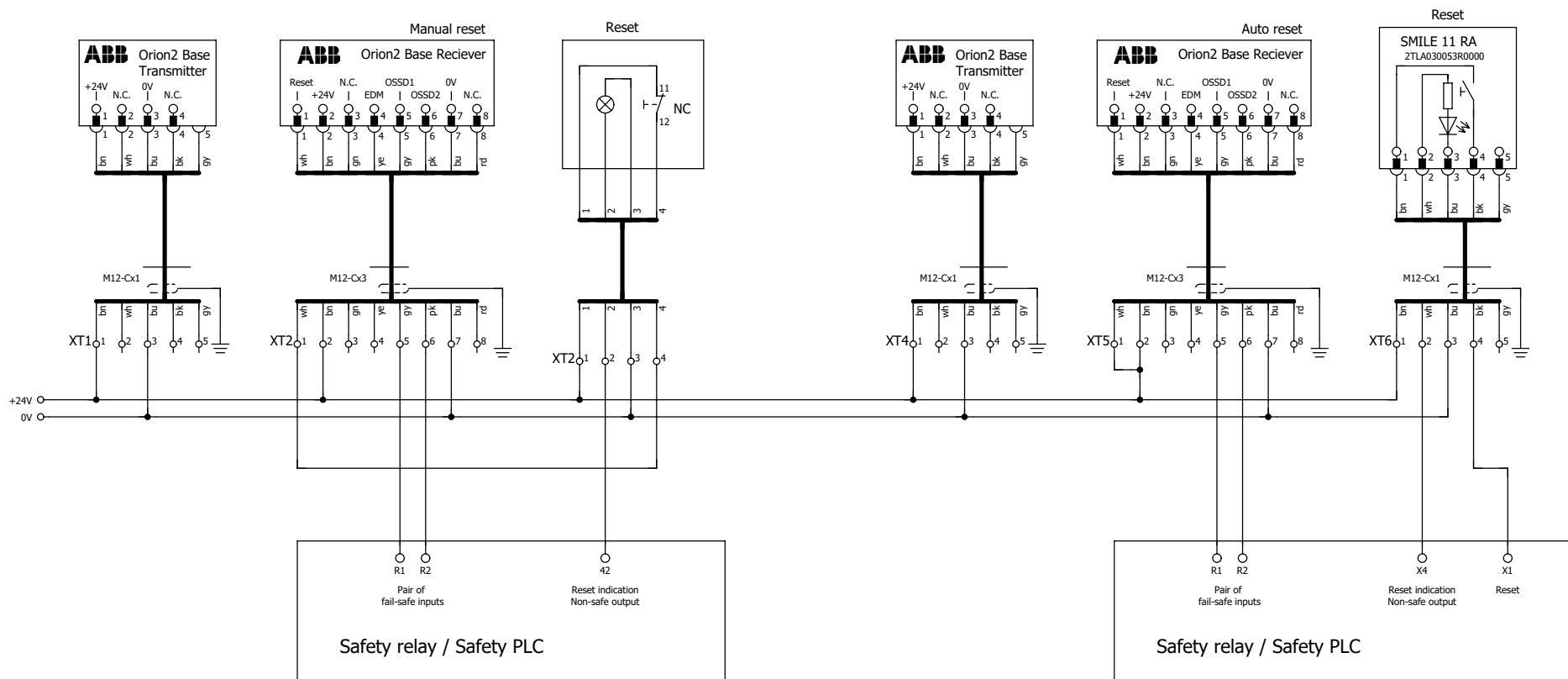
Orion1B - Installation to cabinet



Modification	Date	Name	Original	Date	2022-09-12	ABB Safety Products	ABB ABB EL, ELSP, SPMS	Orion1B - Using M12 accessories	= Orion1B +
				Ed.	SEHAHAL5	Orion			
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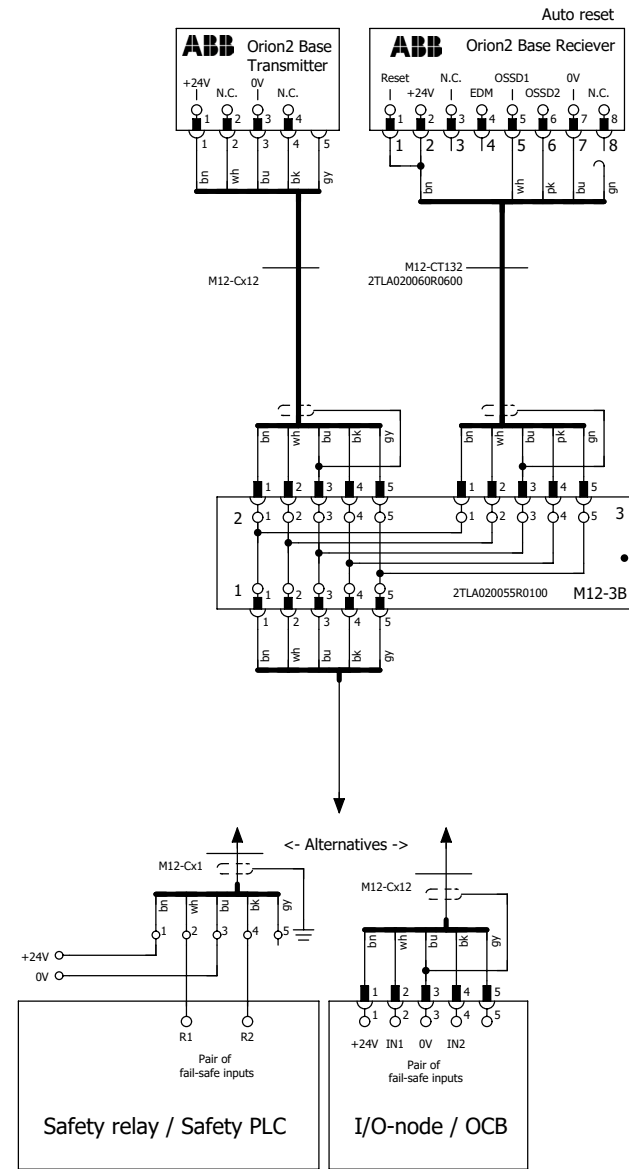
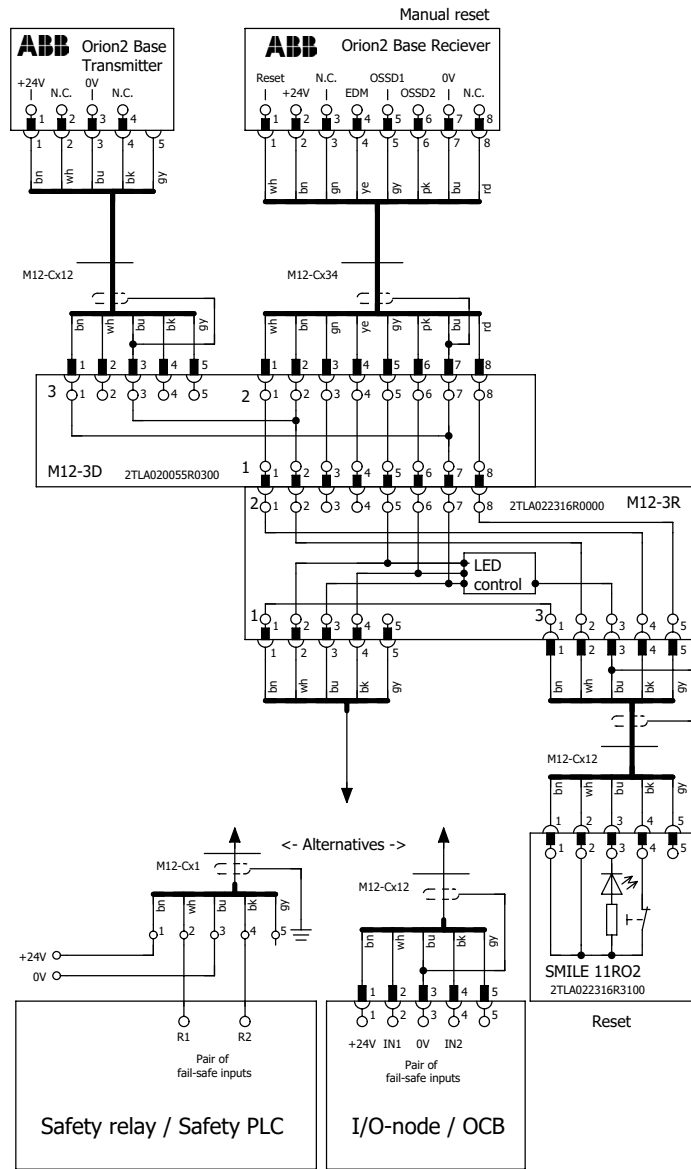


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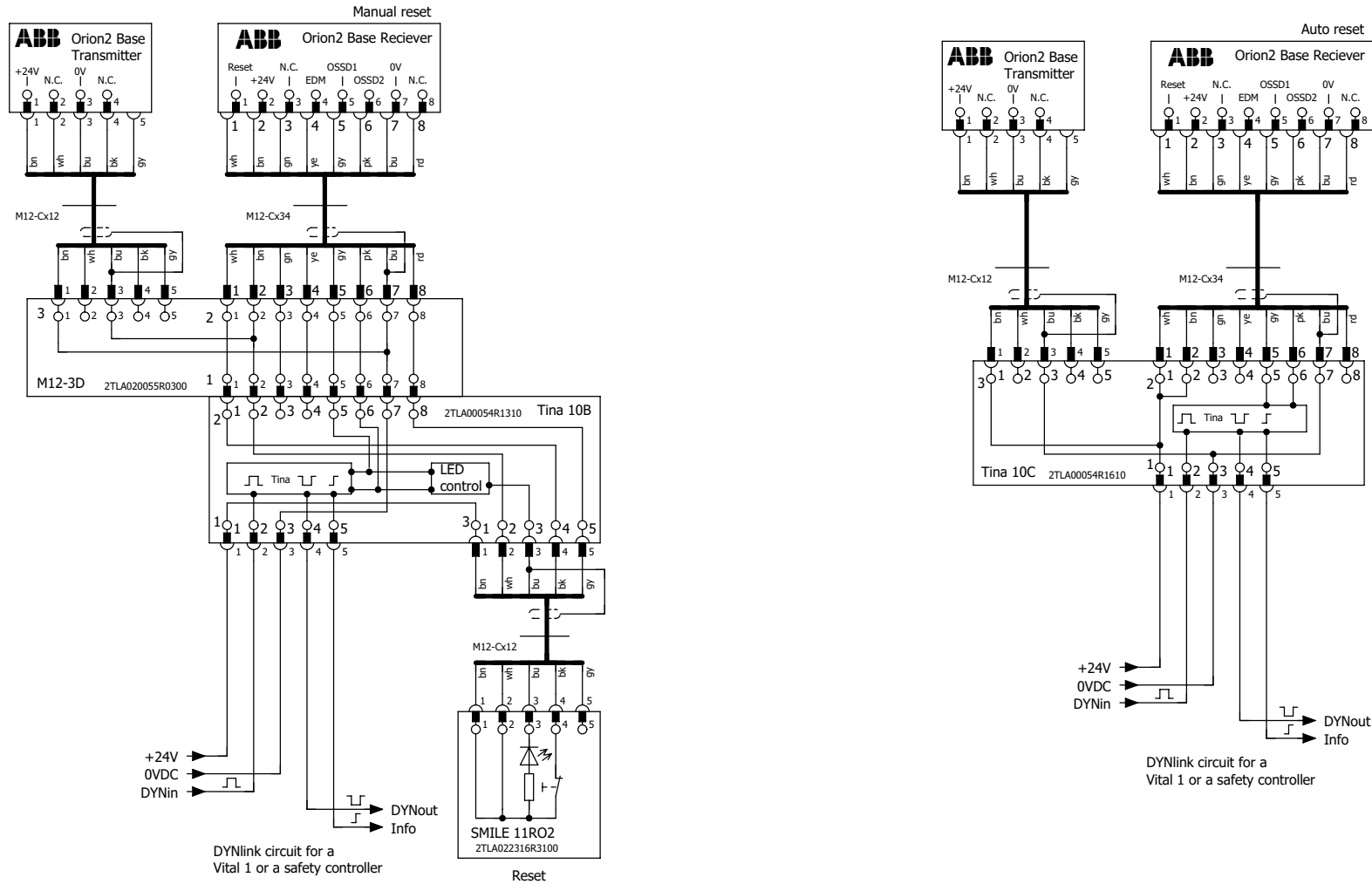


ABB EL, ELSP, SPMS

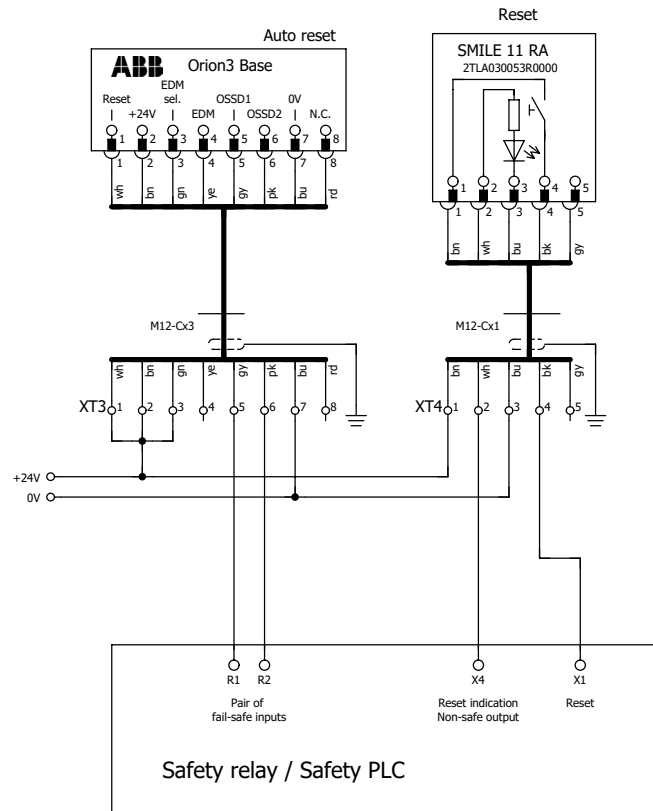
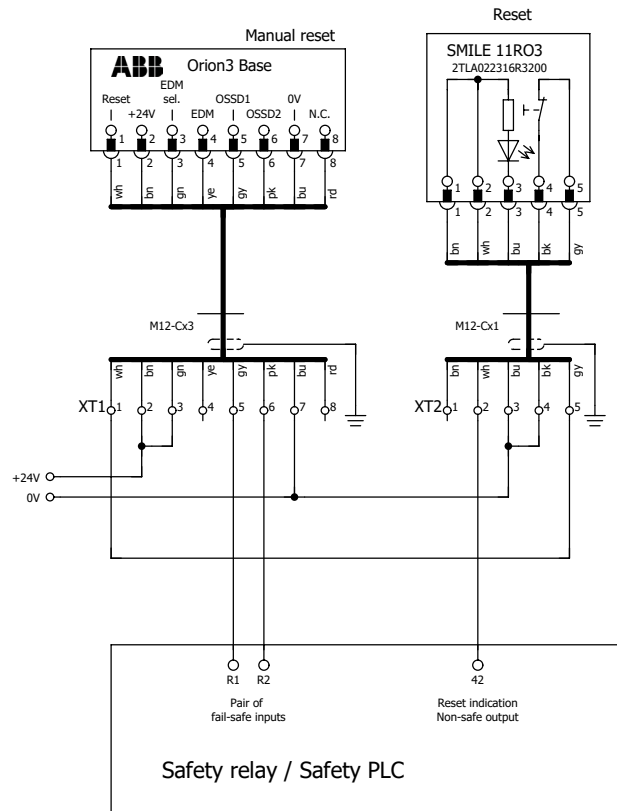
Orion2B - Installation to cabinet



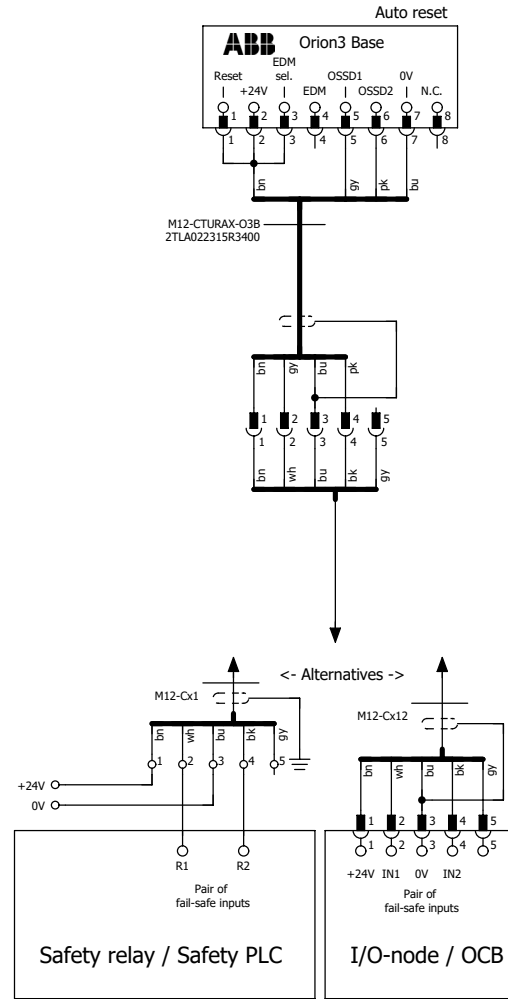
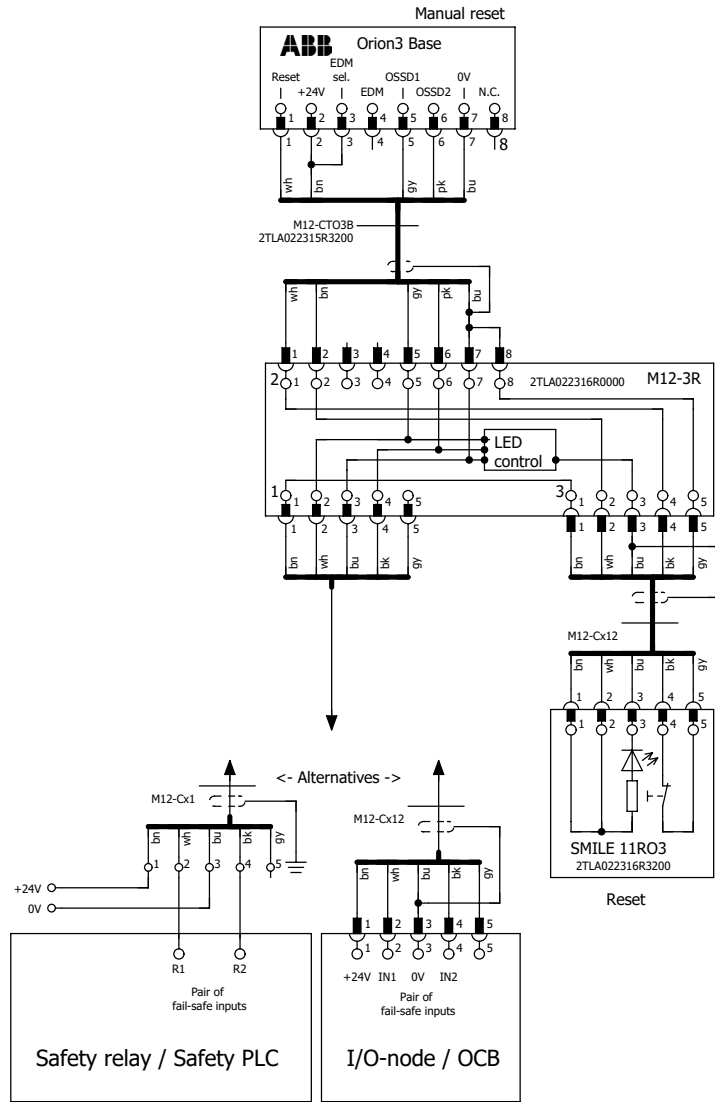
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				Appr.					



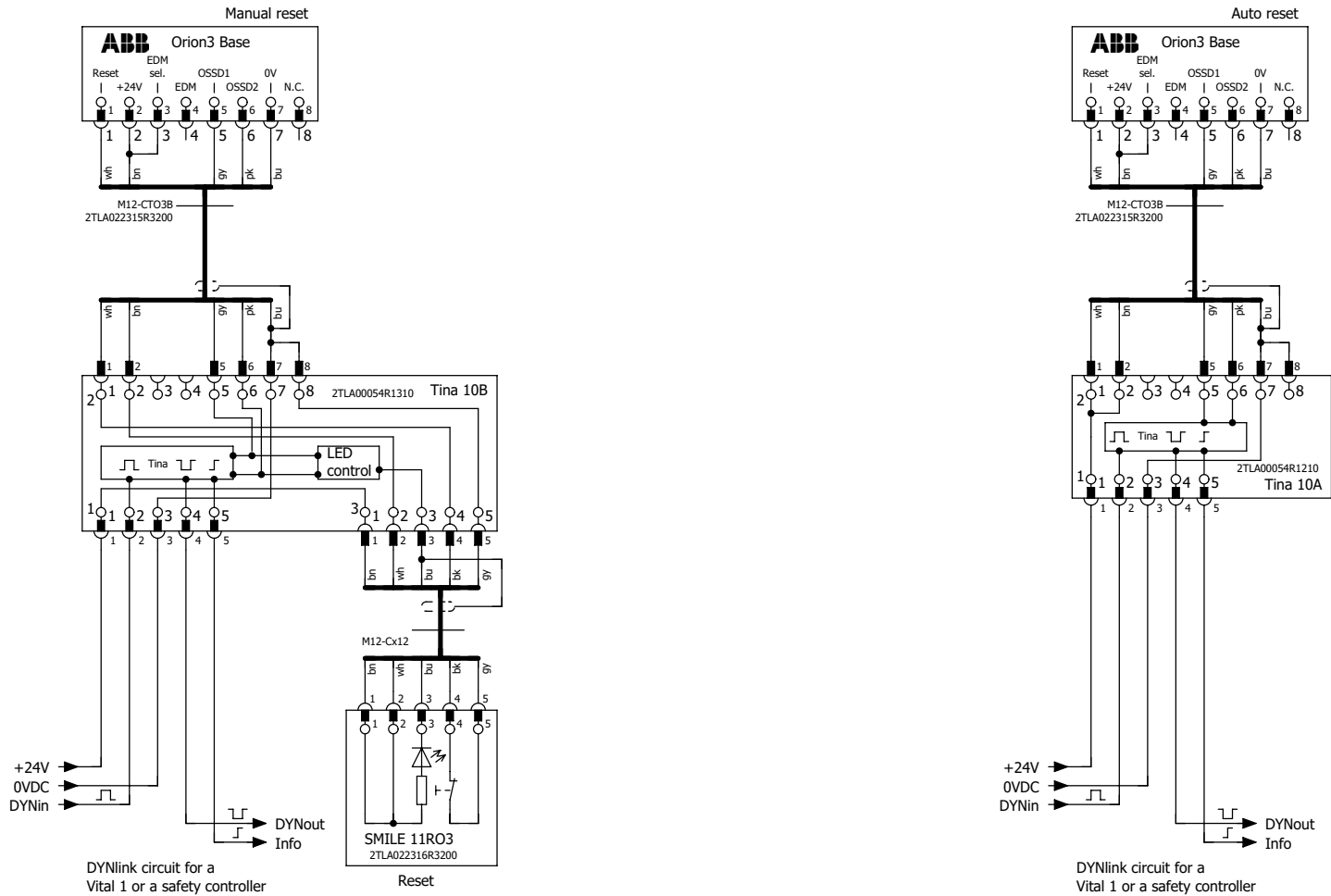
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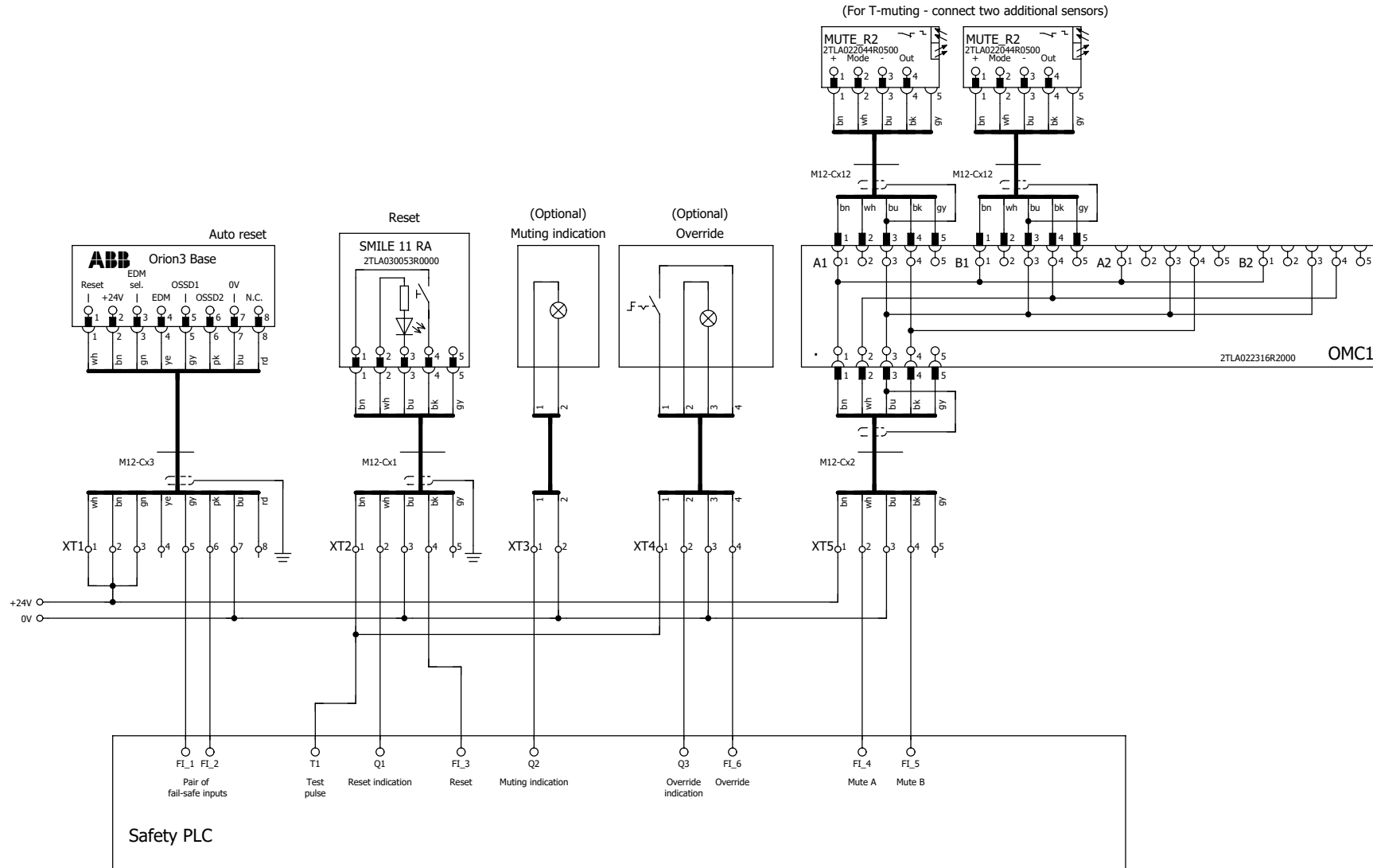
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ABB EL, ELSP, SPMS

Orion3B - With muting from a safety PLC

Orion Extended models

Extended features

The extended versions of Orion are equipped with extra functionality in order to allow more advanced applications for optical safety devices.

Muting

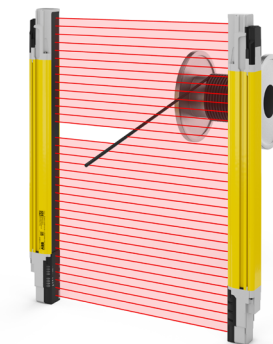
Muting (or bypassing) is the ability to temporarily switch off the optical safety device without triggering the safety function. This may be needed for different reasons. One of the most common reasons for bypassing is when feeding material in and out of a machine on a conveyor, Automated guided vehicle (AGV), etc.

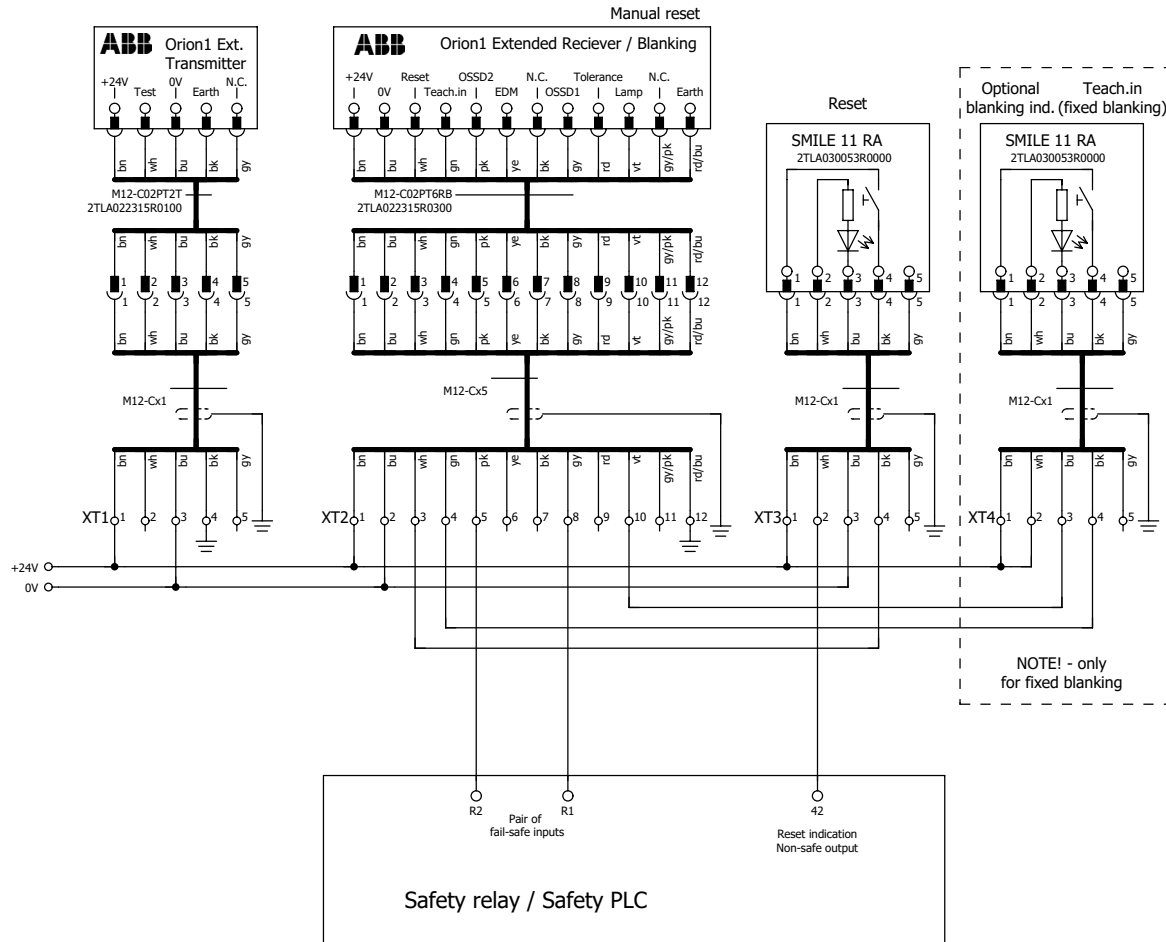
Muting can also be achieved with Orion Basic, but then the logic needs to be handled by a safety PLC. Orion Extended simplifies the muting and enables the continued use of safety relays even in advanced applications.

Blanking

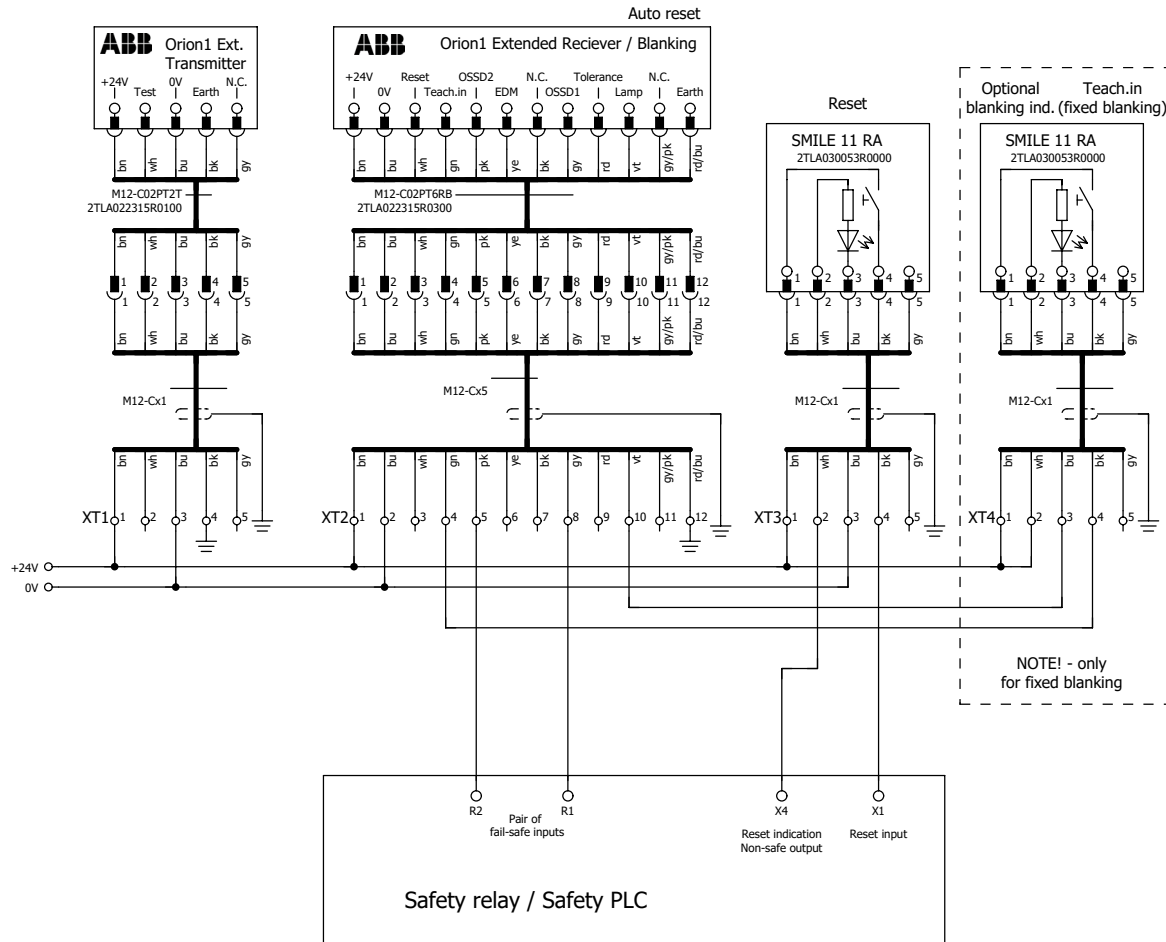
Fixed blanking means permanent switching off of a number of beams in the detection zone of a light curtain. This is a function that is permitted and used when an object that is larger than the resolution of the light curtain is permanently located in the detection zone, without deactivating the safety outputs (OSSD). If the object is removed from the detection zone, the safety outputs are deactivated.

Floating blanking and reduced resolution can be used to allow small objects to move in the detection zone without deactivating the safety outputs.

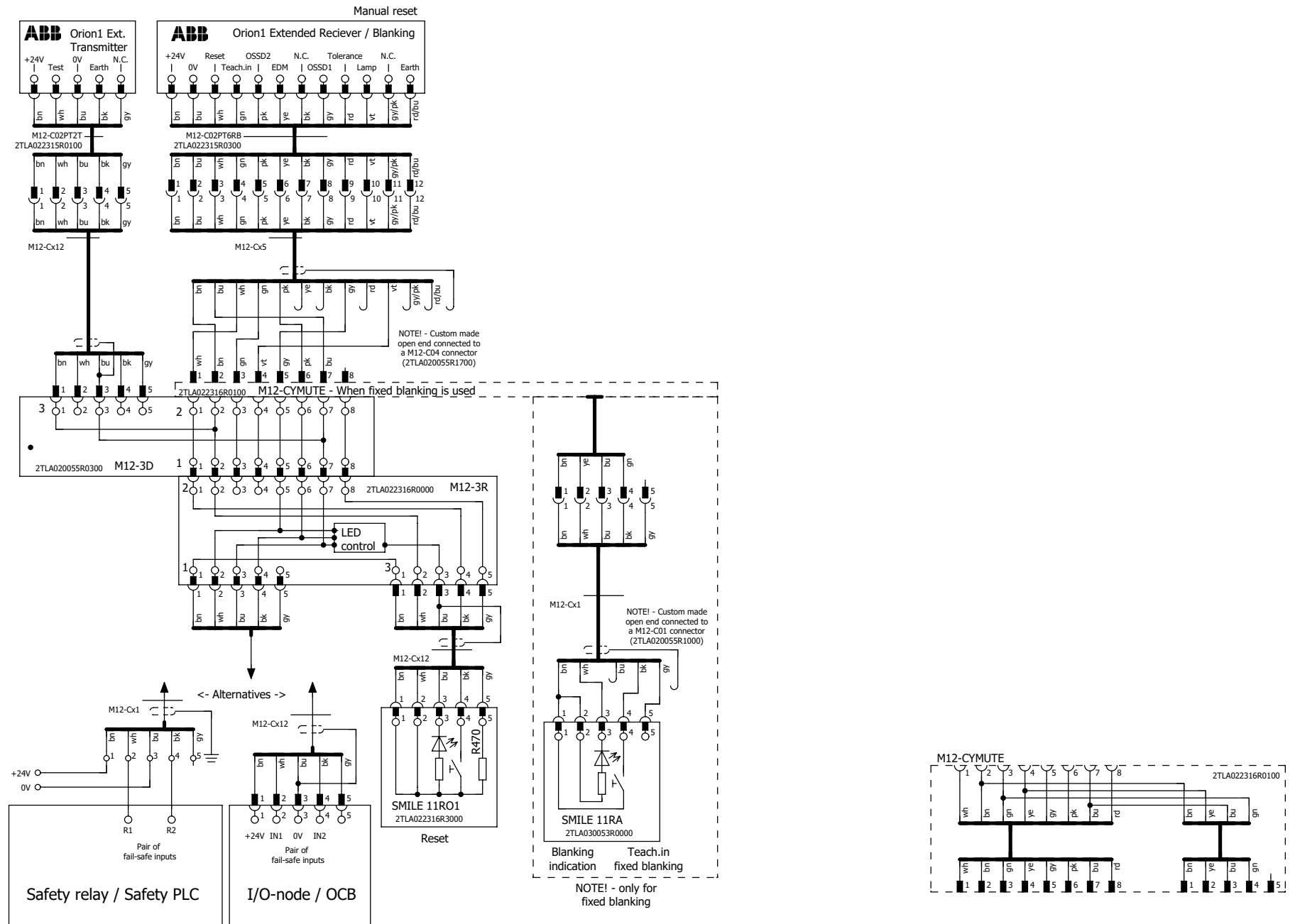




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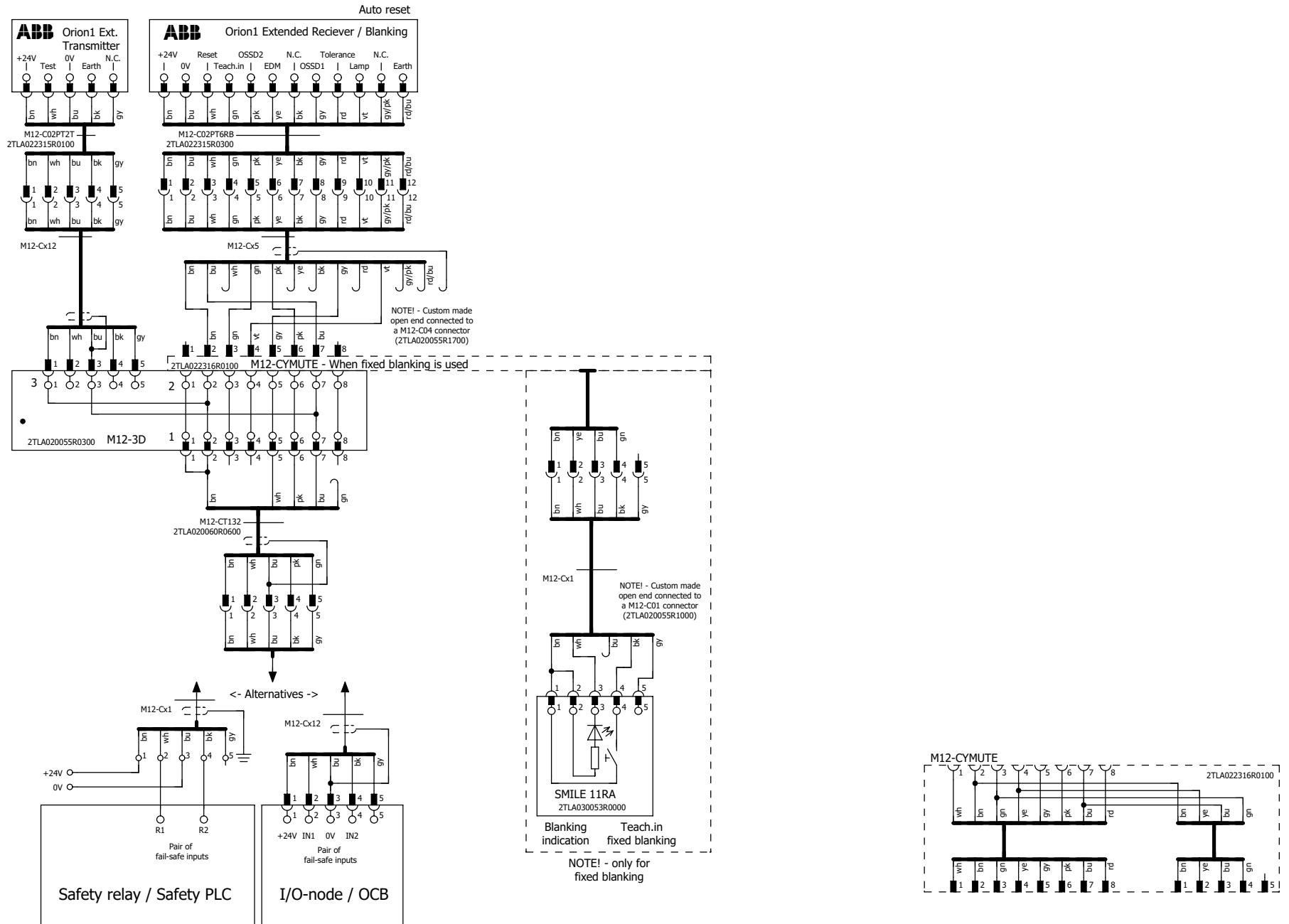
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Modification	Date	Name	Original					ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.



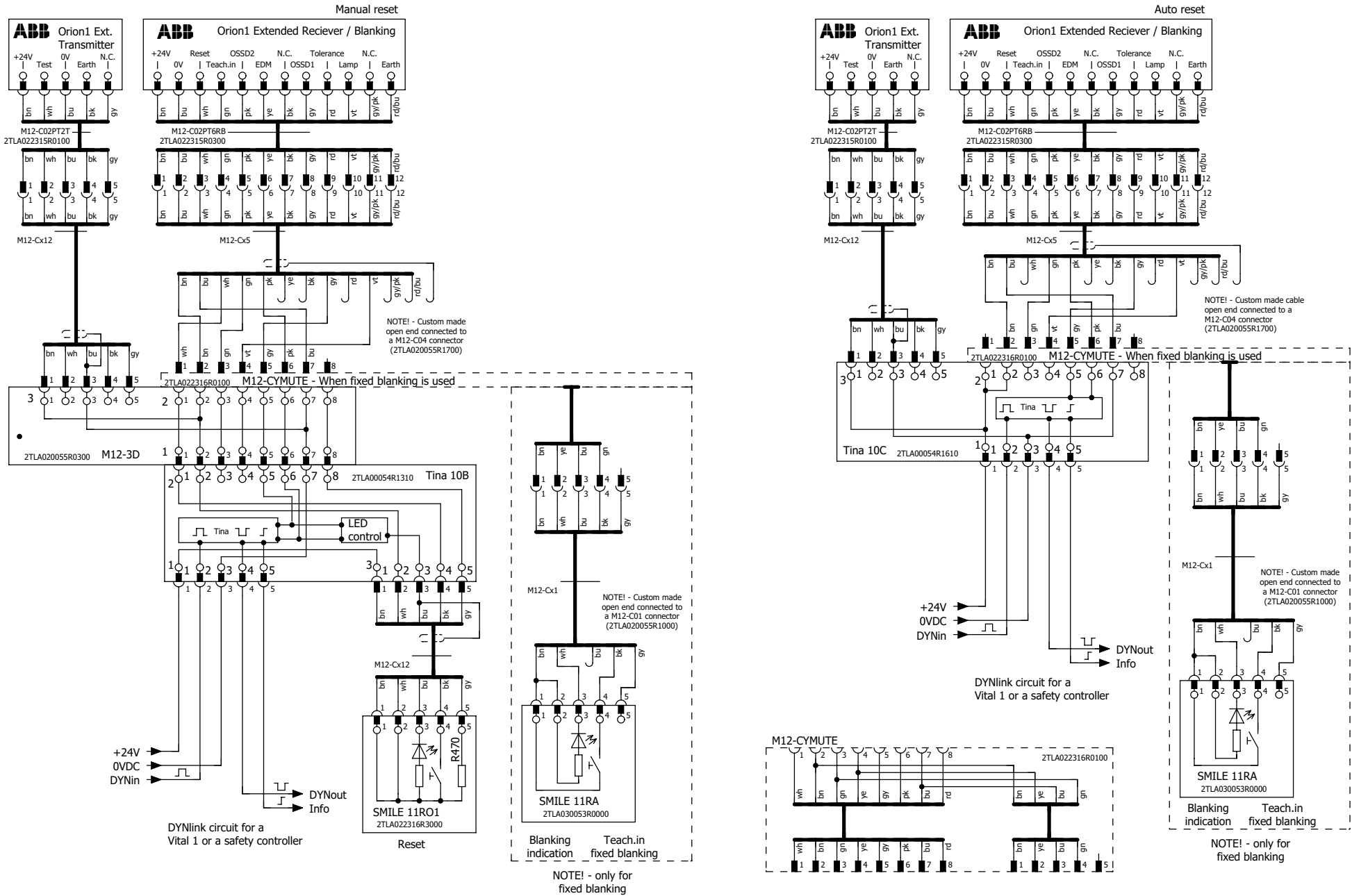
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			Appr.		Orion				ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.
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Orion1E Blanking - Using M12 accessories, manual reset



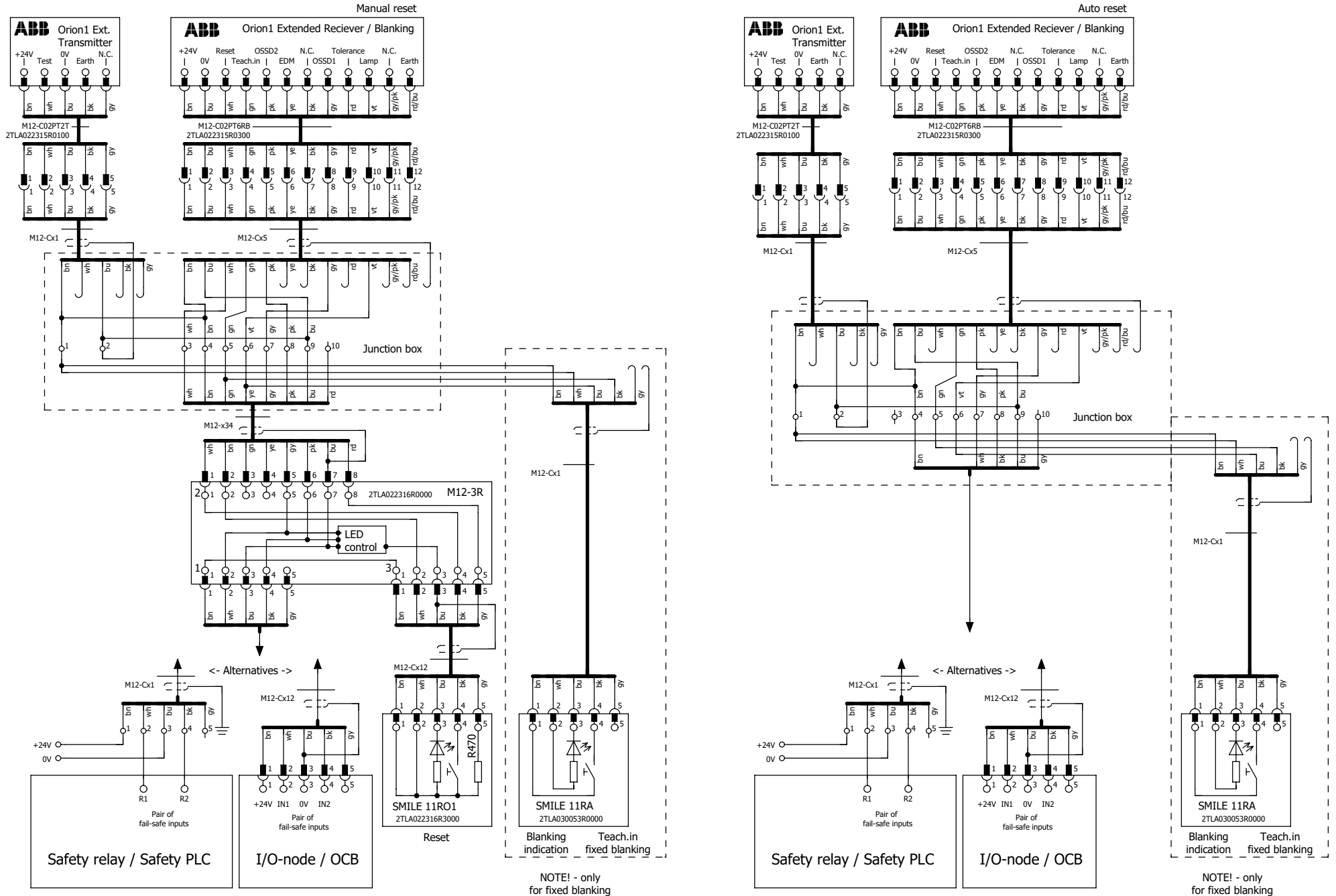
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Modification	Date	Name	Original					



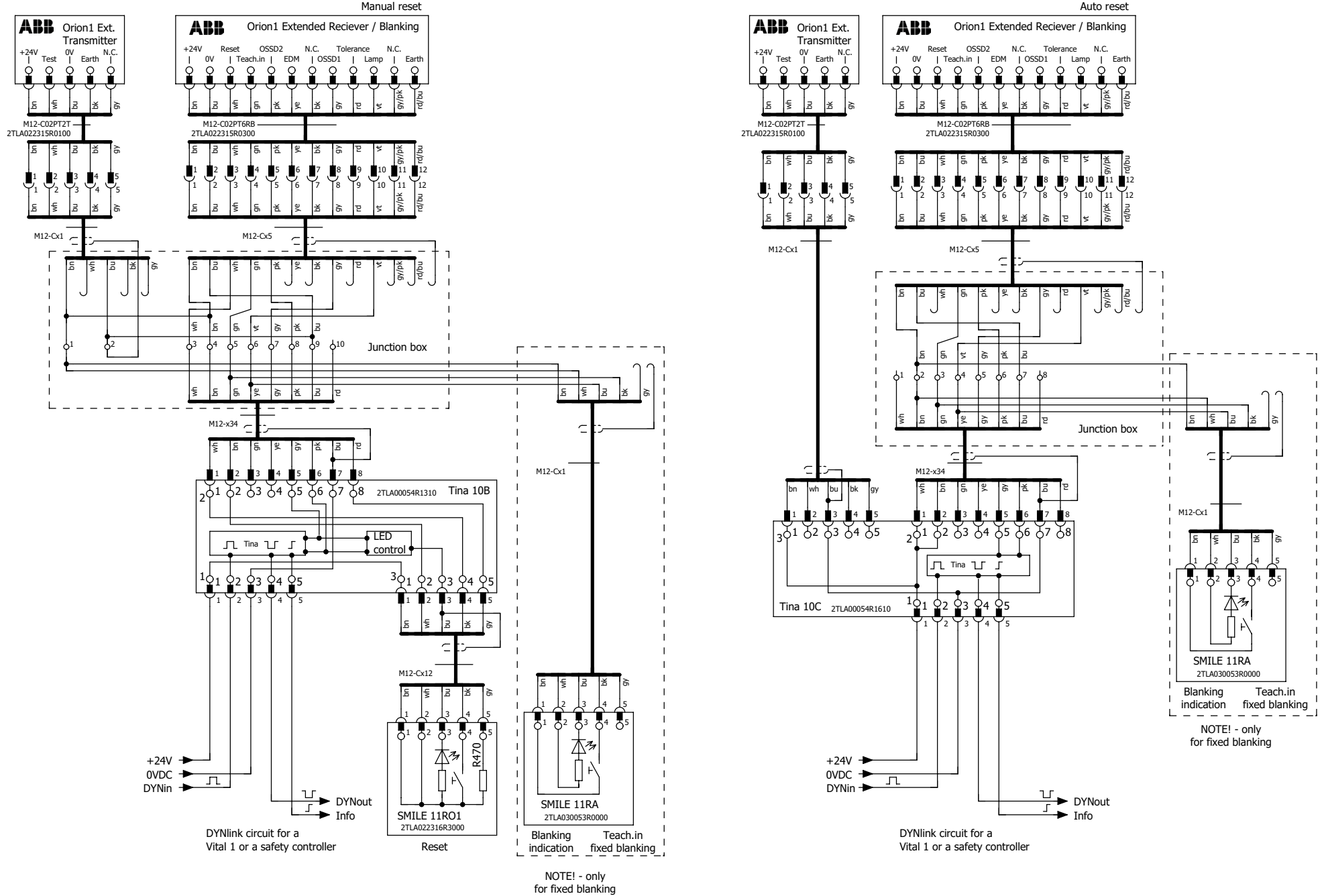
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Modification	Date	Name	Original					ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.



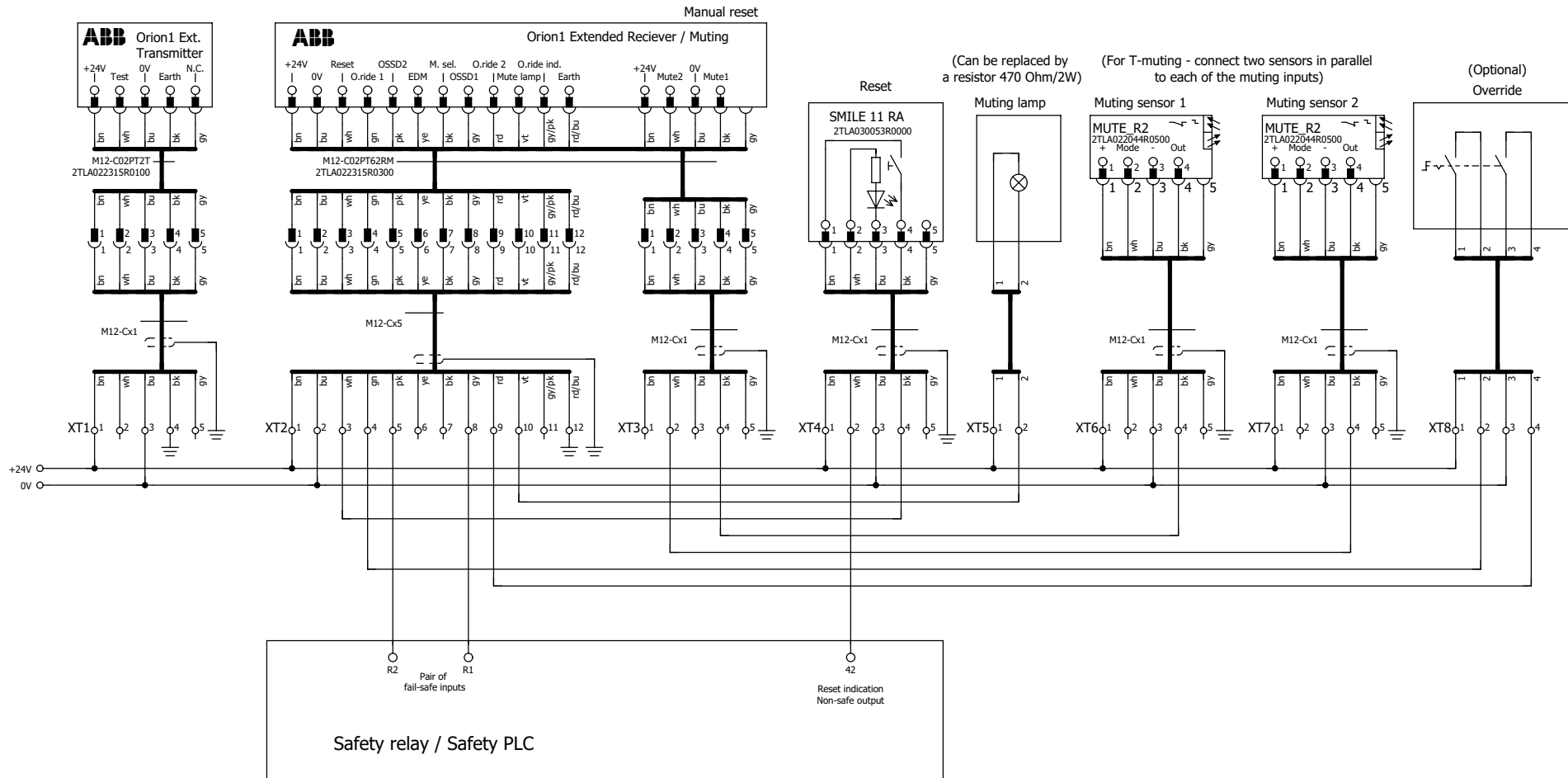
ABB EL, ELSP, SPMS



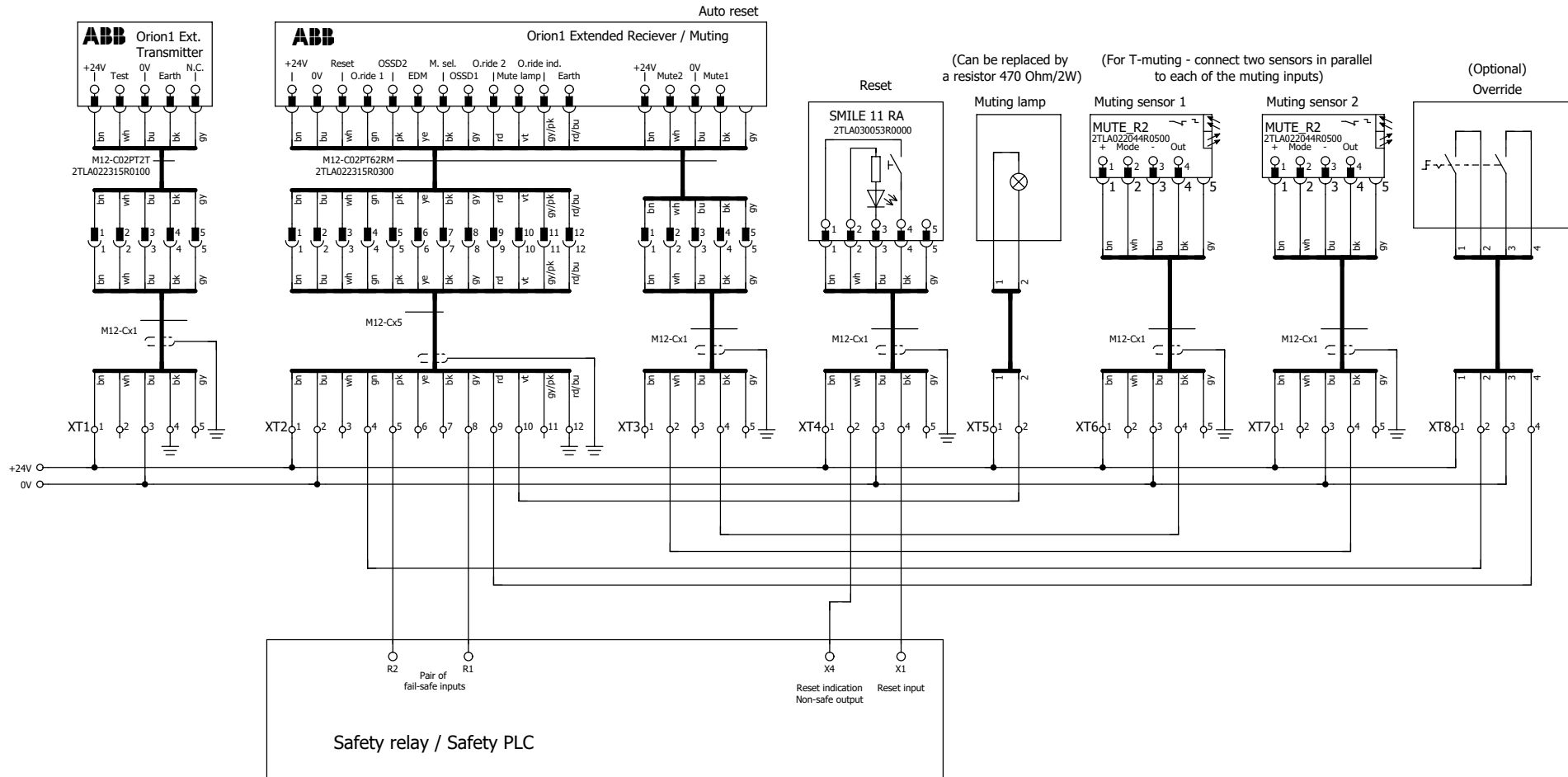
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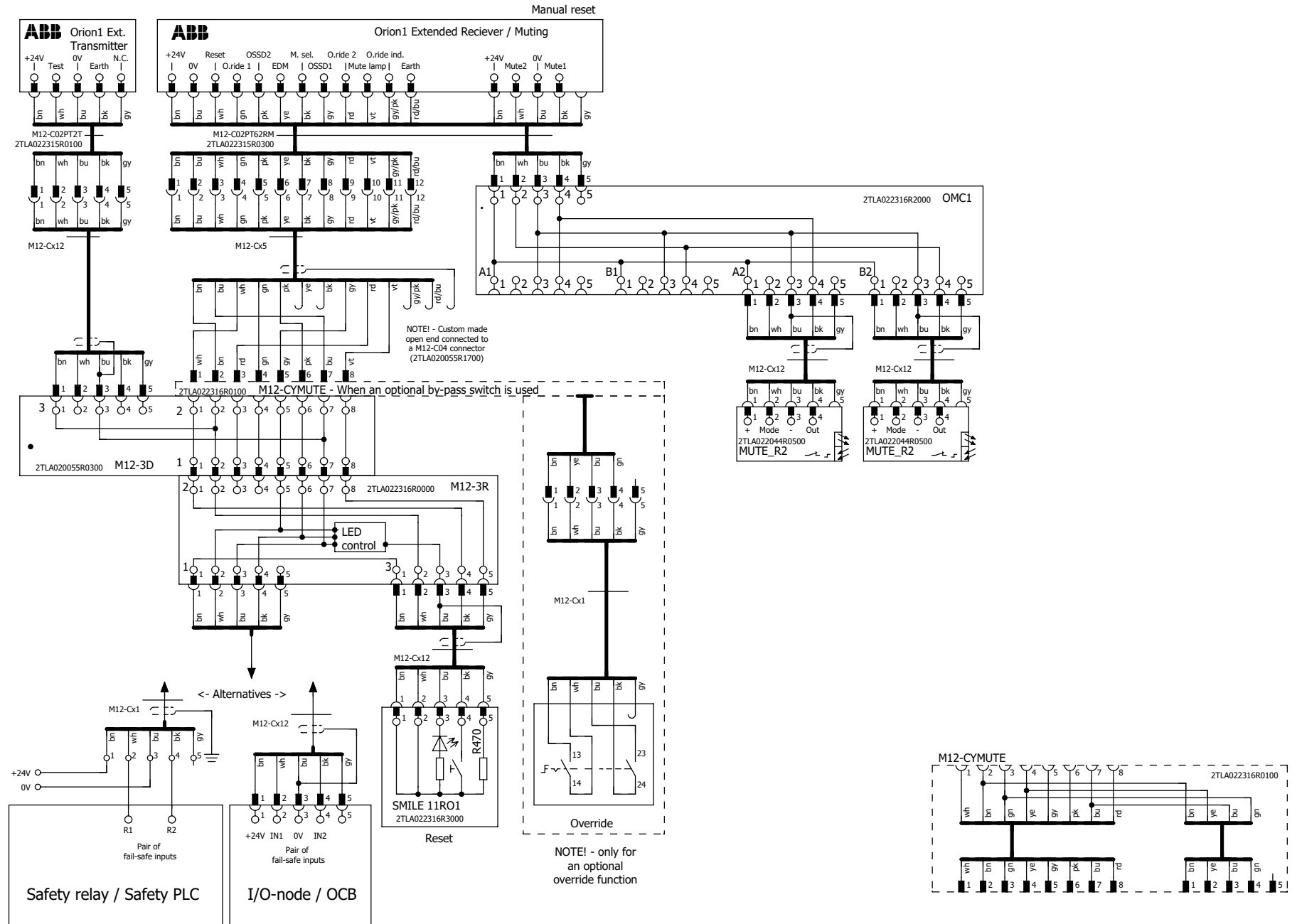
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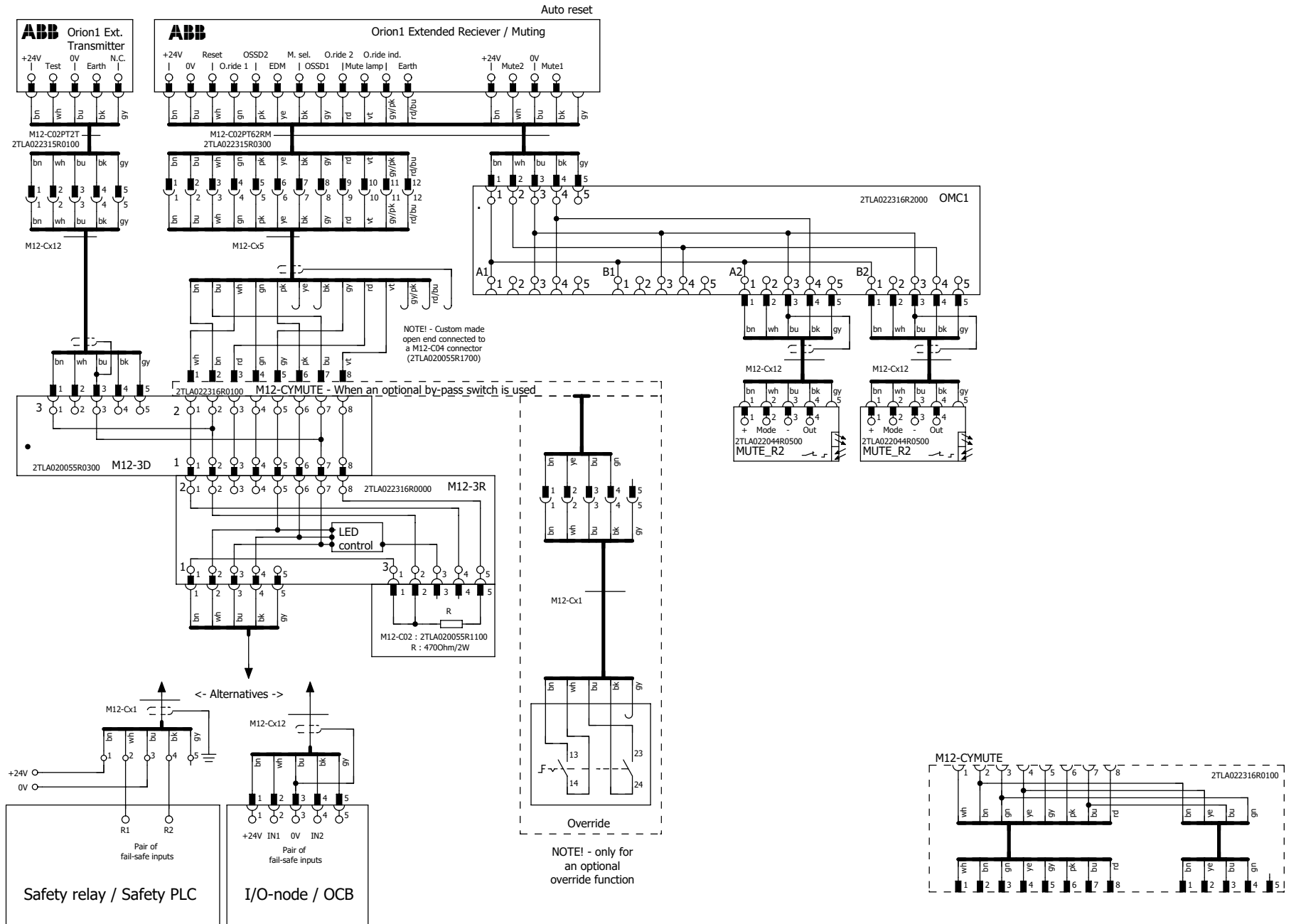
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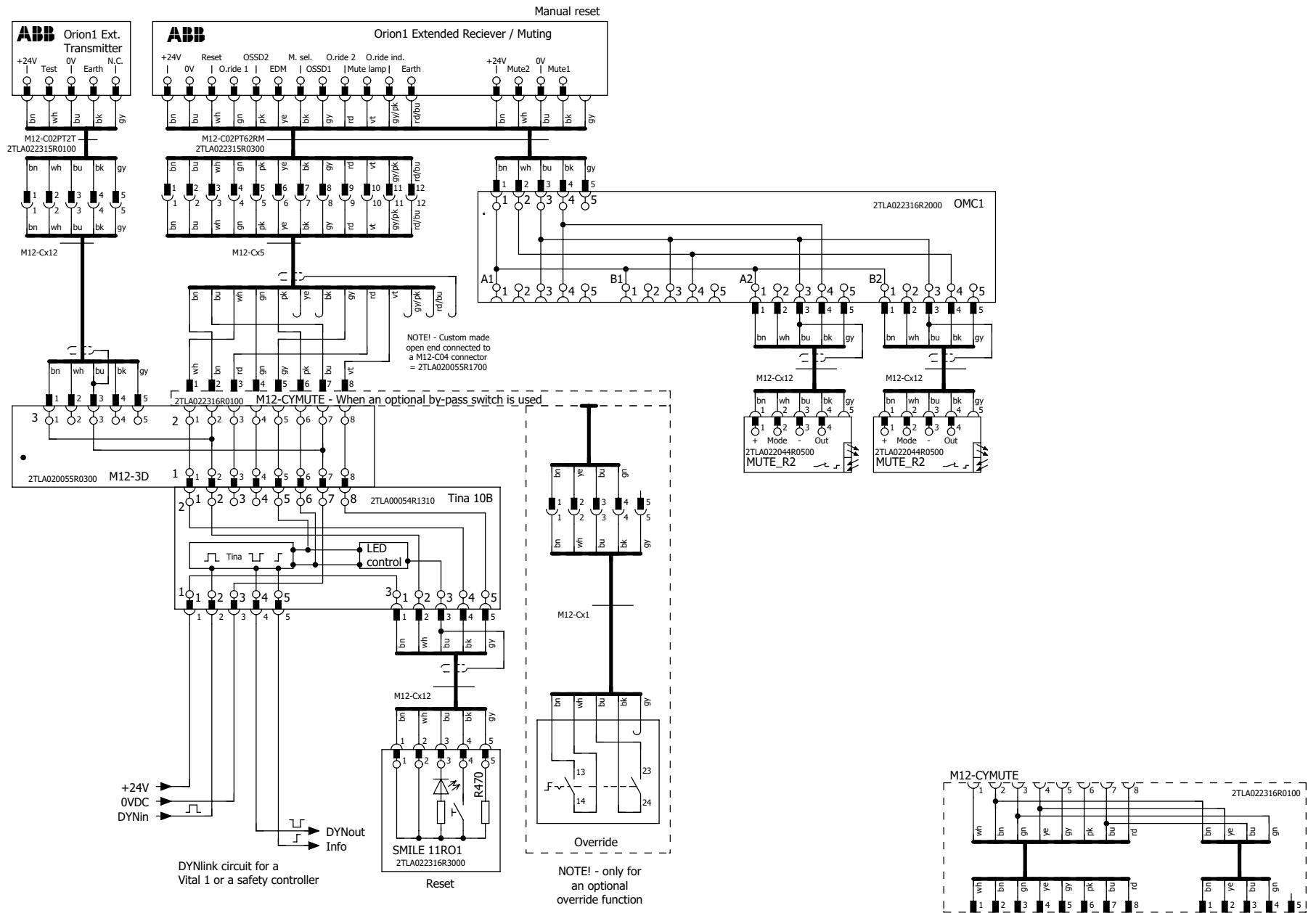
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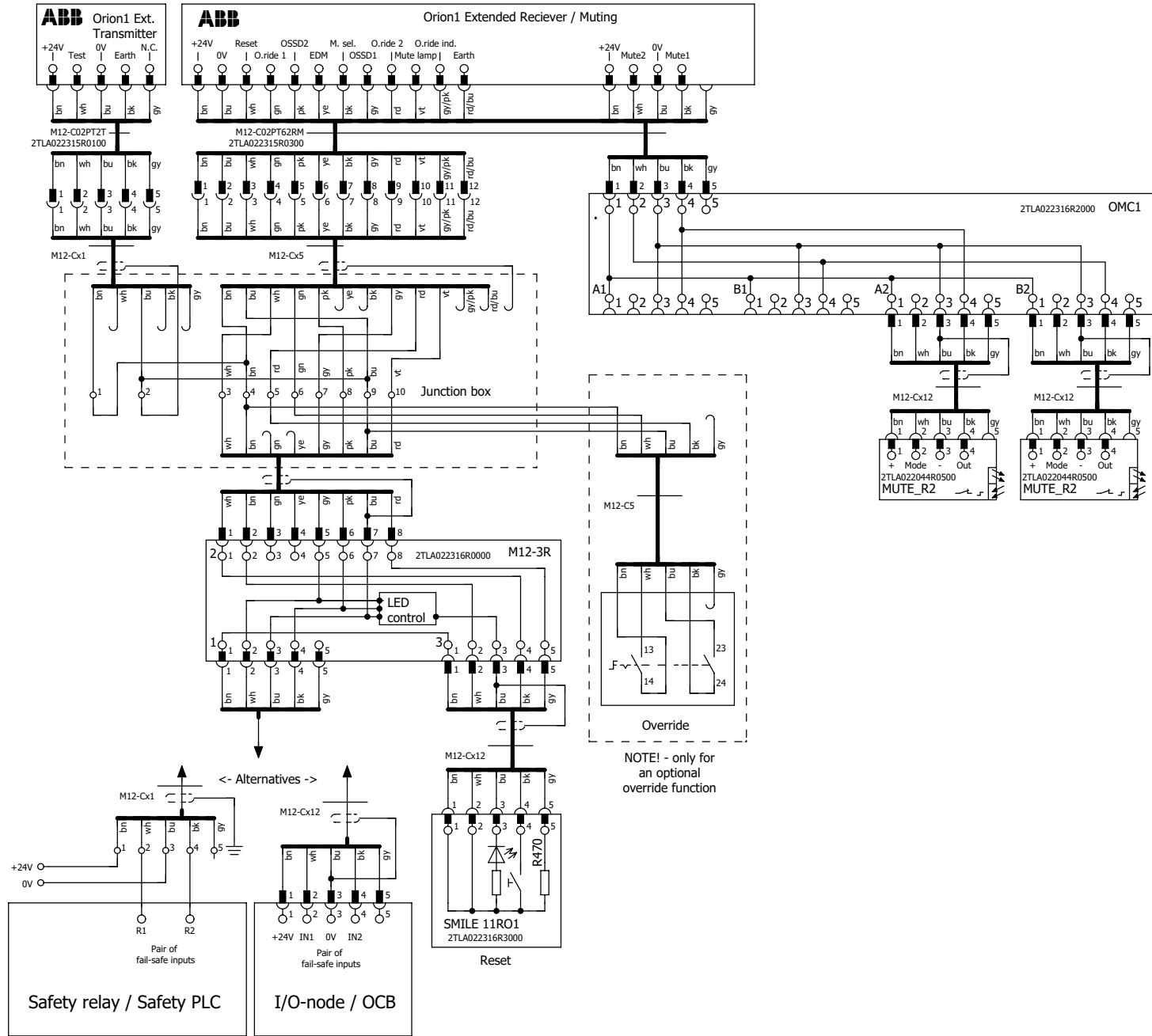
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Appr.					ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.
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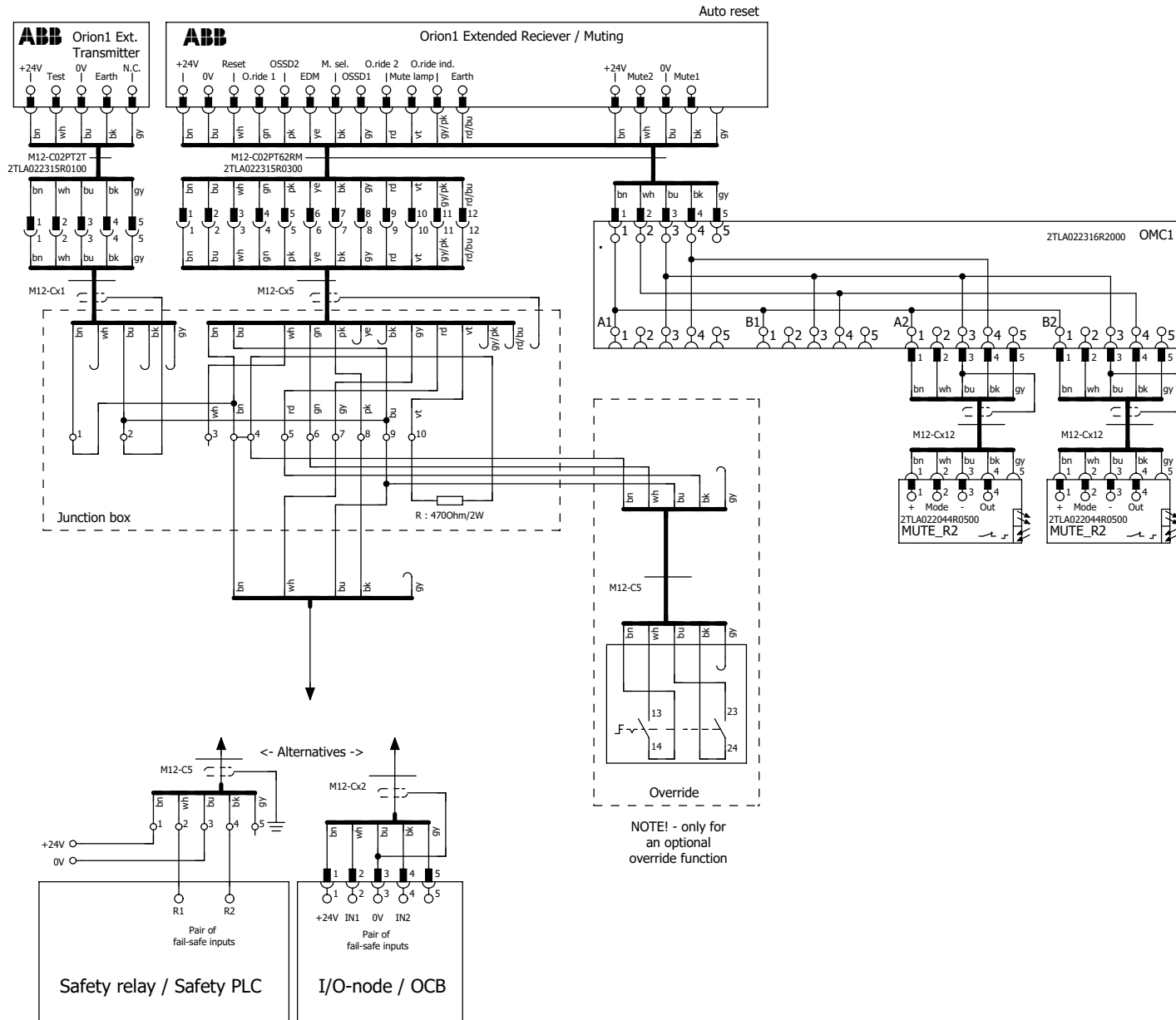
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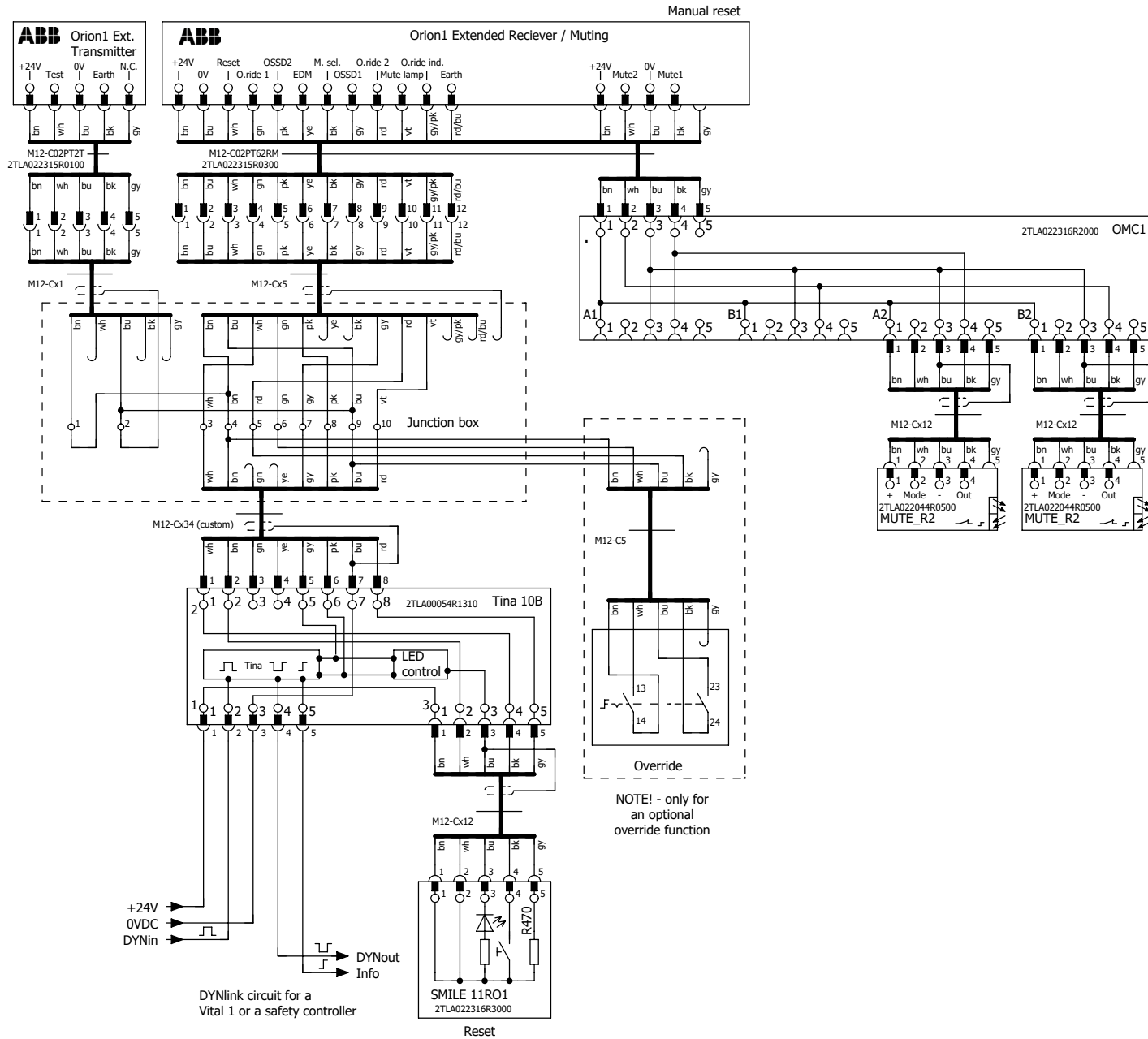
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Modification	Date	Name	Original						



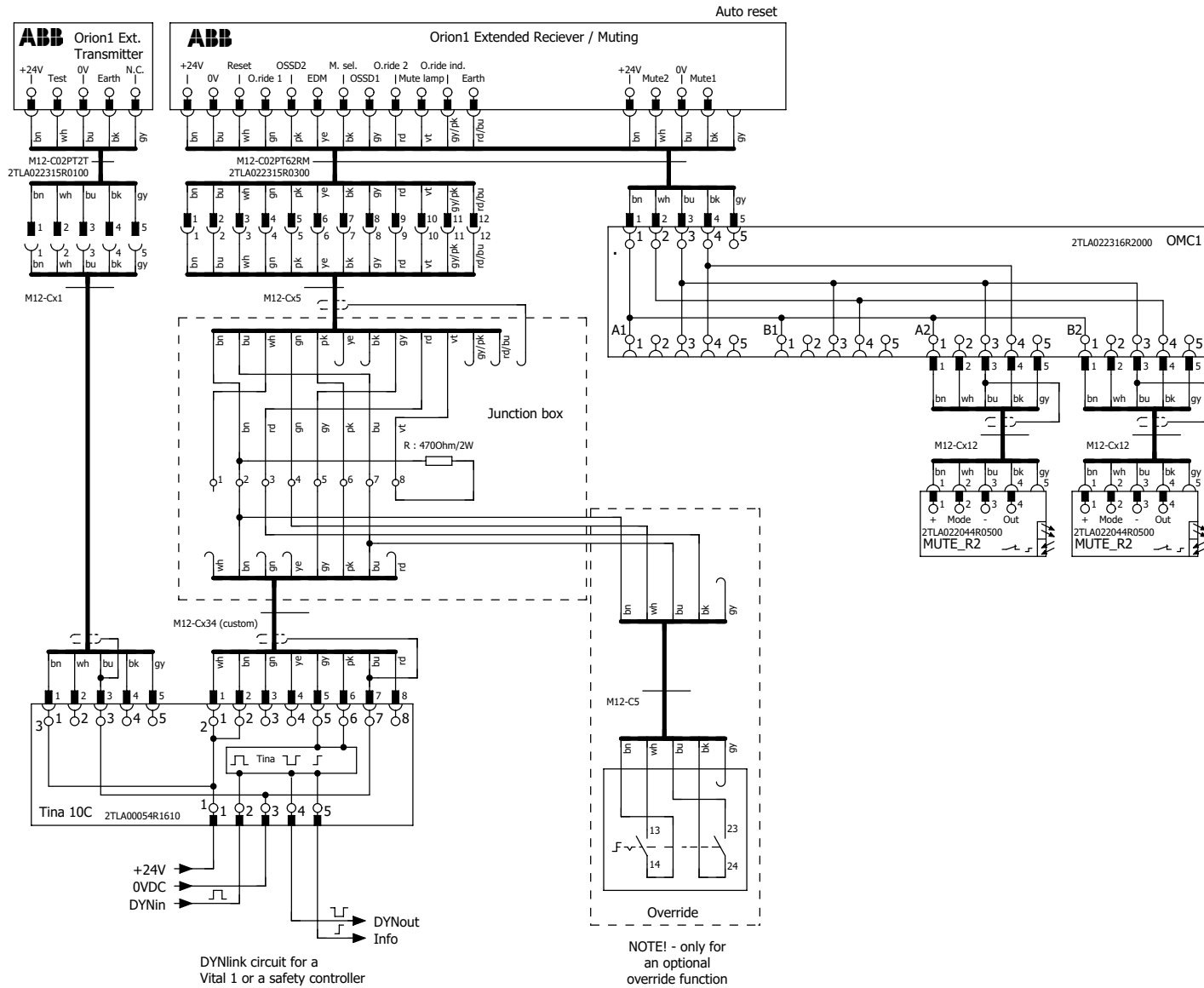
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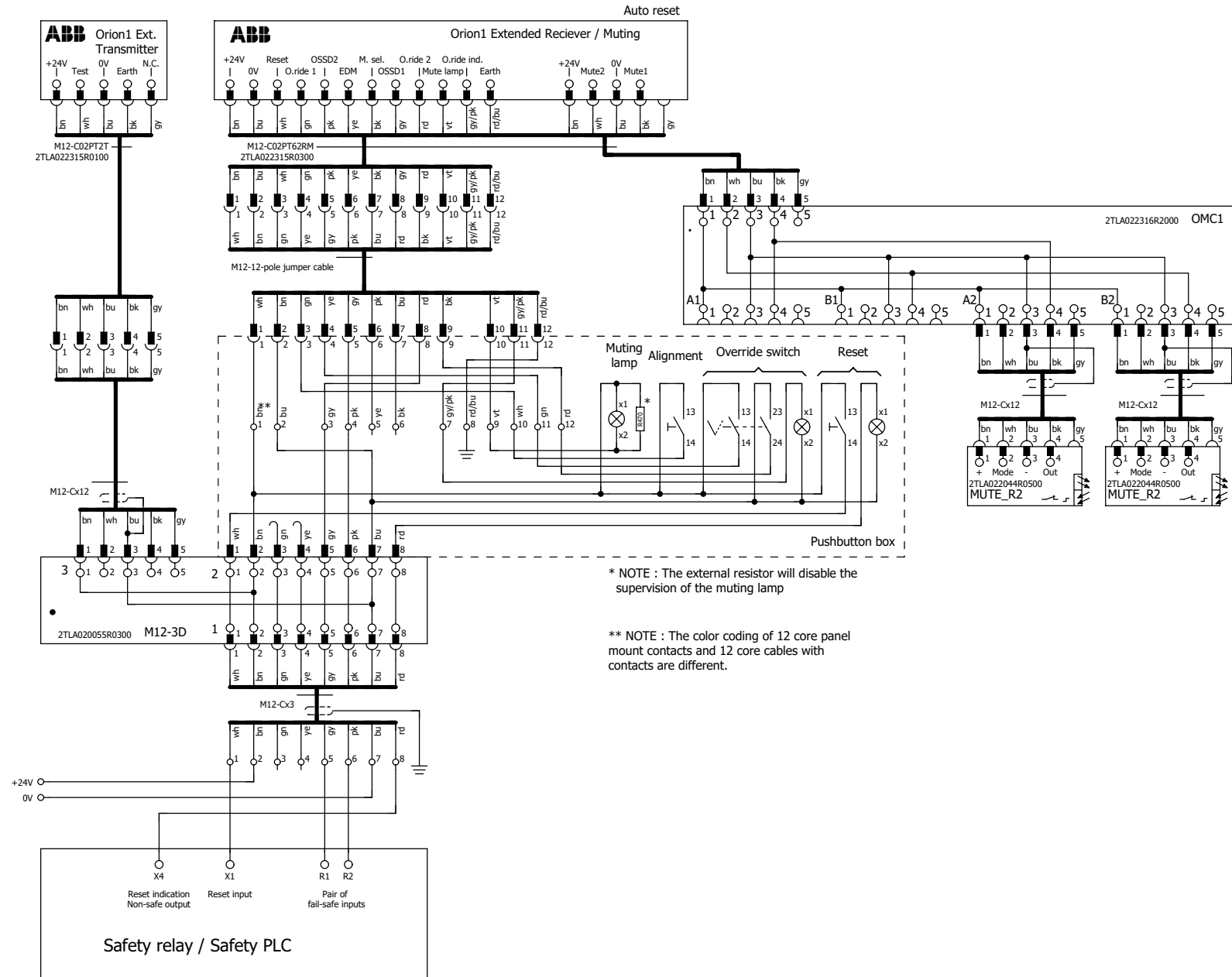
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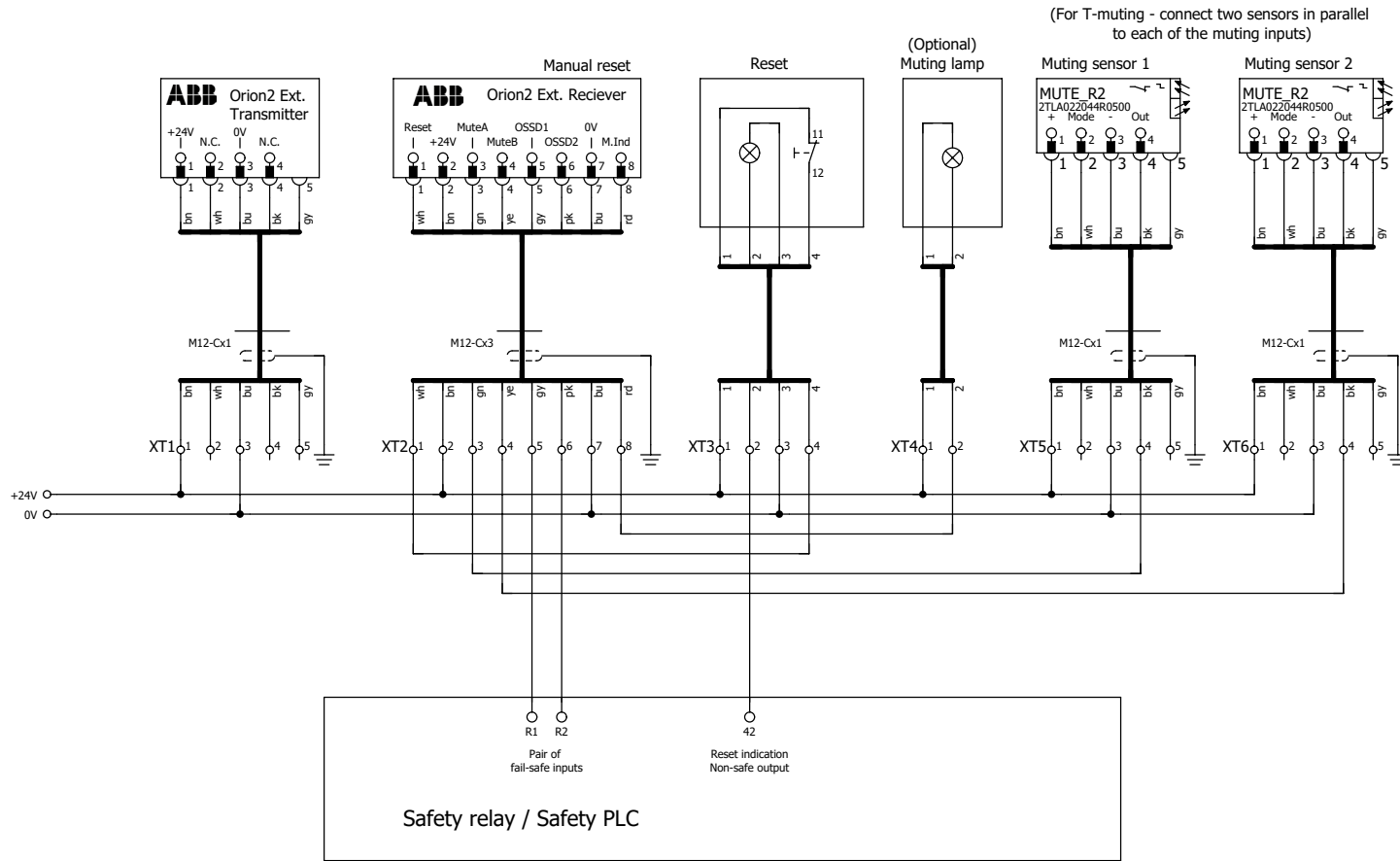
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* NOTE : The external resistor will disable the supervision of the muting lamp

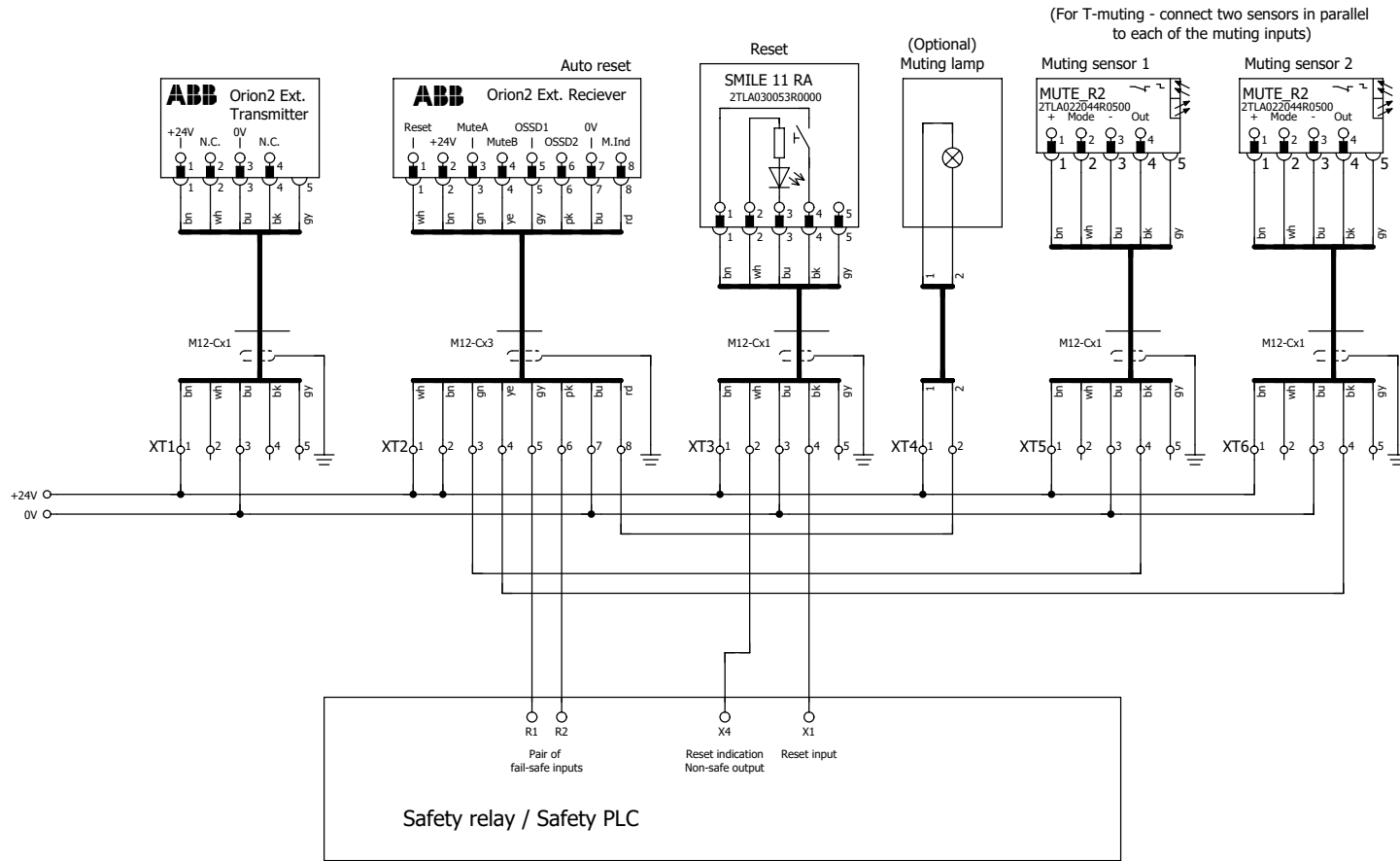
** NOTE : The color coding of 12 core panel mount contacts and 12 core cables with contacts are different.

Modification	Date	Name	Original	Date	2022-09-09	ABB Safety Products	ABB ABB EL, ELSP, SPMS	Orion1E Muting - Using a local pushbutton box	= Orion1E
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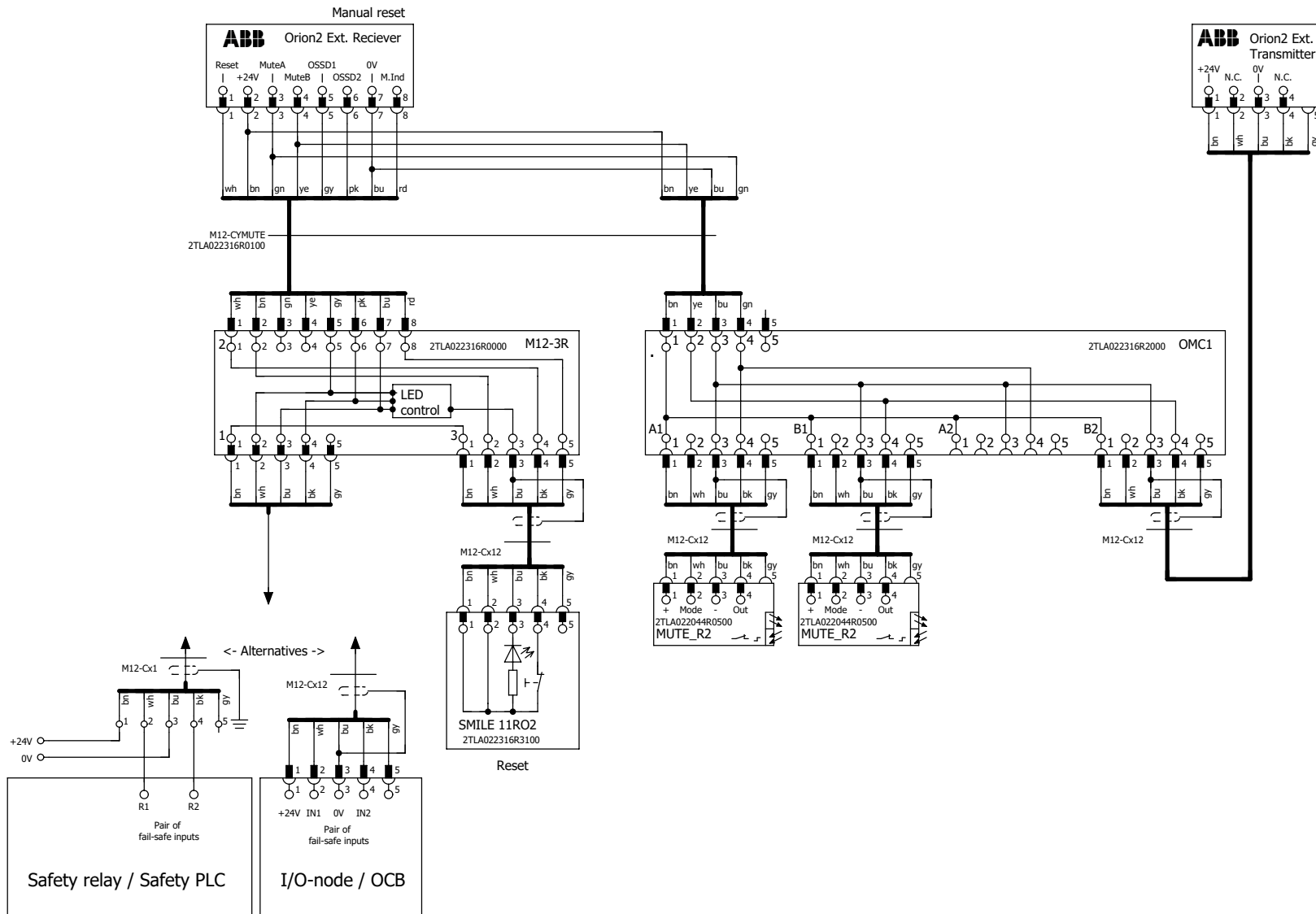


(For T-muting - connect two sensors in parallel to each of the muting inputs)

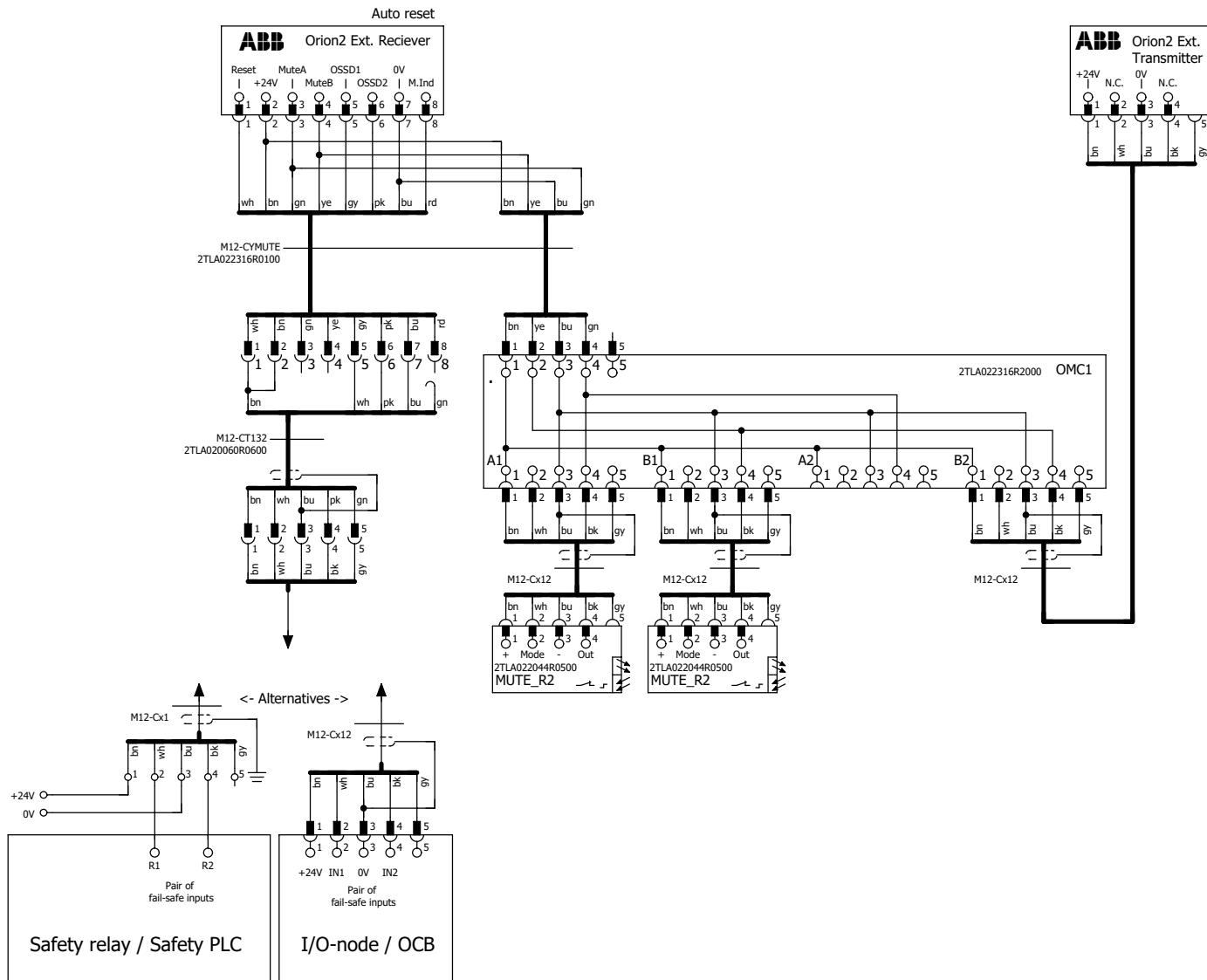
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					ABB EL, ELSP, SPMS	Orion2E - Installation to cabinet, manual reset	



			Date	2022-09-12	ABB Safety Products	 Orion2E - Installation to cabinet, auto reset	= Orion2E
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Modification	Date	Name	Original			ABB EL, ELS, SPMS	



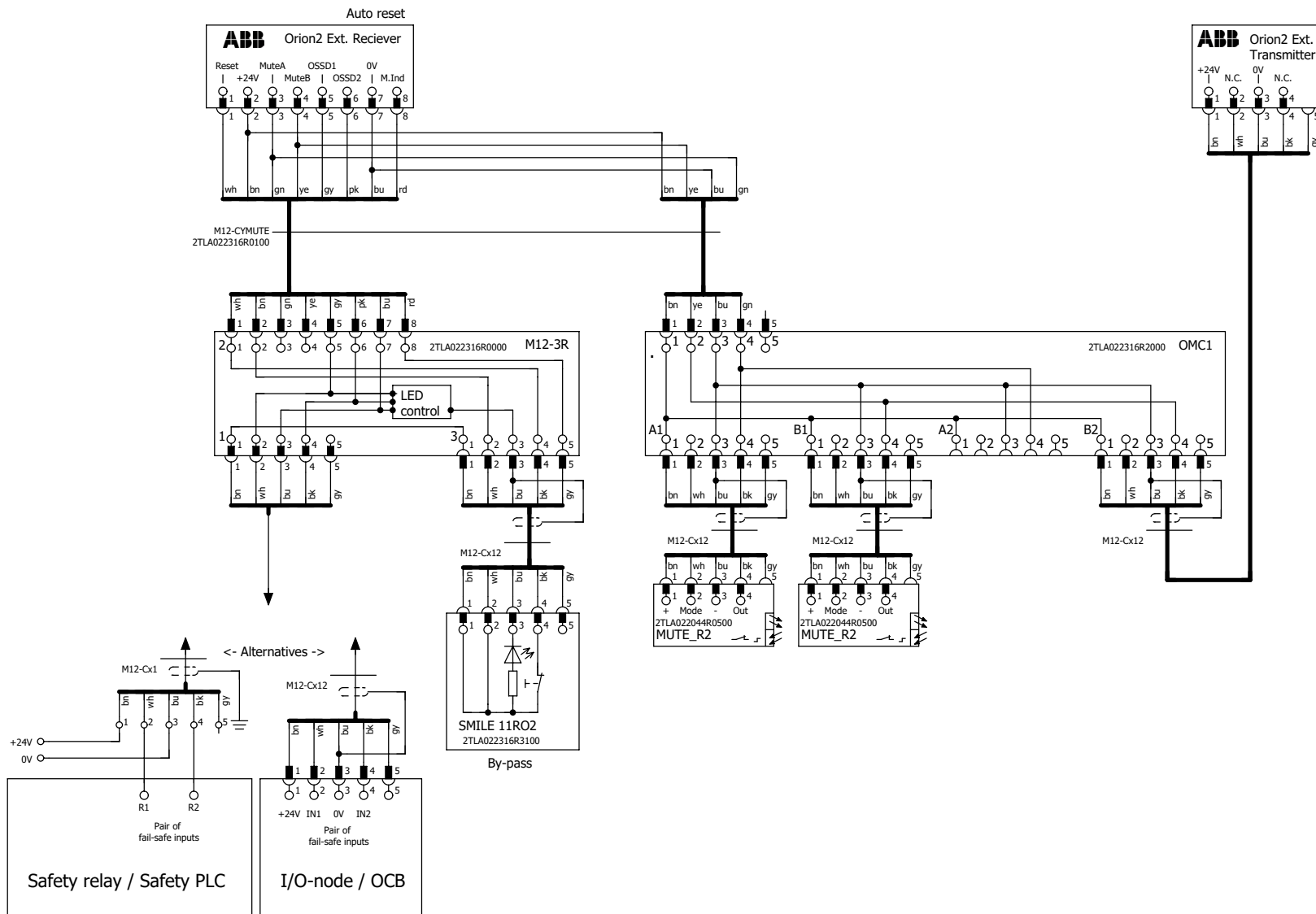
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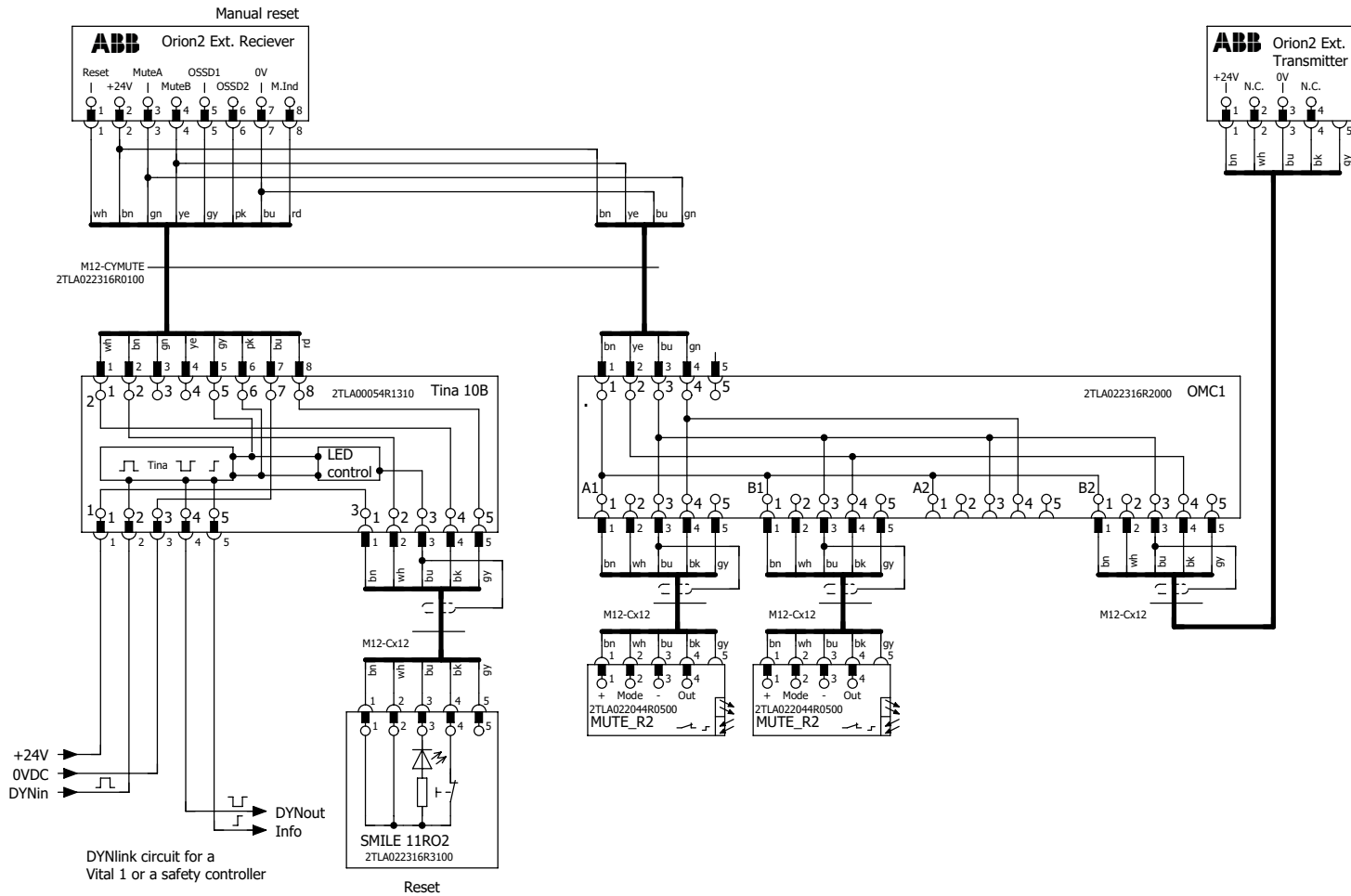
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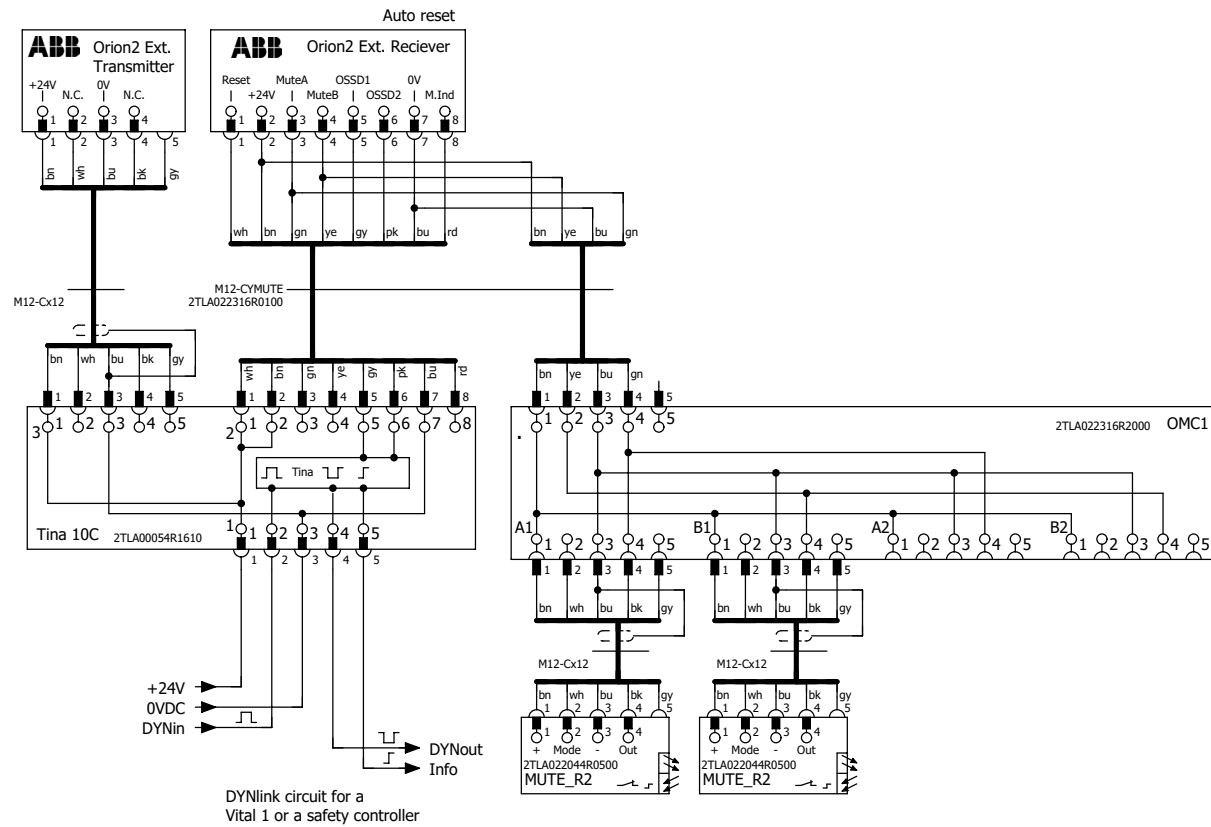
ABB EL, ELS, SPMS



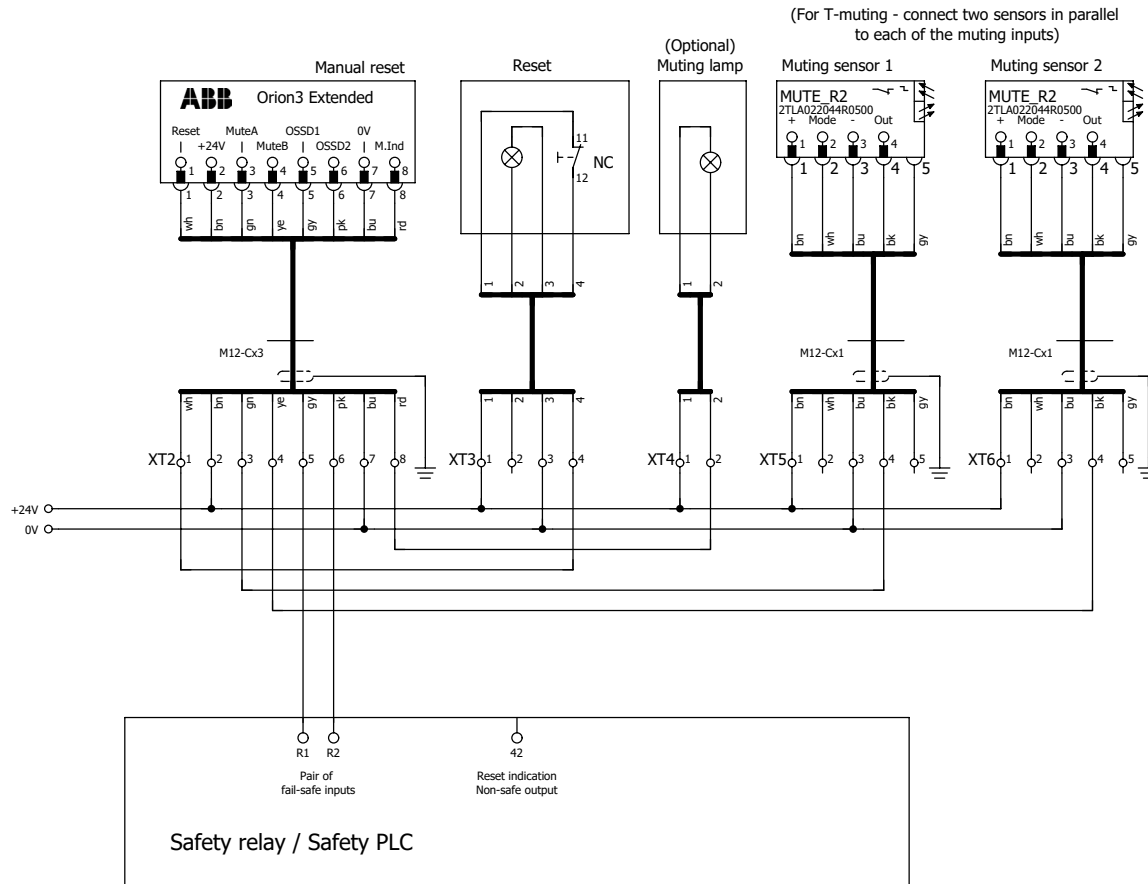
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				Ed.	SEHAHAL5	Orion			
				Appr.					



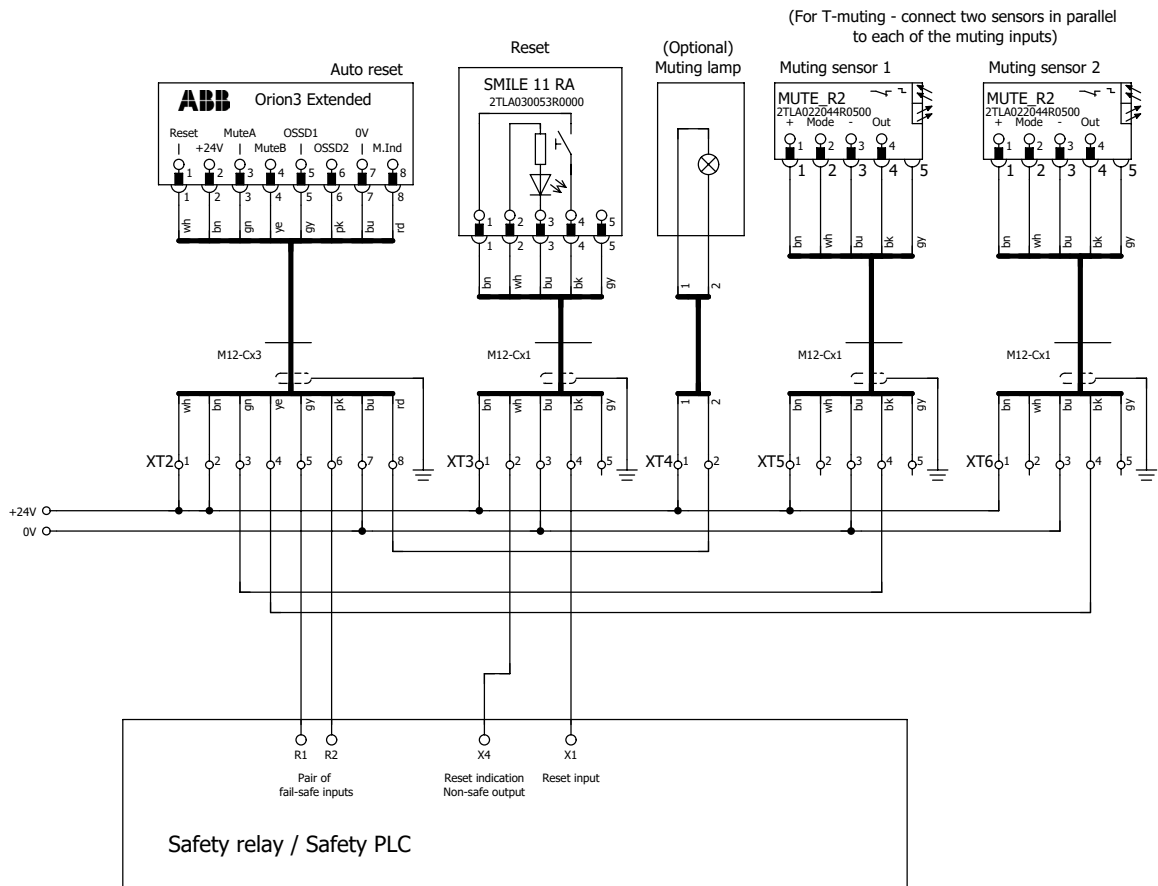
			Date	2022-09-12	ABB Safety Products	ABB	Orion2E - Using Tina 10B for DYNlink	= Orion2E +
			Ed.	SEHAHAL5	Orion			
			Appr.					
Modification	Date	Name	Original			ABB EL, ELSP, SPMS		ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.




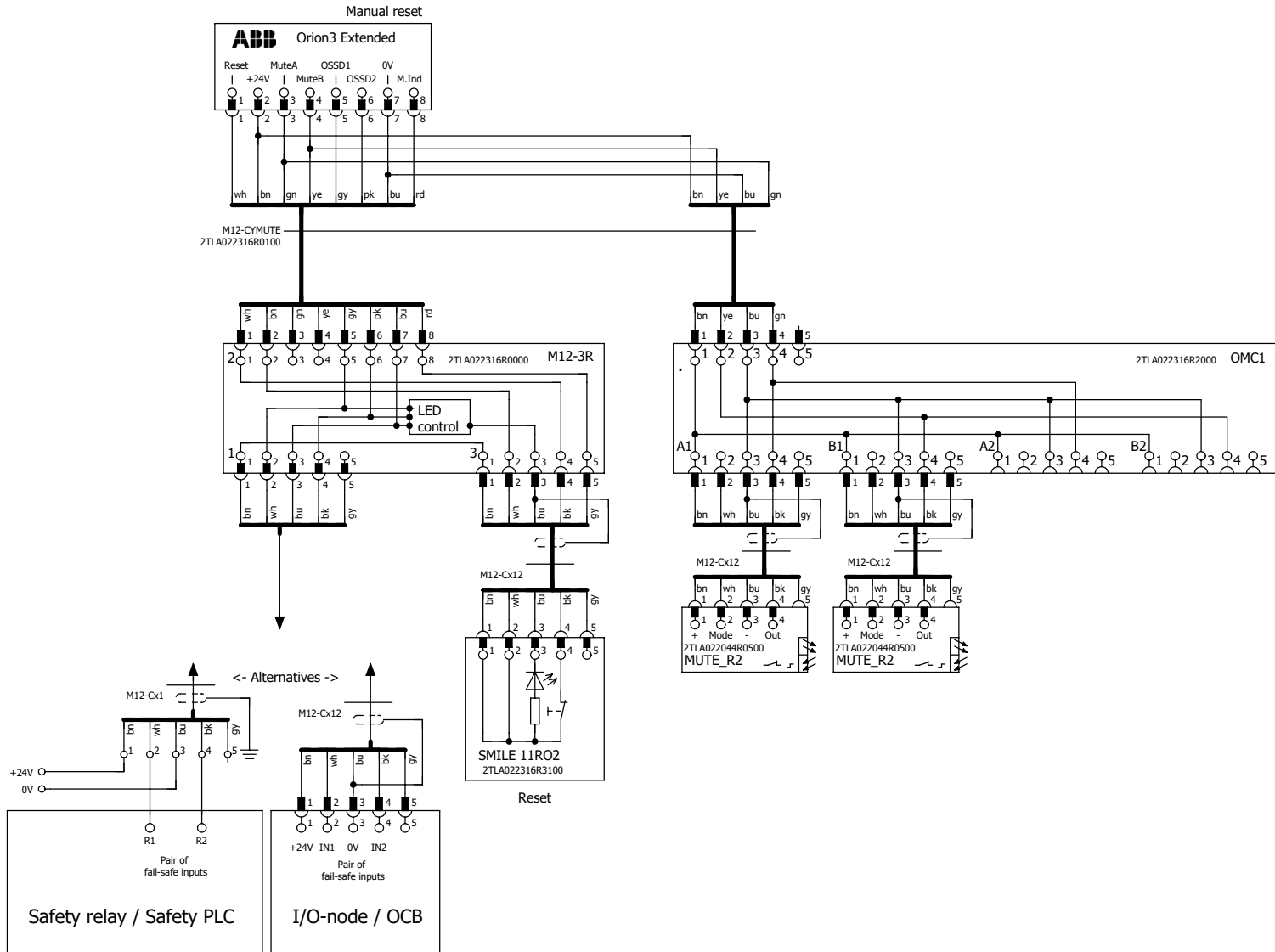
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			Ed.	SEHAHAL5	Orion			
			Appr.					
Modification	Date	Name	Original					ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.



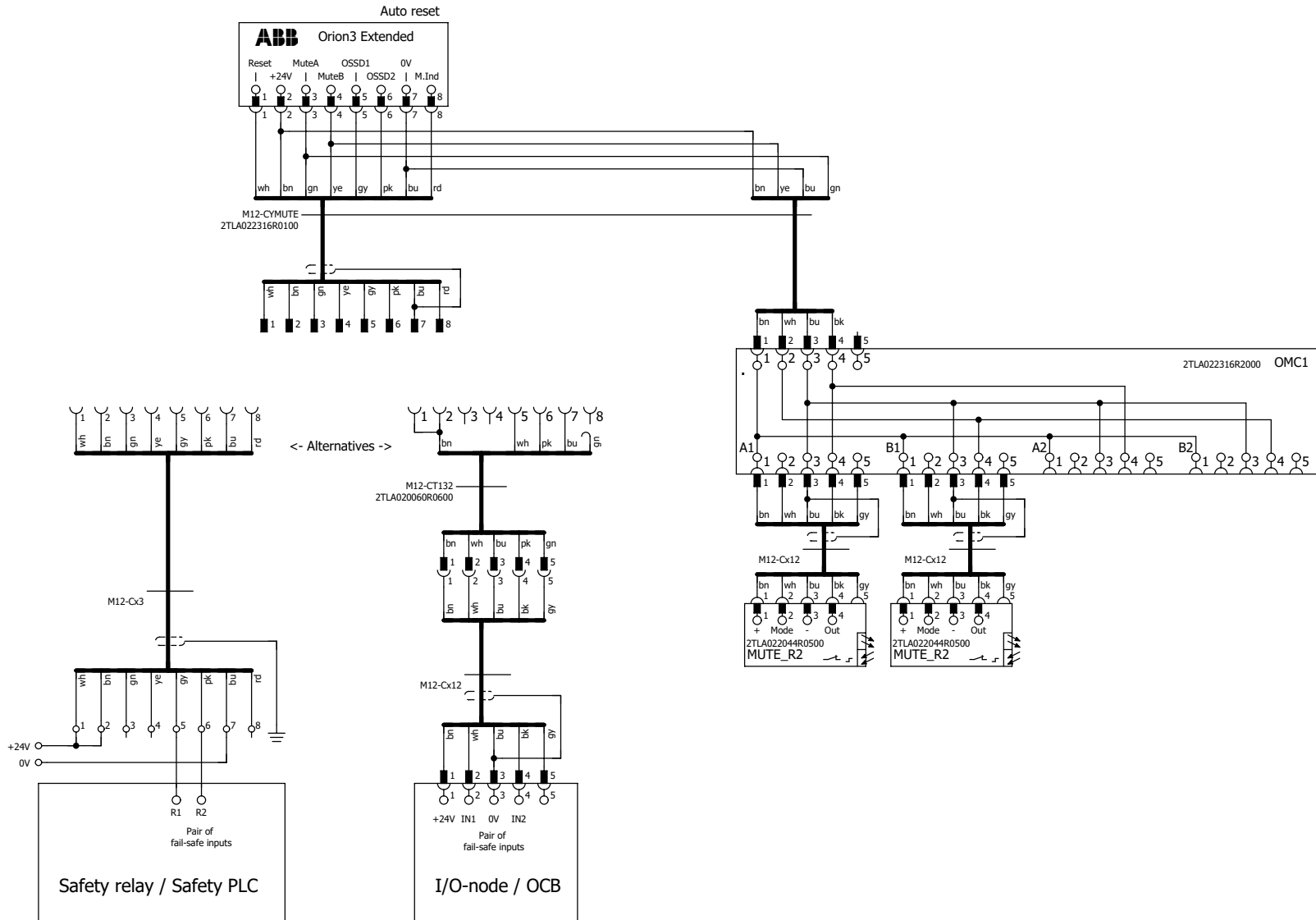
			Date	2022-09-09	ABB Safety Products	ABB ABB EL, ELSP, SPMS	Orion3E - Installation to cabinet, manual reset	= Orion3E +
			Ed.	SEHAHAL5	Orion			
			Appr.					
Modification	Date	Name	Original					ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.



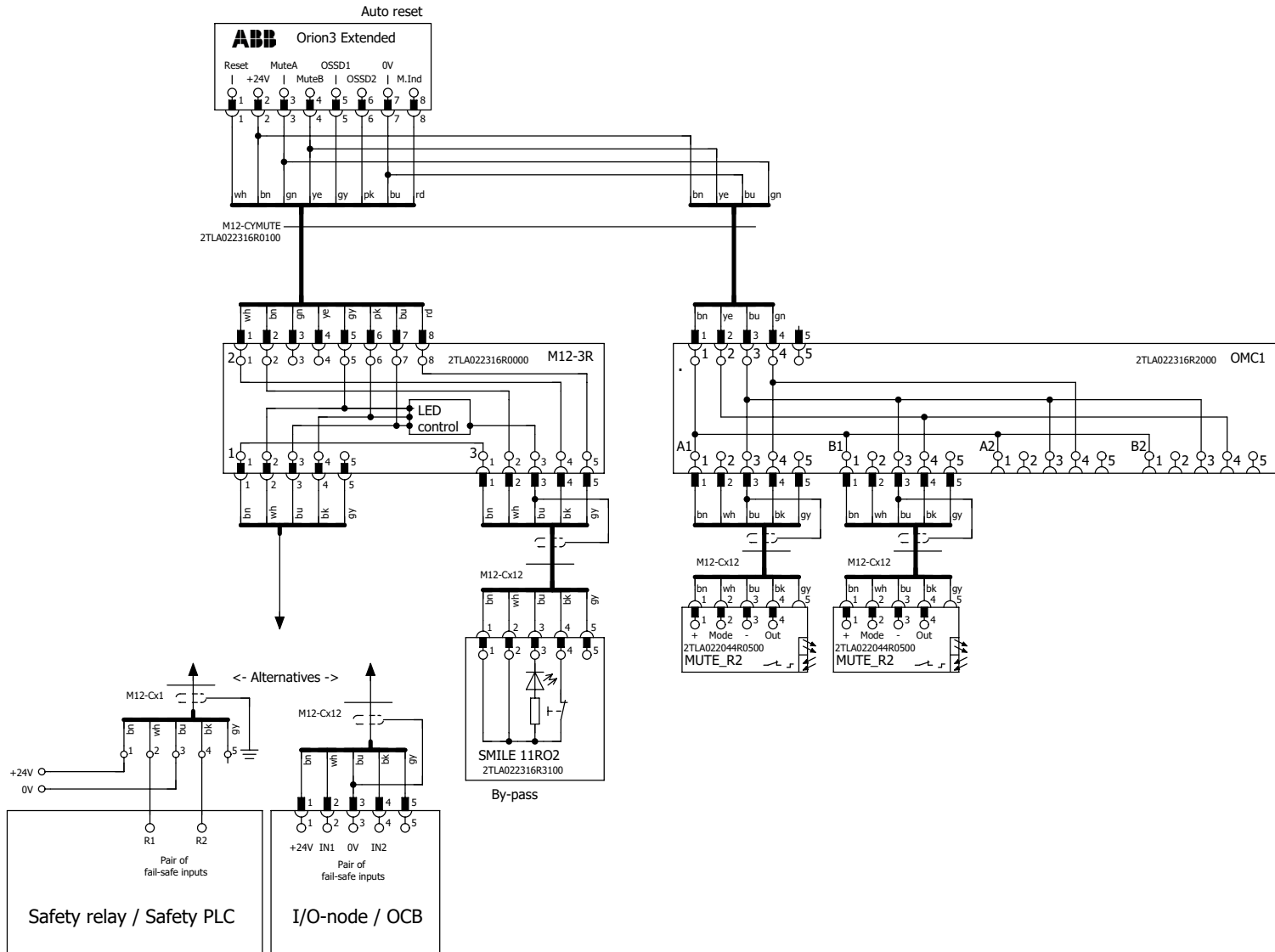
			Date	2022-09-09	ABB Safety Products	 ABB EL, ELSP, SPMS	Orion3E - Installation to cabinet, auto reset	= Orion3E
			Ed.	SEHAHAL5	Orion			+
			Appr.					ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.
Modification	Date	Name	Original					



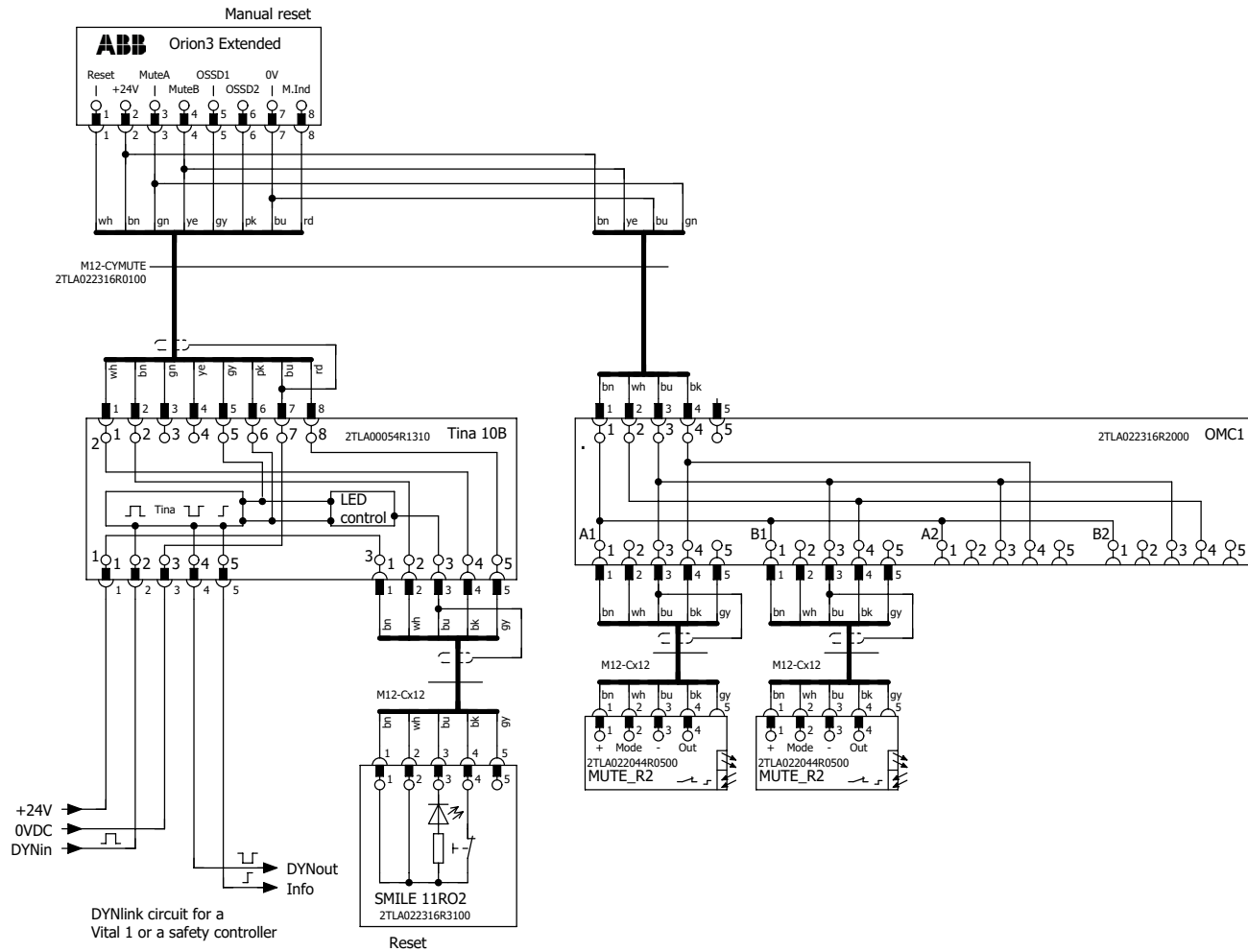
			Date	2022-09-12	ABB Safety Products		Orion3E - Using M12 accessories, manual reset	= Orion3E
			Ed.	SEHAHAL5	Orion		+	
			Appr.				ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.	
Modification	Date	Name	Original			ABB EL, ELS, SPMS		



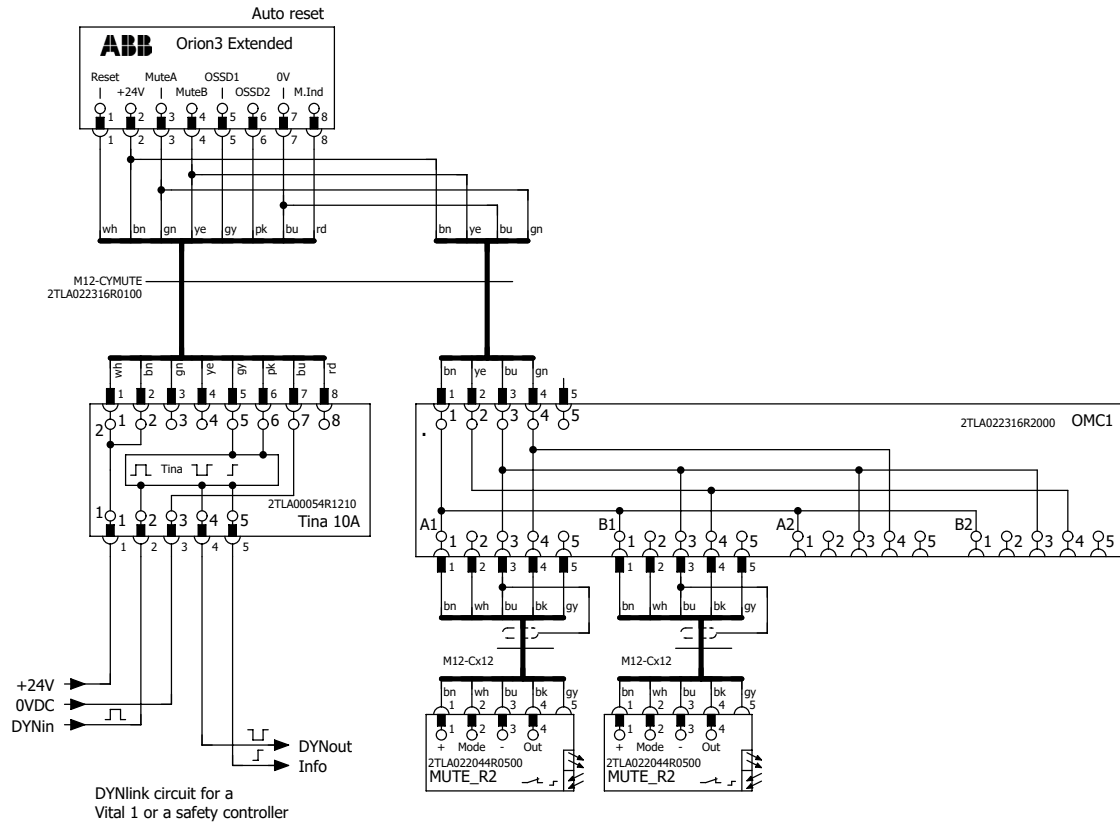
			Date	2022-09-09	ABB Safety Products		Orion3E - Using M12 accessories, auto reset	= Orion3E +
			Ed.	SEHAHAL5	Orion			
			Appr.					
Modification	Date	Name	Original			ABB EL, ELSF, SPMS		ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.



			Date	2022-09-09	ABB Safety Products	ABB	Orion3E - Using M12 accessories, auto reset + by-pass	= Orion3E +
			Ed.	SEHAHAL5	Orion			
			Appr.					
Modification	Date	Name	Original			ABB EL, ELSF, SPMS		ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.



			Date	2022-09-15	ABB Safety Products	ABB ABB EL, ELSP, SPMS	Orion3E - Using Tina 10B for DYNlink	= Orion3E +
			Ed.	SEHAHAL5	Orion			
			Appr.					
Modification	Date	Name	Original					ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.



			Date	2022-09-09	ABB Safety Products	ABB	Orion3E - Using Tina 10A for DYNlink	= Orion3E +
			Ed.	SEHAHAL5	Orion			
			Appr.					
Modification	Date	Name	Original			ABB EL, ELSP, SPMS		ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.

M12-Cx12
Cables with 5 conductors + shield and drain wire
Male + female M12 contacts

M12-C00612	0,06 m	2TLA020056R6300
M12-C0312	0,3 m	2TLA020056R5800
M12-C112	1 m	2TLA020056R2000
M12-C312	3 m	2TLA020056R2100
M12-C612	6 m	2TLA020056R2200
M12-C1012	10 m	2TLA020056R2300
M12-C1612	16 m	2TLA020056R5400
M12-C2012	20 m	2TLA020056R2400

M12-Cx34
Cables with 8 conductors + shield and drain wire
Male + female M12 contacts

M12-C00634	0,06 m	2TLA020056R6400
M12-C134	1 m	2TLA020056R5000
M12-C334	3 m	2TLA020056R5100
M12-C634	6 m	2TLA020056R7600
M12-C1034	10 m	2TLA020056R7700
M12-C2034	20 m	2TLA020056R7800

M12-CYMUTE
2TLA022316R0100

Splitter cable for:
- OMC1 muting box
- custom bypass switch
- custom blanking button

M12-Cx1
Cables with 5 conductors + shield and drain wire
Female M12 contact and open end

M12-C31	3 m	2TLA020056R0500
M12-C61	6 m	2TLA020056R0000
M12-C61HE	6 m	2TLA020056R8000
M12-C101	10 m	2TLA020056R1000
M12-C101HE	10 m	2TLA020056R8100
M12-C201	20 m	2TLA020056R1400

M12-Cx3
Cables with 8 conductors + shield and drain wire
Female M12 contact and open end

M12-C33	3 m	2TLA020056R2900
M12-C63	6 m	2TLA020056R3000
M12-C103	10 m	2TLA020056R4000
M12-C203	20 m	2TLA020056R4100

M12-Cx5
Cables with 12 conductors + shield and drain wire
Female M12 contact and open end

M12-C65	6 m	2TLA020056R7200
M12-C105	10 m	2TLA020056R7300
M12-C205	20 m	2TLA020056R7500

M12-Cx2
Cables with 5 conductors + shield and drain wire
Male M12 contact and open end

M12-C62	6 m	2TLA020056R0200
M12-C102	10 m	2TLA020056R1200

Transfer cables for Orion1 Base

- M12-CTO1BA (2TLA022315R3000)
- M12-CTO1BM (2TLA022315R3100)
- M12-CTURAX-O1B (2TLA022315R3300)

M12-CxP - cables for Orion1 Extended

M12-C02PT6RM
2TLA022315R0300
Receiver - muting

M12-C02PT6RB
2TLA022315R0200
Receiver - blanking

Transfer cable for:
Orion2 Base
Orion2 Extended
Orion3 Extended

M12-CT132
2TLA020060R0600

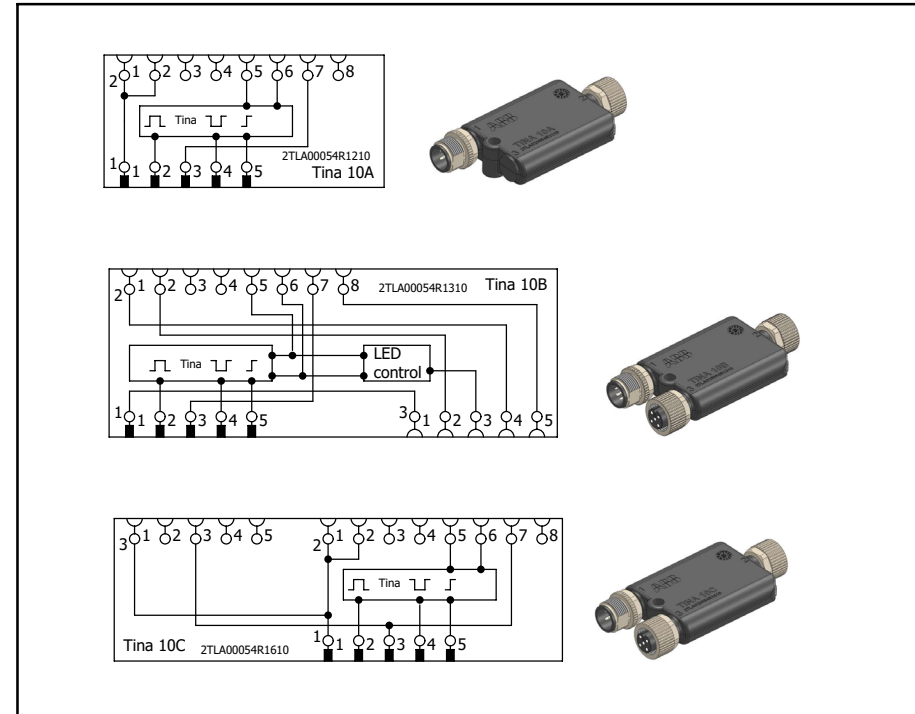
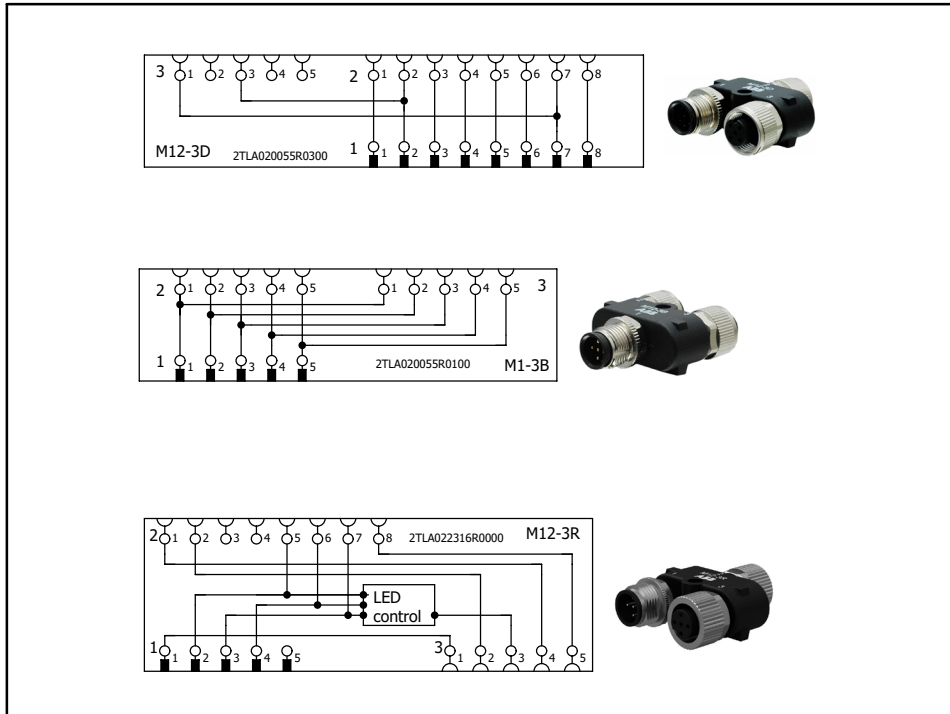
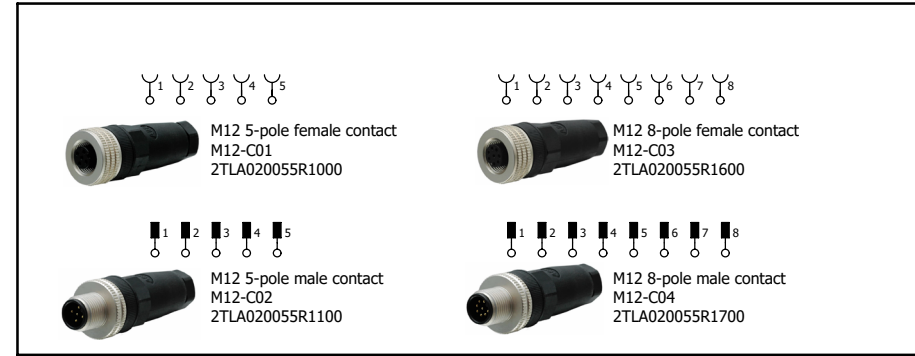
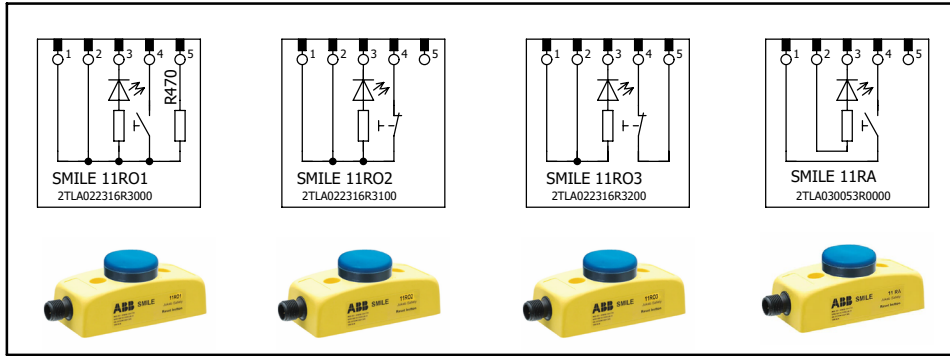
Transfer cables for Orion3 Base

- M12-CTO3B (2TLA022315R3200)
- M12-CTURAX-O3B (2TLA022315R3400)

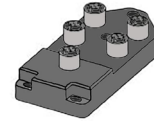
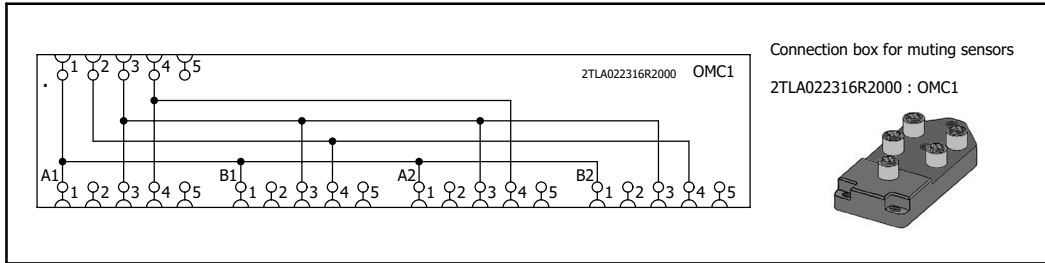
M12-C02PT2T
2TLA022315R0100
Transmitter

PT-CxPT - Cascade cables
PT-C005PT : 2TLA022315R1200 (0,05 m)
PT-C05PT : 2TLA022315R1100 (0,5 m)
PT-C1PT : 2TLA022315R1000 (1 m)

Modification	Date	Name	Original	Date	2022-09-05	ABB Safety Products	ABB	Cables	= Accessories +
				Ed.	SEHAHAL5	Orion			



			Date	2022-09-12	ABB Safety Products	ABB ABB EL, ELSP, SPMS	Reset buttons and adaptors		= Accessories
			Ed.	SEHAHAL5	Orion				+
Modification	Date	Name	Appr.						ABB does not accept any liability and/or responsibility whatsoever for any errors or lack of information in this document.



Optical muting sensor M18
2TLA022044R0500 : MUTE R2

Reflectors for optical muting sensors
MUTE R2
REFLECT1 : 2TLA022044R2000
REFLECT2 : 2TLA022044R3000

Bracket for M18 muting sensors
2TLA040007R0200 : JSM 64

Bracket for muting accessories
2TLA022090R1300 : JSM 66

Laser alignment tool
2TLA022310R5000 : Orion Laser

			Date	2022-09-12	ABB Safety Products		Accessories		= Accessories	
			Ed.	SEHAHAL5						+
			Appr.						Orion	
Modification	Date	Name	Original			ABB EL, ELS, SPMS				



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