

FPA-5000 | FPA-1200

Part 1



BOSCH

cs Návod se schématem zapojení
da Ledningsdiagrammanual
de Anschaltehandbuch
el Εγχειρίδιο σχεδιαγραμμάτων καλωδίωσης
en Wiring Manual
es Manual de diagramas de cableado
fi Kytentäkaavio-opas
fr Manuel des schémas de câblage
hr Priručnik za shemu električnih instalacija
hu Bekötési útmutató

it Manuale con gli schemi elettrici
nl Handleiding met bedradingsschema
no Håndbok for koblingsskjema
pl Schemat połączeń – podręcznik
pt Manual de esquema de ligação
ro Manual cu diagrame de cablare
ru Руководство по монтажным схемам
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1 Poznámky

1.1 Obsah

V tomto návodu je popsáno, jak mají být periferní zařízení připojena k ústředně EPS FPA-5000. Periferie u kterých je ukončen prodej můžete najít v schématu zapojení "Part 2 - Discontinued Products".



POZNÁMKA!

Připojení popsané v tomto dokumentu se vztahuje také na ústřednu EPS FPA-1200, avšak jen za předpokladu, že jsou jednotlivé součásti schváleny společností Bosch Sicherheitssysteme GmbH jako rozšíření pro ústřednu EPS FPA-1200.

1.2 Informace o výrobku

Pokyny k instalaci jednotlivých součástí ústředny EPS FPA-5000/FPA-1200 naleznete v příložené instalační příručce.

Další informace jsou k dispozici na internetové adrese

- www.boschsecurity.cz

1.3 Důležité poznámky

- K instalaci používejte pouze materiály doporučené společností BOSCH Security Systems.
- Při konverzi a pájení vždy noste uzemňovací zápěstní řemínek.
- Montáž a instalaci smí provádět pouze kvalifikovaný odborník.
- Dodržujte požadavky na připojení stanovené místními úřady a institucemi.



NEBEZPEČÍ!

Dotýkat se součástí pod napětím může mít smrtelné následky.
Před zahájením instalačních prací odpojte napájení.

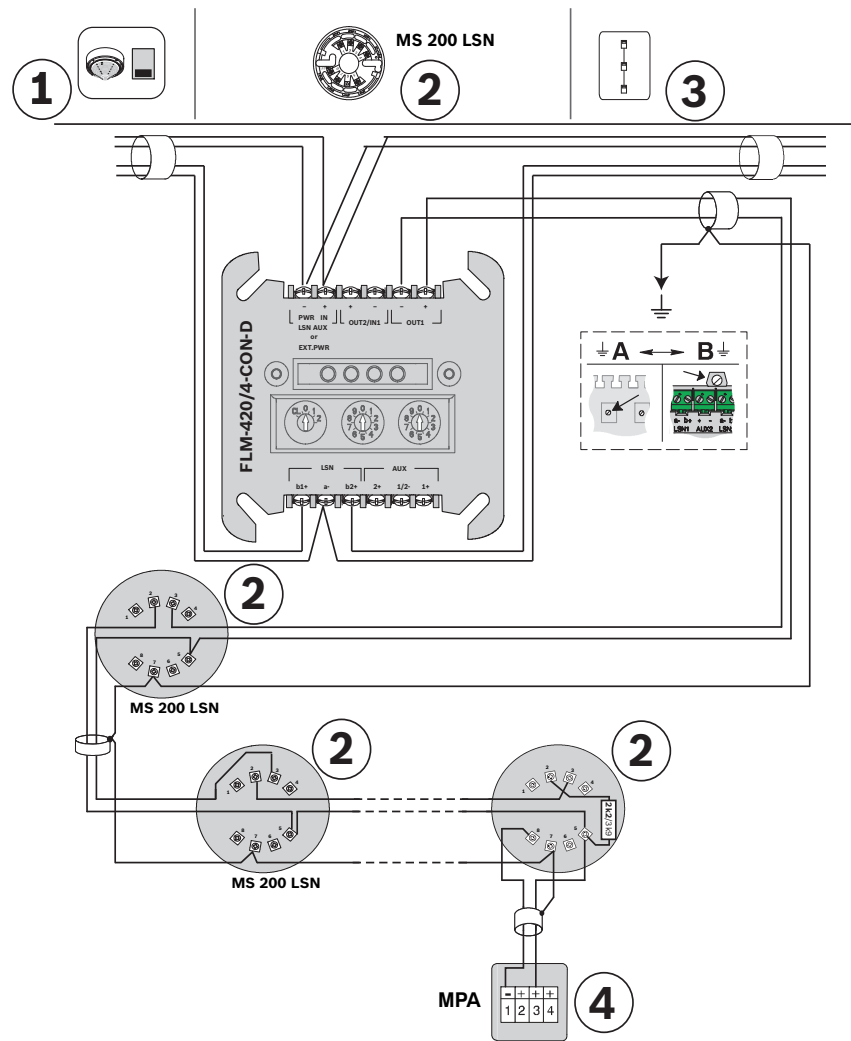
1.4 Možnosti vyhledávání v dokumentu

Informace o tom, která periferní zařízení lze připojit k daným součástem, naleznete v obsahu. Informace o tom, jak připojit konkrétní periferní zařízení k ústředně EPS FPA-5000, naleznete v rejstříku na straně 314 a následujících.

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1.5 Upozornění pro uživatele

Jednotlivá zapojení jsou v tomto návodu strukturována následovně:















1	Symbole kapitol (Oddíl 1.5.1 Symbole kapitol, Strana 5)
2	Připojitelná periferní zařízení
3	Symbole připojení (Oddíl 1.5.2 Symbole připojení, Strana 6)
4	Volitelné součásti (Oddíl 1.5.3 Volitelné součásti, Strana 6)


1.5.1 Symbole kapitol

	Automatické hlásiče		Ovládací a zobrazovací panely		Tiskárny
	Napájecí zdroj		Funkční moduly		Zařízení pro požární ochranu
	Vazební členy		Hasicí systémy		Manuální tlačítkové hlásiče požáru
	Signalizační zařízení		Ovládací prvky dveří		Přenosové jednotky
	Propojení do sítě				

1.5.2 Symboly připojení

	Sledováno / nesledováno		Se zpětnou vazbou / bez zpětné vazby		Oblasti s nebezpečím výbuchu
	Záloha		Synchronizace		Kabeláž kruhového vedení
	Kabeláž kruhového vedení se záložním prvkem		Kabeláž rozvětveného vedení		Záložní kabeláž rozvětveného vedení
	Kabeláž rozvětveného vedení se záložním prvkem		Záložní kabeláž rozvětveného vedení se záložním prvkem		Samostatná ústředna
	Samostatná ústředna se zálohou				

1.5.3 Volitelné součásti

1 ... n	Připojení dalších zařízení
	Doplňkový napájecí zdroj

1.6 Hodnoty odporu

V následující tabulce je uveden přehled barevného označení rezistorů. Rezistory s kovovou vrstvou dodávané s výrobkem mají okruhy v pěti různých barvách, které označují hodnotu jejich odporu.

Barva	1. okruh	2. okruh	3. okruh	4. okruh (multiplikátor)	5. okruh (tolerance)
Stříbrná				10^{-2}	
Zlatá				10^{-1}	
Černá		0	0	10^0	
Hnědá	1	1	1	10^1	±1 %
Červená	2	2	2	10^2	±2 %
Oranžová	3	3	3	10^3	
Žlutá	4	4	4	10^4	
Zelená	5	5	5	10^5	±0,5 %
Modrý	6	6	6	10^6	±0,25 %
Fialová	7	7	7	10^7	±0,1 %
Šedá	8	8	8	10^8	±0,05 %
Bílá	9	9	9	10^9	

V souladu s normami IEC 62 / DIN 41429

Oranžová – bílá – černá – hnědá – hnědá: rezistor s odporem 3900 Ω, tolerance 1 %

Červená – červená – černá – hnědá – hnědá: rezistor s odporem 2200 Ω, tolerance 1 %

1.7**Obsah**

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1 Noter

1.1 Indhold

I denne kablingsvejledning vises, hvordan perifere enheder tilsluttes til FPA-5000-brandcentralen.

Ydre enheder som ikke er tilsluttet kan findes i installations manualen "Part 2 - Discontinued Products".



OPLYSNING!

De tilslutninger, der beskrives i dette dokument, gælder også for FPA-1200-brandcentralen, forudsat at de individuelle komponenter er Bosch Sicherheitssysteme GmbH-godkendte udvidelser af FPA-1200-brandcentralen.

1.2 Produktinformation

I den medfølgende installationsvejledning kan du finde installationsinstruktioner til de individuelle komponenter i brandcentralerne FPA-5000/FPA-1200.

Flere oplysninger er tilgængelige på internettet på:

- www.boschsecurity.dk

1.3 Vigtige bemærkninger

- Brug kun de installationsmaterialer, som anbefales af BOSCH Security Systems.
- Bær altid et jordnet håndledsbånd, når du udfører konverterings- og svejsearbejde.
- Samling og installation må kun udføres af kvalificeret personale.
- Bemærk, hvilke krav de lokale myndigheder/institutioner stiller til tilslutning.



FARE!

Det kan være livsfarligt at røre ved elektriske komponenter.
Afbryd strømforsyningen, før du udfører installationen.

1.4 Søgekriterier i dokumentet

Se indholdsfortegnelsen for at finde ud af, hvilke perifere enheder du kan tilslutte til eksisterende komponenter.

Hvis du vil vide, hvordan du tilslutter en bestemt perifer enhed til FPA-5000, skal du søge ved hjælp af det indeks, der starter på side 314.

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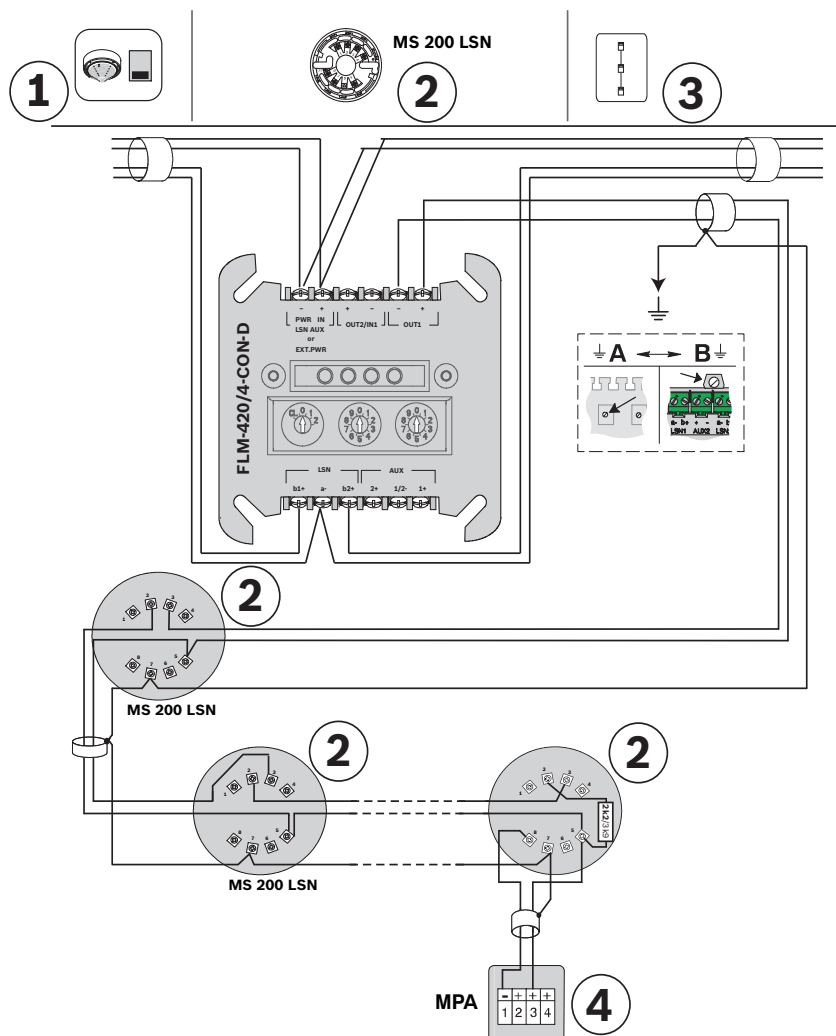
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1.5 Brugerbemærkninger

Tilslutningerne i denne kablingsvejledning er struktureret som følger.



1	Kapitelsymboler (Afsnit 1.5.1 Kapitelsymboler, Side 9)
2	Perifere enheder, der kan tilsluttes
3	Tilslutningssymboler (Afsnit 1.5.2 Tilslutningssymboler, Side 10)
4	Mulige komponenter (Afsnit 1.5.3 Mulige komponenter, Side 10)

1.5.1 Kapitelsymboler

	Automatiske detektorer		Betjeningspanel og display		Printere
	Strømforsyning		Funktionelle moduler		Brandvæsensudstyr
	Interface-moduler		Slukningssystemer		Manuelle alarmtryk
	Signalenheder		Dørstyreenheder		Transmissionsenheder
	Netværksfunktioner				

1.5.2 Tilslutningssymboler

	Overvågede/ ikke overvågede		Med/uden feedback		Områder med eksplosionsfare
	Redundans		Synkronisering		Loop-kabling
	Loop-kabling med redundant element		Grenstub-kabling		Redundant grenstub- kabling
	Grenstub-kabling med redundant element		Redundant grenstub-kabling med redundant element		Separat kontrolpanel
	Separat kontrolpanel med redundans				

1.5.3 Mulige komponenter

1 ... n	Tilslutning af andre enheder
	Ekstra strømforsyning

1.6 Modstandsværdier

Følgende tabel giver en oversigt over farvekoder for modstande. De metalfilmsmodstande, der leveres med produktet, har fem loops med forskellige farver, der angiver modstandsværdien.

Farve	1. Loop	2. Loop	3. Loop	4. loop (multiplikator)	5. loop (tolerance)
Sølv				10^{-2}	
Guld				10^{-1}	
Sort		0	0	10^0	
Brun	1	1	1	10^1	±1 %
Rød	2	2	2	10^2	±2 %
Orange	3	3	3	10^3	
Gul	4	4	4	10^4	
Grøn	5	5	5	10^5	±0,5 %
Blå	6	6	6	10^6	±0,25 %
Lilla	7	7	7	10^7	±0,1 %
Grå	8	8	8	10^8	±0,05 %
Hvid	9	9	9	10^9	

I overensstemmelse med IEC-publ. 62/DIN 41429

Orange - hvid - sort - brun: 3,9 k Ohm modstand med 1 % tolerance,

Rød - rød - sort - brun - brun: 2,2 k Ohm modstand med 1 % tolerance.

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1 Hinweise

1.1 Inhalt

Dieses Anschaltehandbuch zeigt, wie Peripheriegeräte an die Brandmeldezentrale FPA-5000 angeschlossen werden.

Peripheriegeräte, die sich nicht mehr im Lieferprogramm befinden, sind in "Part 2 - Discontinued Products" des Anschaltehandbuchs aufgenommen.



HINWEIS!

Die in diesem Dokument beschriebenen Anschaltungen gelten auch für die Brandmeldezentrale FPA-1200, sofern die einzelnen Komponenten von Bosch Sicherheitssysteme GmbH zugelassene Erweiterungen der Brandmeldezentrale FPA-1200 darstellen.

1.2 Produktinformation

Wie Sie die einzelnen Komponenten der Brandmeldezentralen FPA-5000/FPA-1200 installieren, entnehmen Sie bitte den jeweils beigelegten Installationsanleitung.

Weiterführende Informationen finden sie im Internet unter:

- www.boschsecurity.com

1.3 Wichtige Hinweise

- Nur das von BOSCH Sicherheitssysteme empfohlene Montagematerial verwenden.
- Umbau- und Lötarbeiten nur mit Erdungsarmband durchführen!
- Montage und Installation nur durch Fachpersonal!
- Anschlussbedingungen der regionalen Behörden/Institutionen beachten!



GEFAHR!

Lebensgefahr bei Berührung von stromführenden Teilen.
Vor Installationsarbeiten die Stromzufuhr unterbrechen!

1.4 Suchmöglichkeiten im Dokument

Wenn Sie wissen möchten, welche Peripheriegeräte Sie an vorhandene Komponenten anschließen können, benutzen Sie bitte das Inhaltsverzeichnis.

Möchten Sie wissen, wie Sie ein bestimmtes Peripheriegerät an die FPA-5000 anschließen können, suchen Sie bitte über den Index ab Seite 314.

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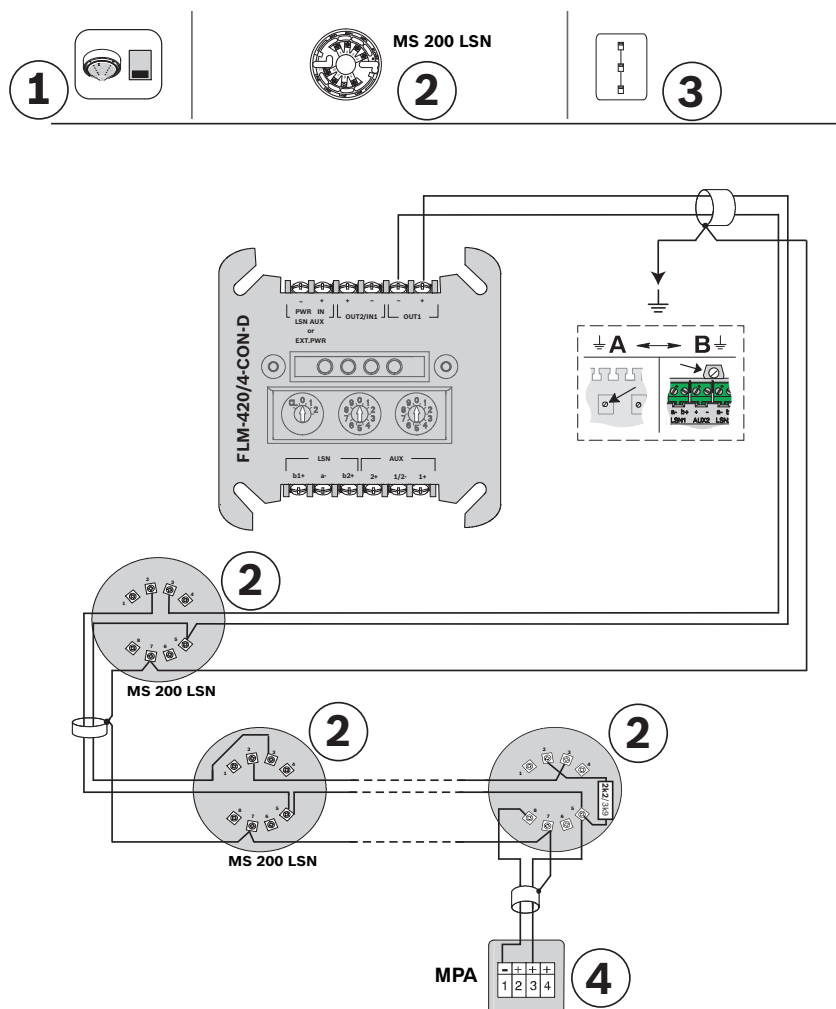
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1.5

Benutzerhinweise

Die Schaltungen in diesem Anschaltehandbuch sind wie folgt aufgebaut.
















1	Kapitelsymbole (Abschnitt 1.5.1 Kapitelsymbole, Seite 13)
2	Anschaltbares Peripheriegerät
3	Anschaltessymbole (Abschnitt 1.5.2 Anschaltessymbole, Seite 14)
4	Optionale Komponenten (Abschnitt 1.5.3 Optionale Komponenten, Seite 14)

1.5.1


Kapitelsymbole

	Automatische Melder		Bedien- und Anzeigetableaus		Drucker
	Energieversorgung		Funktionsmodule		Feuerwehreinrichtungen
	Koppler		Löschanlagen		Manuelle Melder
	Signalgeber		Türsteuerungen		Übertragungseinrichtungen
	Vernetzung				

1.5.2 Anschaltensymbole

	Überwacht/ nicht überwacht		Mit/ohne Rückmeldung		explosionsgefährdeter Bereich
	Redundanz		Synchronisation		Ringverdrahtung
	Ringverdrahtung mit redundantem Element		Stichverdrahtung		Redundante Stichverdrahtung
	Stichverdrahtung mit redundantem Element		Redundante Stichverdrahtung mit redundantem Element		Stand-Alone-Zentrale
	Stand-Alone-Zentrale mit Redundanz				

1.5.3 Optionale Komponenten

1 ... n	Anschaltung weiterer Geräte
 24 V - 28 V ΔU > 6V	Zusätzliche Energieversorgung

1.6 Widerstandswerte

Die folgende Tabelle gibt Ihnen einen Überblick über die Farbcodierung von Widerständen. Die mitgelieferten Metallschichtwiderstände haben fünf farbige Ringe, anhand derer Sie den Widerstandswert ablesen können.

Farbe	1. Ring	2. Ring	3. Ring	4. Ring (Multiplikator)	5. Ring (Toleranz)
Silber				10^{-2}	
Gold				10^{-1}	
Schwarz		0	0	10^0	
Braun	1	1	1	10^1	±1%
Rot	2	2	2	10^2	±2%
Orange	3	3	3	10^3	
Gelb	4	4	4	10^4	
Grün	5	5	5	10^5	±0,5%
Blau	6	6	6	10^6	±0,25%
Violett	7	7	7	10^7	±0,1%
Grau	8	8	8	10^8	±0,05%
Weiß	9	9	9	10^9	

Nach IEC-Publ 62/DIN 41 429

Orange - weiß - schwarz - braun - braun: 3k9 Ω Widerstand mit 1% Toleranz,

Rot - rot - schwarz - braun - braun: 2k2 Ω Widerstand mit 1% Toleranz.

1.7

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1 Σημειώσεις

1.1 Περιεχόμενα

Το παρόν εγχειρίδιο καλωδίωσης δείχνει πώς συνδέονται οι περιφερειακές συσκευές στον πίνακα πυροπροστασίας FPA-5000.

Προϊόντα τα οποία έχουν καταργηθεί μπορούν να βρεθούν στο εγχειρίδιο καλωδίωσης "Part 2 - Discontinued Products".



ΣΗΜΕΙΩΣΗ!

Οι συνδέσεις που παρουσιάζονται στο παρόν εγχειρίδιο εφαρμόζονται επίσης στον πίνακα πυροπροστασίας FPA-1200, εφόσον τα μεμονωμένα εξαρτήματα αποτελούν εγκεκριμένες από την Bosch Sicherheitssysteme GmbH επεκτάσεις του πίνακα πυροπροστασίας FPA-1200.

1.2 Πληροφορίες προϊόντων

Μπορείτε να βρείτε οδηγίες εγκατάστασης για τα μεμονωμένα εξαρτήματα των πινάκων πυροπροστασίας FPA-5000/FPA-1200 στο εσώκλειστο εγχειρίδιο εγκατάστασης.

Περισσότερες πληροφορίες είναι διαθέσιμες στο Διαδίκτυο στη διεύθυνση:

- www.boschsecurity.gr

1.3 Σημαντικές σημειώσεις

- Χρησιμοποιείτε τα υλικά εγκατάστασης μόνο σύμφωνα με τις συστάσεις της BOSCH Security Systems.
- Εκτελείτε εργασίες μετατροπής και συγκόλλησης μόνο φορώντας περικάρπιο γείωσης.
- Οι εργασίες συναρμολόγησης και εγκατάστασης πρέπει να εκτελούνται μόνο από κατάλληλα εκπαιδευμένο προσωπικό.
- Προσέχετε τα κριτήρια σύνδεσης των περιφερειακών αρχών/υπηρεσιών.



ΚΙΝΔΥΝΟΣ!

Η επαφή με εξαρτήματα με ηλεκτρική τάση μπορεί να αποβεί μοιραία.

Αποσυνδέετε την παροχή ισχύος πριν από εργασίες εγκατάστασης.

1.4 Επιλογές αναζήτησης στο εγχειρίδιο

Εάν θέλετε να μάθετε ποιες περιφερειακές συσκευές μπορείτε να συνδέσετε σε υπάρχοντα εξαρτήματα, παρακαλούμε ανατρέξτε στον πίνακα περιεχομένων.

Εάν θέλετε να μάθετε πώς να συνδέσετε μια συγκεκριμένη περιφερειακή συσκευή στο FPA-5000, αναζητήστε τις πληροφορίες χρησιμοποιώντας το ευρετήριο που αρχίζει στη σελίδα 314.

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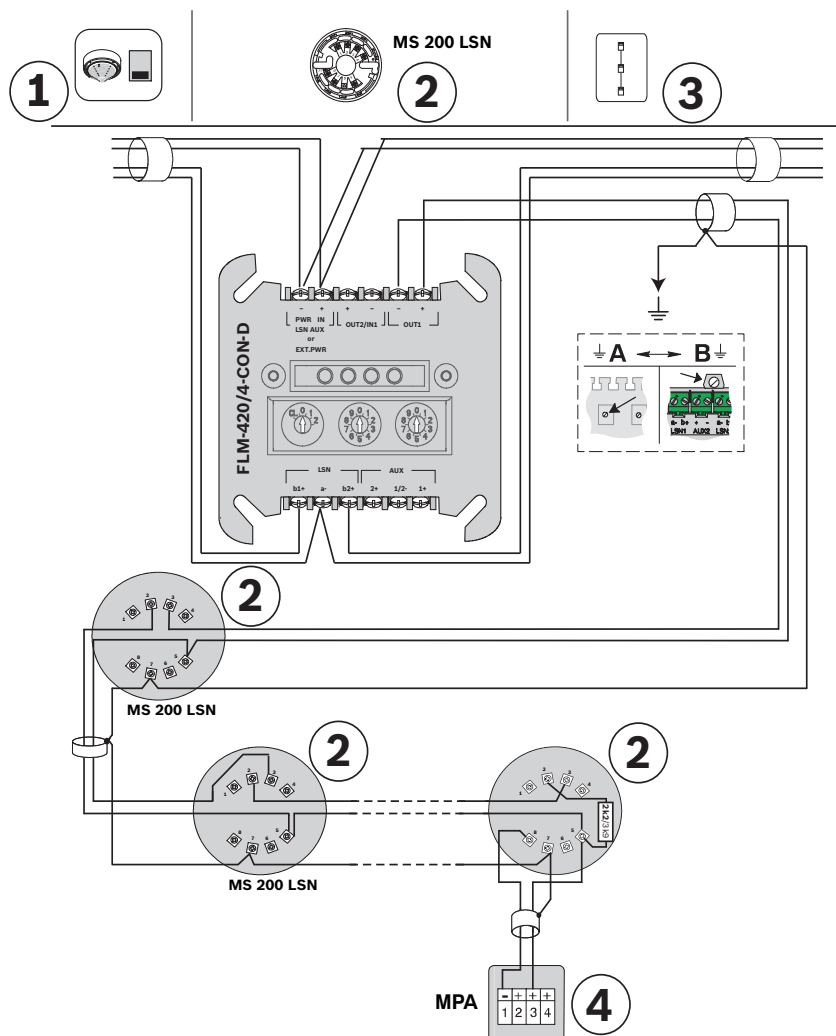
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1.5 Σημειώσεις χρήστη

Οι συνδέσεις στο παρόν εγχειρίδιο καλωδίωσης παρουσιάζονται ως εξής.



1	Σύμβολα κεφαλαίου (Ενότητα 1.5.1 Σύμβολα κεφαλαίου, Σελίδα 17)
2	Συνδεόμενη περιφερειακή συσκευή
3	Σύμβολα σύνδεσης (Ενότητα 1.5.2 Σύμβολα σύνδεσης, Σελίδα 18)
4	Προαιρετικά εξαρτήματα (Ενότητα 1.5.3 Προαιρετικά εξαρτήματα, Σελίδα 18)

1.5.1 Σύμβολα κεφαλαίου

	Αυτόματοι ανιχνευτές		Πίνακες χειρισμού και ενδείξεων		Εκτυπωτές
	Τροφοδοτικό		Λειτουργικά δομοστοιχεία		Εξοπλισμός πυροσβεστικής υπηρεσίας
	Δομοστοιχεία διασύνδεσης		Συστήματα πυρόσβεσης		Κομβία αναγγελίας πυρκαγιάς
	Συσκευές σηματοδότησης		Έλεγχοι πόρτας		Μονάδες μετάδοσης
	Δικτύωση				

1.5.2 Σύμβολα σύνδεσης

	Επιτηρούμενο/ μη επιτηρούμενο		Με/χωρίς ανάδραση		Περιοχές με κίνδυνο έκρηξης
	Εφεδρικός		Συγχρονισμός		Καλωδίωση βρόχου
	Καλωδίωση βρόχου με εφεδρικό στοιχείο		Καλωδίωση στελέχους		Εφεδρική καλωδίωση στελέχους
	Καλωδίωση στελέχους με εφεδρικό στοιχείο		Εφεδρική καλωδίωση στελέχους με εφεδρικό στοιχείο		Αυτόνομος πίνακας ελέγχου
	Αυτόνομος πίνακας ελέγχου με εφεδρεία				

1.5.3 Προαιρετικά εξαρτήματα

1 ... n	Σύνδεση άλλων συσκευών
	Πρόσθετη παροχή ισχύος

1.6 Τιμές αντίστασης

Ο ακόλουθος πίνακας παρέχει μια ανασκόπηση της χρωματικής κωδικοποίησης αντίστασης. Οι αντιστάσεις μεταλλικής μεμβράνης που παρέχονται με το προϊόν έχουν πέντε χρωματιστούς δακτυλίους, οι οποίοι υποδεικνύουν την τιμή αντίστασης.

Χρώμα	1. δακτύλιο ς	2. δακτύλιο ς	3. δακτύλιος	4. δακτύλιος (πολλαπλασιαστής ής)	5. δακτύλιος (ανοχή)
Ασημί				10^{-2}	
Χρυσό				10^{-1}	
Μαύρο		0	0	10^0	
Καφέ	1	1	1	10^1	±1%
Κόκκινο	2	2	2	10^2	±2%
Πορτοκαλί	3	3	3	10^3	
Κίτρινο	4	4	4	10^4	
Πράσινο	5	5	5	10^5	±0,5%
Μπλε	6	6	6	10^6	±0,25%
Μοβ	7	7	7	10^7	±0,1%
Γκρι	8	8	8	10^8	±0,05%
Λευκό	9	9	9	10^9	

Σύμφωνα με Δημοσίευση IEC 62/DIN 41429

Πορτοκαλί – Λευκό – μαύρο – καφέ – καφέ: αντίσταση 3,9k Ohm με ανοχή 1%,

Κόκκινο – κόκκινο – μαύρο – καφέ – καφέ: αντίσταση 2,2 k Ohm με ανοχή 1%.

1.7

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1 Notes

1.1 Contents

This wiring manual shows how peripheral devices are connected to the FPA-5000 Fire Panel. Peripheral devices that are discontinued can be found in the wiring manual "Part 2 - Discontinued Products".

**NOTICE!**

The connections laid out in this document also apply to the FPA-1200 Fire Panel, provided that the individual components are Bosch Sicherheitssysteme GmbH-approved extensions of the FPA-1200 Fire Panel.

1.2 Product information

You can find installation instructions for the individual components of the FPA-5000/FPA-1200 Fire Panels in the enclosed installation guide.

More information is available on the Internet at:

- www.boschsecurity.com

1.3 Important notes

- Only use installation materials as recommended by BOSCH Security Systems.
- Only perform conversion and soldering work wearing a grounding wrist strap.
- Assembly and installation must only be performed by qualified personnel.
- Note connection criteria of the regional authorities/institutions.

**WARNING!**

Touching live components can be fatal.

Disconnect the power supply before carrying out installation.

1.4 Search options in the document

If you want to know which peripheral devices you can connect to existing components, please refer to the table of contents.

If you want to know how to connect a specific peripheral device to the FPA-5000, please search using the index starting on page 314.

MS 400 ->

CZM 0004 A 114

FLM-420/4-CON-D 235

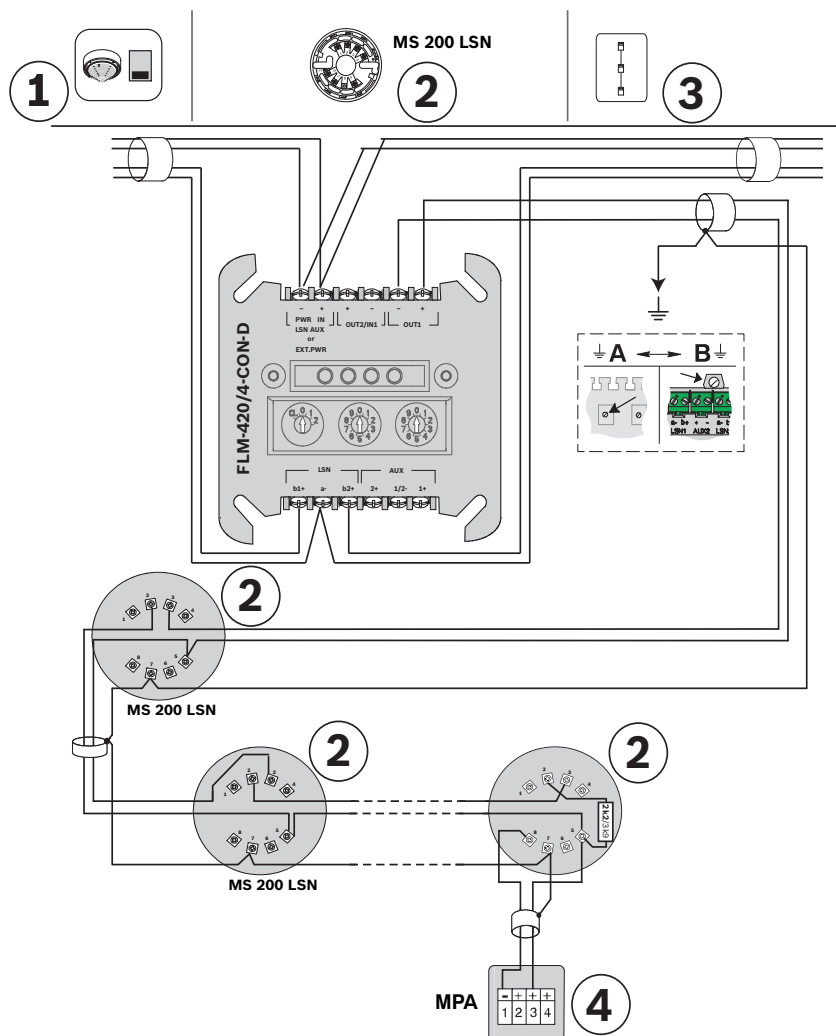
FLM-420/4-CON-D (EN 54-13) 309

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1.5 User notes

The connections in this wiring manual are structured as follows.










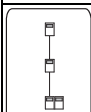
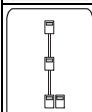




1	Chapter symbols (Section 1.5.1 Chapter symbols, page 21)
2	Connectable peripheral device
3	Connection symbols (Section 1.5.2 Connection symbols, page 22)
4	Optional components (Section 1.5.3 Optional components, page 22)


1.5.1 Chapter symbols

	Automatic detectors		Operating and display panels		Printers
	Power supply		Functional modules		Fire service equipment
	Interface modules		Extinguishing systems		Manual call points
	Signaling devices		Door controls		Transmission units
	Networking				

1.5.2 Connection symbols

	Monitored/ not monitored		With/without feedback		Areas with danger of explosion
	Redundancy		Synchronization		Loop wiring
	Loop wiring with redundant element		Stub wiring		Redundant stub wiring
	Stub wiring with redundant element		Redundant stub wiring with redundant element		Standalone control panel
	Standalone control panel with redundancy				

1.5.3 Optional components

1 ... n	Connecting other devices
 24 V - 28 V ΔU > 6V	Additional power supply

1.6 Resistance values

The following table provides an overview of resistor color coding. The metal film resistors delivered with the product have five color loops, which indicate the resistance value.

Color	1st loop	2nd loop	3rd loop	4th loop (multiplier)	5th loop (tolerance)
Silver				10^{-2}	
Gold				10^{-1}	
Black		0	0	10^0	
Brown	1	1	1	10^1	±1%
Red	2	2	2	10^2	±2%
Orange	3	3	3	10^3	
Yellow	4	4	4	10^4	
Green	5	5	5	10^5	±0.5%
Blue	6	6	6	10^6	±0.25%
Purple	7	7	7	10^7	±0.1%
Gray	8	8	8	10^8	±0.05%
White	9	9	9	10^9	

In accordance with IEC Publ. 62/DIN 41429

Orange – white – black – brown – brown: 3.9k Ohm resistor with 1% tolerance,

Red – red – black – brown – brown: 2.2 k Ohm resistor with 1% tolerance.

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1 Notas

1.1 Contenido

Este manual de diagramas de cableado muestra la forma de conexión de los dispositivos a FPA-5000 Central de incendios.

Los equipos periféricos que se descatalogan se pueden encontrar en el manual de conexiones "Part 2 - Discontinued Products".



¡NOTA!

Las conexiones que se muestran en este documento también son aplicables a la Central de Incendios FPA-1200, siempre que los componentes individuales sean ampliaciones de FPA-1200 Central de incendios aprobadas por Bosch Sicherheitssysteme GmbH.

1.2 Ficha del producto

Las instrucciones de instalación de los componentes de las Centrales de Incendio FPA-5000/ FPA-1200 están disponibles en la guía de instalación incluida.

También hay más información disponible en Internet en:

- www.boschsecurity.es

1.3 Notas importantes

- Utilice únicamente el material de instalación proporcionado por BOSCH Security Systems.
- No realice conexiones ni soldaduras de componentes sin protegerse con un brazalete antiestático de puesta a tierra.
- El montaje y la instalación sólo se deben llevar a cabo por personal cualificado.
- Tenga en cuenta las normas de conexión de autoridades o instituciones de su país.



¡PELIGRO!

El contacto directo con componentes cargados podría llegar a causar la muerte.

Desconecte la fuente de alimentación antes de llevar a cabo la instalación.

1.4 Opciones de búsqueda en el documento

Si desea conocer los dispositivos periféricos que puede conectar a los componentes existentes, consulte el índice.

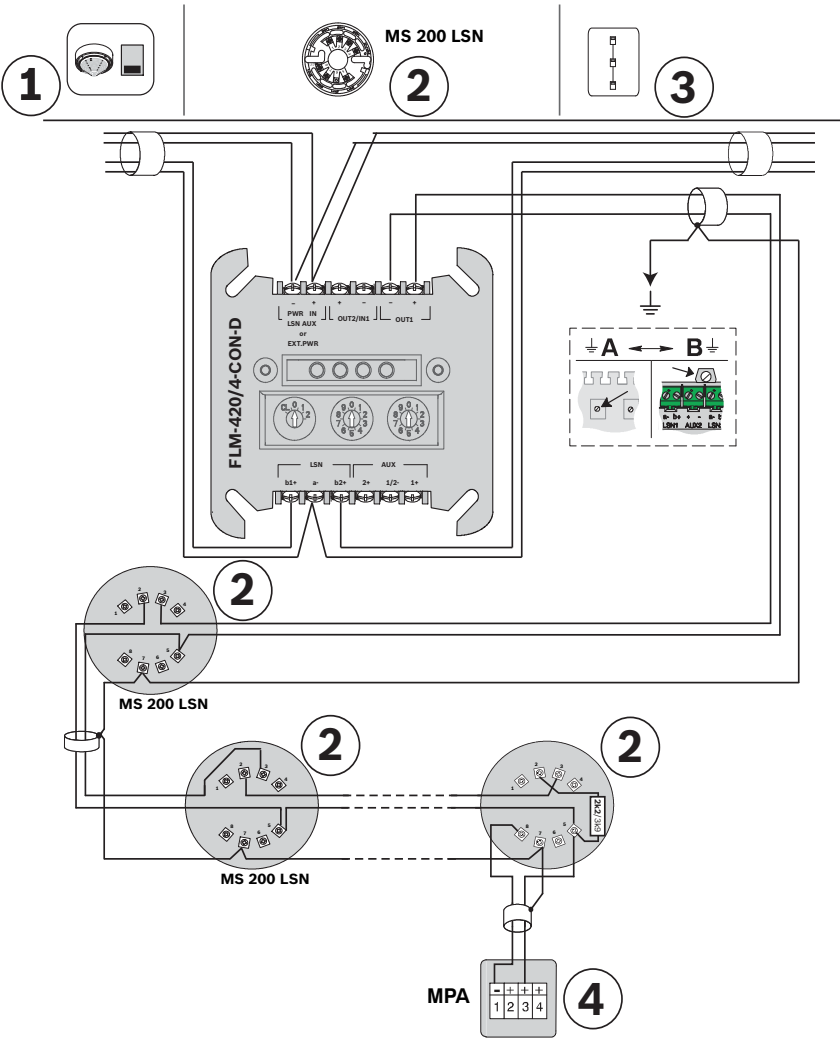
Si desea saber como conectar un dispositivo periférico específico a la central FPA-5000, realice la búsqueda utilizando el índice que comienza en la página 314.

MS 400 ->
CZM 0004 A 114
FLM-420/4-CON-D 235
FLM-420/4-CON-D (EN 54-13) 309
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LSN 0300 A (EN 54-13) 300, 301

1.5

Notas del usuario

Las conexiones de este manual de diagramas de cableado se estructuran de la siguiente forma.
















1	Símbolos del capítulo (Sección 1.5.1 Símbolos del capítulo, Página 25)
2	Dispositivo periférico conectable
3	Símbolos de conexión (Sección 1.5.2 Símbolos de conexión, Página 26)
4	Componentes opcionales (Sección 1.5.3 Componentes opcionales, Página 26)

1.5.1


Símbolos del capítulo

	Detectores automáticos		Paneles de mando y visualización		Impresoras
	Fuente de alimentación		Módulos funcionales		Equipamiento de detección de incendios
	Módulos de interfaz		Sistemas de extinción		Pulsadores de alarma manuales
	Dispositivos de señalización		Controles de puertas		Unidades de transmisión
	Funcionamiento en red				

1.5.2 Símbolos de conexión

	Monitorizado/ no monitorizado		Con/sin retroalimentación		Zonas con peligro de explosión
	Redundancia		Sincronización		Cableado del lazo
	Cableado del lazo con elemento redundante		Cableado del ramal		Cableado del ramal redundante
	Cableado del ramal con elemento redundante		Cableado del ramal redundante con elemento redundante		Panel de control independiente
	Panel de control independiente con redundancia				

1.5.3 Componentes opcionales

1 ... n	Conexión de otros dispositivos
	Fuente de alimentación adicional

1.6 Valores de resistencia

La siguiente tabla describe la codificación de colores de las resistencias. Las resistencias con película de metal que se suministran con el producto tienen lazos de cinco colores, que indican el valor de resistencia.

Color	1. lazo	2. lazo	3. lazo	4. lazo (multiplicador)	5. lazo (tolerancia)
Plateado				10^{-2}	
Dorado				10^{-1}	
Negro		0	0	10^0	
Marrón	1	1	1	10^1	±1%
Rojo	2	2	2	10^2	±2%
Naranja	3	3	3	10^3	
Amarillo	4	4	4	10^4	
Verde	5	5	5	10^5	±0,5%
Azul	6	6	6	10^6	±0,25%
Violeta	7	7	7	10^7	±0,1%
Gris	8	8	8	10^8	±0,05%
Blanco	9	9	9	10^9	

Conforme a la norma IEC 62/DIN 41429

Naranja – blanco – negro – marrón – marrón: resistencia de 3900 ohmios con tolerancia del 1%,

Rojo – rojo – negro – marrón – marrón: resistencia de 2200 ohmios con tolerancia del 1%.

1.7

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1 Huomautuksia

1.1 Sisällysluettelo

Tästä oppaasta näet, miten etälaitteet kytketään FPA-5000-paloilmoitinkeskukseen.
Peripheral devices that are discontinued can be found in the wiring manual "Part 2 - Discontinued Products".



HUOMAUTUS!

Tässä asiakirjassa esitellyt liitännät soveltuvat myös FPA-1200-paloilmoitinkeskukseen, jos yksittäiset komponentit ovat Bosch Sicherheitssysteme GmbH:n hyväksymiä FPA-1200-paloilmoitinkeskuksen laajennusosia.

1.2 Tuotetiedot

FPA-5000/FPA-1200-paloilmoitinkeskusten yksittäisten komponenttien asennusohjeet löytyvät liitteenä olevasta asennusoppaasta.

Lisätietoja on Internet-osoitteessa

- www.boschsecurity.com

1.3 Tärkeitä huomautuksia

- Käytä vain BOSCH Security Systemsin suosittelemia asennusmateriaaleja.
- Käytä muokkaus- ja juotostöissä aina maadoitusranneketta.
- Asennustöitä saavat tehdä vain valtuutetut henkilöt.
- Huomioi paikallisten viranomaisten liitântämääräykset.



VAARA!

Jännitteisten komponenttien koskettaminen voi olla hengenvaarallista.
Katkaise virransyöttö ennen asennustöiden aloittamista.

1.4 Asiakirjan hakumahdollisuudet

Jos haluat tietää, mitä oheislaitteita voit liittää olemassa oleviin komponentteihin, katso lisätietoja sisällysluettelosta.

Jos haluat tietää, miten tietty oheislaitte liitetään FPA-5000-keskukseen, etsi sivulta 314 alkavasta hakemistosta.

MS 400 ->

CZM 0004 A 114

FLM-420/4-CON-D 235

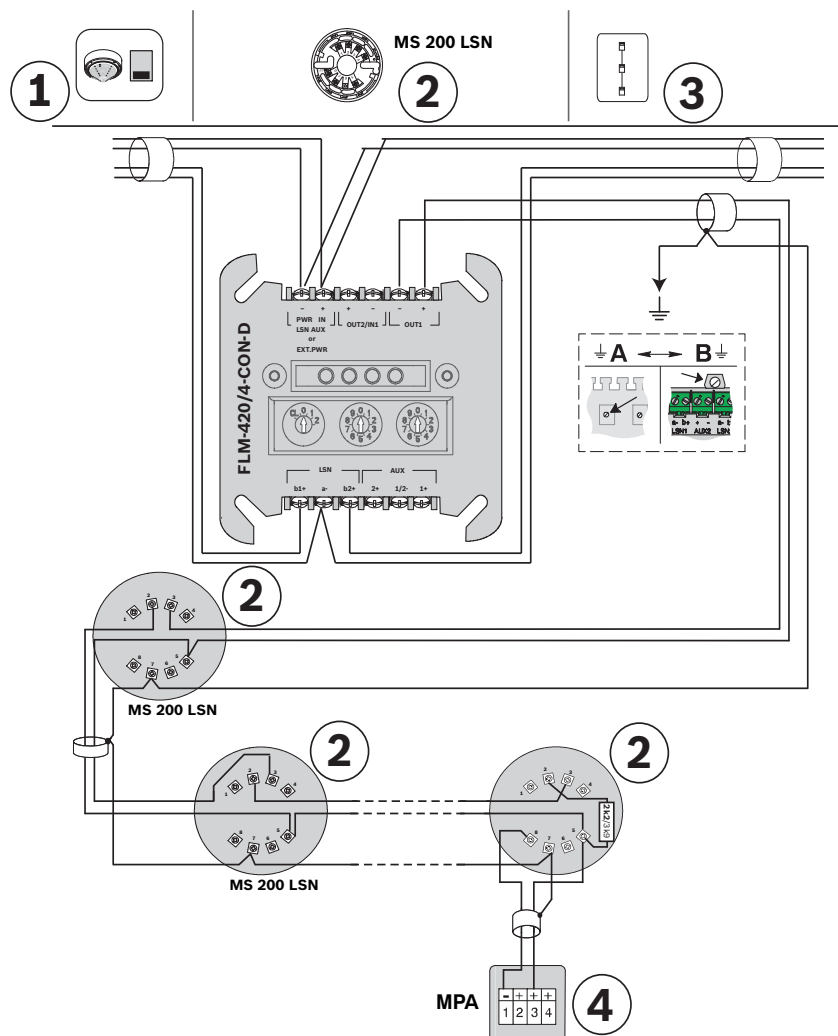
FLM-420/4-CON-D (EN 54-13) 309

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1.5 Käyttäjän huomautukset

Tässä kytkentäoppaassa mainitut kytkennät on ryhmitelty seuraavasti.



1	Luvun symbolit (Osa 1.5.1 Luvun symbolit, Sivu 29)
2	Liitettävä oheislaite
3	Liitäntöjen symbolit (Osa 1.5.2 Liitäntöjen symbolit, Sivu 30)
4	Lisäkomponentit (Osa 1.5.3 Lisäkomponentit, Sivu 30)

1.5.1 Luvun symbolit

	Automaattiset ilmaisimet		Käyttö- ja näyttöpaneelit		Tulostimet
	Virtalähde		Toimintomoduulit		Palolaitoksen laitteet
	Liitäntämoduulit		Sammutusjärjestelmät		Manuaaliset paloilmoitimet
	Signaalilaitteita		Ovien ohjaus		Tiedonsiirtoyksiköt
	Verkotus				

1.5.2 Liitäntöjen symbolit

	Valvottu/ valvoton		Takaisinkytkentä käytössä / ei käytössä		Räjähdysvaaralliset alueet
	Redundanssi		Synkronointi		Silmukkakytkennät
	Redundantin elementin silmukkakytkennät		Linjakytkennät		Redundantit linjakytkennät
	Linjakytkentä, jossa redundantti elementti		Redundantti linjakytkentä, jossa redundantti elementti		Itsenäinen ilmoitinkeskus
	Itsenäinen ilmoitinkeskus, jossa redundanssi				

1.5.3 Lisäkomponentit

1 ... n	Muiden laitteiden liittäminen
	Lisävirtalähde

1.6 Resistanssiarvot

Seuraavassa taulukossa on resistorien värikoodit. Tuotteen mukana toimitetuissa metallifilmiresistoreissa on viisi värisilmukkaa, jotka ilmaisevat resistanssiarvon.

Väri	1. silmukka väylä	2. silmukka väylä	3. silmukkaväylä	4. silmukkaväylä (kertoja)	5. silmukkaväylä (toleranssi)
Hopea				10^{-2}	
Kulta				10^{-1}	
Musta		0	0	10^0	
Ruskea	1	1	1	10^1	±1 %
Punainen	2	2	2	10^2	±2 %
Oranssi	3	3	3	10^3	
Keltainen	4	4	4	10^4	
Vihreä	5	5	5	10^5	±0,5 %
Sininen	6	6	6	10^6	±0,25 %
Purppura	7	7	7	10^7	±0,1 %
Harmaa	8	8	8	10^8	±0,05 %
Valkoinen	9	9	9	10^9	

IEC Public 62/DIN 41429:n mukaisesti

Oranssi – valkoinen – musta – ruskea – ruskea: 3,9 kilo-ohmin resistori ja 1 %:n toleranssi,

Punainen – punainen – musta – ruskea – ruskea: 2,2 kilo-ohmin resistori ja 1 %:n toleranssi.

1.7 Sisällysluettelo

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FLM-420-RHV	259

1 Notes

1.1 Contenu

Ce manuel de câblage décrit la connexion entre les périphériques et la Centrale incendie FPA-5000.

Tous les appareils périphériques abandonnés peuvent être trouvés dans le manuel de câblage "Part 2 - Discontinued Products".



REMARQUE !

Les connexions présentées dans ce document s'appliquent également à la Centrale incendie FPA-1200, à condition que les différents composants soient des extensions de la Centrale incendie FPA-1200 agréées par Bosch Sicherheitssysteme GmbH.

1.2 Fiche produit

Le guide d'installation joint contient les instructions d'installation des composants individuels des Centrales incendie FPA-5000 et FPA-1200.

Pour plus d'informations, visitez le site Web

- www.boschsecurity.fr

1.3 Important

- Utilisez uniquement le matériel d'installation recommandé par BOSCH Security System.
- Portez toujours un bracelet antistatique mis à la terre pour effectuer des travaux de conversion ou de soudure.
- Seul le personnel formé est habilité à l'assemblage et à l'installation.
- Observez les critères de connexion des autorités/institutions régionales.



DANGER !

Tout contact avec des composants sous tension présente un danger de mort.
Débranchez l'alimentation avant de procéder à l'installation.

1.4 Options de recherche du document

Pour savoir quels périphériques vous pouvez connecter aux composants existants, veuillez vous référer à la table des matières.

Si vous souhaitez savoir comment connecter un périphérique spécifique à la centrale FPA-5000, veuillez effectuer votre recherche avec l'index à partir de la page 314.

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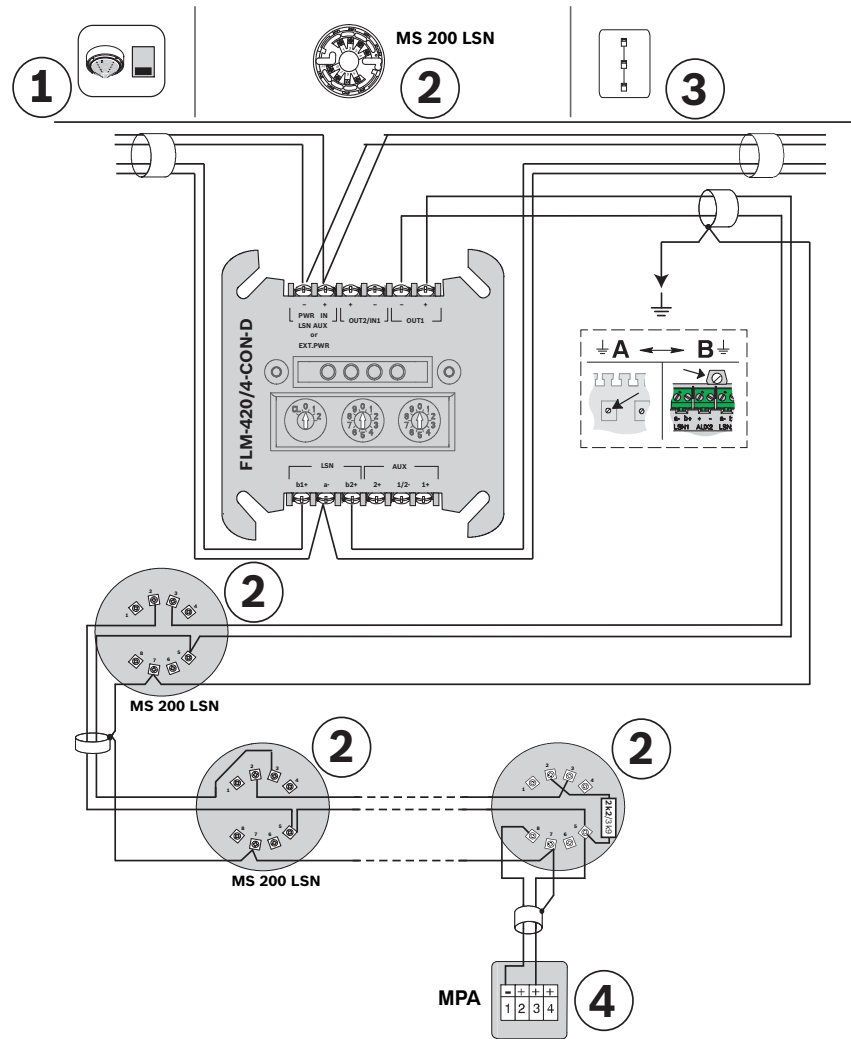
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1.5

Notes pour l'utilisateur

Les connexions décrites dans ce manuel sont structurées comme suit.



1	Marques de chapitre (Section 1.5.1 Marques de chapitre, Page 33)
2	Périphérique connectable
3	Symboles de connexion (Section 1.5.2 Symboles de connexion, Page 34)
4	Composants optionnels (Section 1.5.3 Composants optionnels, Page 34)

1.5.1

Marques de chapitre

	Détecteurs automatiques		Panneaux de commande et d'affichage		Imprimantes
	Alimentation		Modules fonctionnels		Équipement de détection d'incendie
	Modules d'interface		Systèmes d'extinction		Déclencheurs manuels d'alarme incendie
	Dispositifs de signalisation		Commandes de portes		Unités de transmission
	Mise en réseau				

1.5.2 Symboles de connexion

	Surveillé/ non surveillé		Avec/sans retour		Lieux présentant un risque d'explosion
	Redondance		Synchronisation		Câblage en boucle
	Câblage en boucle avec élément redondant		Câblage en tronçon		Câblage en tronçon redondant
	Câblage en tronçon avec élément redondant		Câblage en tronçon redondant avec élément redondant		Centrale d'alarme autonome
	Centrale d'alarme autonome avec redondance				

1.5.3 Composants optionnels

1 ... n	Connexion des autres périphériques
	Alimentation électrique supplémentaire

1.6 Valeurs de résistance

Le tableau suivant présente un aperçu des codes de couleur des résistances. Les résistances avec film métallique livrées avec le produit possèdent cinq anneaux colorés indiquant la valeur de la résistance.

Couleur	1. anneau	2. anneau	3. anneau	4. anneau (multiplicateur)	5. anneau (tolérance)
Argenté				10^{-2}	
Doré				10^{-1}	
Noir		0	0	10^0	
Brun	1	1	1	10^1	±1 %
Rouge	2	2	2	10^2	±2 %
Orange	3	3	3	10^3	
Jaune	4	4	4	10^4	
Vert	5	5	5	10^5	±0,5 %
Bleu	6	6	6	10^6	±0,25 %
Mauve	7	7	7	10^7	±0,1 %
Gris	8	8	8	10^8	±0,05 %
Blanc	9	9	9	10^9	

Conformément à la publication IEC 62/DIN 41429

Orange – blanc – noir – brun – brun : résistance de 3,9 kohms avec tolérance de 1 %,

Rouge – rouge – noir – brun – brun : résistance de 2,2 kohms avec tolérance de 1 %.

1.7

Contenu

Mise en réseau	84
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1 Napomene

1.1 Sadržaj

Ovaj priručnik za shemu el. instalacija opisuje spajanje perifernih uređaja na upravljačku ploču FPA-5000 sustava za dojavu požara.

Periferni uređaji koji se više ne proizvode mogu se naći u uputama za spajanje "Part 2 - Discontinued Products".



NAPOMENA!

Spajanje prikazano u ovom dokumentu vrijedi i za upravljačku ploču FPA-1200 sustava za dojavu požara pod uvjetom da su pojedinačne komponente odobrene od strane tvrtke Bosch Sicherheitssysteme GmbH kao dodaci, tj. proširenja za upravljačku ploču FPA-1200 sustava za dojavu požara.

1.2 Informacija o proizvodu

U priloženim instalacijskim uputama naći ćete upute za instaliranje pojedinačnih komponenti upravljačke ploče FPA-5000/FPA-1200 sustava za dojavu požara.

Dodatne informacije možete potražiti na Internet adresi:

- www.boschsecurity.com

1.3 Važne napomene

- Koristite isključivo materijale za instalaciju koje je preporučila tvrtka BOSCH Security Systems.
- Preinake ili radove na postavljanju izvodite samo s propisnim uzemljenjem pomoću zaštitne vodljive narukvice.
- Sastavljanje i postavljanje smije izvoditi samo stručno osoblje.
- Pridržavajte se lokalnih propisa i zakona o priključivanju.



OPASNOST!

Dodirivanje komponenata pod naponom može imati smrtne posljedice.
Obavezno isključite napajanje prije izvođenja instalacije.

1.4 Mogućnosti za pretraživanje u dokumentu

Kada želite saznati koji se periferni uređaj može spojiti s postojećim komponentama, potražite ga u sadržaju.

Ako želite saznati kako se spaja određeni periferni uređaj na upravljačku ploču FPA-5000 sustava za dojavu požara, potražite ga u indeksu na početnoj stranici 314.

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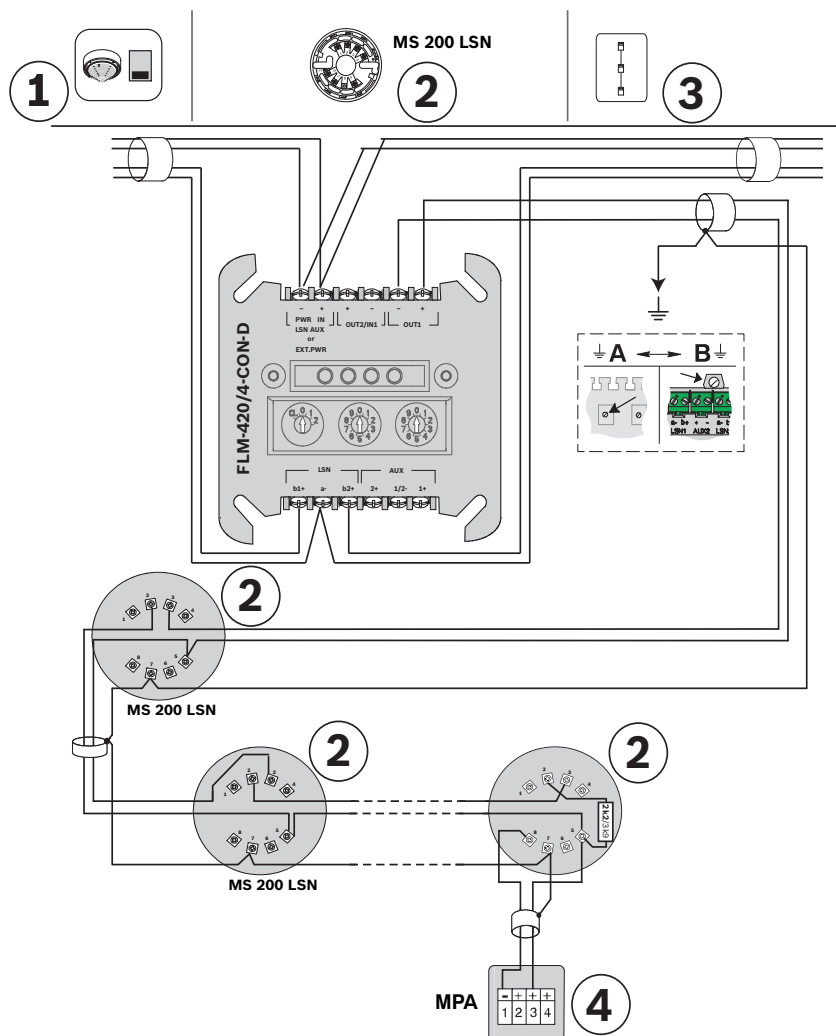
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1.5 Napomene za korisnika

Priključci u ovom priručniku za shemu el. instalacija prikazani su na sljedeći način:












1	Simboli poglavlja (Odjeljak 1.5.1 Simboli poglavlja, Stranica 37)
2	Periferni uređaji koji se mogu spojiti
3	Simboli za spajanje (Odjeljak 1.5.2 Simboli za spajanje, Stranica 38)
4	Opcionalne komponente (Odjeljak 1.5.3 Opcionalne komponente, Stranica 38)


1.5.1 Simboli poglavlja

	Automatski detektori		Upravljačke ploče za rukovanje sustavom i prikaz		Pisači
	Napajanje		Moduli funkcija		Vatrogasna oprema
	Moduli sučelja		Sustavi za gašenje požara		Ručni javljači požara
	Signalni uređaji		Kontrole vrata		Uređaji za prijenos
	Umrežavanje				

1.5.2 Simboli za spajanje

	s nadzorom/ bez nadzora		s/bez povratne veze		Područja s opasnošću od eksplozije
	Redundancija		Sinkronizacija		Ožičenje petlje
	Ožičenje petlje s redundantnim elementom		Ožičenje mreže s jednim izlazom prema vanjskim mrežama		Redundantno ožičenje mreže s jednim izlazom prema vanjskim mrežama
	Ožičenje mreže s jednim izlazom prema vanjskim mrežama s redundantnim elementom		Ožičenje redundantne mreže s jednim izlazom prema vanjskim mrežama s redundantnim elementom		Samostalna upravljačka ploča
	Samostalna upravljačka ploča s redundancijom				

1.5.3 Opcionalne komponente

1 ... n	Spajanje ostalih uređaja
	Dodatno napajanje

1.6 Vrijednosti otpora

U sljedećoj tablici nalazi se prikaz kodiranja u boji za otpornik. Otpornici obloženi metalom koji su isporučeni s proizvodom imaju pet petlji u boji koja označava vrijednost otpora.

Boja	1. petlja	2. petlja	3. petlja	4. petlja (množitelj)	5. petlja (tolerancija)
Srebrna				10^{-2}	
Zlatna				10^{-1}	
Crna		0	0	10^0	
Smeđa	1	1	1	10^1	$\pm 1\%$
Crvena	2	2	2	10^2	$\pm 2\%$
Narančasta	3	3	3	10^3	
Žuta	4	4	4	10^4	
Zelena	5	5	5	10^5	$\pm 0,5\%$
Plava	6	6	6	10^6	$\pm 0,25\%$
Ljubičasta	7	7	7	10^7	$\pm 0,1\%$
Siva	8	8	8	10^8	$\pm 0,05\%$
Bijela	9	9	9	10^9	

U skladu s IEC standardima 62/DIN 41429

Narančasta – bijela – crna – smeđa – smeđa: 3,9 kOhmski otpornik s 1% tolerancije,

Crvena – crvena – crna – smeđa – smeđa: 2,2 kOhmski otpornik s 1% tolerancije.

1.7

Sadržaj

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1 Megjegyzések

1.1 Tartalom

A bekötési kézikönyv külső eszközöknek az FPA-5000 tűzjelző központhoz történő csatlakoztatását tartalmazza.

A kifutott periféria eszközök a vezetékezési útmutató "Part 2 - Discontinued Products" részében találhatók.



FIGYELEM!

Az ebben a dokumentumban ismertetett bekötések az FPA-1200 tűzjelző központra szintén érvényesek, feltéve, ha annak egyedi alkatrészei az FPA-1200 tűzjelző központ Bosch Sicherheitssysteme GmbH által engedélyezett kiegészítői.

1.2 Termékinformáció

Az FPA-5000/FPA-1200 tűzjelző központok alkatrészeinek szerelési utasításait a mellékelt szerelési útmutatóban találja meg.

További információ elérhető az Interneten:

- www.boschsecurity.com

1.3 Fontos megjegyzések

- Csak a BOSCH Security Systems által ajánlott eszközöket használja.
- Átalakítást és forrasztást csak földelő csuklópántot viselve végezzen.
- Az összeszerelést és telepítést csak szakképzett személyzet végezheti.
- Ügyeljen a helyi hatósági/intézményi csatlakoztatási előírásokra.



FIGYELEM!

Feszültség alatti alkatrészek érintése életveszélyes lehet!
Üzembe helyezés előtt kapcsolja ki a tápellátást.

1.4 Keresse ki az opciókat a dokumentumban

Ha azt szeretné tudni, mely külső eszközöket tud csatlakoztatni a már meglévő elemekhez, lapozza fel a tartalomjegyzéket.

Ha azt szeretné tudni, hogyan csatlakoztasson egy adott külső eszközt az FPA-5000 tűzjelző központhoz, keresse ki a tárgymutatóban a 314. oldaltól.

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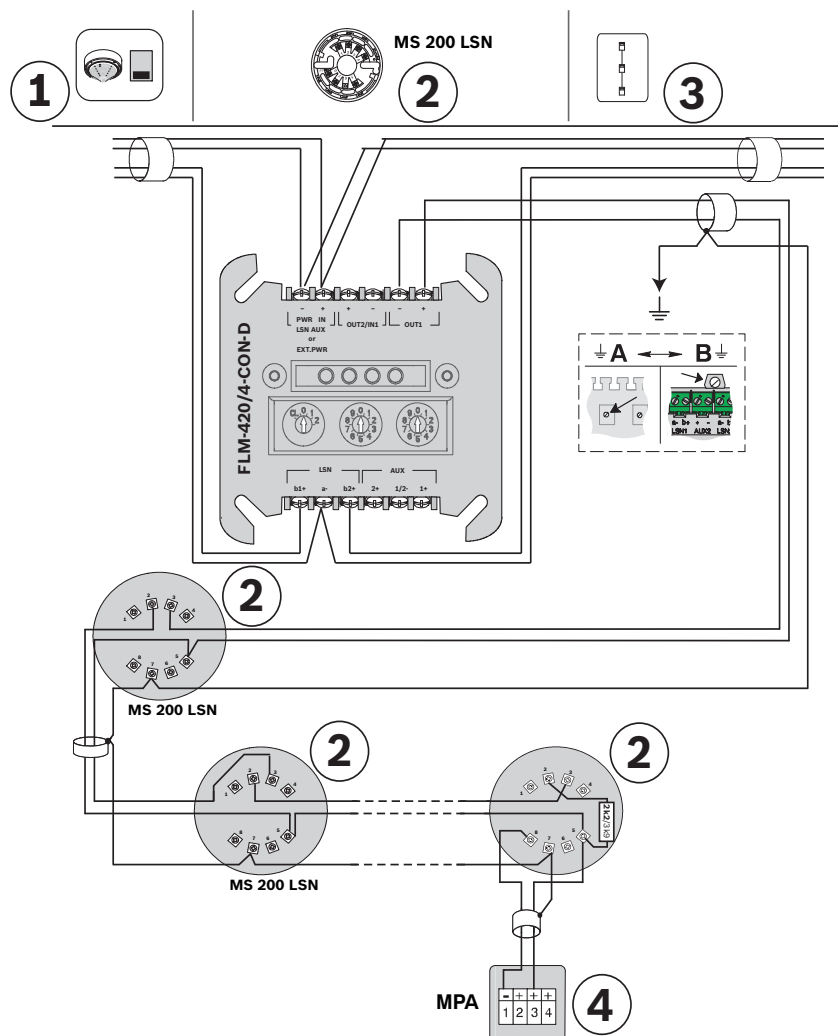
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1.5 Megjegyzések a használatához

A csatlakoztatásokat a bekötési kézikönyv a következőképp tagolja.



1	Fejezetjelölések (Rész 1.5.1 Fejezetjelölések, Oldal 41)
2	Csatlakoztatható külső eszköz
3	Csatlakoztatási jelölések (Rész 1.5.2 Csatlakoztatási jelölések, Oldal 42)
4	Opcionális elemek (Rész 1.5.3 Opcionális elemek, Oldal 42)

1.5.1 Fejezetjelölések

	Automatikus érzékelők		Kezelők és kijelzők		Nyomtatók
	Tápegység		Funkcionális modulok		Tűzoltósági kezelőegység
	Interfész modulok		Oltórendszerek		Kézi jelzésadók
	Jelzőeszközök		Ajtóvezérlők		Távjelző egységek
	Hálózatba kapcsolás				

1.5.2 Csatlakoztatási jelölések

	Felügyelt/ nem felügyelt		Van/nincs visszacsatolás		Robbanásveszélyes területek
	Redundancia		Szinkronizálás		Hurkos vezetékezés
	Hurkos vezetékezés redundáns elemmel		Ágas vezetékezés		Redundáns ágas vezetékezés
	Ágas vezetékezés redundáns elemmel		Redundáns ágas vezetékezés redundáns elemmel		Onálló központ
	Onálló központ redundanciával				

1.5.3 Opcionális elemek

1 ... n	Egyéb eszközök csatlakoztatása
	Kiegészítő tápegység

1.6 Ellenállási értékek

Az alábbi táblázat az ellenállás színkódokat foglalja össze. A fémréteg ellenállásokat öt színes csíkkal látják el, melyek az ellenállás értékét jelölik.

Szín	1. sáv	2. sáv	3. sáv	4. sáv (multiplikátor)	5. sáv (tűrés)
Ezüst				10^{-2}	
Arany				10^{-1}	
Fekete		0	0	10^0	
Barna	1	1	1	10^1	$\pm 1\%$
Vörös	2	2	2	10^2	$\pm 2\%$
Narancssárga	3	3	3	10^3	
Sárga	4	4	4	10^4	
Zöld	5	5	5	10^5	$\pm 0.5\%$
Kék	6	6	6	10^6	$\pm 0.25\%$
Lila	7	7	7	10^7	$\pm 0.1\%$
Szürke	8	8	8	10^8	$\pm 0.05\%$
Fehér	9	9	9	10^9	

Az 62/DIN 41429 IEC Publ. szabvány szerint

Narancssárga – fehér – fekete – barna – barna: 3,9k Ohm ellenállás 1%-os tűréssel,

Vörös – vörös – fekete – barna – barna: 2,2 k Ohm ellenállás 1%-os tűréssel.

1.7**Tartalom**

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1 Note

1.1 Indice

Il presente manuale illustra le modalità di collegamento dei dispositivi periferici alla centrale di rivelazione incendio FPA-5000.

I dispositivi periferici che sono dismessi possono essere trovati nel manuale di collegamento "Part 2 - Discontinued Products".



NOTA!

I collegamenti descritti in questo documento sono validi anche per la centrale di rivelazione incendio FPA-1200, a condizione che i singoli componenti siano estensioni della centrale di rivelazione incendio FPA-1200 approvate da Bosch Sicherheitssysteme GmbH.

1.2 Informazioni sul prodotto

Le istruzioni di installazione per i singoli componenti delle centrali di rivelazione incendio FPA-5000/FPA-1200 sono riportate nella relativa guida all'installazione in dotazione.

Per maggiori informazioni, visitare il sito

- www.boschsecurity.it

1.3 Note importanti

- Utilizzare solo i materiali necessari all'installazione consigliati da BOSCH Security Systems.
- Indossare sempre un cinturino con messa a terra quando si effettuano modifiche e lavori di saldatura.
- L'assemblaggio e l'installazione devono essere eseguiti solo da personale qualificato.
- Osservare i criteri di collegamento stabiliti dalle normative locali vigenti.



PERICOLO!

Il contatto con componenti scoperti potrebbe avere conseguenze letali.

Prima di eseguire l'installazione, scollegare l'alimentazione.

1.4 Opzioni di ricerca nel documento

Se si desidera conoscere i dispositivi periferici disponibili per il collegamento a componenti esistenti, consultare il sommario.

Per sapere come collegare dispositivi periferici specifici alla centrale FPA-5000, effettuare la ricerca utilizzando l'indice a pagina 314.

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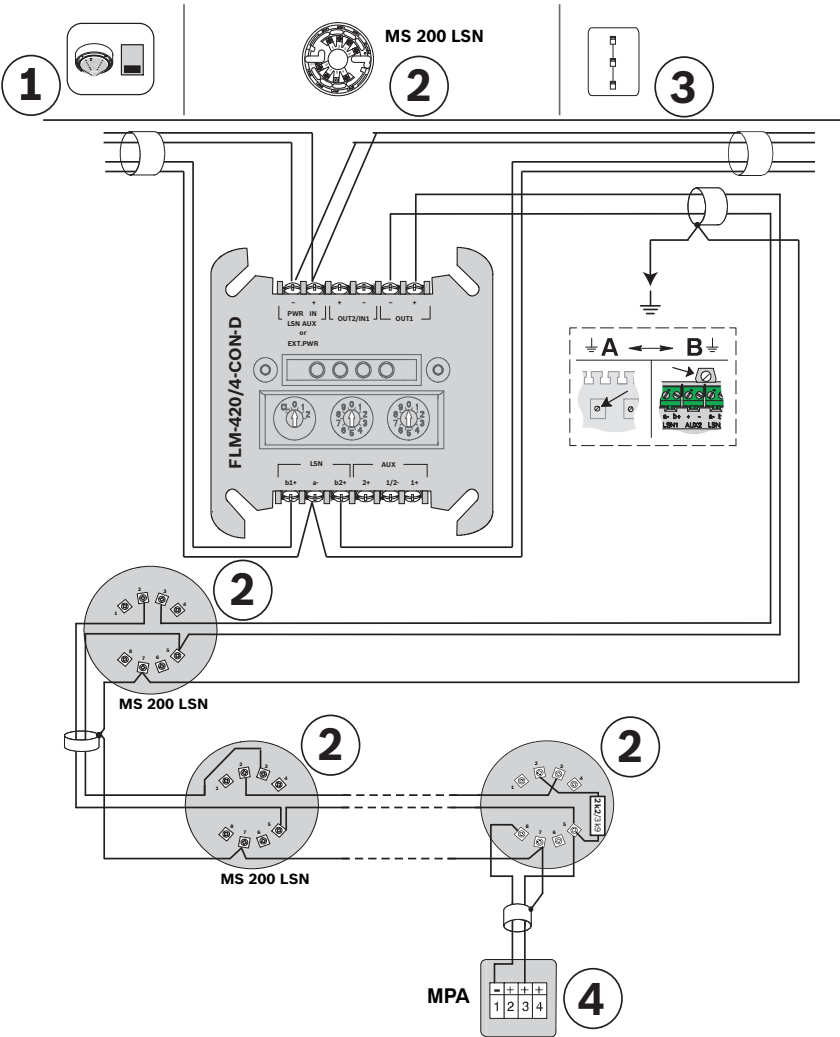
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1.5

Note per l'utente

I collegamenti illustrati nel presente manuale presentano le struttura seguente.
















1	Simboli capitolo (Sezione 1.5.1 Simboli capitolo, Pagina 45)
2	Dispositivo periferico collegabile
3	Simboli collegamento (Sezione 1.5.2 Simboli collegamento, Pagina 46)
4	Componenti opzionali (Sezione 1.5.3 Componenti opzionali, Pagina 46)

1.5.1


Simboli capitolo

	Rivelatori automatici		Pannelli operativi e display		Stampanti
	Alimentatore		Moduli funzionali		Dispositivi per il servizio antincendio
	Moduli interfaccia		Sistemi di spegnimento		Pulsanti manuali
	Dispositivi di segnalazione		Controlli porte		Unità di trasmissione
	Collegamento in rete				

1.5.2 Simboli collegamento

	Monitoraggio attivato/ disattivato		Con/senza feedback		Aree a rischio di esplosione
	Ridondanza		Sincronizzazione		Cablaggio in loop
	Cablaggio in loop con elemento ridondante		Cablaggio in linea aperta		Cablaggio in linea aperta ridondante
	Cablaggio in linea aperta con elemento ridondante		Cablaggio in linea aperta ridondante con elemento ridondante		Centrale di controllo autonoma
	Centrale di controllo autonoma con ridondanza				

1.5.3 Componenti opzionali

1 ... n	Collegamento di altri dispositivi
	Alimentazione supplementare

1.6 Valori di resistenza

La seguente tabella mostra una panoramica delle codifiche dei colori per le resistenze. Le resistenze della pellicola di metallo fornite con il prodotto presentano cinque colori, indicanti un valore per ciascun loop.

Colore	1. loop	2. loop	3. loop	4. loop (moltiplicatore)	5. loop (tolleranza)
Argento				10^{-2}	
Oro				10^{-1}	
Nero		0	0	10^0	
Marrone	1	1	1	10^1	±1%
Rosso	2	2	2	10^2	±2%
Arancione	3	3	3	10^3	
Giallo	4	4	4	10^4	
Verde	5	5	5	10^5	±0,5%
Blu	6	6	6	10^6	±0,25%
Viola	7	7	7	10^7	±0,1%
Grigio	8	8	8	10^8	±0,05%
Bianco	9	9	9	10^9	

Conforme alla pubblicazione IEC 62/DIN 41429

Arancione - Bianco - Nero - Marrone - Marrone: resistenza di 3.900 Ohm con tolleranza dell'1%

Rosso - Rosso - Nero - Marrone - Marrone: resistenza di 2.200 Ohm con tolleranza dell'1%

1.7**Indice**

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1 Opmerkingen

1.1 Inhoud

In deze bedradingshandleiding wordt de aansluiting van randapparatuur op de FPA-5000 Brandmeldcentrale beschreven.

Niet meer leverbare periferie elementen zijn in "Part 2 - Discontinued Products" van het aansluithandboek opgenomen.



AANWIJZING!

De beschreven aansluitingen zijn tevens van toepassing op de FPA-1200 Brandmeldcentrale, mits de afzonderlijke componenten door Bosch Security Systems goedgekeurde uitbreidingen van de FPA-1200 Brandmeldcentrale zijn.

1.2 Productinformatie

Lees de meegeleverde installatiehandleiding voor installatieinstructies bij de afzonderlijke componenten van de FPA-5000/FPA-1200 Brandmeldcentrale.

Voor meer informatie kunt u ook onze website bezoeken:

- www.boschsecurity.nl

1.3 Belangrijke opmerkingen

- Gebruik uitsluitend installatiemateriaal dat door Bosch Security Systems wordt aanbevolen.
- Draag bij conversies en soldeerwerk altijd een aardingspolsband.
- Montage- en installatiewerkzaamheden mogen uitsluitend worden uitgevoerd door gekwalificeerd personeel.
- Houd rekening met aansluitvoorschriften van regionale overheden/instellingen!



GEVAAR!

Het aanraken van spanningvoerende onderdelen kan fataal zijn.

Sluit de spanningstoevoer af voordat u de installatie uitvoert.

1.4 Mogelijkheden voor zoeken in het document

Raadpleeg de inhoudsopgave als u wilt weten welke randapparatuur u kunt aansluiten op bestaande componenten.

Gebruik het trefwoordenregister dat begint op pagina 314 als u wilt weten hoe u een specifiek randapparaat kunt aansluiten op de FPA-5000.

MS 400 ->

CZM 0004 A 114

FLM-420/4-CON-D 235

FLM-420/4-CON-D (EN 54-13) 309

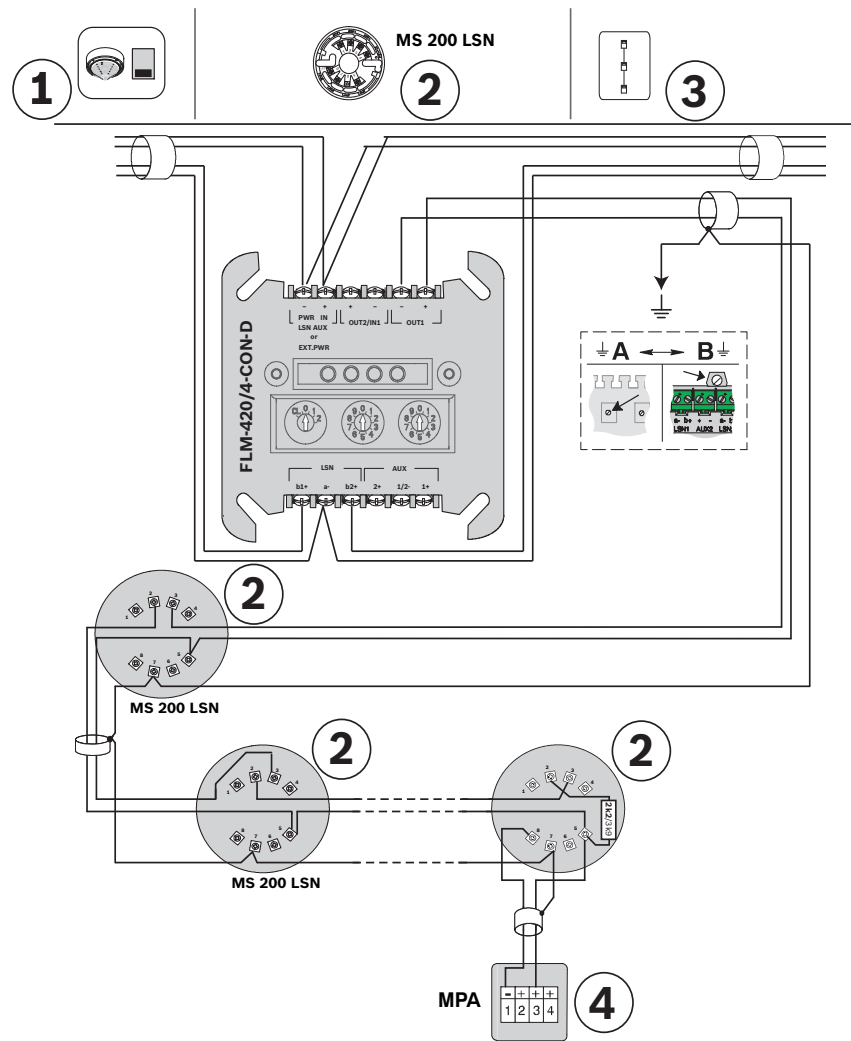
LSN 0300 A 154

LSN 0300 A (EN 54-13) 300, 301

1.5

Opmerkingen voor de gebruiker

De aansluitingen in deze bedradingshandleiding zijn als volgt ingedeeld.
















1	Hoofdstukpictogrammen (Paragraaf 1.5.1 Hoofdstukpictogrammen, Pagina 49)
2	Aan te sluiten randapparaat
3	Aansluitingspictogrammen (Paragraaf 1.5.2 Aansluitingspictogrammen, Pagina 50)
4	Optionele componenten (Paragraaf 1.5.3 Optionele componenten, Pagina 50)

1.5.1


Hoofdstukpictogrammen

	Automatische melders		Bedienings- en displaypanelen		Printers
	Voeding		Functionele modules		Brandweeruitrusting
	Interfacemodules		Brandblussystemen		Handbrandmelders
	Signaalgevers		Deursturing		Transmissiesystemen
	Netwerk				

1.5.2 Aansluitingspictogrammen

	Bewaakt/ niet bewaakt		Met/zonder terugvoer		Omgevingen met explosiegevaar
	Redundantie		Synchronisatie		Lusbedrading
	Lusbedrading met redundant element		Steeklijnbedrading		Redundante steeklijnbedrading
	Steeklijnbedrading met redundant element		Redundante steeklijnbedrading met redundant element		Zelfstandige centrale
	Zelfstandige centrale met redundantie				

1.5.3 Optionele componenten

1 ... n	Andere apparaten aansluiten
	Extra voeding

1.6 Weerstandswaarden

De volgende tabel geeft een overzicht van de kleurcodering van de weerstanden. De metaalfilmweerstanden die met het product zijn meegeleverd hebben vijf kleurbanden die de weerstandswaarde aanduiden.

Kleur	1. band	2. band	3. band	4. band (vermenigvuldigingsfactor)	5. band (tolerantie)
Zilver				10^{-2}	
Goud				10^{-1}	
Zwart		0	0	10^0	
Bruin	1	1	1	10^1	±1%
Rood	2	2	2	10^2	±2%
Oranje	3	3	3	10^3	
Geel	4	4	4	10^4	
Groen	5	5	5	10^5	±0,5%
Blauw	6	6	6	10^6	±0,25%
Paars	7	7	7	10^7	±0,1%
Grijs	8	8	8	10^8	±0,05%
Wit	9	9	9	10^9	

Conform IEC Publ. 62/DIN 41429

Oranje – wit – zwart – bruin – bruin: 3,9 kohm weerstand met 1% tolerantie,

Rood – rood – zwart – bruin – bruin: 2,2 kohm weerstand met 1% tolerantie.

1.7**Inhoud**

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1 Merknader

1.1 Innhold

Denne veiledningen viser hvordan eksterne enheter kobles til FPA-5000-brannmelderen. Peripheral devices that are discontinued can be found in the wiring manual "Part 2 - Discontinued Products".



MERKNAD!

Koblingene som legges frem i dette dokumentet gjelder FPA-1200-brannmelderen, så lenge de individuelle komponentene er godkjente oppdateringer av FPA-1200-brannmelderen til Bosch Sicherheitssysteme GmbH.

1.2 Produktinformasjon

I den vedlagte installasjonsveiledningen finner du også installasjonsinstruksjoner til FPA-5000-/FPA-1200-brannmelderne.

Du finner mer informasjon på Internett på

- www.boschsecurity.com

1.3 Viktige merknader

- Bruk bare installasjonsmateriale som er anbefalt av BOSCH Security Systems.
- Du må alltid ha på deg en håndleddsstropp for jording når du utfører konverterings- og jordingsarbeid.
- Montering og installering skal bare utføres av kvalifisert personell.
- Legg merke til koblingskravene til de lokale myndighetene.



FARE!

Det kan være livsfarlig å røre strømførende komponenter.

Koble fra strømforsyningen før du gjennomfører installasjonen.

1.4 Søkemuligheter i dokumentet

Se innholdsfortegnelsen hvis du vil vite hvilke eksterne enheter du kan koble til eksisterende komponenter.

Hvis du vil vite hvordan du kobler til en spesifikk ekstern enhet til FPA-5000, kan du søke ved hjelp av stikkordsregisteret som begynner på side 314.

MS 400 ->

CZM 0004 A 114

FLM-420/4-CON-D 235

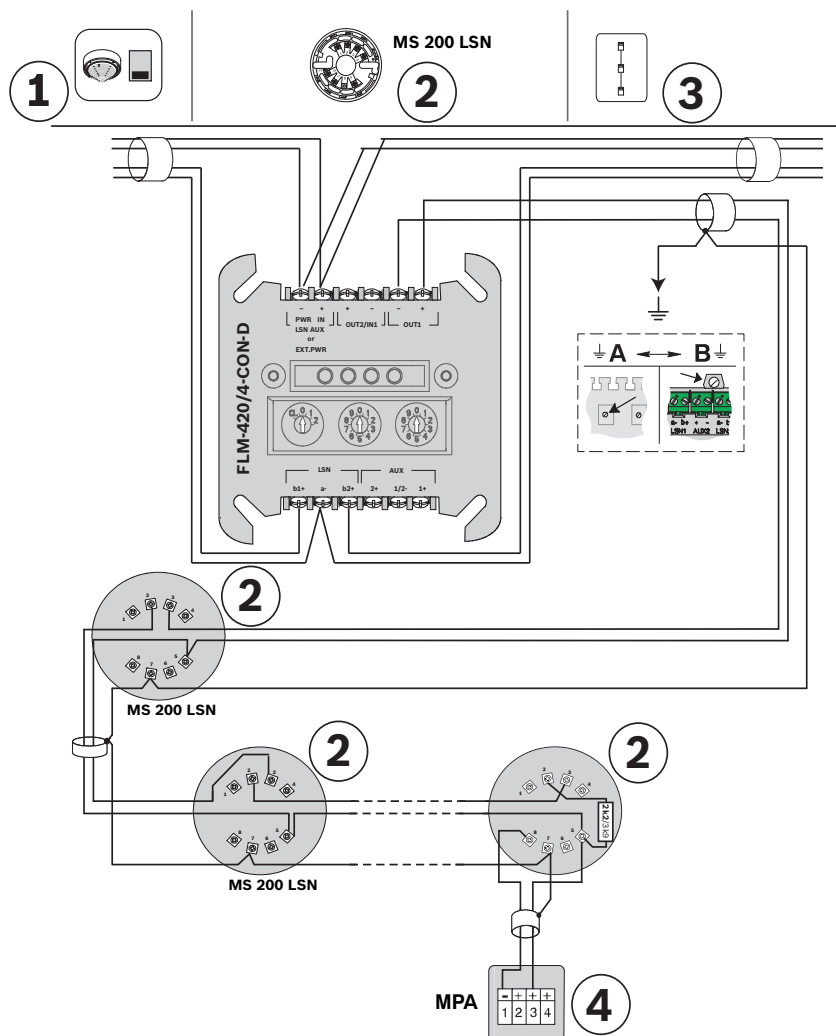
FLM-420/4-CON-D (EN 54-13) 309

LSN 0300 A 154

LSN 0300 A (EN 54-13) 300, 301

1.5 Brukermerknader

Tilkoblingene i denne koblingsveiledningen er ordnet på følgende måte:
















1	Kapittelsymboler (Del 1.5.1 Kapittelsymboler, Side 53)
2	Ekstern enhet som kan tilkobles
3	Tilkoblingssymboler (Del 1.5.2 Tilkoblingssymboler, Side 54)
4	Valgfrie komponenter (Del 1.5.3 Valgfrie komponenter, Side 54)


1.5.1 Kapittelsymboler

	Automatiske detektorer		Drifts- og skjermpaneler		Skrivere
	Strømforsyning		Funksjonelle moduler		Utstyr for brannvesen
	Grensesnittmoduler		Slukningssystemer		Manuelle anropsenheter
	Signalenheter		Dørkontroller		Overføringsenheter
	Nettverk				

1.5.2 Tilkoblingssymboler

	Overvåket / ikke-overvåket		Med/uten tilbakekobling		Områder med eksplosjonsfare
	Redundans		Synkronisering		Sløyfekobling
	Sløyfekobling med redundant element		Stikkledningskobling		Redundant stikkledningskobling
	Stikkledningskobling med redundant element		Redundant stikkledningskobling med redundant element		Frittstående kontrollpanel
	Frittstående kontrollpanel med redundans				

1.5.3 Valgfrie komponenter

1 ... n	Koble til andre apparater
	Ekstra strømforsyning

1.6 Motstandsverdier

Følgende tabell gir en oversikt over fargekoding for resistor. Metallfilmresistorene som leveres med produktet, har fem fargesløyfer som angir motstandsverdien.

Farge	1. sløyfe	2. sløyfe	3. sløyfe	4. sløyfe (multiplikator)	5. sløyfe (toleranse)
Sølv				10^{-2}	
Gull				10^{-1}	
Svart		0	0	10^0	
Brun	1	1	1	10^1	±1 %
Rød	2	2	2	10^2	±2 %
Oransje	3	3	3	10^3	
Gul	4	4	4	10^4	
Grønn	5	5	5	10^5	±0,5 %
Blå	6	6	6	10^6	±0,25 %
Lilla	7	7	7	10^7	±0,1 %
Grå	8	8	8	10^8	±0,05 %
Hvit	9	9	9	10^9	

I henhold til IEC-publ. 62/DIN 41429

Oransje – hvit – svart – brun – brun: 3,9 k Ohm-resistor med 1 % toleranse.

Rød – rød – svart – brun – brun: 2,2 k Ohm-resistor med 1 % toleranse.

1.7

Innhold

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NZM 0002 A	195
RMH 0002 A	208
IOS 0020 A	220
Grensesnittmoduler	223
FLM-420/4-CON-D/S	224
FLM-420-I2-D	247
FLM-420-I2-E/W	248
FLM-420-O1I1-E	250
FLM-420-NAC-D/S	251
FLM-420-RHV	259

1 Notatki

1.1 Spis treści

W niniejszej instrukcji opisano sposoby podłączania urządzeń peryferyjnych do centrali sygnalizacji pożaru FPA-5000.

Urządzenia peryferyjne, które nie są produkowane, można znaleźć w instrukcji "Part 2 - Discontinued Products".



UWAGA!

Połączenia przedstawione w tej dokumentacji mogą być także zastosowane w centrali FPA-1200, jednak pod warunkiem, iż komponenty rozbudowy zostały zatwierdzone przez firmę Bosch Sicherheitssysteme GmbH.

1.2 Informacje o produkcie

Instrukcje instalacji poszczególnych elementów centrali FPA-5000/FPA-1200 można znaleźć w załączonej instrukcji instalacji.

Więcej informacji można uzyskać na stronie internetowej:

- www.boschsecurity.pl

1.3 Ważne

- Korzystać wyłącznie z materiałów instalacyjnych zalecanych przez firmę BOSCH Security Systems.
- Konwersję i prace lutownicze wykonywać wyłącznie po założeniu opaski antyelektrostatycznej na nadgarstek.
- Prace instalacyjne i montażowe powierzać wyłącznie personelowi, który posiada stosowne przeszkolenie.
- Przestrzegać wymagań dotyczących połączeń ustanowionych przez lokalne władze/instytucje.



NIEBEZPIECZENSTWO!

Pamiętać, że dotykanie elementów pod napięciem może grozić śmiercią.
Przed instalacją odłączyć zasilanie urządzenia.

1.4 Wyszukiwanie informacji w dokumencie

Informacje dotyczące urządzeń peryferyjnych, które można podłączać do elementów centrali można znaleźć w spisie treści niniejszej instrukcji.

Aby uzyskać informacje dotyczące sposobu podłączania konkretnego urządzenia peryferyjnego do centrali FPA-5000, należy skorzystać z indeksu, począwszy od strony 314.

MS 400 ->

CZM 0004 A 114

FLM-420/4-CON-D 235

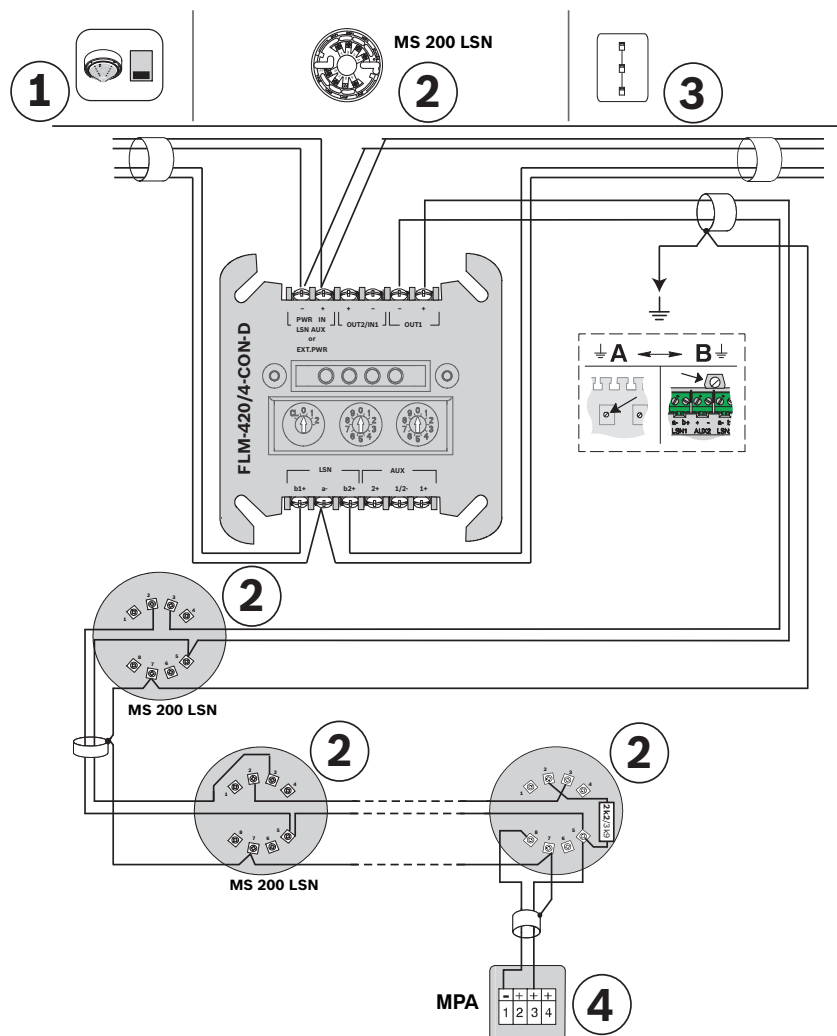
FLM-420/4-CON-D (EN 54-13) 309

LSN 0300 A 154

LSN 0300 A (EN 54-13) 300, 301

1.5 Notatki użytkownika

Poniżej zamieszczono wykaz połączeń opisanych w niniejszej instrukcji okablowania.
















1	Oznaczenia rozdziałów (Punkt 1.5.1 Oznaczenia rozdziałów, Strona 57)
2	Podłączane urządzenie peryferyjne
3	Oznaczenia połączeń (Punkt 1.5.2 Oznaczenia połączeń, Strona 58)
4	Elementy opcjonalne (Punkt 1.5.3 Elementy opcjonalne, Strona 58)


1.5.1 Oznaczenia rozdziałów

	Czujki automatyczne		Panele sterowania i wyświetlacze		Drukarki
	Zasilacz		Moduły funkcyjne		Wyposażenie przeciwpożarowe
	Moduły interfejsu		Systemy gaśnicze		Ręczne ostrzegacze pożarowe
	Urządzenia sygnalizacyjne		Sterowanie drzwiami		Urządzenia transmisyjne
	Połączenie z siecią				

1.5.2 Oznaczenia połączeń

	Z monitoringiem/ bez monitoringu		Ze sprzężeniem / bez sprzężenia		Obszary zagrożone wybuchem
	Nadmiarowość		Synchronizacja		Okablowanie pętli
	Okablowanie pętli z elementem nadmiarowym		Okablowanie odgałęzienia		Nadmiarowe okablowanie odgałęzienia
	Okablowanie odgałęzienia z elementem nadmiarowym		Nadmiarowe okablowanie odgałęzienia z elementem nadmiarowym		Samodzielna centrala sygnalizacji pożaru
	Samodzielna centrala sygnalizacji pożaru z elementem nadmiarowym				

1.5.3 Elementy opcjonalne

1 ... n	Podłączanie innych urządzeń
	Dodatkowy zasilacz

1.6 Wartości rezystancji

Niniejsza tabela zawiera informacje na temat oznaczeń barwnych rezystorów. Dostarczone wraz z produktem rezystory metalizowane posiadają pięć pętli, których oznaczenia barwne wskazują wartość rezystancji.

Kolor	1. Pętla 1	2. Pętla 2	3. Pętla 3	4. Pętla 4 (powielacz)	5. Pętla 5 (tolerancja)
srebrny				10^{-2}	
złoty				10^{-1}	
czarny		0	0	10^0	
brązowy	1	1	1	10^1	±1%
czerwony	2	2	2	10^2	±2%
pomarańczowy	3	3	3	10^3	
żółty	4	4	4	10^4	
zielony	5	5	5	10^5	±0,5%
niebieski	6	6	6	10^6	±0,25%
purpurowy	7	7	7	10^7	±0,1%
szary	8	8	8	10^8	±0,05%
biały	9	9	9	10^9	

zgodnie z normą IEC 62/DIN 41429

Pomarańczowy – biały – czarny – brązowy – brązowy: rezystor 3,9 kΩ z tolerancją 1%,

Czerwony – czerwony – czarny – brązowy – brązowy: rezystor 2,2 kΩ z tolerancją 1%.

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FLM-420-RHV	259

1 Notas

1.1 Índice

Este manual de ligações mostra como estão ligados os dispositivos periféricos ao Painei de Incêndio FPA-5000.

Os dispositivos periféricos que estão descontinuados, podem ser encontrados no manual de ligações "Part 2 - Discontinued Products".



NOTA!

As ligações exibidas neste documento também se aplicam ao Painei de Incêndio FPA-1200, desde que os componentes individuais sejam extensões aprovadas pela Bosch Security Systems para o Painei de Incêndio FPA-1200.

1.2 Informações sobre o produto

As instruções de instalação para os componentes individuais dos Painéis de Incêndio FPA-5000/FPA-1200, encontram-se no manual de instalação incluído.

Estão disponíveis mais informações na Internet em:

- www.boschsecurity.com.pt

1.3 Notas importantes

- Utilize apenas os materiais de instalação recomendados pela BOSCH Security Systems.
- Só efectue trabalhos de conversão e soldadura mediante o uso de uma pulseira anti-estática com ligação à terra.
- A montagem e a instalação só devem ser efectuadas por pessoal qualificado.
- Respeite os critérios de ligação impostos pelas autoridades/instituições regionais.



PERIGO!

O contacto com componentes com corrente pode ser fatal.
Desligue a alimentação antes de executar a instalação.

1.4 Opções de pesquisa no documento

Consulte o índice remissivo caso pretenda obter informações sobre os dispositivos periféricos que pode ligar aos componentes existentes.

Caso pretenda saber qual o método de ligação de um dispositivo periférico específico ao FPA-5000, pesquise através do índice, começando na página 314.

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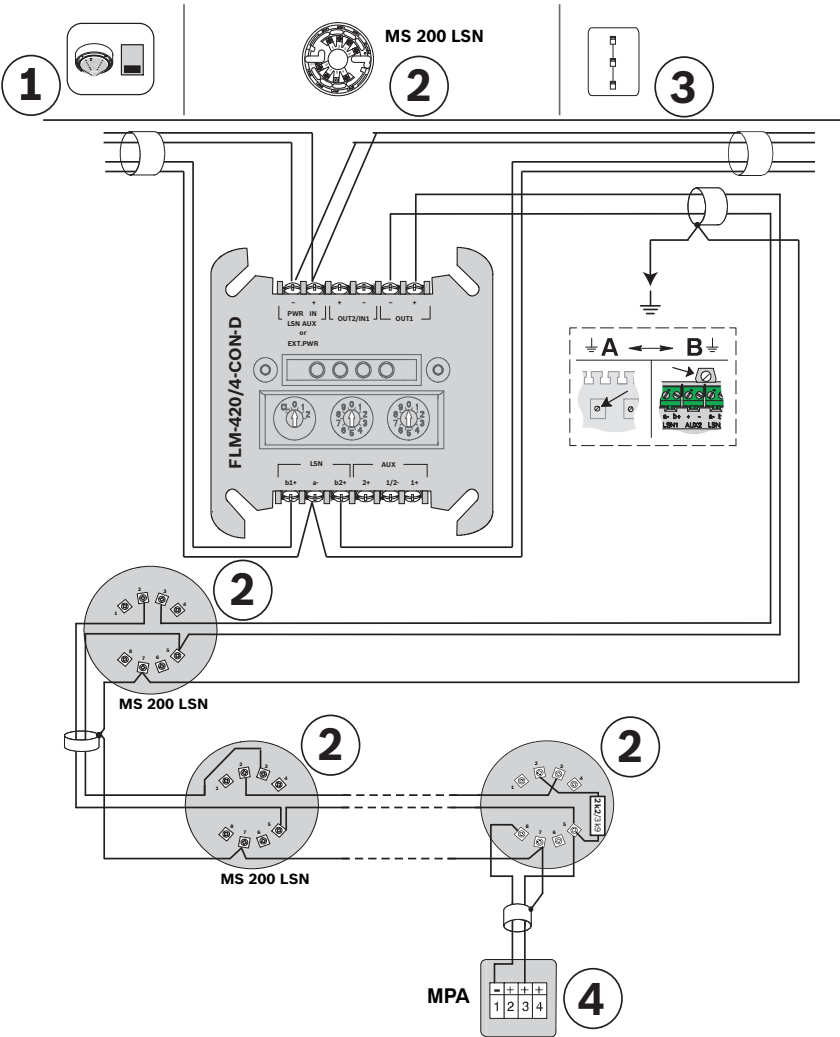
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1.5

Notas do utilizador

As ligações neste manual de ligação estão estruturadas da seguinte forma.
















1	Símbolos de capítulo (Secção 1.5.1 Símbolos de capítulo, Página 61)
2	Dispositivo periférico conectável
3	Símbolos de ligação (Secção 1.5.2 Símbolos de ligação, Página 62)
4	Componentes opcionais (Secção 1.5.3 Componentes opcionais, Página 62)

1.5.1


Símbolos de capítulo

	Detetores automáticos		Painéis de operação e visualização		Impressoras
	Fonte de alimentação		Módulos funcionais		Equipamento de serviço de incêndio
	Módulos interface		Sistemas de extinção		Botões de alarme manual
	Avisadores / sirenes		Controlos de portas		Unidades de transmissão
	Ligação em rede				

1.5.2 Símbolos de ligação

	Monitorizado/ não monitorizado		Com/sem retorno		Áreas com risco de explosão
	Redundância		Sincronização		Ligação em anel (loop)
	Ligação em anel (loop) com elemento redundante		Ligação em ramal		Ligação em ramal redundante
	Ligação em ramal com elemento redundante		Ligação em ramal redundante com elemento redundante		Painel de controlo autónomo
	Painel de controlo autónomo com redundância				

1.5.3 Componentes opcionais

1 ... n	Ligar outros dispositivos
	Fonte de alimentação adicional

1.6 Valores de resistência

A tabela que se segue fornece uma vista geral sobre os códigos de cores das resistências. As resistências de capa metálica entregues com o produto são de precisão (código de cores com cinco anéis).

Cor	1. anel	2. anel	3. anel	4. anel (multiplicador)	5. anel (tolerância)
Prata				10^{-2}	
Dourado				10^{-1}	
Preto		0	0	10^0	
Castanho	1	1	1	10^1	±1 %
Vermelho	2	2	2	10^2	±2 %
Laranja	3	3	3	10^3	
Amarelo	4	4	4	10^4	
Verde	5	5	5	10^5	±0,5 %
Azul	6	6	6	10^6	±0,25 %
Roxo	7	7	7	10^7	±0,1 %
Cinzentos	8	8	8	10^8	±0,05 %
Branco	9	9	9	10^9	

Em conformidade com a norma CEI Publ. 62/DIN 41429

Laranja – branco – preto – castanho – castanho: resistência de 3,9k Ohm com 1 % de tolerância,

Vermelho – vermelho – preto – castanho – castanho: resistência de 2,2 k Ohm com 1 % de tolerância.

1.7**Índice**

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Unidades de transmissão	93
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Painéis de operação e visualização	95
Módulos interface	98
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Módulos funcionais	106
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1 Note

1.1 Cuprins

Acest manual de conexiuni arată cum sunt conectate dispozitivele periferice la panoul detecție incendiu FPA-5000.

Dispozitivele periferice scoade din fabricatie pot fi gasite in manualul de conexiuni "Part 2 - Discontinued Products".



INDICATIE!

Conexiunile descrise în acest document se aplică de asemenea panoului detecție incendiu FPA-1200, cu condiția ca piesele individuale să fie extensii aprobate de Bosch Sicherheitssysteme GmbH pentru panoul detecție incendiu FPA-1200.

1.2 Informații despre produs

Puteți găsi instrucțiuni de instalare pentru componentele individuale ale panourilor detecție incendiu FPA-5000/FPA-1200 în ghidul de instalare inclus.

Informații suplimentare sunt disponibile pe Internet la adresa:

- www.boschsecurity.com

1.3 Note importante

- Utilizați doar materialele de instalare recomandate de BOSCH Security Systems.
- Nu executați lucrări de interconectare și sudură decât dacă purtați un cablu de punere la pământ.
- Operațiunile de asamblare și instalare nu trebuie efectuate decât de personal calificat.
- ?ineți cont de principiile de conectare stipulate de autoritățile/instituțiile regionale.



PERICOL!

Atingerea componentelor sub tensiune poate prezenta pericol de moarte.

Deconectați sursa de alimentare înainte de a efectua lucrările de instalare.

1.4 Opțiuni de căutare în document

Dacă doriți să știți ce dispozitive periferice puteți conecta la componentele existente, consultați cuprinsul.

Dacă doriți să știți cum să conectați un anumit dispozitiv periferic la FPA-5000, consultați indexul, care începe la pagina 314.

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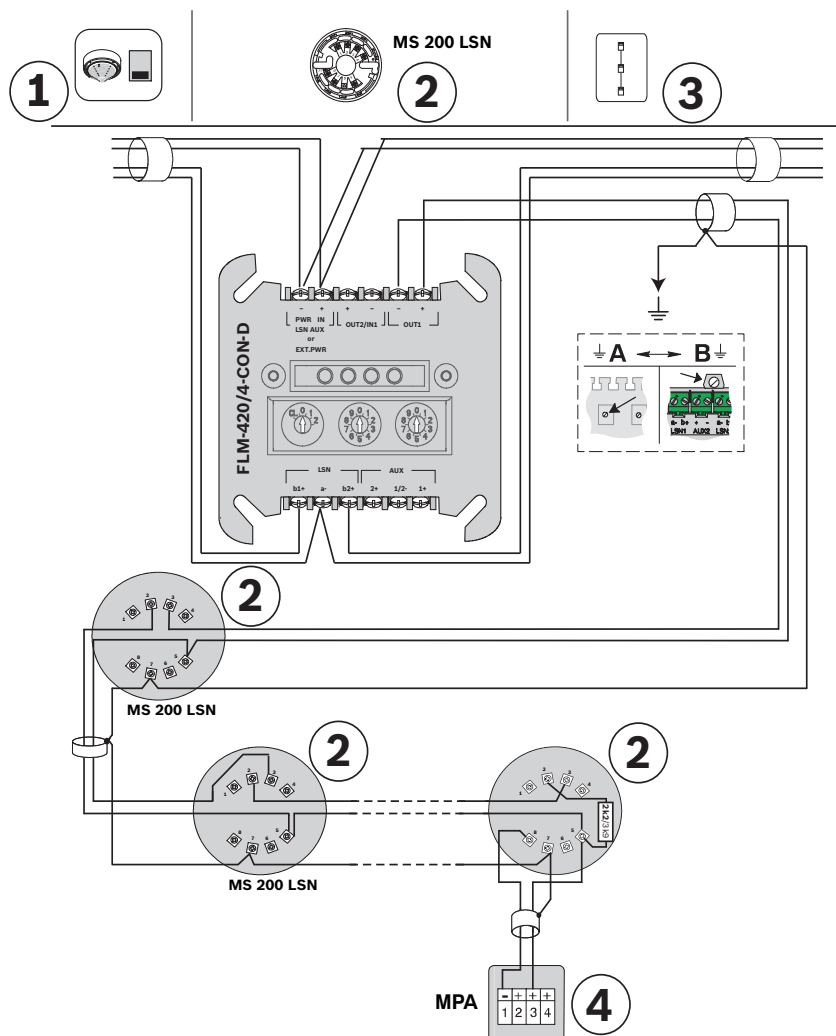
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1.5 Note pentru utilizator

Conexiunile din acest manual de conectare sunt structurate după cum urmează.



1	Simboluri pentru capitol (Secțiunea 1.5.1 Simboluri pentru capitol, Pagina 65)
2	Dispozitive periferice ce pot fi conectate
3	Simboluri pentru conectare (Secțiunea 1.5.2 Simboluri pentru conectare, Pagina 66)
4	Componente opționale (Secțiunea 1.5.3 Componente opționale, Pagina 66)

1.5.1 Simboluri pentru capitol

	Dispozitive automate de detecție		Panouri de comandă și de afișare		Imprimante
	Sursă de alimentare		Module funcționale		Echipament pentru întreținere sistem
	Module de interfață		Sisteme de stingere		Declanșatoare manuale
	Dispozitive de semnalizare		Comenzi ale ușilor		Unități de transmisie
	Conectare în rețea				

1.5.2 Simboluri pentru conectare

	Monitorizat/ nemonitorizat		Cu/fără confirmare		Zone cu pericol de explozie
	Redundanță		Sincronizare		Cablaj tip buclă
	Cablaj tip buclă cu element redundant		Cablaj tip arbore		Cablaj tip arbore redundant
	Cablaj tip arbore cu element redundant		Cablaj tip arbore redundant cu element redundant		Panou de control "standalone"
	Panou de control "standalone" cu redundanță				

1.5.3 Componente opționale

1 ... n	Conectarea altor dispozitive
	Sursă de alimentare suplimentară

1.6 Valorile rezistenței

Următorul tabel oferă o prezentare generală a codului de culori al rezistoarelor. Rezistoarele cu peliculă metalică furnizate cu produsul au cinci inele colorate, care indică valorile rezistenței.

Culoare	1. Inel	2. Inel	3. Inel	4. Inel (multiplicator)	5. Inel (toleranță)
Argintiu				10^{-2}	
Auriu				10^{-1}	
Negru		0	0	10^0	
Maro	1	1	1	10^1	±1%
Roșu	2	2	2	10^2	±2%
Portocaliu	3	3	3	10^3	
Galben	4	4	4	10^4	
Verde	5	5	5	10^5	±0,5%
Albastru	6	6	6	10^6	±0,25%
Mov	7	7	7	10^7	±0,1%
Gri	8	8	8	10^8	±0,05%
Alb	9	9	9	10^9	

Conform IEC Publ. 62/DIN 41429

Portocaliu – alb – negru – maro – maro: rezistor de 3,9 k Ohm cu toleranță de 1%,

Roșu – roșu – negru – maro – maro: rezistor de 2,2 k Ohm cu toleranță de 1%.

1.7**Cuprins**

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1 Примечания

1.1 Содержание

В настоящем руководстве по подключению содержится информация о подключении периферийного оборудования к пожарной панели FPA-5000.

Периферийные устройства, которые уже не производятся, находятся в руководстве по подключению "Part 2 - Discontinued Products".



ЗАМЕЧАНИЕ!

Подключения, описанные в настоящем документе, относятся также к пожарной панели FPA-1200, при условии, что отдельные компоненты представляют собой расширения пожарной панели FPA-1200, утвержденные Bosch Sicherheitssysteme GmbH.

1.2 Информация о продукте

Инструкции по установке отдельных компонентов пожарных панелей FPA-5000/FPA-1200 содержатся в прилагаемом руководстве по установке.

Дополнительные сведения можно найти в Интернете по адресу:

- www.boschsecurity.com

1.3 Важные замечания

- Используйте только установочные материалы, рекомендуемые BOSCH Security Systems.
- Работы по модификации и пайке следует выполнять только с использованием антистатического браслета.
- Сборка и установка должны выполняться только квалифицированным персоналом.
- Следует учитывать критерии подключения, определенные региональными нормами.



ОПАСНОСТЬ!

Прикосновение к компонентам под напряжением может привести к смертельному исходу. Отключите источники питания перед началом установки.

1.4 Параметры поиска в документе

Для получения сведений о том, какие периферийные устройства можно подключать к имеющимся компонентам, обратитесь к оглавлению.

Для получения сведений о порядке подключения конкретного периферийного устройства к FPA-5000 обратитесь к указателю, начинающемуся со стр. 314.

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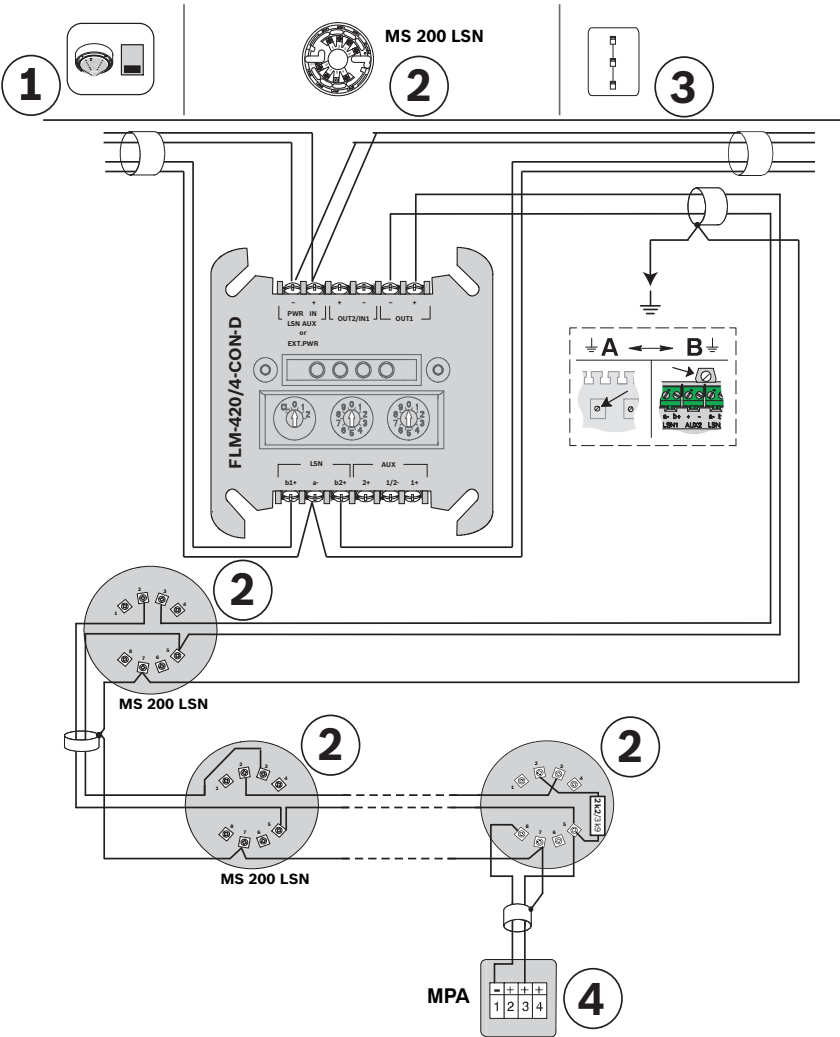
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1.5

Примечания пользователя

Данное руководство по подключению имеет следующую структуру.
















1	Обозначение разделов (Раздел 1.5.1 Обозначение разделов, Страница 69)
2	Подключаемое периферийное устройство
3	Обозначение подключений (Раздел 1.5.2 Обозначение подключений, Страница 70)
4	Дополнительные компоненты (Раздел 1.5.3 Дополнительные компоненты, Страница 70)

1.5.1


Обозначение разделов

	Автоматические извещатели		Панели управления и индикации		Принтеры
	Источники питания		Функциональные модули		Пожарное оборудование
	Интерфейсные модули		Системы пожаротушения		Ручные извещатели
	Устройства оповещения		Устройства управления дверьми		Передающие устройства
	Сетевые подключения				

1.5.2 Обозначение подключений

	Контролируется/ не контролируется		С обратной связью/без обратной связи		Взрывоопасные зоны
	Резервирование		Синхронизация		Кольцевая топология
	Кольцевая топология с резервным элементом		Радиальная топология		Избыточная радиальная топология
	Радиальная топология с резервным элементом		Избыточная радиальная топология с резервным элементом		Автономная контрольная панель
	Автономная контрольная панель с резервированием				

1.5.3 Дополнительные компоненты

1 ... n	Подключение других устройств
	Дополнительный источник питания

1.6 Значения сопротивления

В следующей таблице содержится обзор цветовой маркировки резисторов. Металлические пленочные резисторы, поставляемые с изделием, имеют пять разноцветных колец, соответствующих значению сопротивления.

Цвет	1. кольцо	2. кольцо	3. кольцо	4. кольцо (степень)	5. кольцо (допуск)
Серебристый				10^{-2}	
Золотистый				10^{-1}	
Черный		0	0	10^0	
Коричневый	1	1	1	10^1	$\pm 1\%$
Красный	2	2	2	10^2	$\pm 2\%$
Оранжевый	3	3	3	10^3	
Желтый	4	4	4	10^4	
Зеленый	5	5	5	10^5	$\pm 0,5\%$
Синий	6	6	6	10^6	$\pm 0,25\%$
Малиновый	7	7	7	10^7	$\pm 0,1\%$
Серый	8	8	8	10^8	$\pm 0,05\%$
Белый	9	9	9	10^9	

В соответствии с док. IEC 62/DIN 41429

Оранжевый — белый — черный — коричневый — коричневый: резистор 3,9 кОм с допуском 1%,

Красный — красный — черный — коричневый — коричневый: резистор 2,2 кОм с допуском 1%,

1.7**Содержание**

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1 Opombe

1.1 Vsebina

V tem priročniku z diagrami ožičenja so opisane povezave zunanjih naprav na FPA-5000 (protipožarna plošča).

Zunanji elementi, ki niso več v proizvodnji, so opisani v priročniku ožičenja "Part 2 - Discontinued Products".



OPOMBA!

Opis povezav, opisanih v tej dokumentaciji, velja tudi za FPA-1200 (protipožarna plošča), vendar samo pod pogojem, da je posamezne sestavne dele odobrilo podjetje Bosch Sicherheitssysteme GmbH kot primerne za razširitev FPA-1200 (protipožarna plošča).

1.2 Informacije o izdelku

Navodila za namestitev posameznih sestavnih delov nadzorne plošče FPA-5000/FPA-1200 si lahko ogledate v priloženem priročniku za namestitev.

Več informacij je na voljo na spletnem naslovu:

- www.boschsecurity.com

1.3 Pomembne opombe

- Pri namestitvi uporabljajte samo priložena sredstva, ki jih predlaga podjetje BOSCH Security Systems.
- Predelave ali lotanje lahko izvajate samo, če nosite ozemljitveno zapestnico.
- Postavitev in namestitev lahko opravi samo usposobljeno osebje.
- Upoštevajte zahteve za vzpostavitev povezav, ki jih predpisujejo lokalne oblasti/uradi.



NEVARNOST!

Dotikanje sestavnih delov, ki so pod napetostjo, je lahko smrtno nevarno.

Pred namestitvijo izklopite napajanje.

1.4 Možnosti iskanja v dokumentih

Če želite izvedeti, katere zunanje naprave lahko priklopite na obstoječe sestavne dele, si oglejte vsebino.

Za vzpostavitev povezave določene zunanje naprave s ploščo FPA-5000, začnite s kazalom iskati na strani 314.

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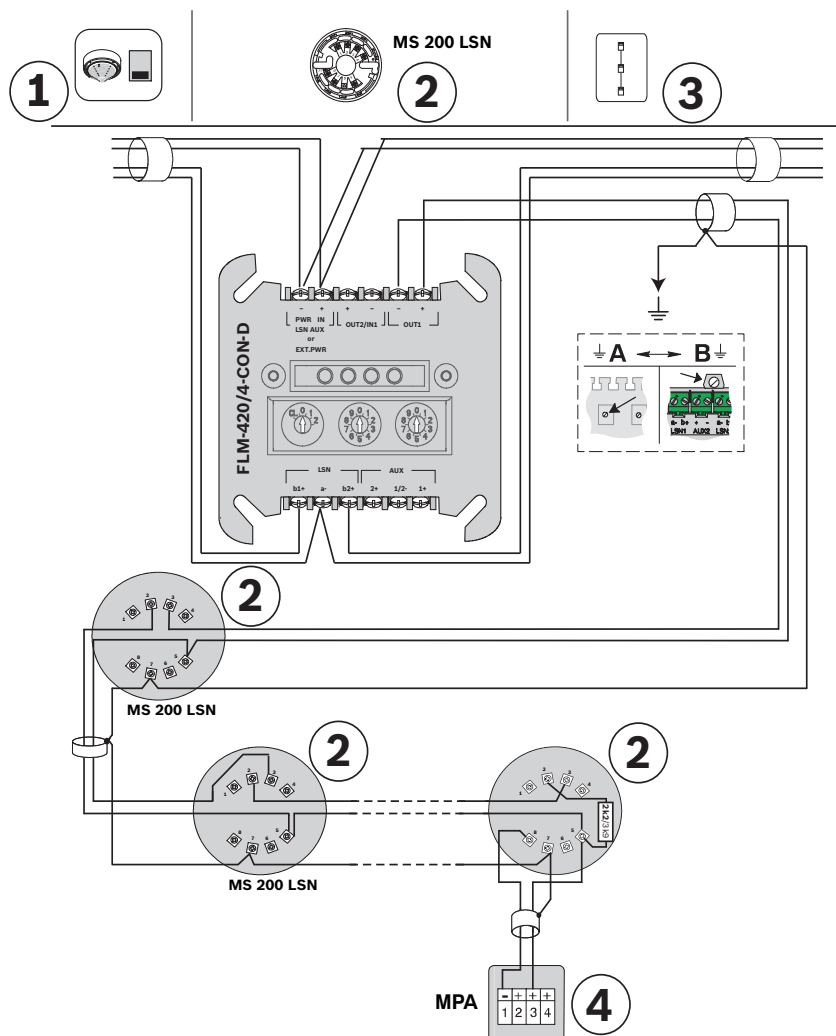
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1.5 Napotki za uporabnike

Povezave v tem priročniku z diagrami ožičenja so ločene na tri skupine.
















1	Oznake poglavij (<i>Del 1.5.1 Oznake poglavij, Stran 73</i>)
2	Zunanja naprava, ki jo je mogoče priključiti
3	Oznake povezav (<i>Del 1.5.2 Oznake povezav, Stran 74</i>)
4	Dodatni sestavni deli (<i>Del 1.5.3 Dodatni sestavni deli, Stran 74</i>)


1.5.1 Oznake poglavij

	Samodejni javljalniki		Nadzorne plošče in zasloni		Tiskalniki
	Napajanje		Delovni moduli		Protipožarna oprema
	Vmesniški moduli		Gasilni sistemi		Ročni javljalniki
	Signalne naprave		Moduli za upravljanje z vrati		Oddajne enote
	Omrežje				

1.5.2 Oznake povezav

	Nadzorovano/ brez nadzora		Z/brez povratnih informacij		Območja z nevarnostjo eksplozije
	Redundantnost		Sinhronizacija		Vezava v zanko
	Vezava v zanko z redundantnim elementom		Vezava z odcepom		Vezava z redundantnim odcepom
	Vezava z odcepom in redundantnim elementom		Vezava z redundantnim odcepom in redundantnim elementom		Samostojna nadzorna plošča
	Samostojna nadzorna plošča z redundanco				

1.5.3 Dodatni sestavni deli

1 ... n	Priklop drugih naprav
 24 V - 28 V ΔU > 6V	Dodatno napajanje

1.6 Vrednosti uporov

V naslednji tabeli so navedene barvne oznake uporov. Upori s kovinsko prevleko, dobavljeni skupaj z izdelkom, imajo pet barvnih zank, ki označujejo upor.

Barva	1. zanka	2. zanka	3. zanka	4. zanka (množitelj)	5. zanka (odstopanje)
Srebrna				10^{-2}	
Zlata				10^{-1}	
Črna		0	0	10^0	
Rjava	1	1	1	10^1	± 1 %
Rdeča	2	2	2	10^2	± 2 %
Oranžna	3	3	3	10^3	
Rumena	4	4	4	10^4	
Zelena	5	5	5	10^5	± 0,5 %
Modra	6	6	6	10^6	± 0,25 %
Vijolična	7	7	7	10^7	± 0,1 %
Siva	8	8	8	10^8	± 0,05 %
Bela	9	9	9	10^9	

V skladu s standardi IEC 62/DIN 41429

Oranžna – bela – črna – rjava – rjava: 3,9 kΩ upor z 1 % odstopanjem,

Rdeča – Rdeča – črna – rjava – rjava: 2,2 kΩ upor z 1 % odstopanjem,

1.7

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1 Anteckningar

1.1 Innehåll

Den här handboken visar hur kringutrustning ansluts till FPA-5000 Brandlarmscentral. Pereferi enheter som ej är anslutna kan hittas i inkopplingsmanual "Part 2 - Discontinued Products".

**OBS!**

Anslutningarna i det här dokumentet gäller också för FPA-1200 Brandlarmscentral förutsatt att de enskilda komponenterna är godkända av Bosch Sicherheitssysteme GmbH för FPA-1200 Brandlarmscentral.

1.2 Produktinformation

Du kan hitta installationsanvisningar för de enskilda komponenterna i FPA-5000/FPA-1200 Brandlarmscentral i den bifogade installationsguiden.

Mer information finns på Internet:

- www.boschsecurity.com

1.3 Viktiga anmärkningar

- Använd endast installationsmaterial som rekommenderas av BOSCH Security Systems.
- Se till att ha ett jordat handledsband när du utför konverterings- och lödningsarbeten.
- Montering och installation får endast utföras av kvalificerad personal.
- Följ gällande bestämmelser beträffande anslutningar.

**FARA!**

Det kan vara livsfarligt att röra strömförande komponenter.
Koppla ifrån strömförsörjningen innan du utför installationen.

1.4 Sökalternativ i dokumentet

Mer information om vilken kringutrustning som du kan anslutna till befintliga komponenter finns i innehållsförteckningen.

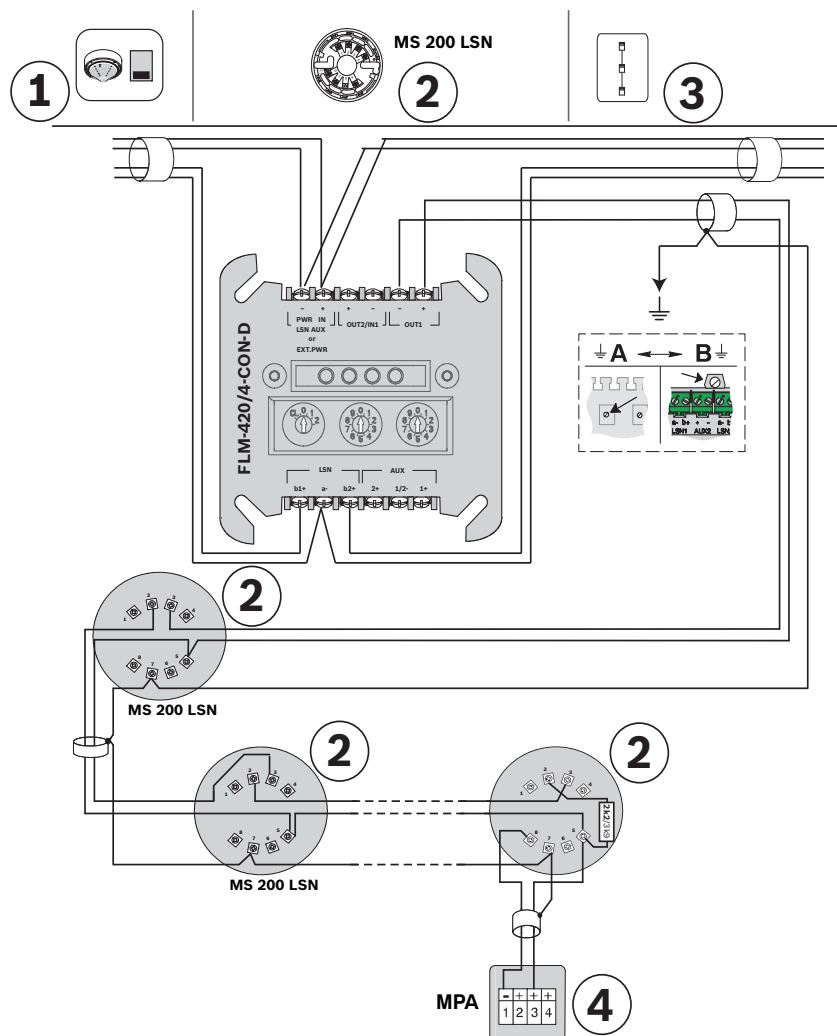
Om du vill veta hur du ansluter en specifik kringutrustningsenhet till FPA-5000 använder du sökindexet på sidan 314.

MS 400 ->

CZM 0004 A 114
FLM-420/4-CON-D 235
FLM-420/4-CON-D (EN 54-13) 309
LSN 0300 A 154
LSN 0300 A (EN 54-13) 300, 301

1.5 Användaranmärkningar

Anslutningarna i den här handboken är strukturerade på följande sätt.
















1	Kapitelsymboler (Sektion 1.5.1 Kapitelsymboler, Sidan 77)
2	Anslutningsbar kringutrustning
3	Anslutningssymboler (Sektion 1.5.2 Anslutningssymboler, Sidan 78)
4	Komponenter (tillval) (Sektion 1.5.3 Komponenter (tillval), Sidan 78)


1.5.1 Kapitelsymboler

	Automatiska detektorer		Drifts- och displayenheter		Skrivare
	Strömförsörjning		Funktionsmoduler		Brandkärsutrustning
	Interfacemoduler		Brandsläckarsystem		Manuella larmknappar
	Signalenheter		Dörrstyrning		Överföringsenheter
	Nätverk				

1.5.2 Anslutningssymboler

	Övervakas/ övervakas inte		Med/utan återkoppling		Områden med explosionsrisk
	Redundans		Synkronisering		Slinga
	Slinga med redundant element		Förgrening		Redundant förgrening
	Förgrening med redundant element		Redundant förgrening med redundant element		Fristående centralapparat
	Fristående centralapparat med redundans				

1.5.3 Komponenter (tillval)

1 ... n	Ansluta andra enheter
	Ytterligare strömförsörjning

1.6 Resistansvärden

I följande tabell visas en översikt över motståndets färgkodning. Metallfilmsmotstånden som följer med produkten har fem färgslingor som indikerar motståndsvärdet.

Färg	1. slinga	2. slinga	3. slinga	4. slinga (multiplikator)	5. slinga (tolerans)
Silver				10^{-2}	
Guld				10^{-1}	
Svart		0	0	10^0	
Brun	1	1	1	10^1	±1%
Röd	2	2	2	10^2	±2%
Orange	3	3	3	10^3	
Gul	4	4	4	10^4	
Grön	5	5	5	10^5	±0.5%
Blå	6	6	6	10^6	±0.25%
Lila	7	7	7	10^7	±0.1%
Grå	8	8	8	10^8	±0.05%
Vit	9	9	9	10^9	

Uppfyller IEC Publ. 62/DIN 41429

Orange – vit – svart – brun – brun: 3,9k Ohm motstånd med 1% tolerans

Röd – röd – svart – brun – brun: 2,2 k Ohm motstånd med 1% tolerans.

1.7**Innehåll**

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1 Notlar

1.1 İçindekiler

Bu kablo bağlantı kılavuzu, çevre birim aygıtlarının FPA-5000 Yangın Paneline nasıl bağlanacağını gösterir.

Devam etmeyen tüm saha cihazları kablolama kılavuzunda bulunabilir. "Part 2 - Discontinued Products".



NOT!

Diğer parçaların Bosch Sicherheitssysteme GmbH onaylı FPA-1200 Yangın Paneli uzatmaları olması kaydıyla, bu belgede gösterilen bağlantılar FPA-1200 Yangın Paneli için de geçerlidir.

1.2 Ürün bilgileri

FPA-5000/FPA-1200 Yangın Panellerinin diğer parçaları için kurulum talimatlarını ekteki kurulum kılavuzunda bulabilirsiniz.

Daha fazla bilgi için aşağıdaki Internet adresine bakın:

- www.boschsecurity.com

1.3 Önemli açıklamalar

- Kurulum malzemelerini sadece BOSCH Güvenlik Sistemleri tarafından önerilen şekilde kullanın.
- Değiştirme ve lehim çalışmaları yaparken mutlaka topraklama bilekliği kullanın.
- Montaj ve kurulum yalnızca yetkili personel tarafından gerçekleştirilmelidir.
- Yerel yetkililerin/kurumların bağlantı kriterlerini dikkate alın.



TEHLİKE!

Elektrik yüklü parçalara dokunmak ölümcül olabilir.
Kurulum işleminden önce güç kaynağı bağlantısını kesin.

1.4 Belgedeki seçenekleri inceleyin

Mevcut parçalara hangi çevre birim aygıtlarını bağlayabileceğinizi öğrenmek istiyorsanız, lütfen içindekiler bölümüne bakın.

Belirli bir çevre birim aygıtını FPA-5000'e nasıl bağlayacağınızı öğrenmek istiyorsanız, 314 sayfasında başlayan dizini kullanarak arama yapın.

MS 400 ->

CZM 0004 A 114

FLM-420/4-CON-D 235

FLM-420/4-CON-D (EN 54-13) 309

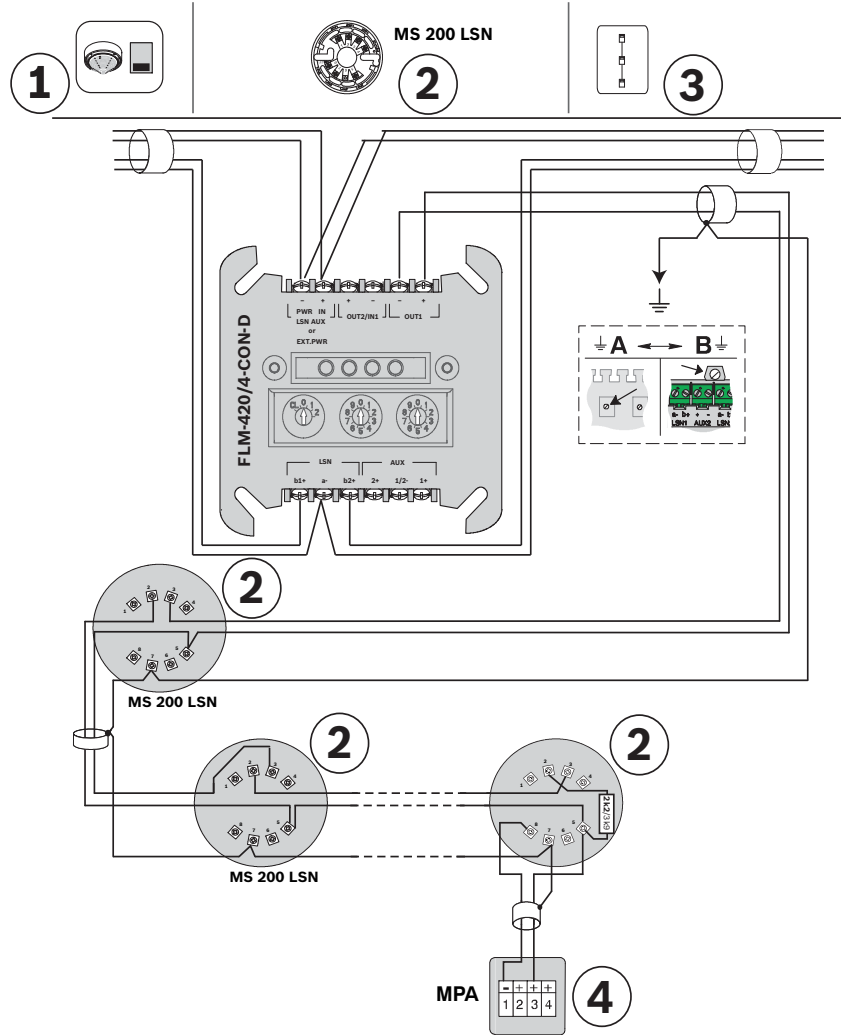
LSN 0300 A 154

LSN 0300 A (EN 54-13) 300, 301

1.5

Kullanıcı notları

Bu kablo bağlantı kılavuzundaki bağlantılar aşağıdaki şekilde yapılandırılmıştır.
















1.5.1


Bölüm simgeleri

	Otomatik dedektörler		Çalışma ve ekran panelleri		Yazıcılar
	Güç kaynağı		Fonksiyonel modüller		Yangın servis ekipmanı
	Arayüz modülleri		Yangın söndürme sistemleri		Manuel yangın butonları
	Sinyal aygıtları		Kapı kontrolleri		Aktarım üniteleri
	Ağ				

1.5.2 Bağlantı simgeleri

	İzlemeli/ izlemesiz		Geri beslemeli/geri beslemesiz		Patlama tehlikesi bulunan bölgeler
	Yedekleme		Senkronizasyon		Devre kablo bağlantısı
	Yedek öge ile devre kablo bağlantısı		Saplama kablo bağlantısı		Yedek saplama kablo bağlantısı
	Yedek öge ile saplama kablo bağlantısı		Yedek öge ile yedek saplama kablo bağlantısı		Bağımsız kontrol paneli
	Yedekleme ile bağımsız kontrol paneli				

1.5.3 Opsiyonel parçalar

1 ... n	Diğer aygıtların bağlanması
	Ek güç kaynağı

1.6 Direnç değerleri

Aşağıdaki tablo, rezistör renk kodlamasına genel bakış sağlar. Ürünle birlikte verilen metal film rezistörleri, direnç değerini gösteren beş renkli devreye sahiptir.

Renk	1. devre	2. devre	3. devre	4. devre (çoklayıcı)	5. devre (tolerans)
Gümüş				10^{-2}	
Altın				10^{-1}	
Siyah		0	0	10^0	
Kahverengi	1	1	1	10^1	$\pm \%1$
Kırmızı	2	2	2	10^2	$\pm \%2$
Turuncu	3	3	3	10^3	
Sarı	4	4	4	10^4	
Yeşil	5	5	5	10^5	$\pm \%0,5$
Mavi	6	6	6	10^6	$\pm \%0,25$
Mor	7	7	7	10^7	$\pm \%0,1$
Gri	8	8	8	10^8	$\pm \%0,05$
Beyaz	9	9	9	10^9	

IEC Publ. 62/DIN 41429 ile uyumlu

Turuncu – beyaz – siyah – kahverengi – kahverengi: %1 tolerans ile 3,9k Ohm rezistör

Kırmızı – kırmızı – siyah – kahverengi – kahverengi: %1 tolerans ile 2,2k Ohm rezistör

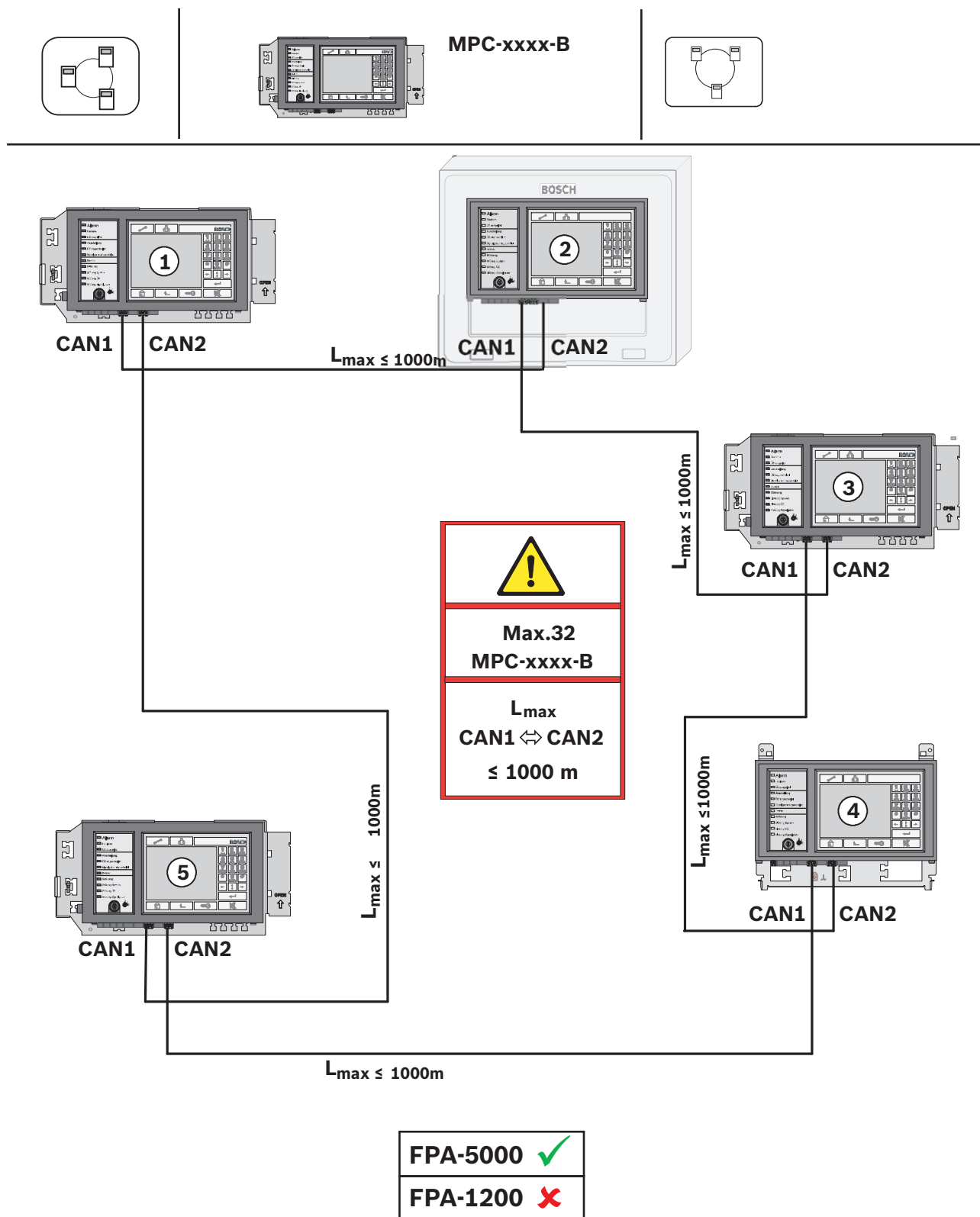
1.7

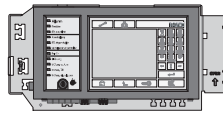
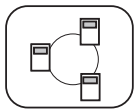
İçindekiler

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FLM-420-NAC-D/S	251
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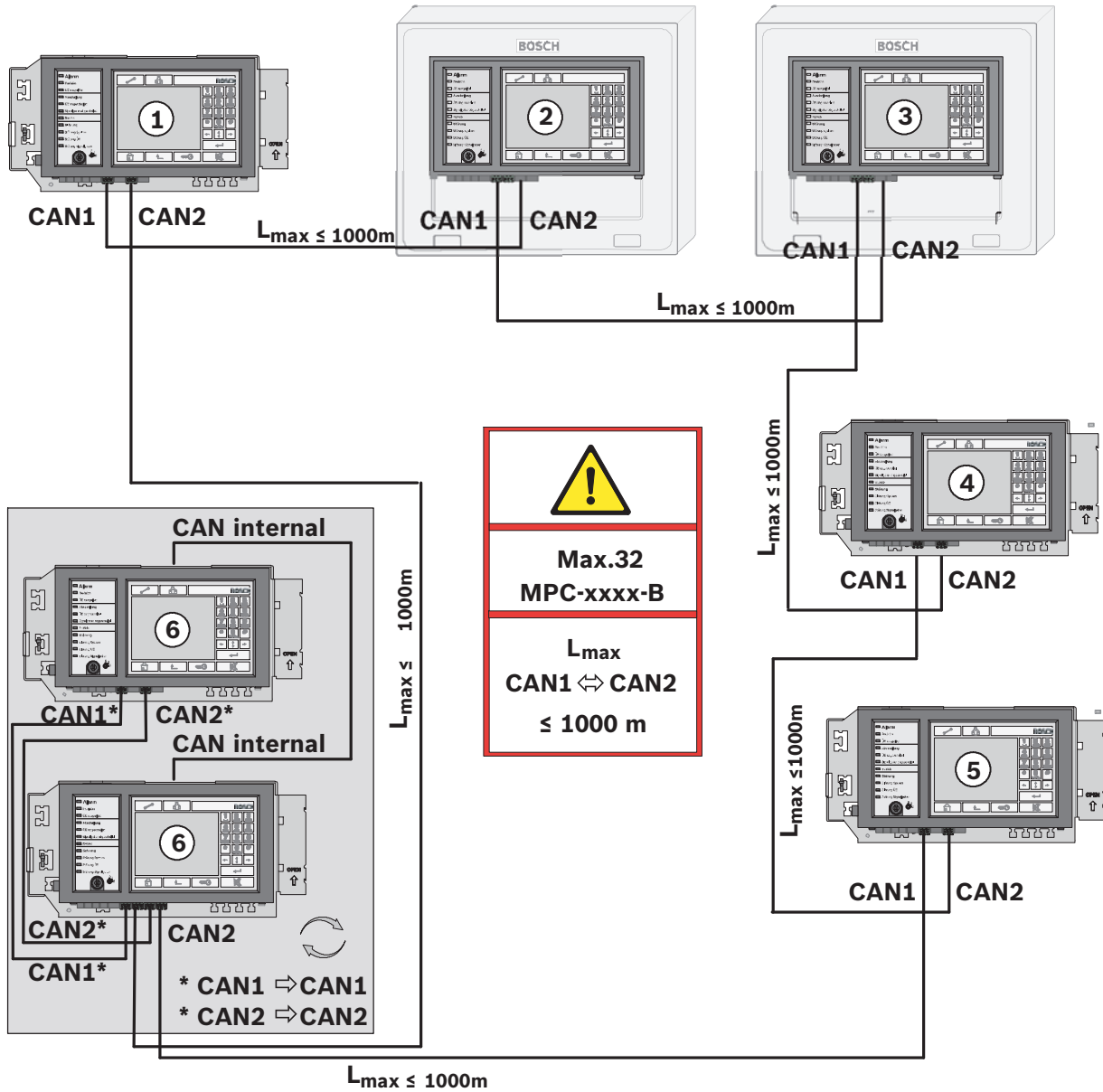
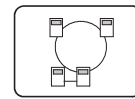
Vernetzung

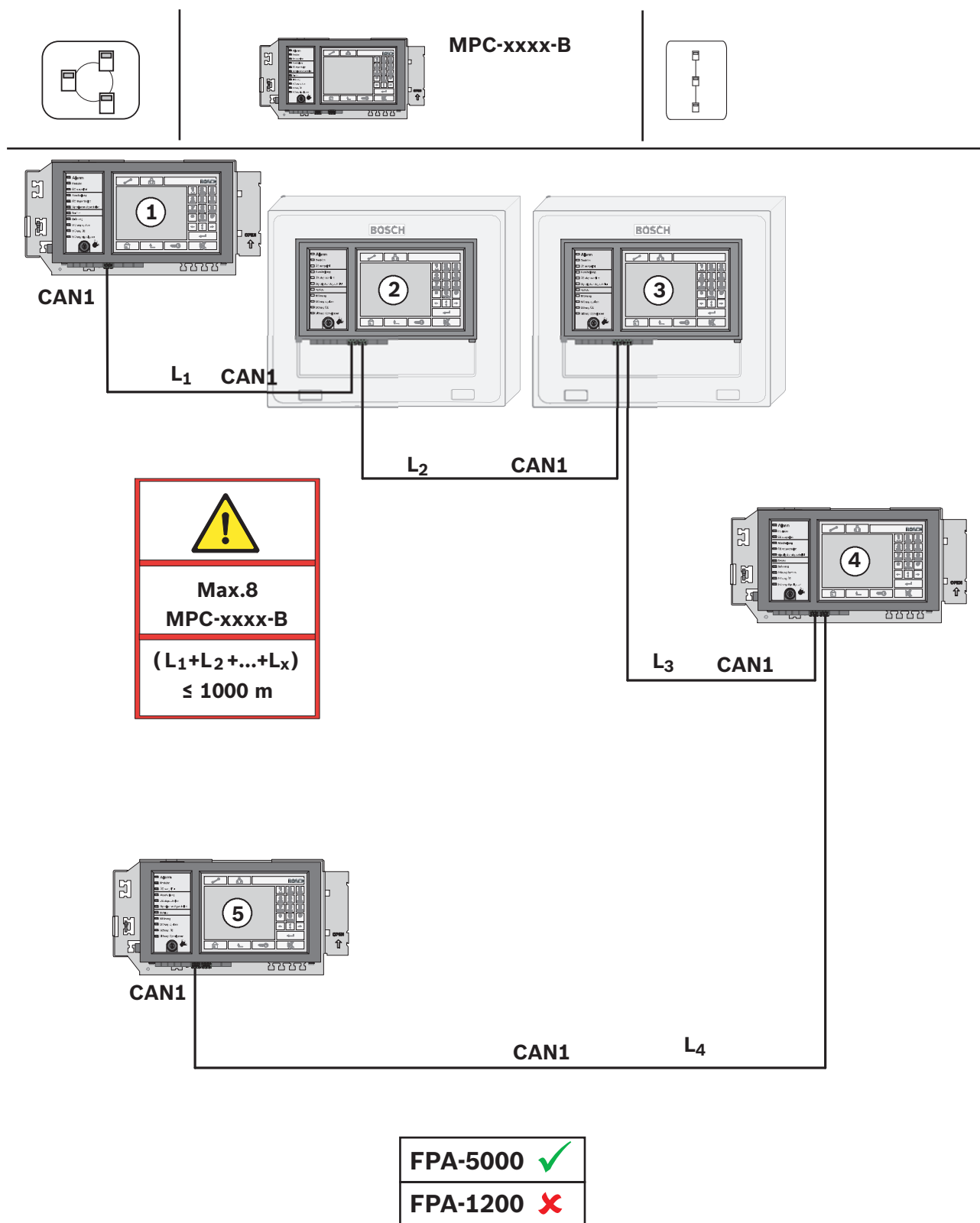
EN	Networking	HU	Hálózatra kapcsolás
EL	Δικτύωση	DA	Netværksfunktioner
IT	Collegamento in rete	FR	Mise en réseau
NL	Netwerk	HR	Umrežavanje
PL	Połączenie z siecią	RO	Conectare în rețea
PT	Ligação em rede	SV	Nätverk
RU	Сетевые подключения	SL	Omrežje
ES	Funcionamiento en red	FI	Verkotus
CS	Propojení do sítě	NO	Nettverk
TR	Ağ		

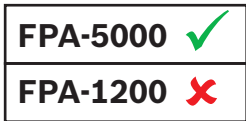


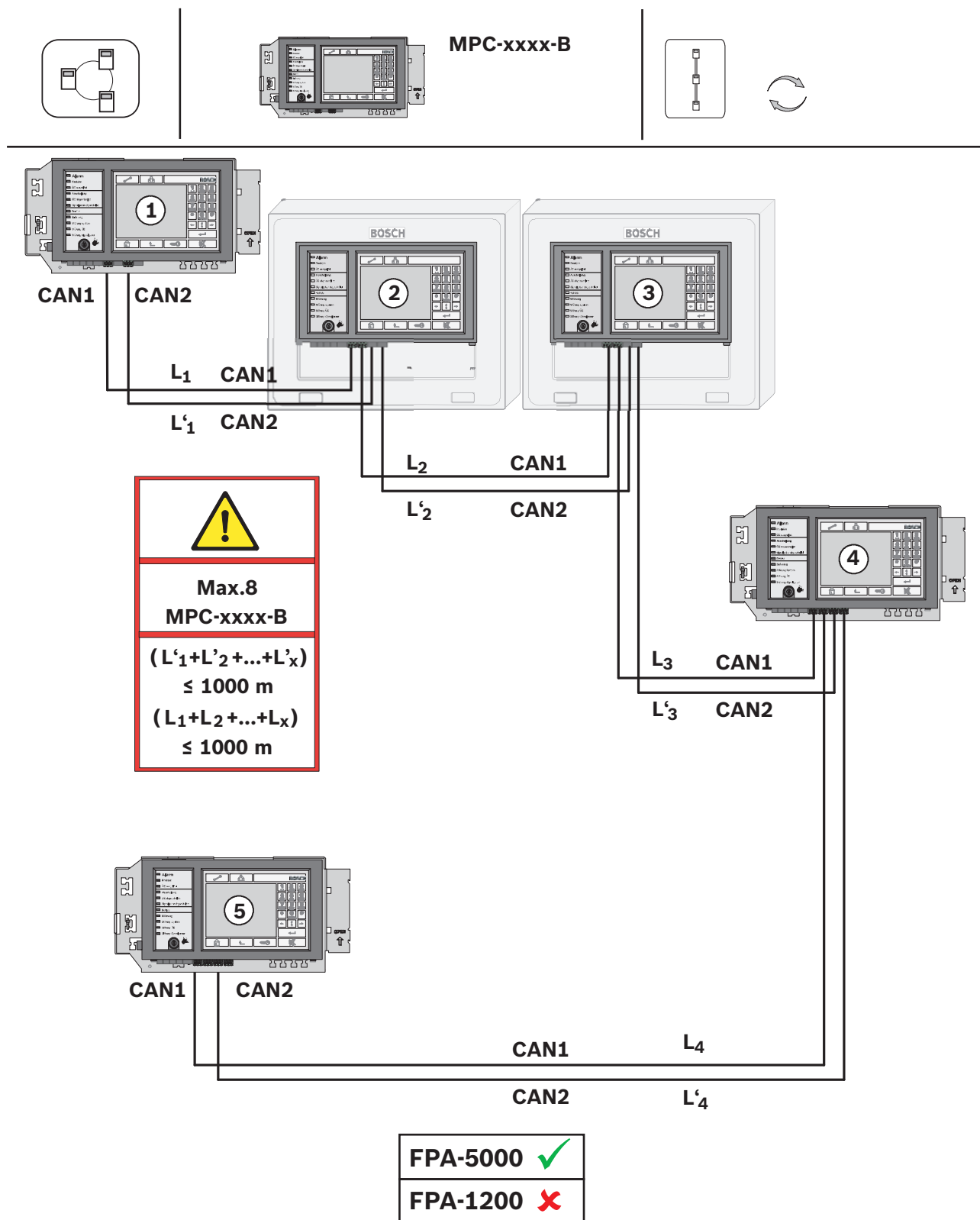


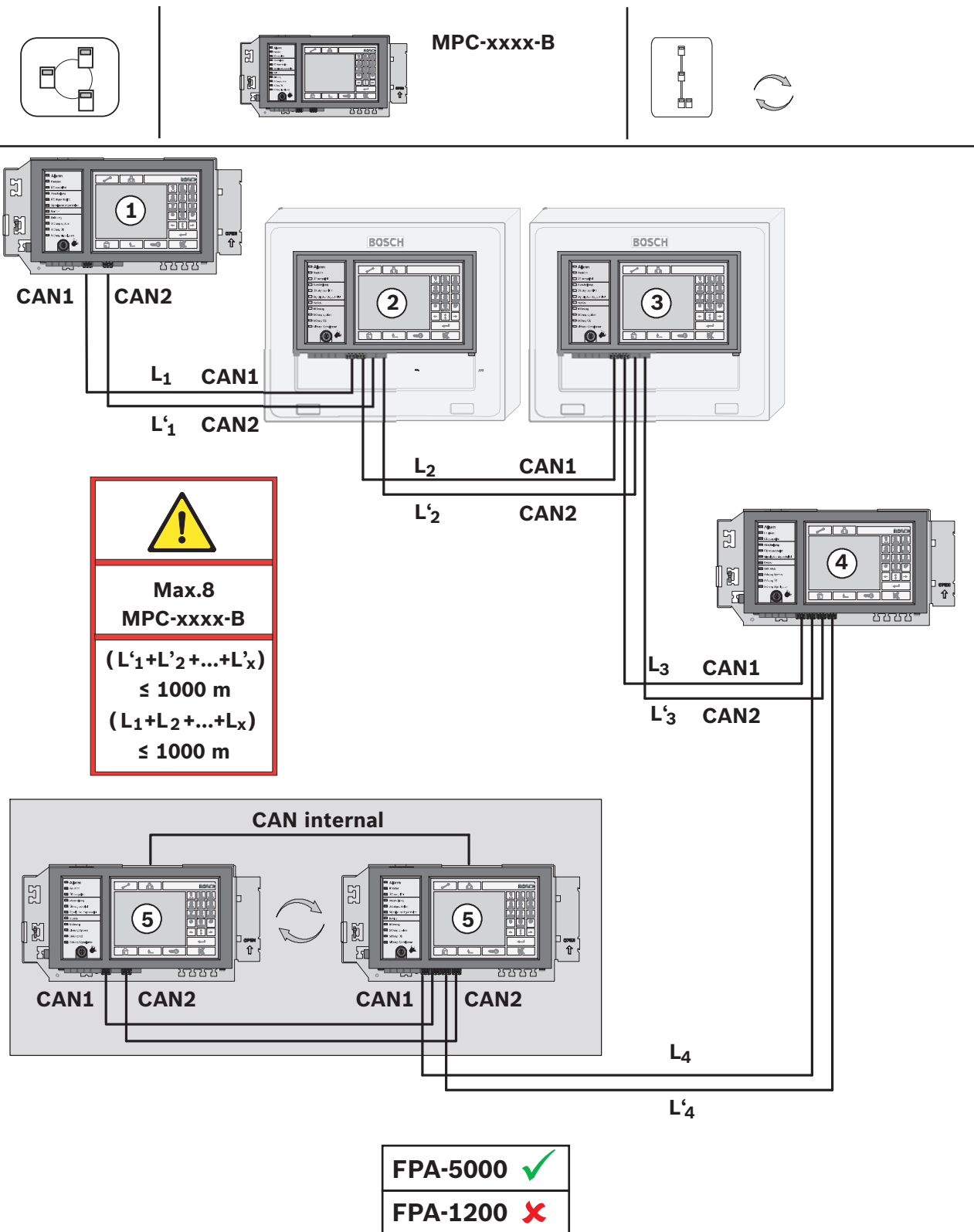
MPC-xxxx-B

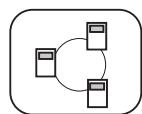




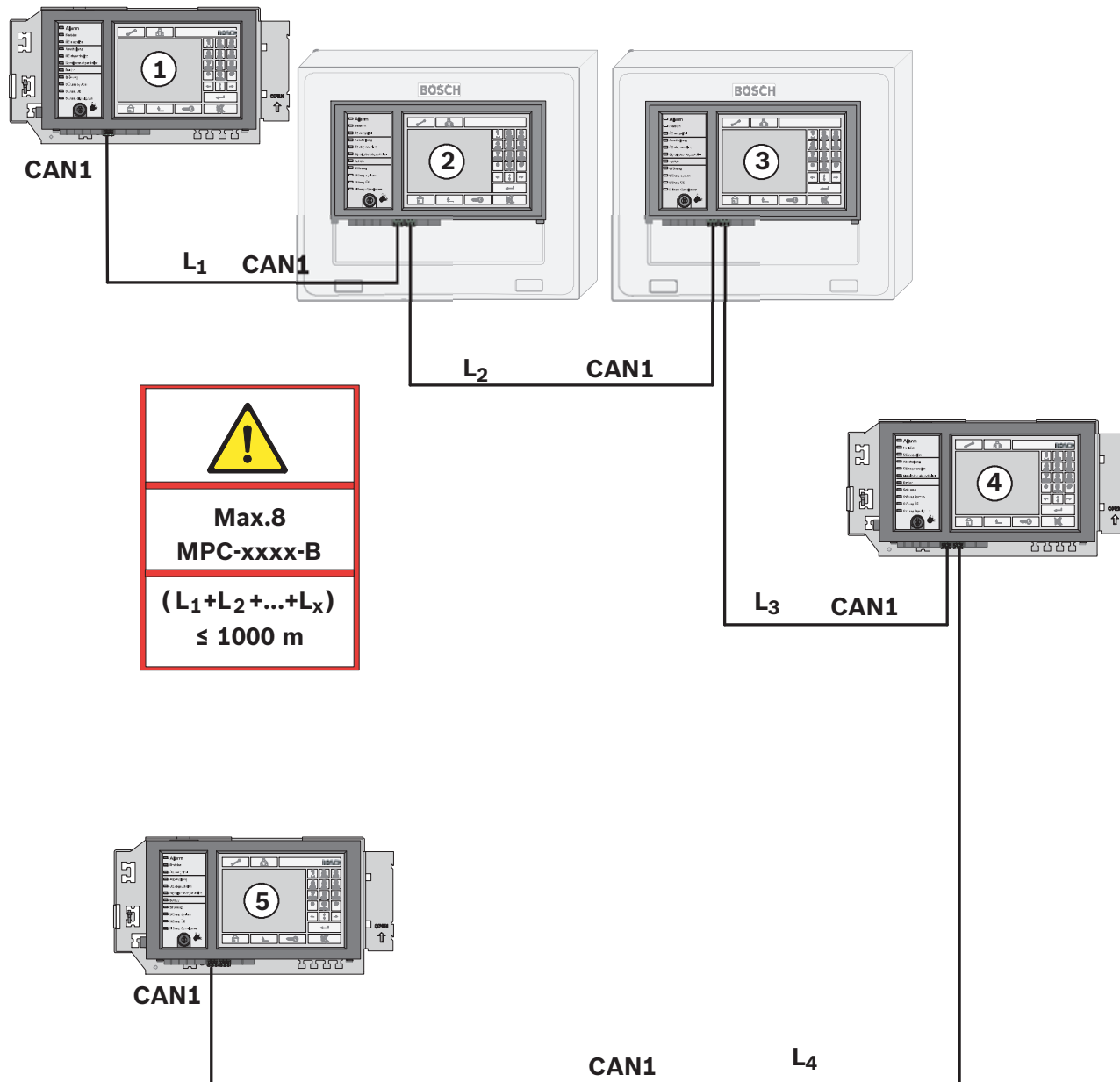
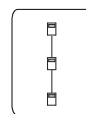






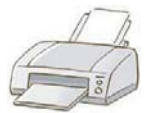


MPC-xxxx-B

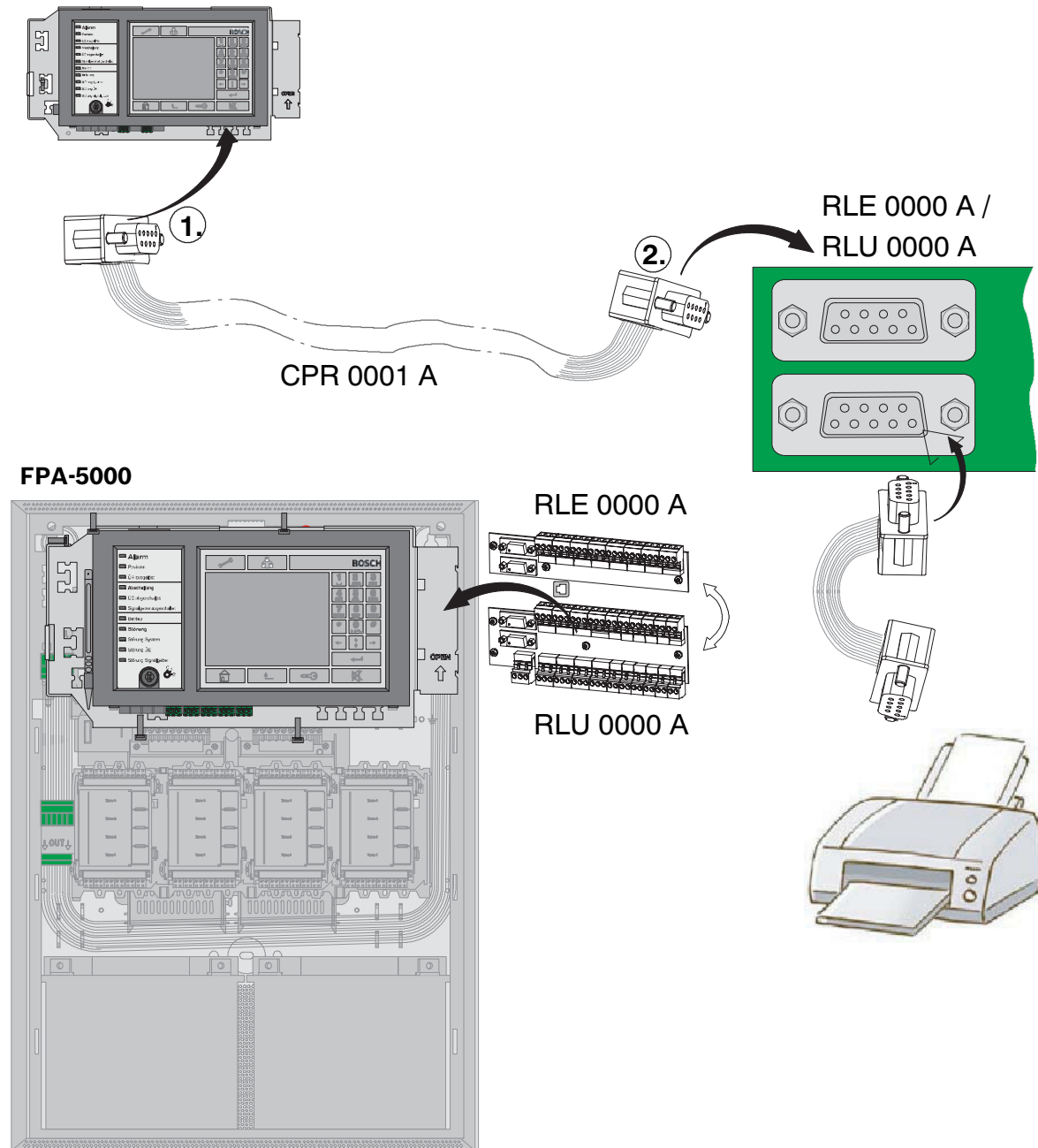


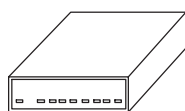
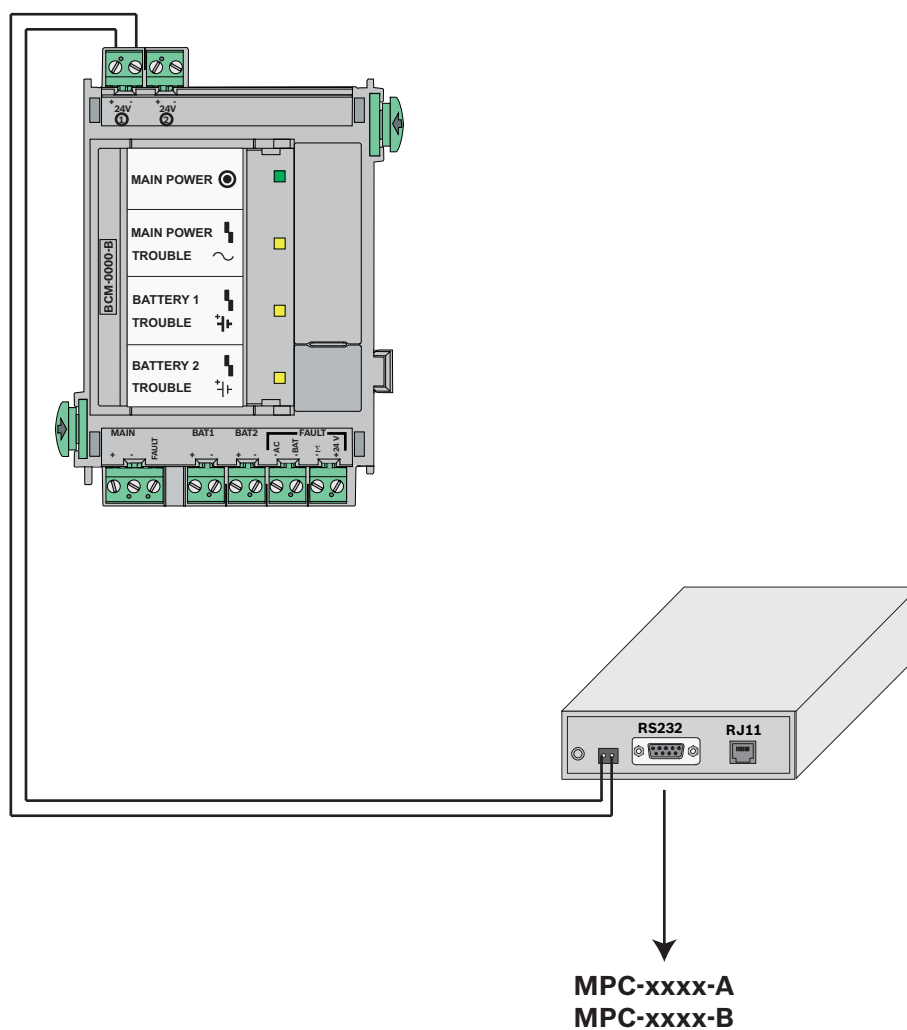
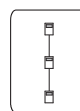
FPA-5000 ✓

FPA-1200 ✗



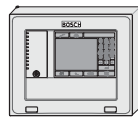
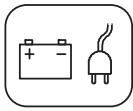
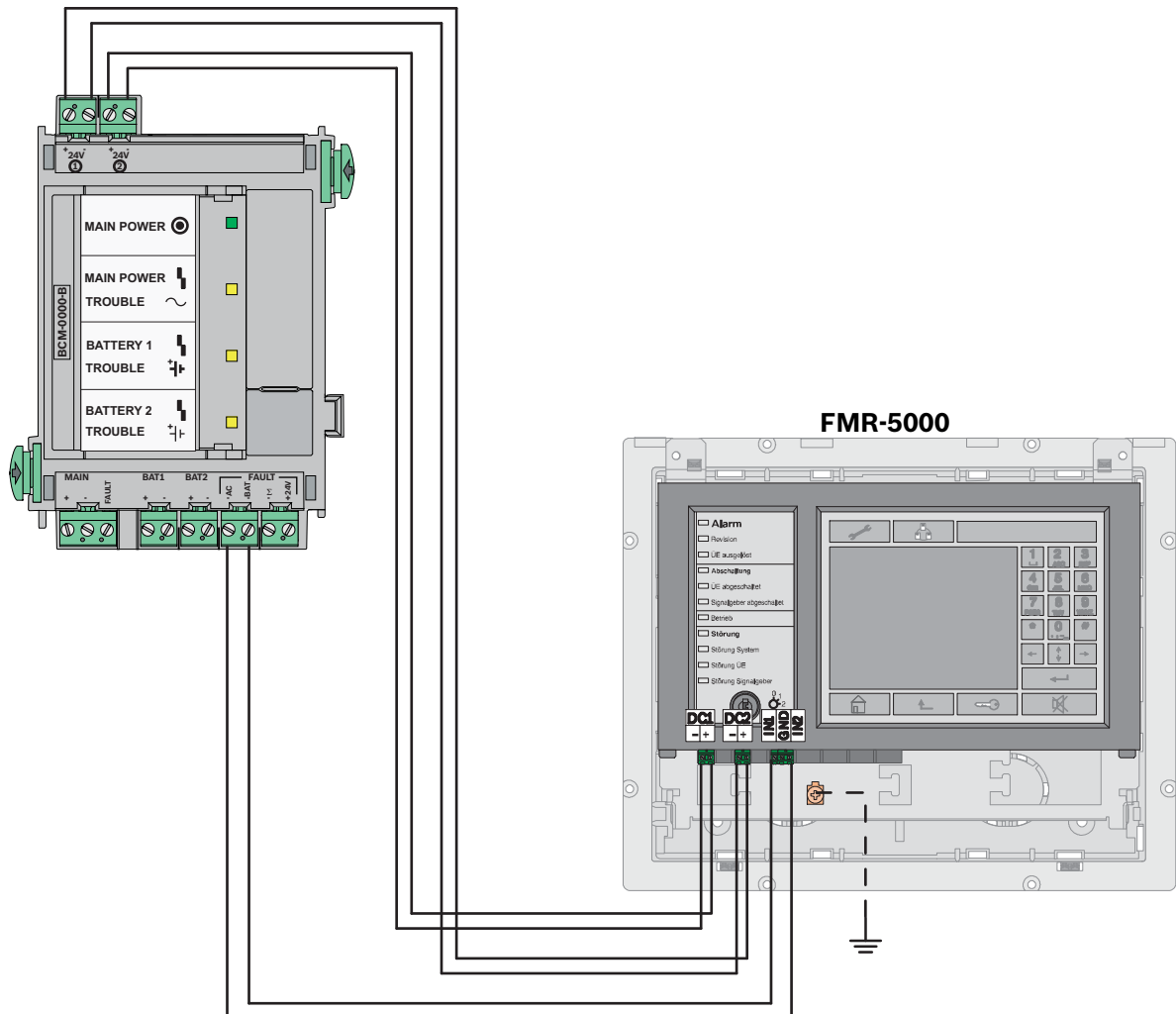
RS 232

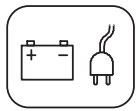


**Analog Modem 56k**

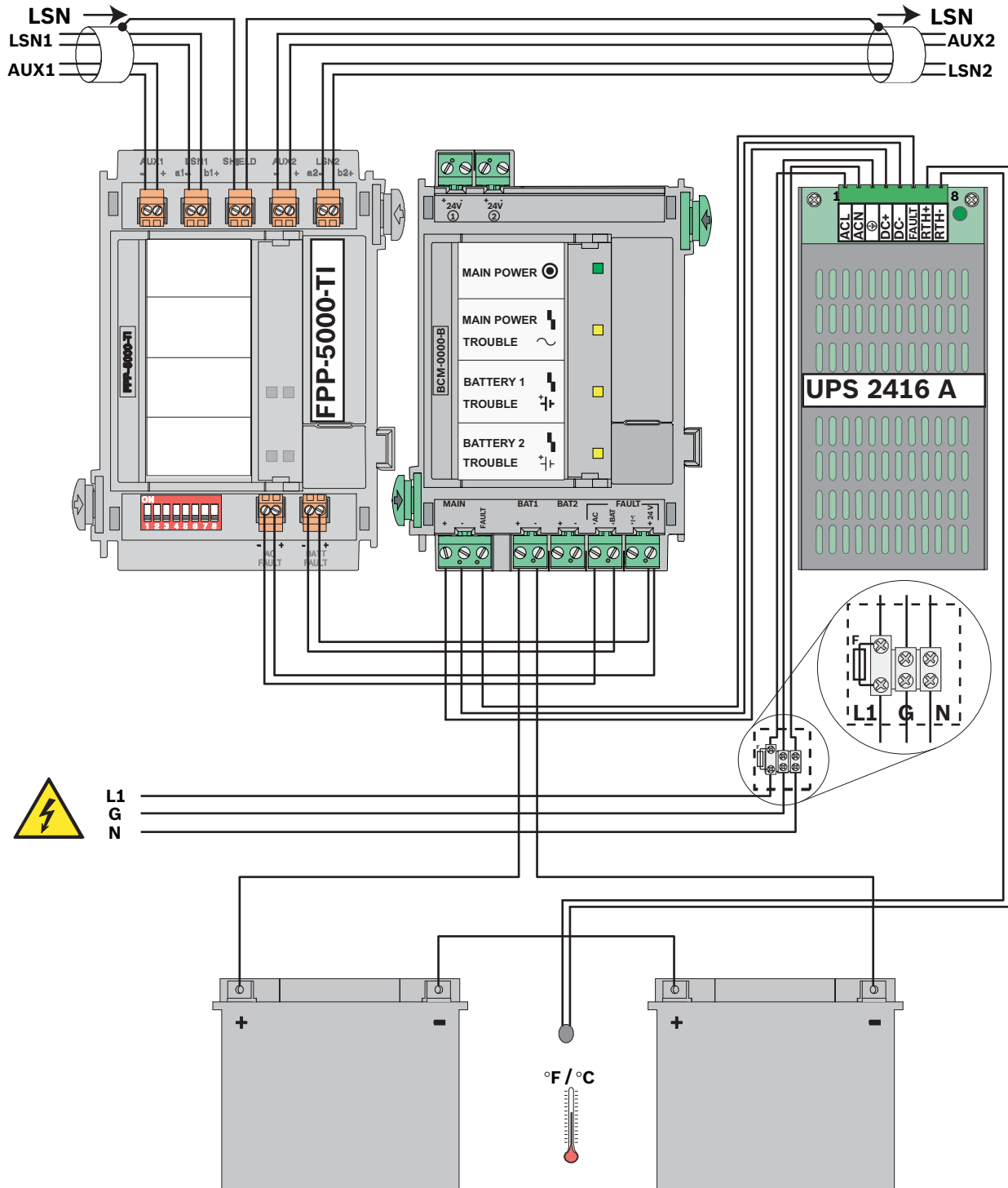
Energieversorgung

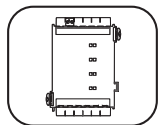
EN	Power supply	HU	Tápegység
EL	Τροφοδοτικό	DA	Strømforsyning
IT	Alimentatore	FR	Alimentation
NL	Voeding	HR	Napajanje
PL	Zasilacz	RO	Sursă de alimentare
PT	Fonte de alimentação	SV	Strömförsörjning
RU	Источники питания	SL	Napajanje
ES	Fuente de alimentación	FI	Virtalähde
CS	Napájecí zdroj	NO	Strømforsyning
TR	Güç kaynağı		

**FMR-5000-xx**

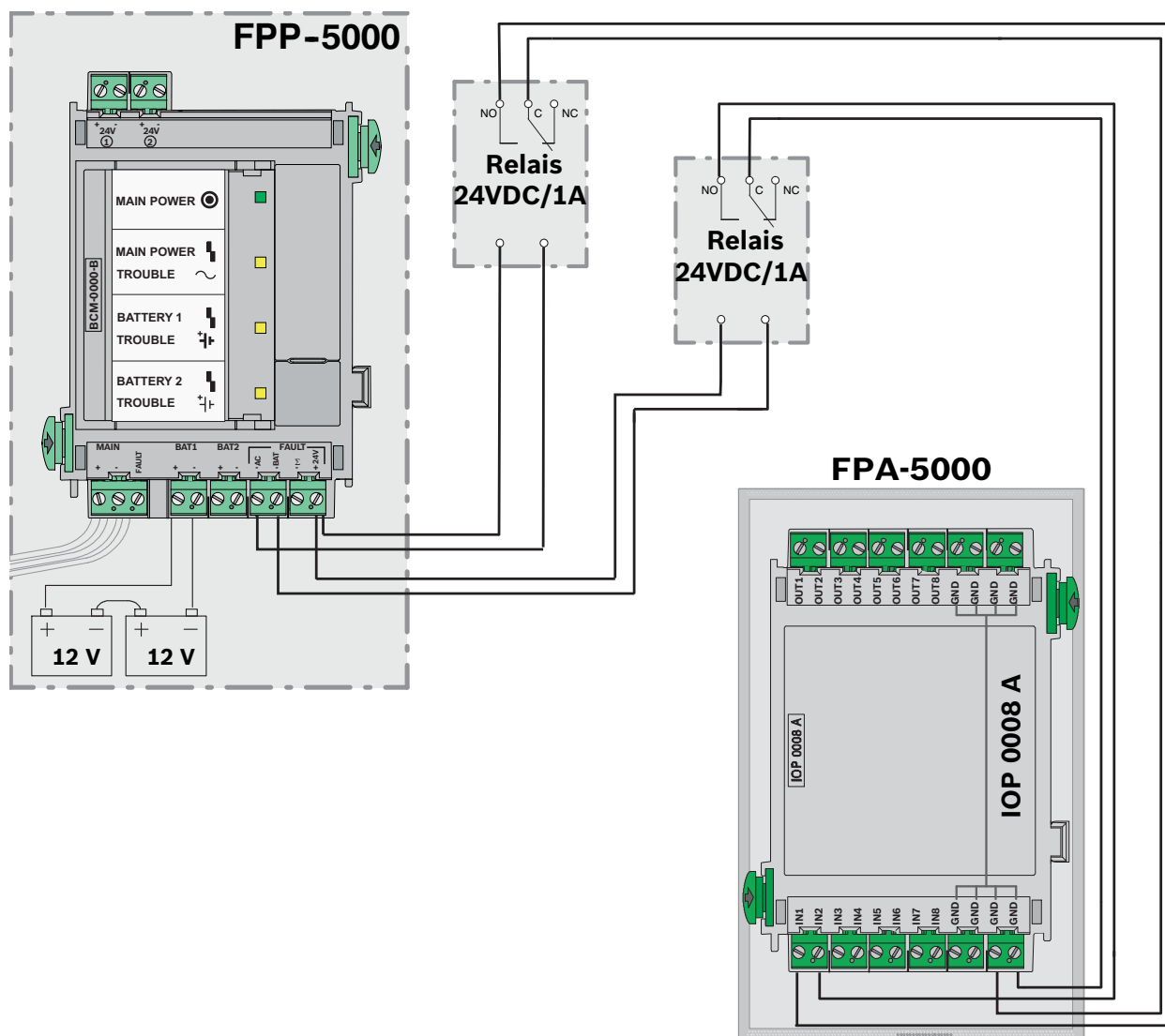


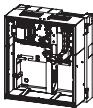
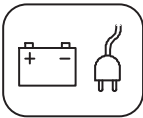
BCM 0000 B



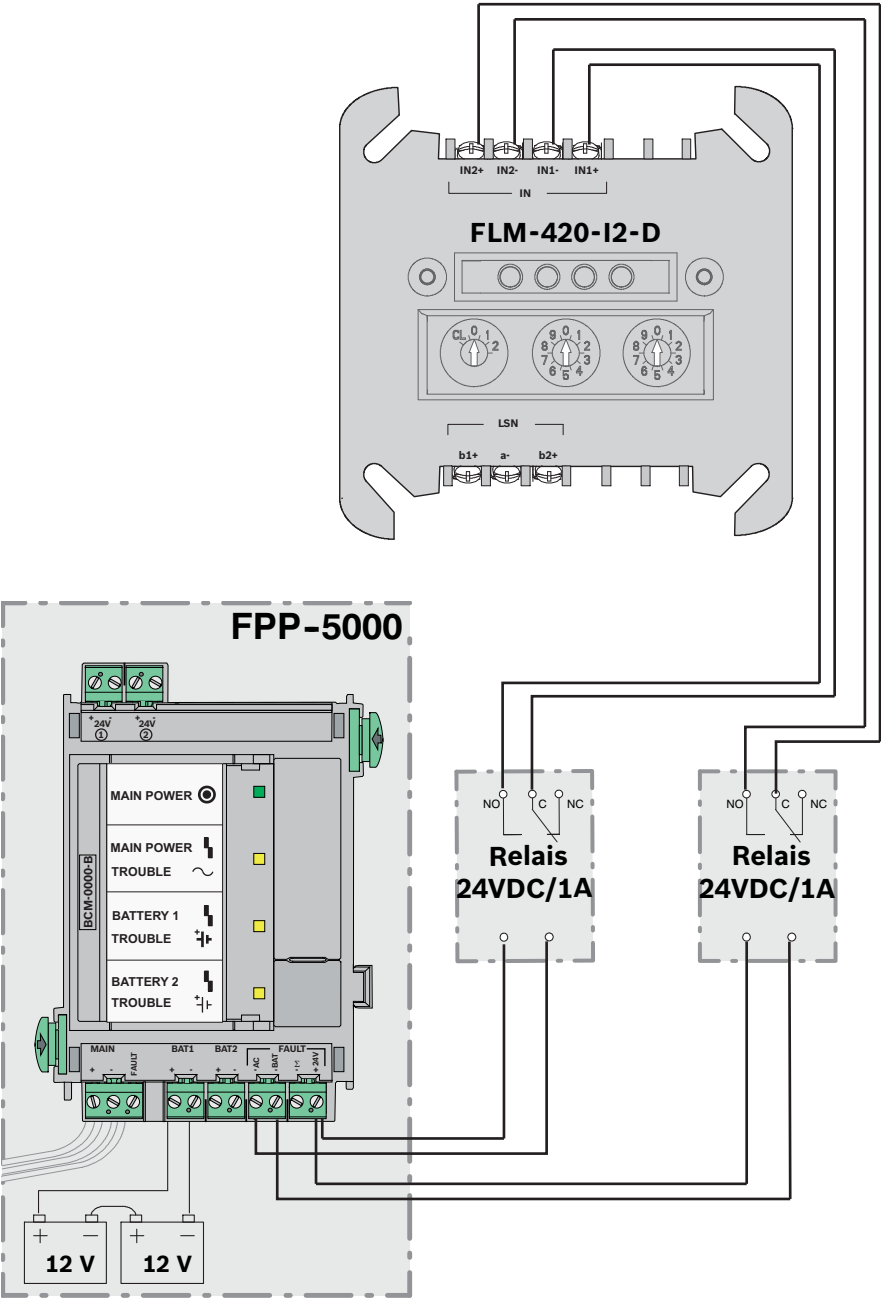


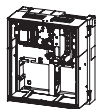
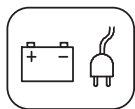
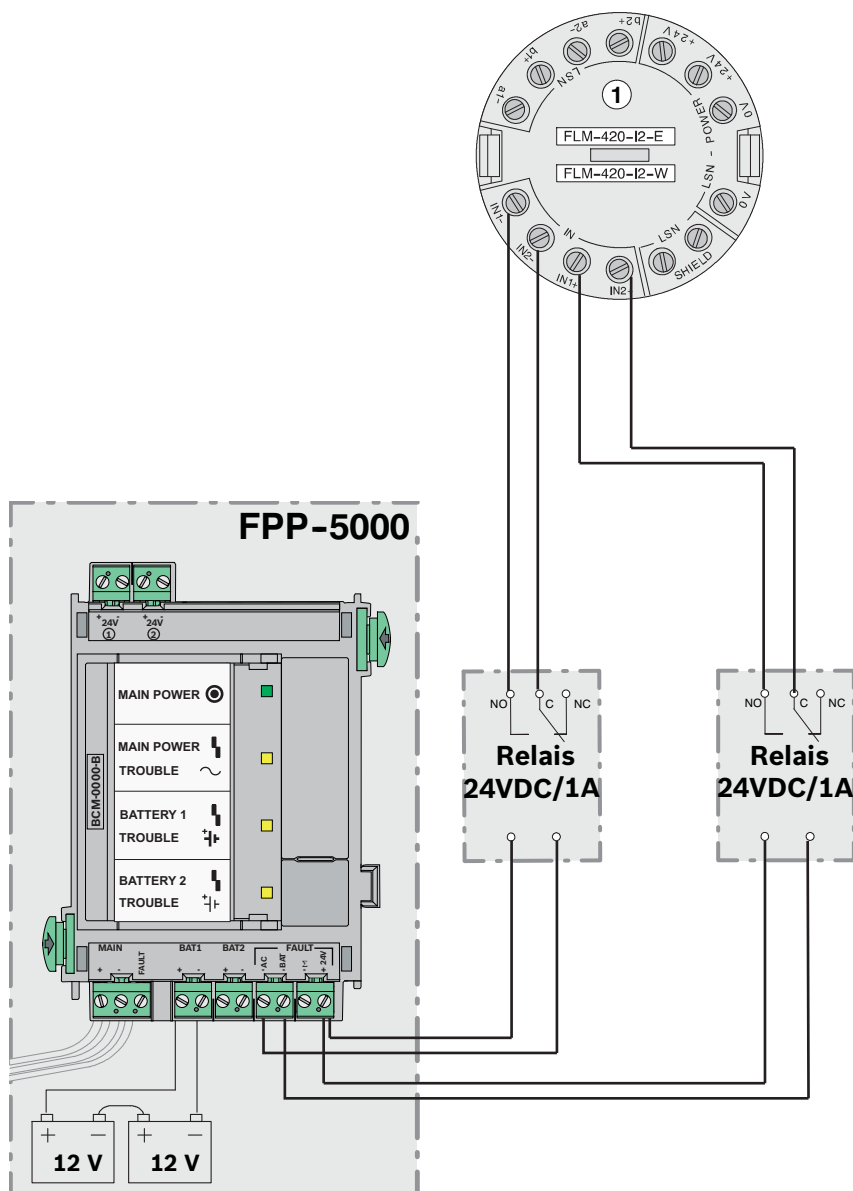
IOP 0008 A

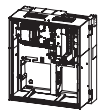
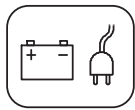
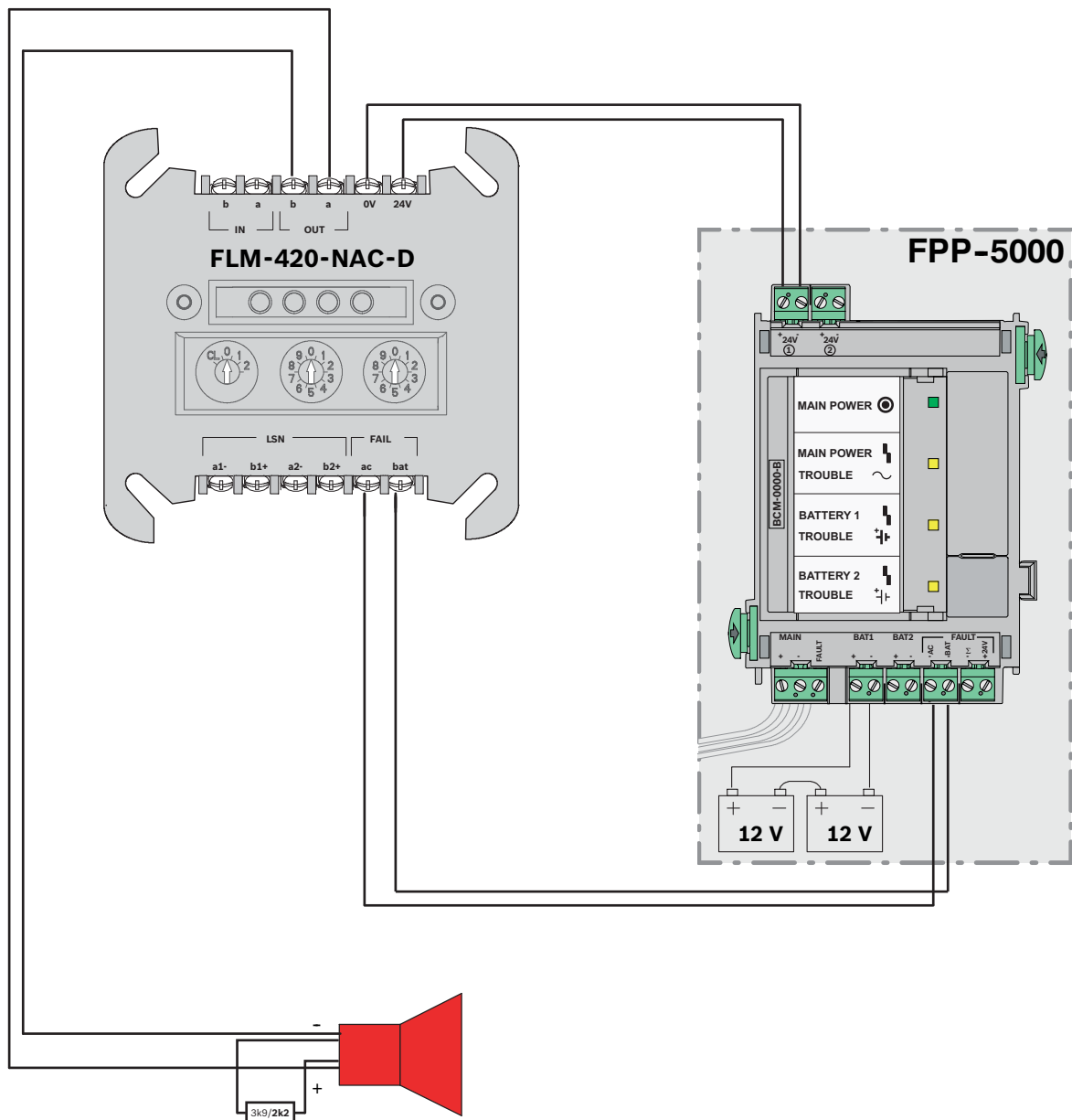
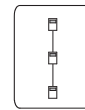


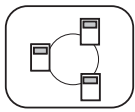


FPP-5000

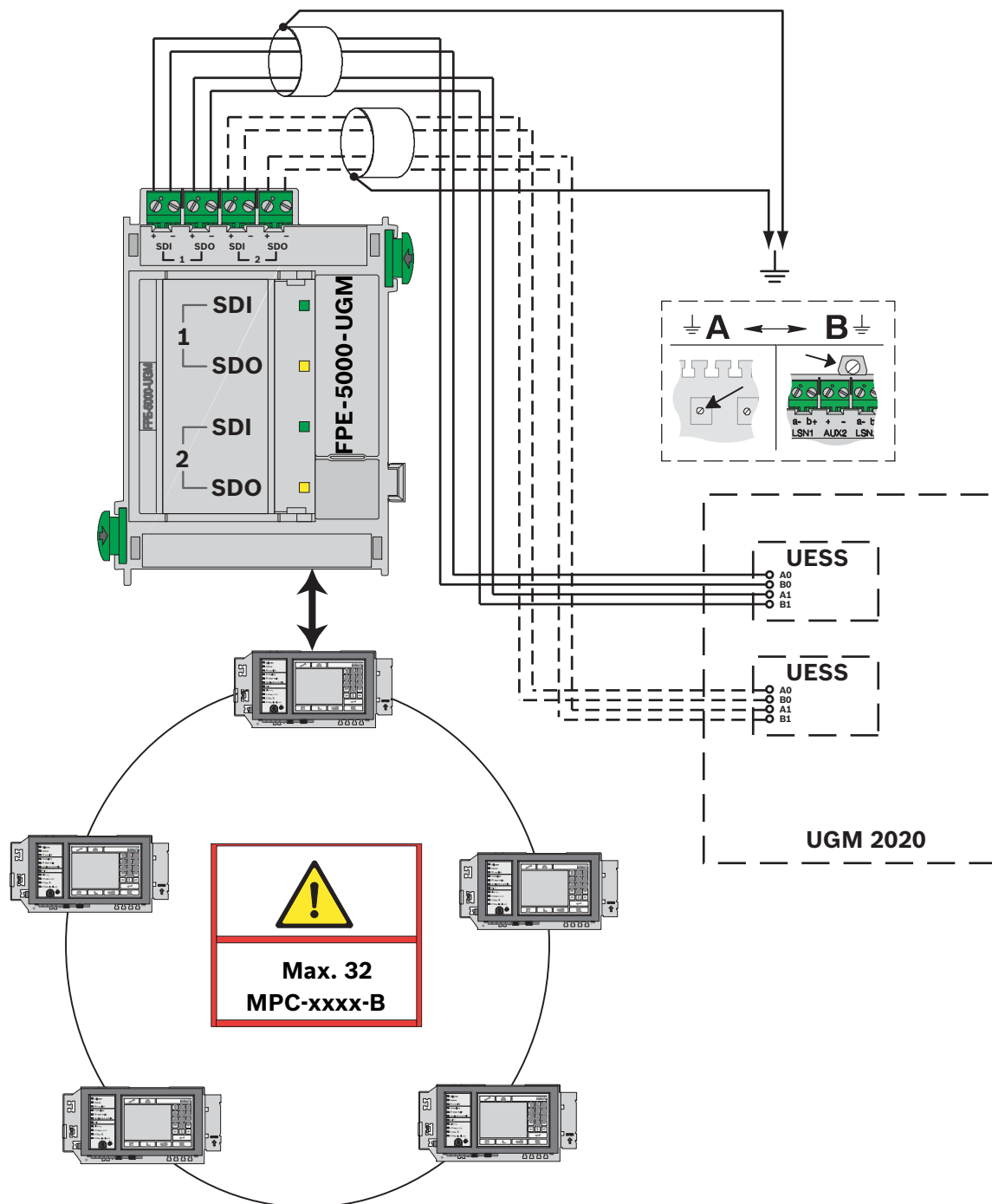


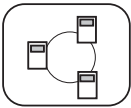
**FPP-5000**

**FPP-5000**

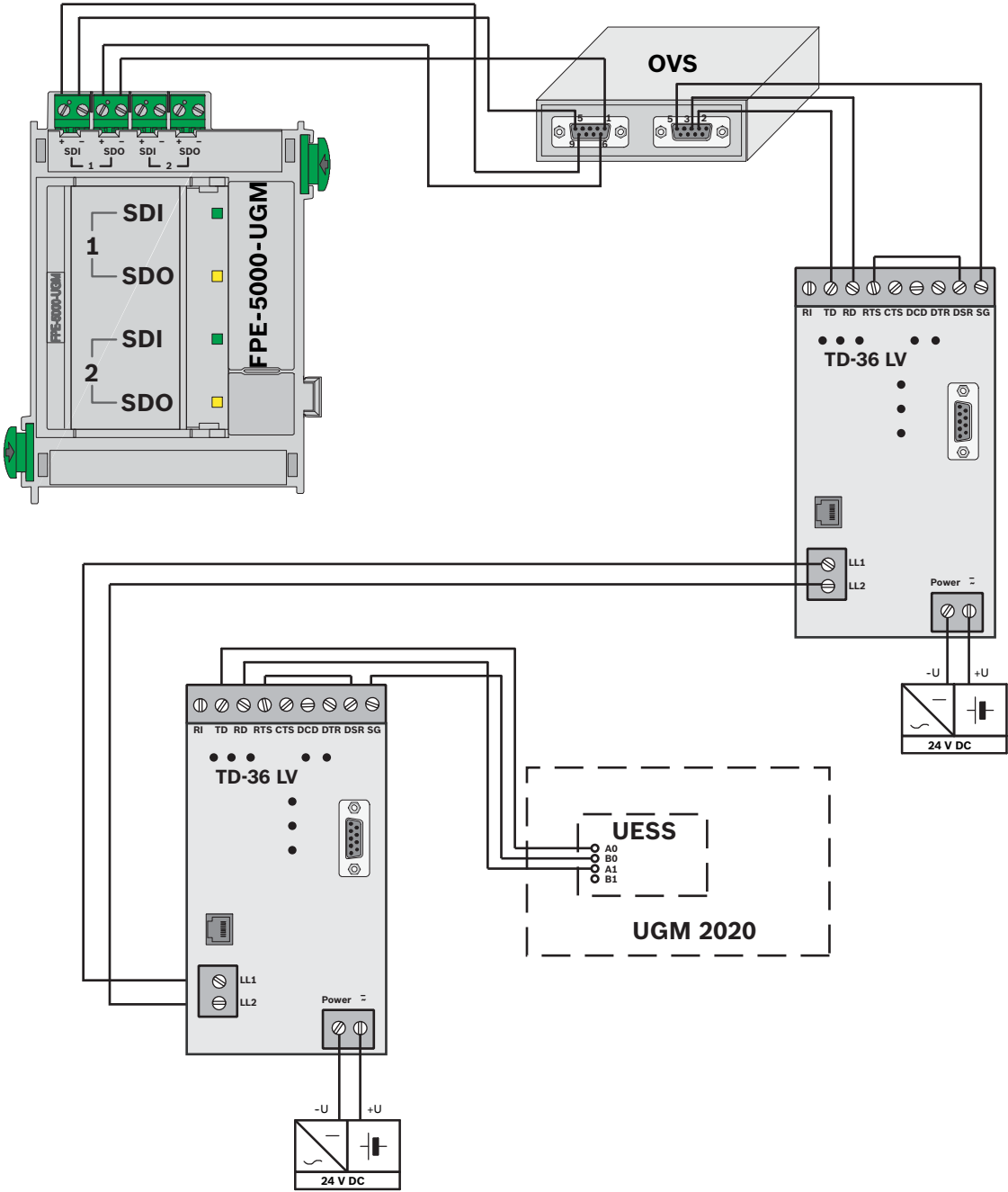


UGM 2020



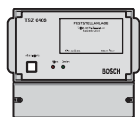
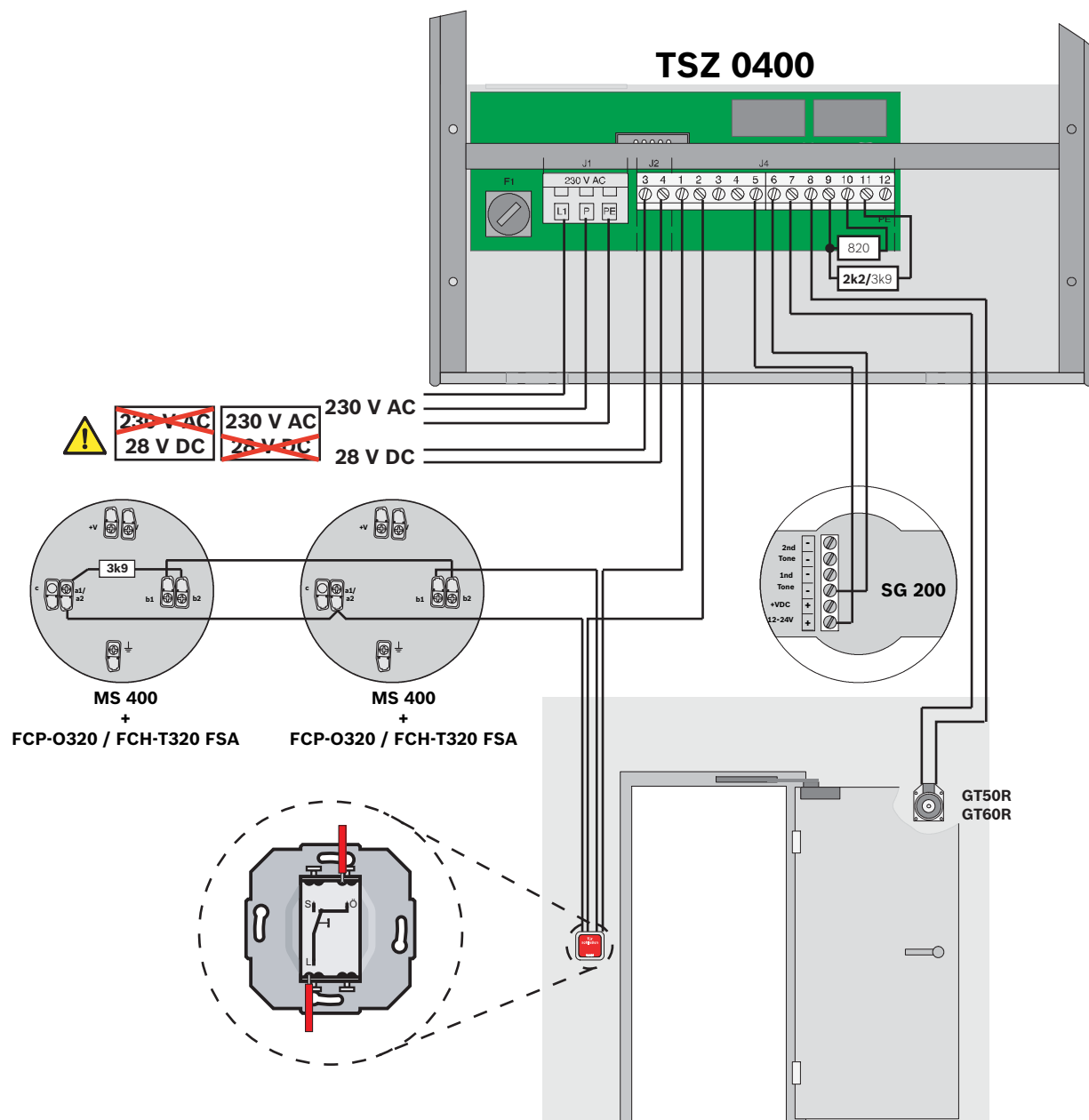


UGM 200



Meldersockel

EN	Detector bases	HU	Érzékelaljzat
EL	Έλεγχοι πόρτας βάσης ανιχνευτή	DA	Detektorbase
IT	Base rivelatore	FR	Socle de détecteur
NL	Meldersokkels	HR	Podnožje detektora
PL	Podstawy sygnalizatorów	RO	Baze pentru detectori
PT	Base para detectores	SV	Detektorsockelns
RU	Базы извещателей	SL	Podnožje detektorja
ES	Bases de los detectores	FI	Ilmaisimen alusta
CS	Patice hlásie	NO	Detektorsokkel
TR	Dedektör taban		

**TSZ 0400****DIBT** 

Funktionsmodule

EN	Functional modules	HU	Funkcionális modulok
EL	Λειτουργικά δομοστοιχεία	DA	Funktionelle moduler
IT	Moduli funzionali	FR	Modules fonctionnels
NL	Functionele modules	HR	Moduli funkcija
PL	Moduły funkcjonalne	RO	Module funcționale
PT	Módulos funcionais	SV	Funktionsmoduler
RU	Функциональные модули	SL	Delovni moduli
ES	Módulos funcionales	FI	Toimintomoduulit
CS	Funkční moduly	NO	Funksjonelle moduler
TR	Fonksiyonel modüller		

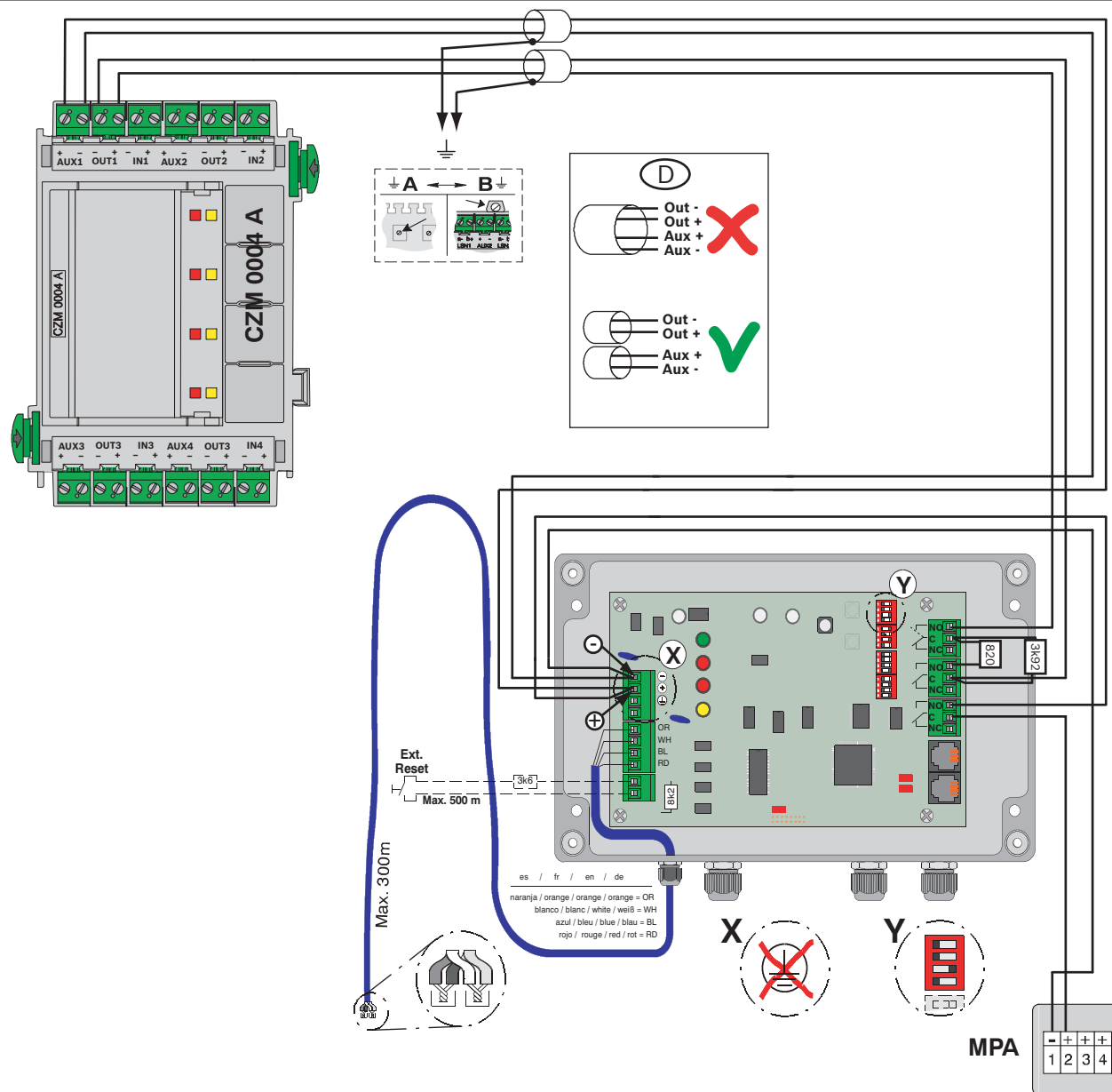


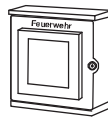
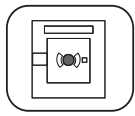
CZM 0004 A	107
ENO 0000 A/B	122
LSN 0300 A / LSN 1500 A	146
NZM 0002 A	195
RMH 0002 A	208
IOS 0020 A	220



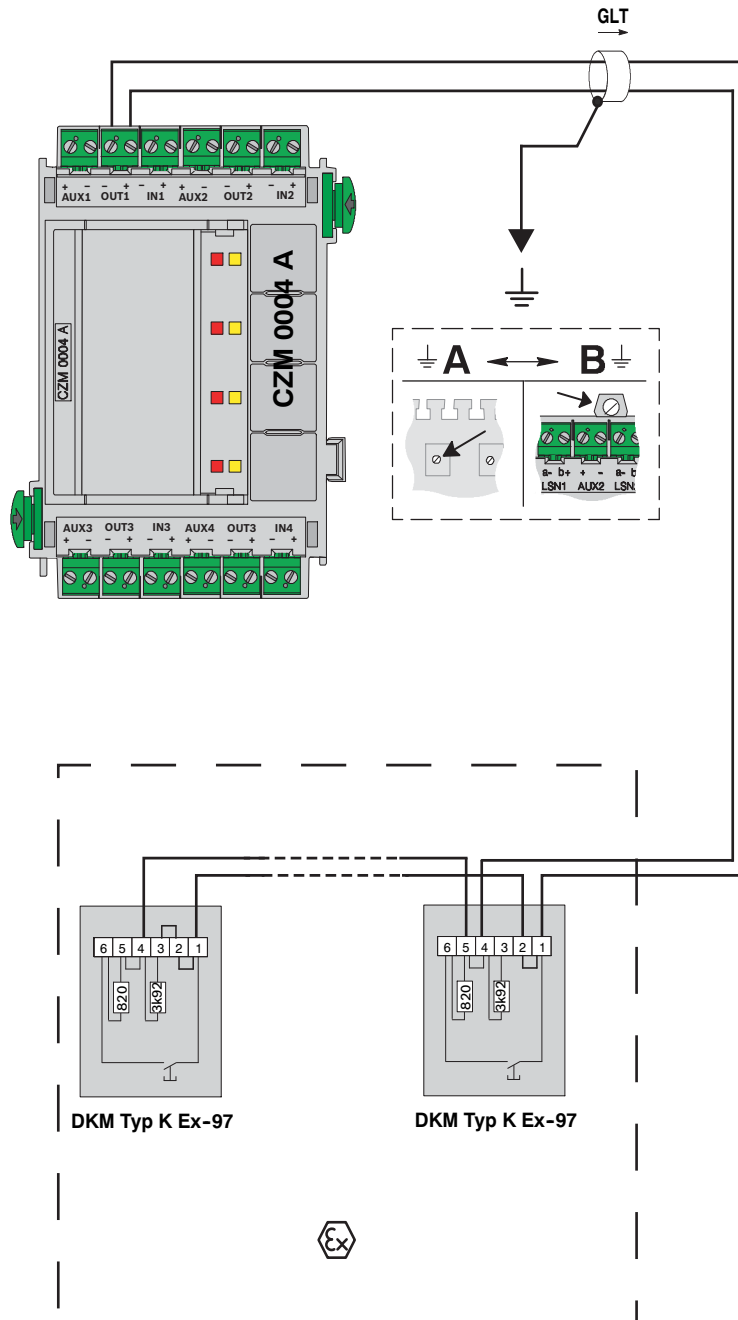
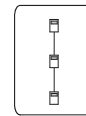
FCS-LWM-1

EN 54-2





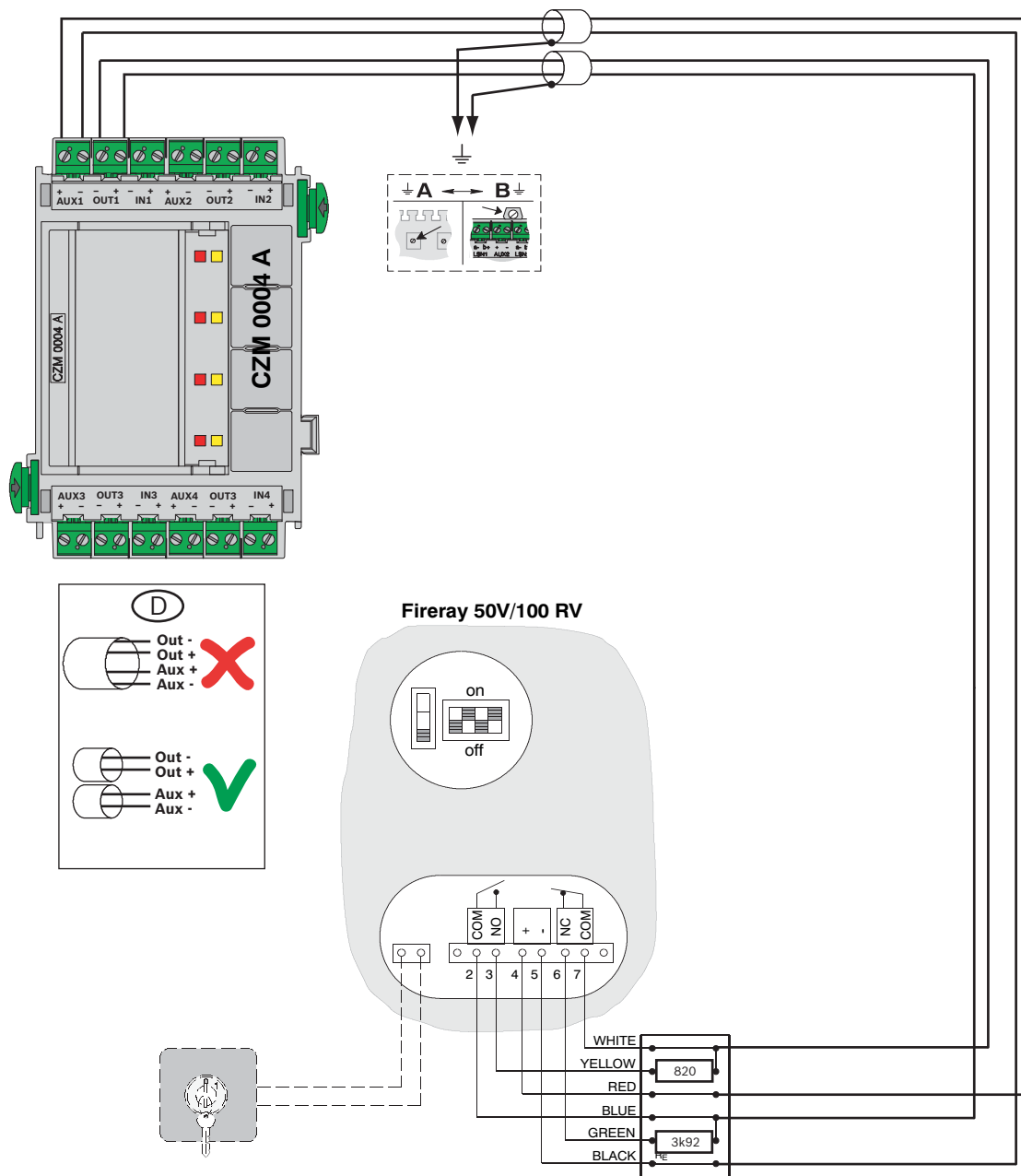
DKM Typ K Ex-97

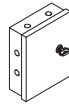
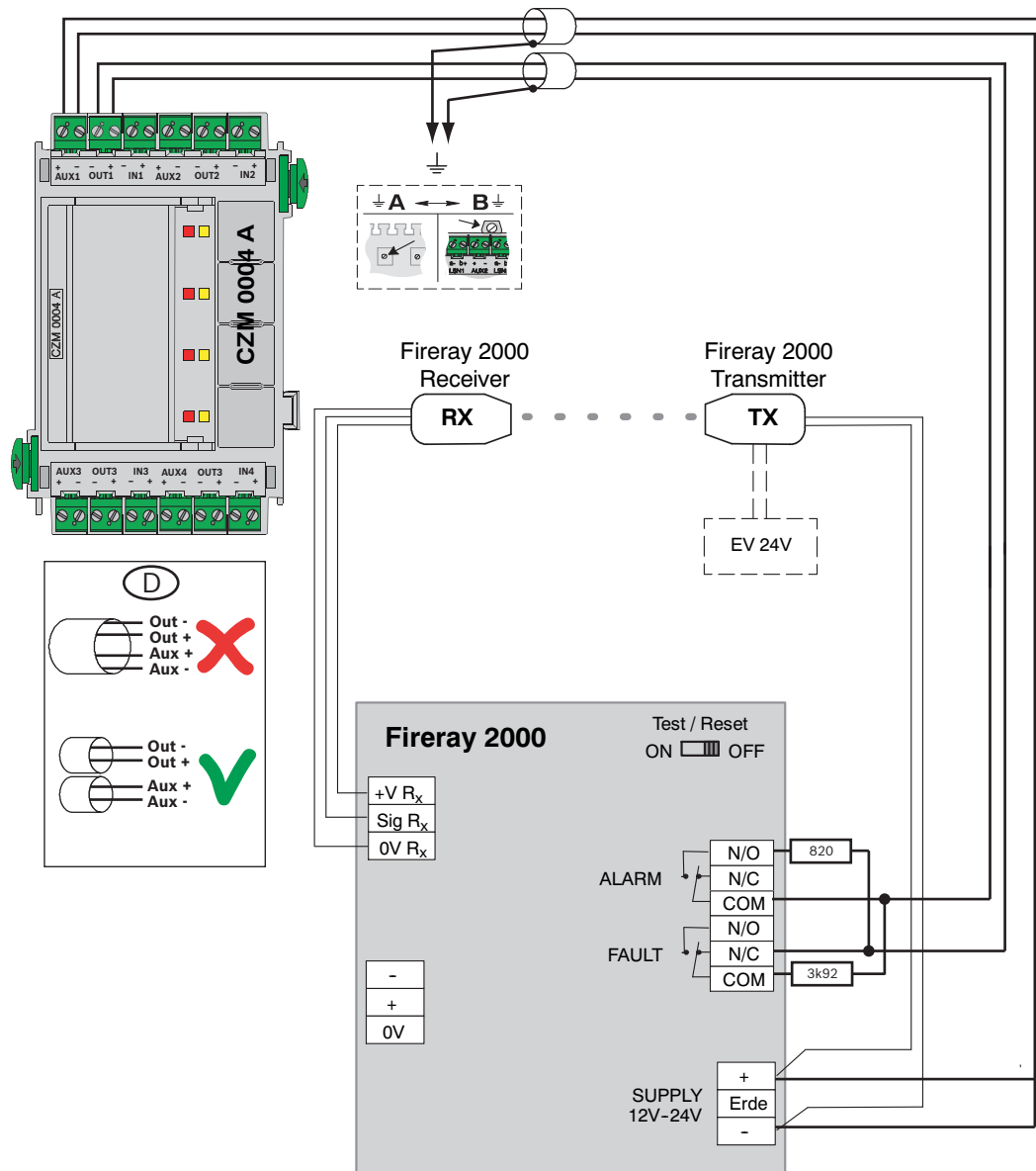


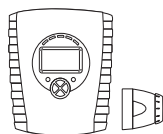


**Fireray 50RV
Fireray 100RV**

EN 54-2

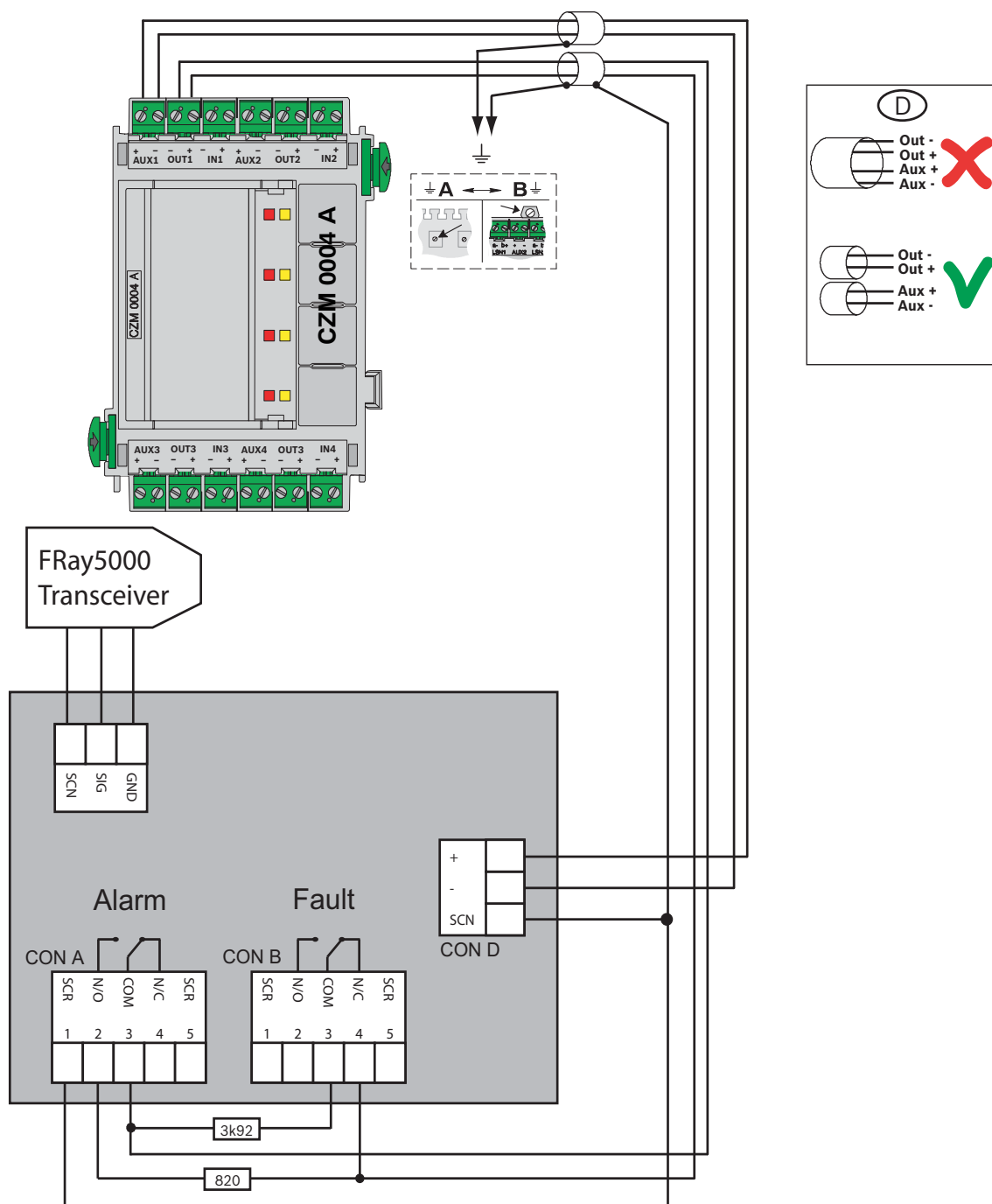



Fireray 2000
EN 54-2




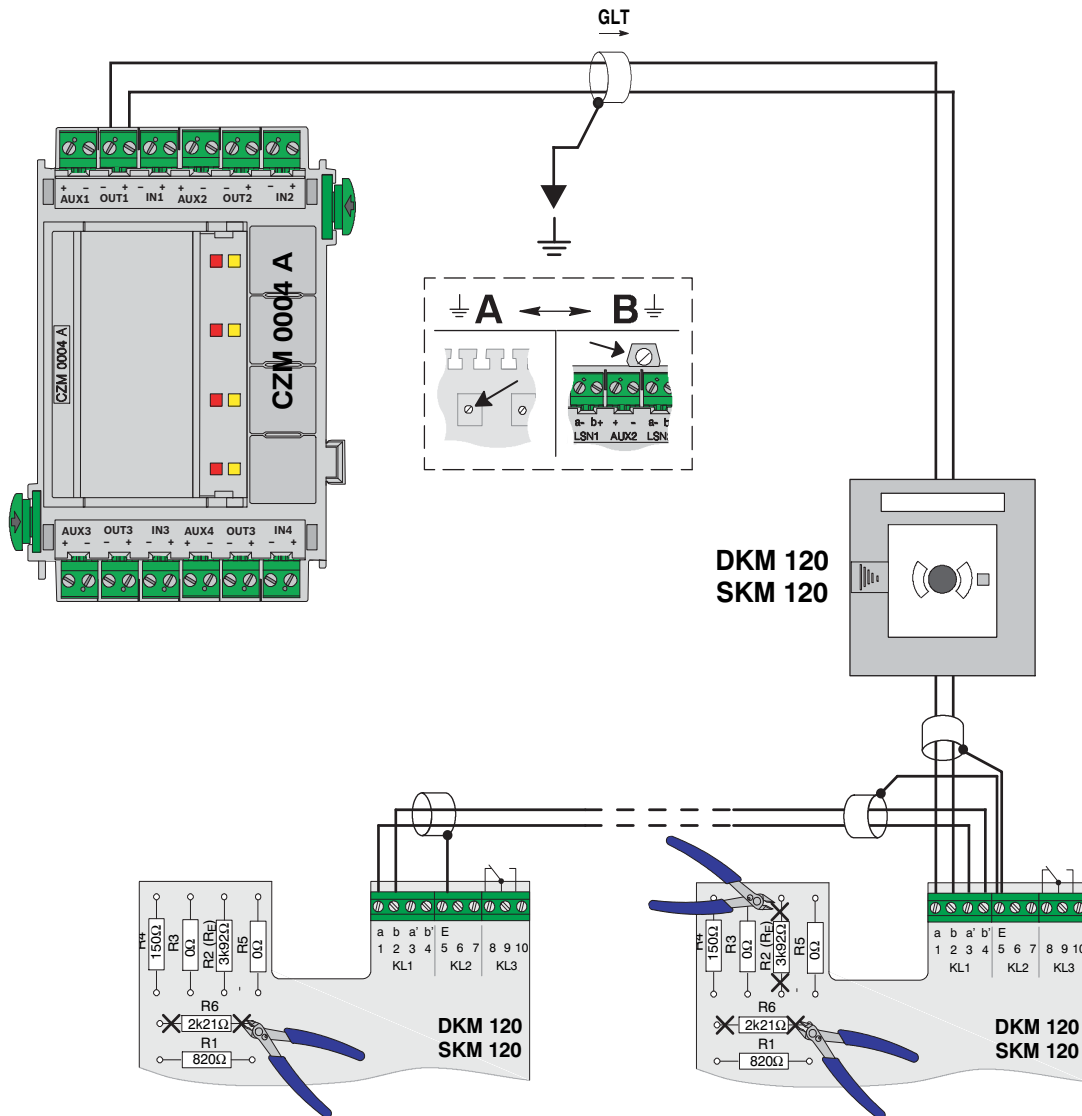
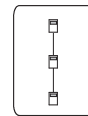
FRay5000-series

EN 54-2



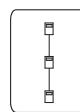


**DKM 120
SKM 120**

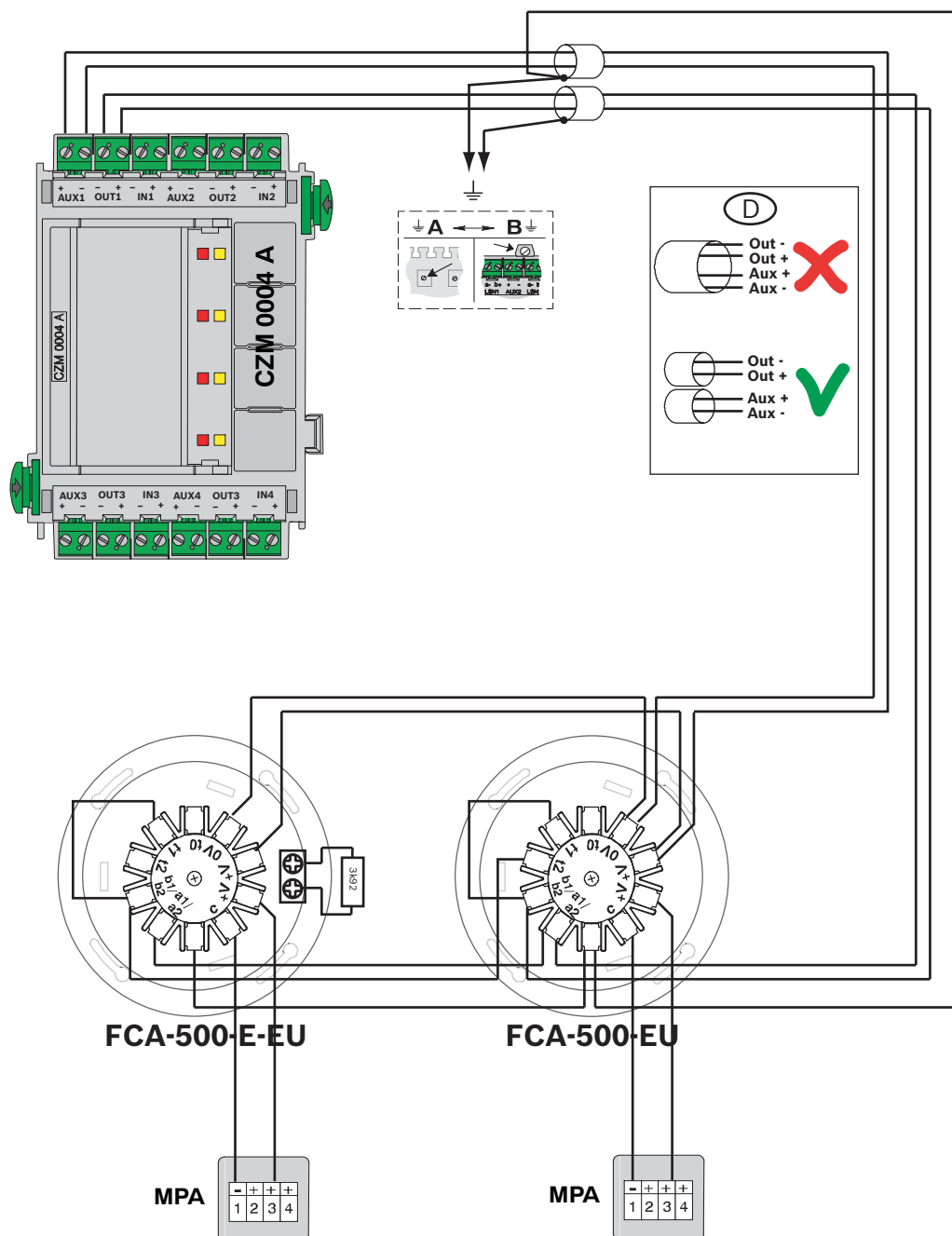




FAP-520
FCP-520

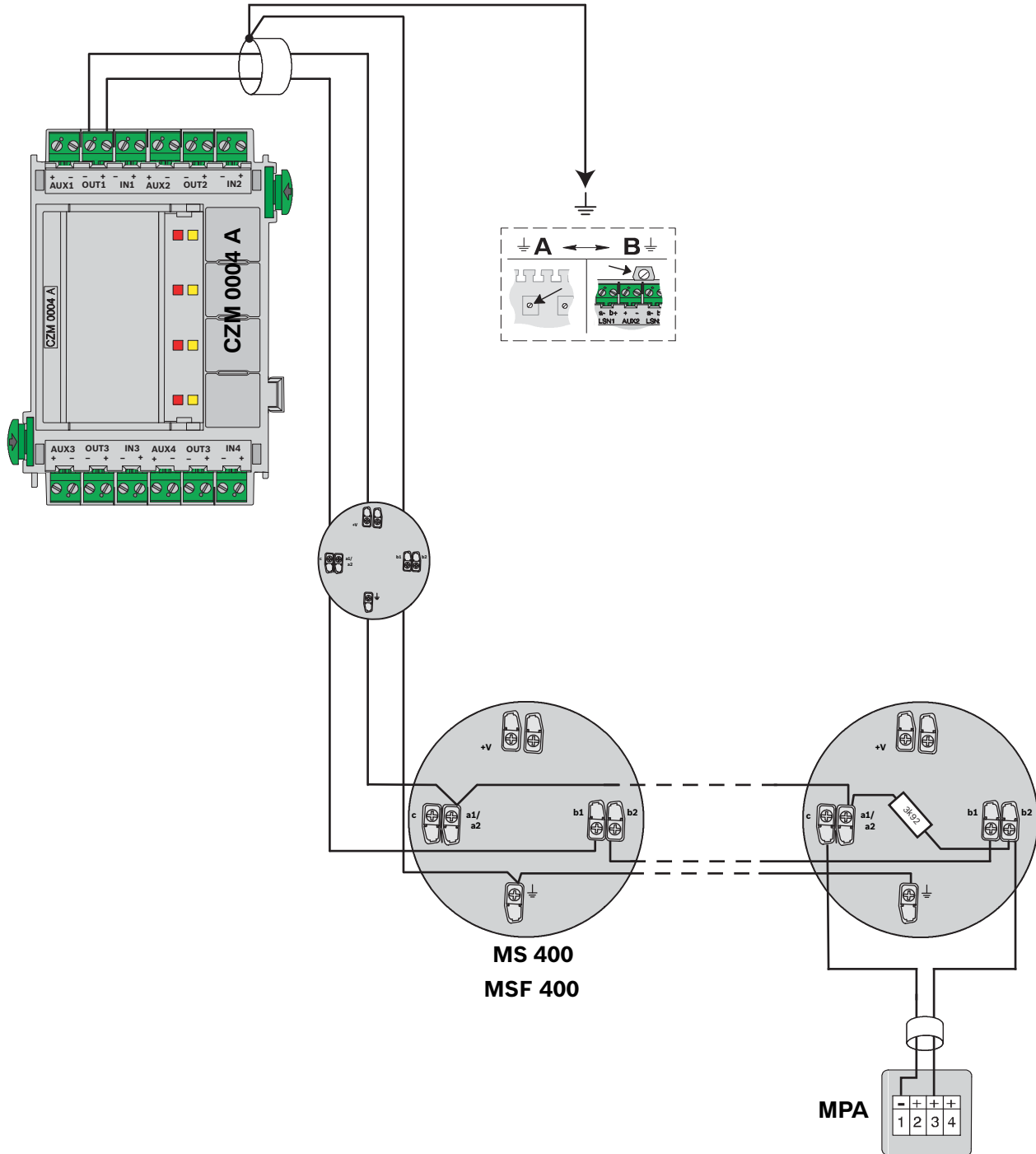
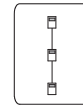


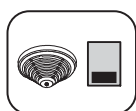
EN 54-2





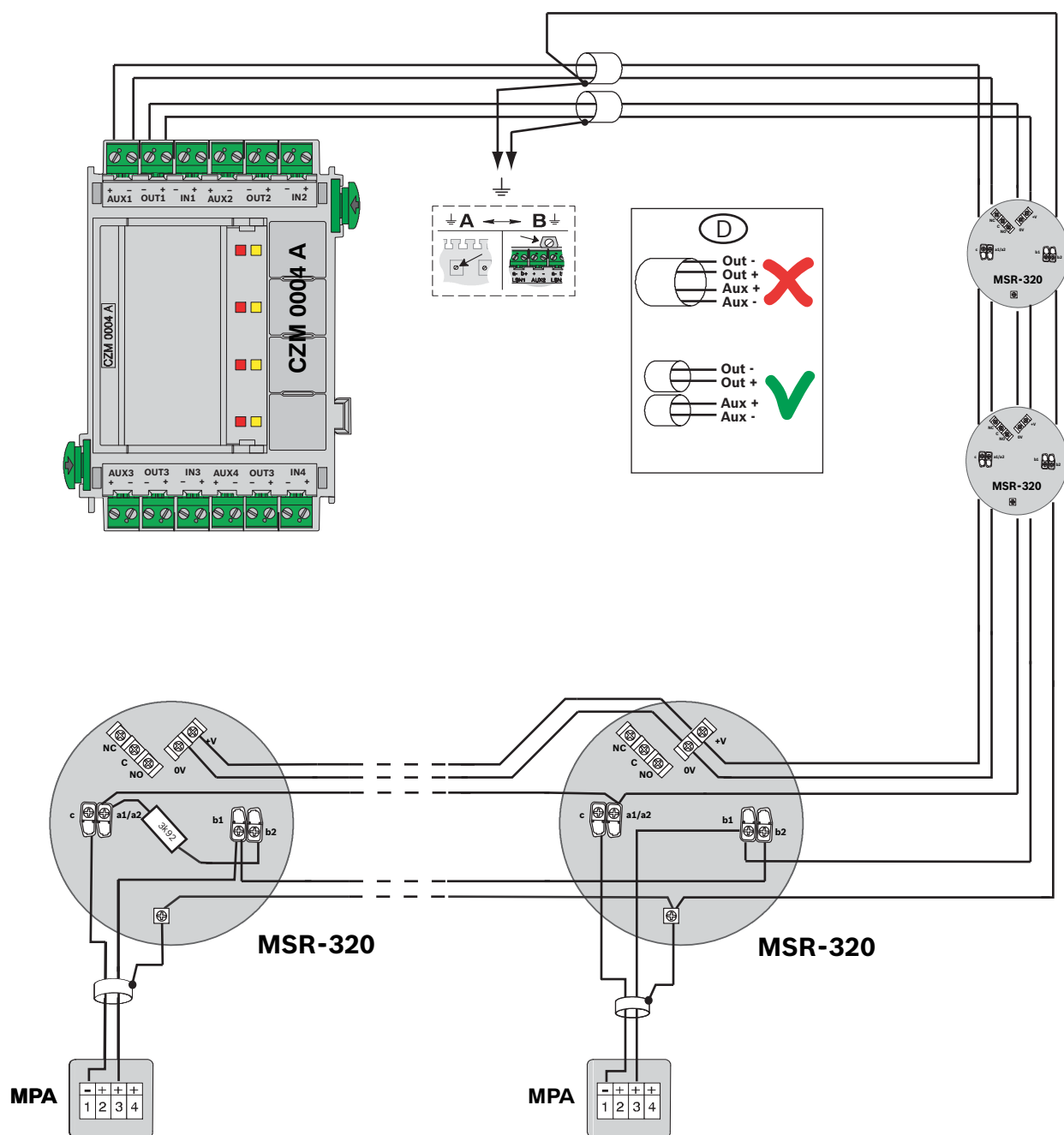
MS 400
MSF 400

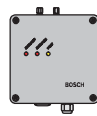




MSR 320

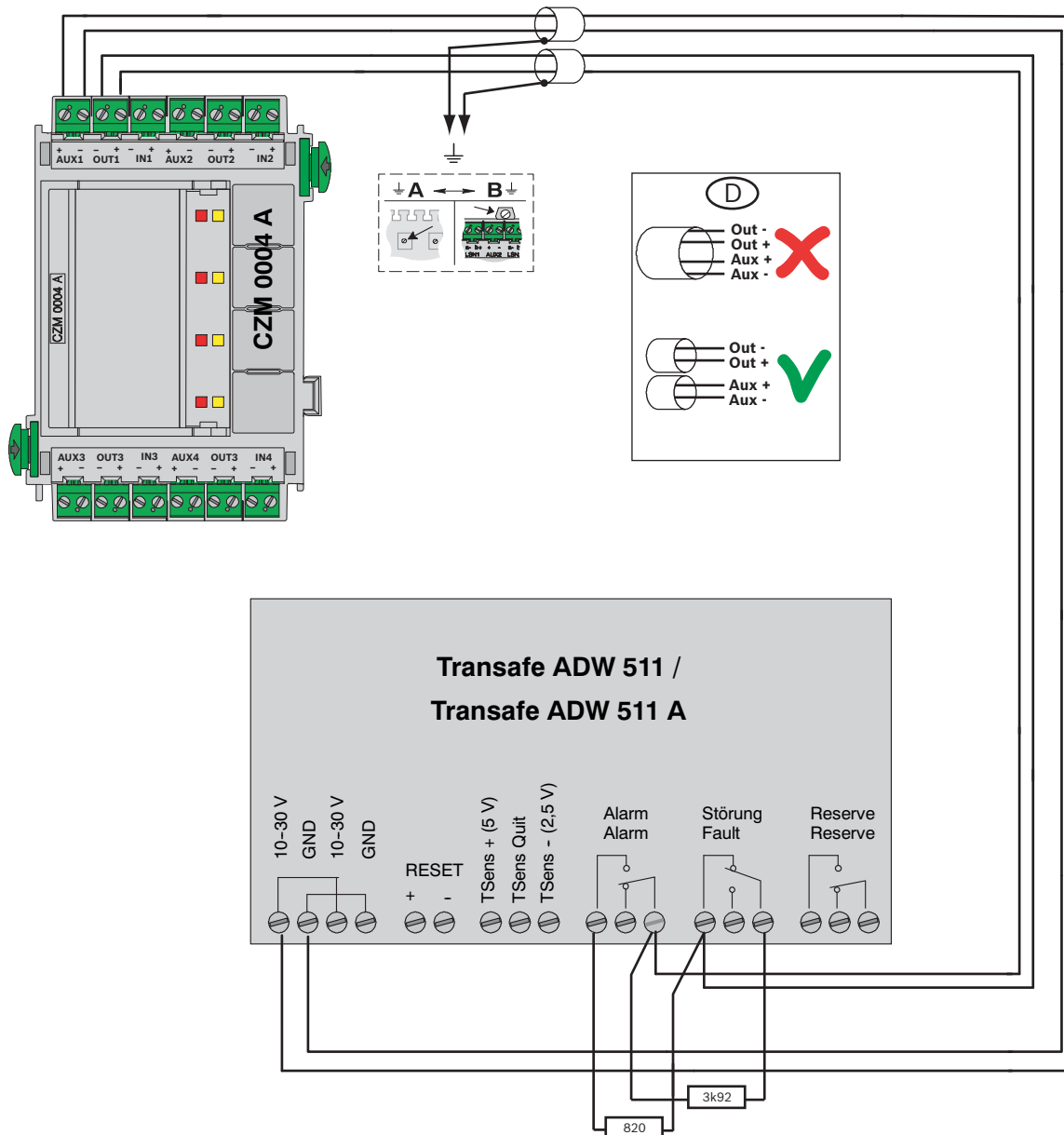
EN 54-2

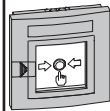
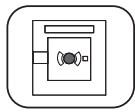




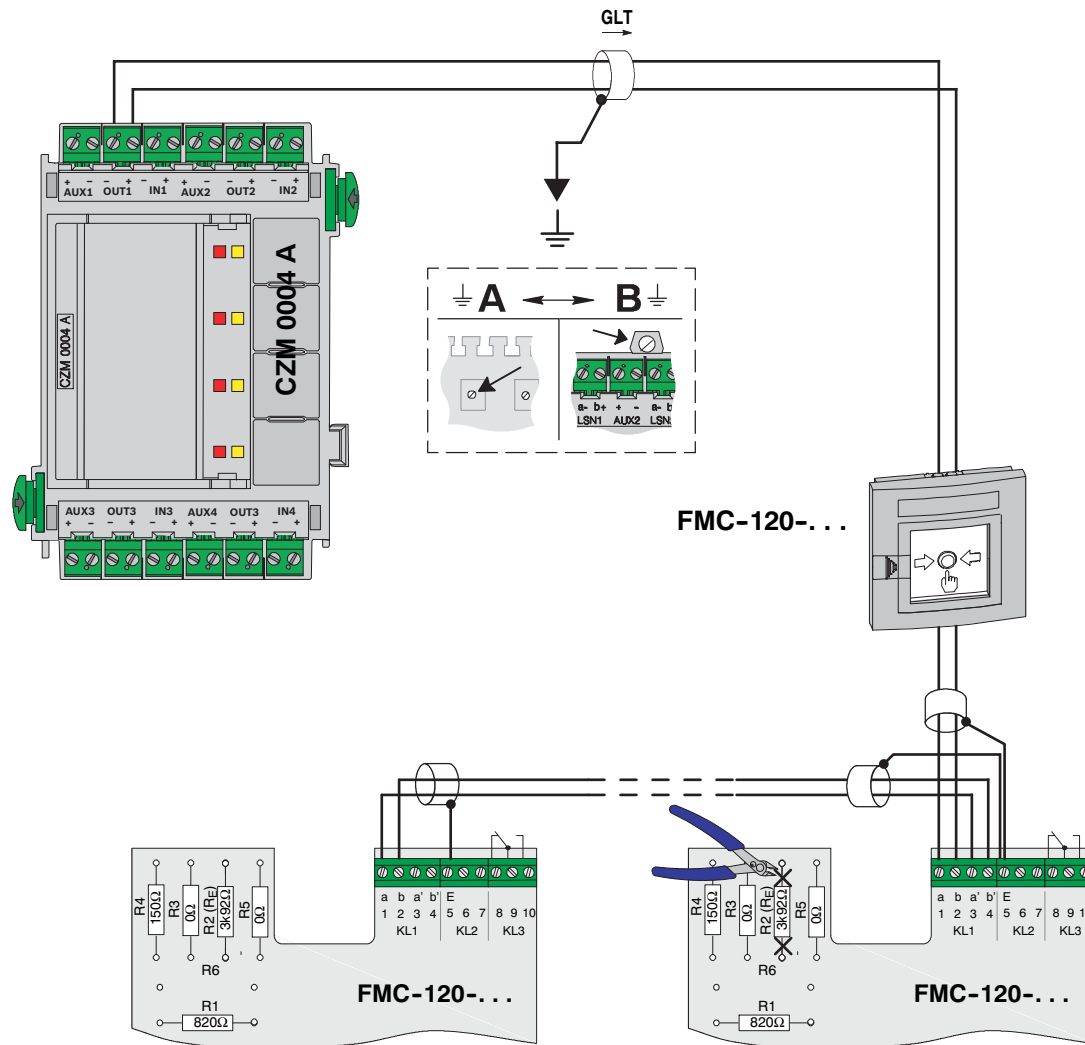
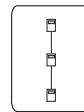
Transafe ADW 511
Transafe ADW 511A

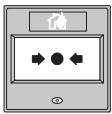
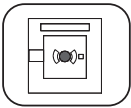
EN 54-2



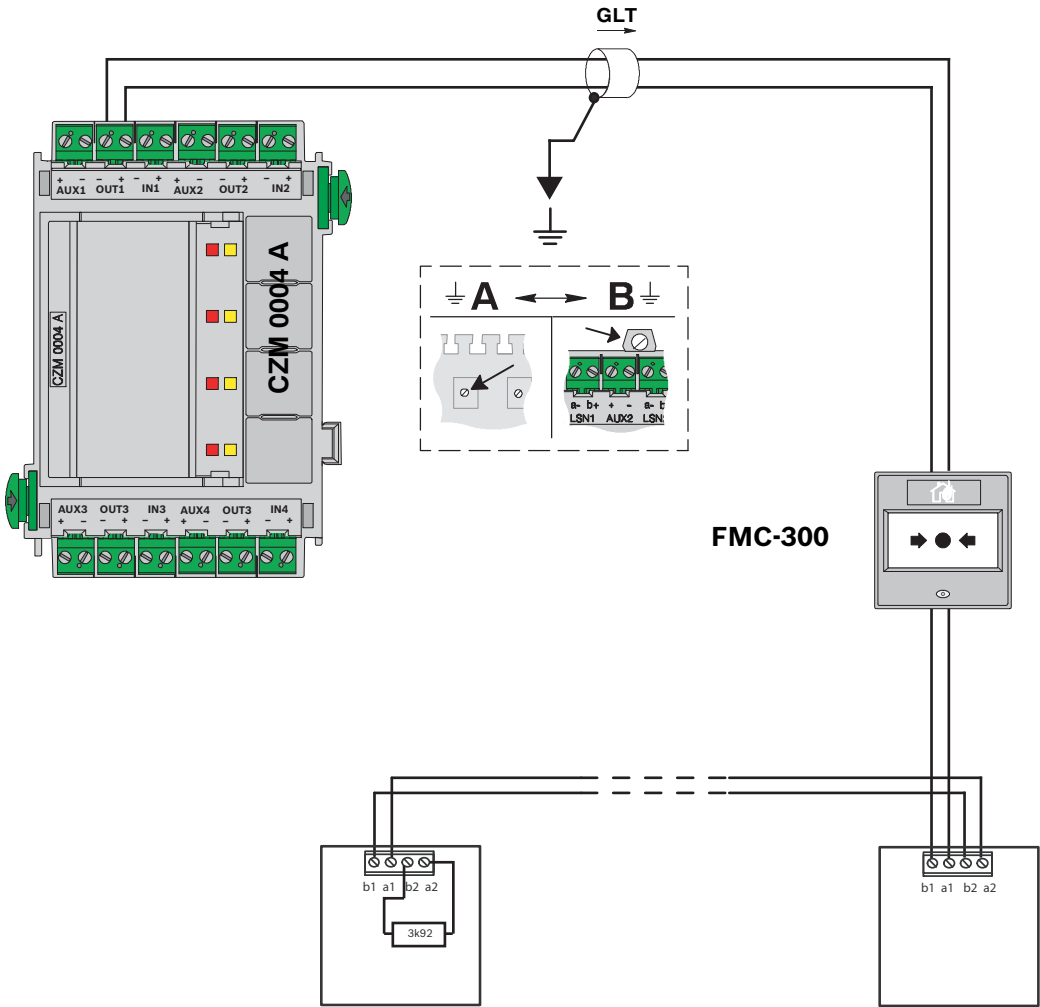
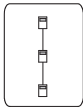


FMC-120-DKM-G-R FMC-120-DKM-G-Y
FMC-120-DKM-H-R FMC-120-EST-G-B
FMC-120-DKM-G-B
FMC-120-DKM-H-B



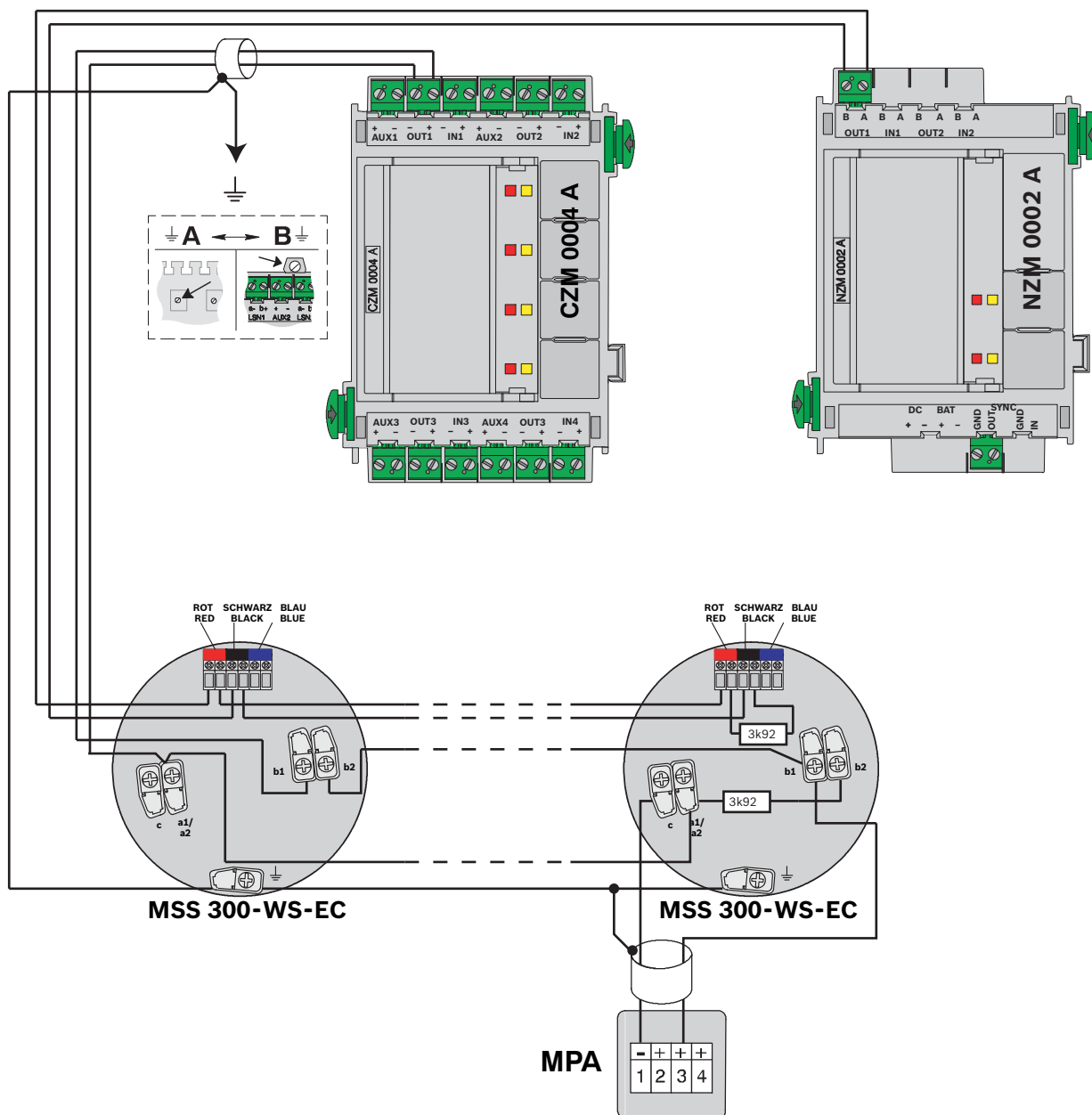


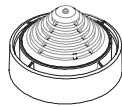
FMC-300 Series





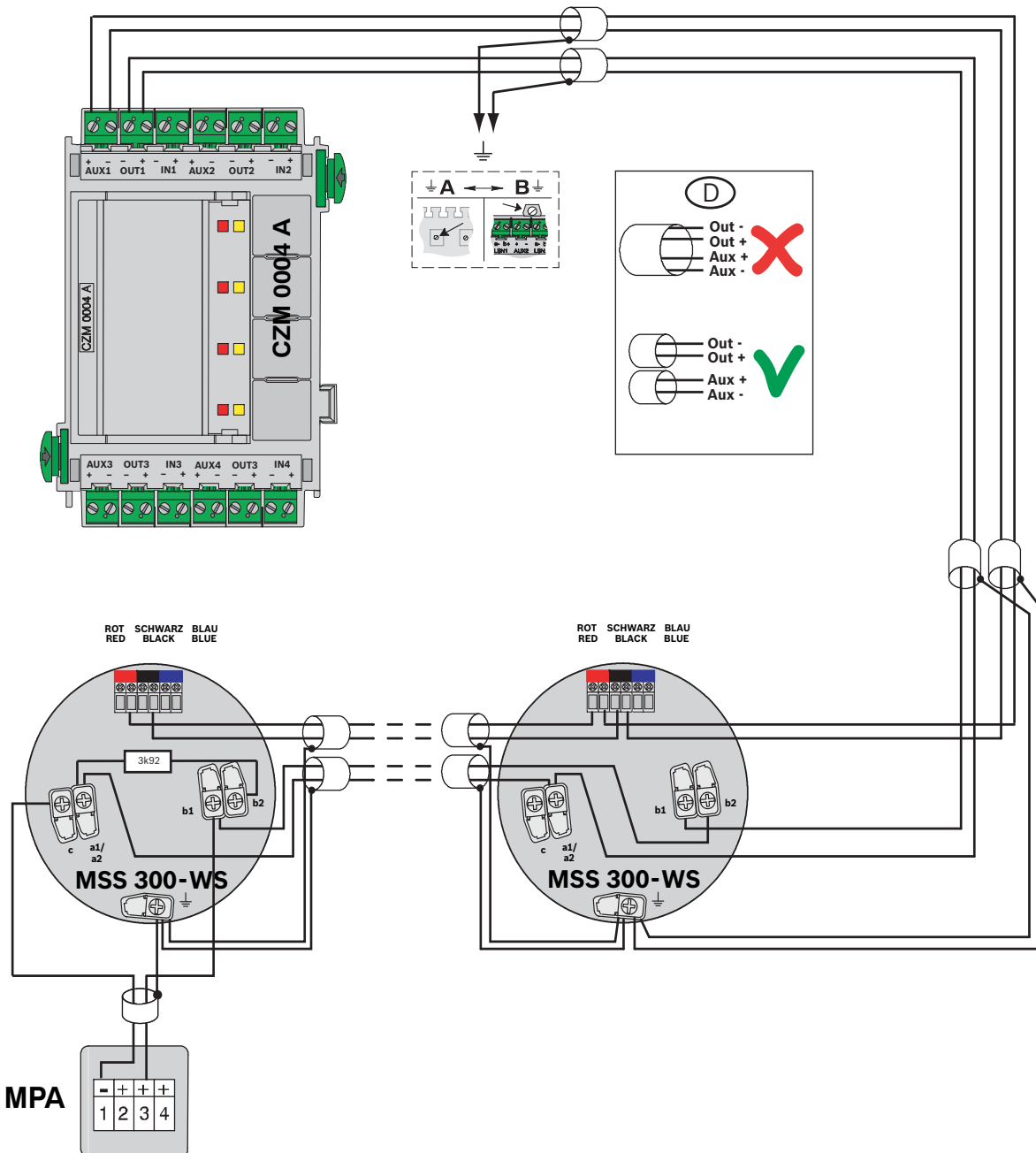
MSS 300-WS-EC

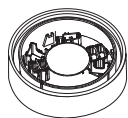




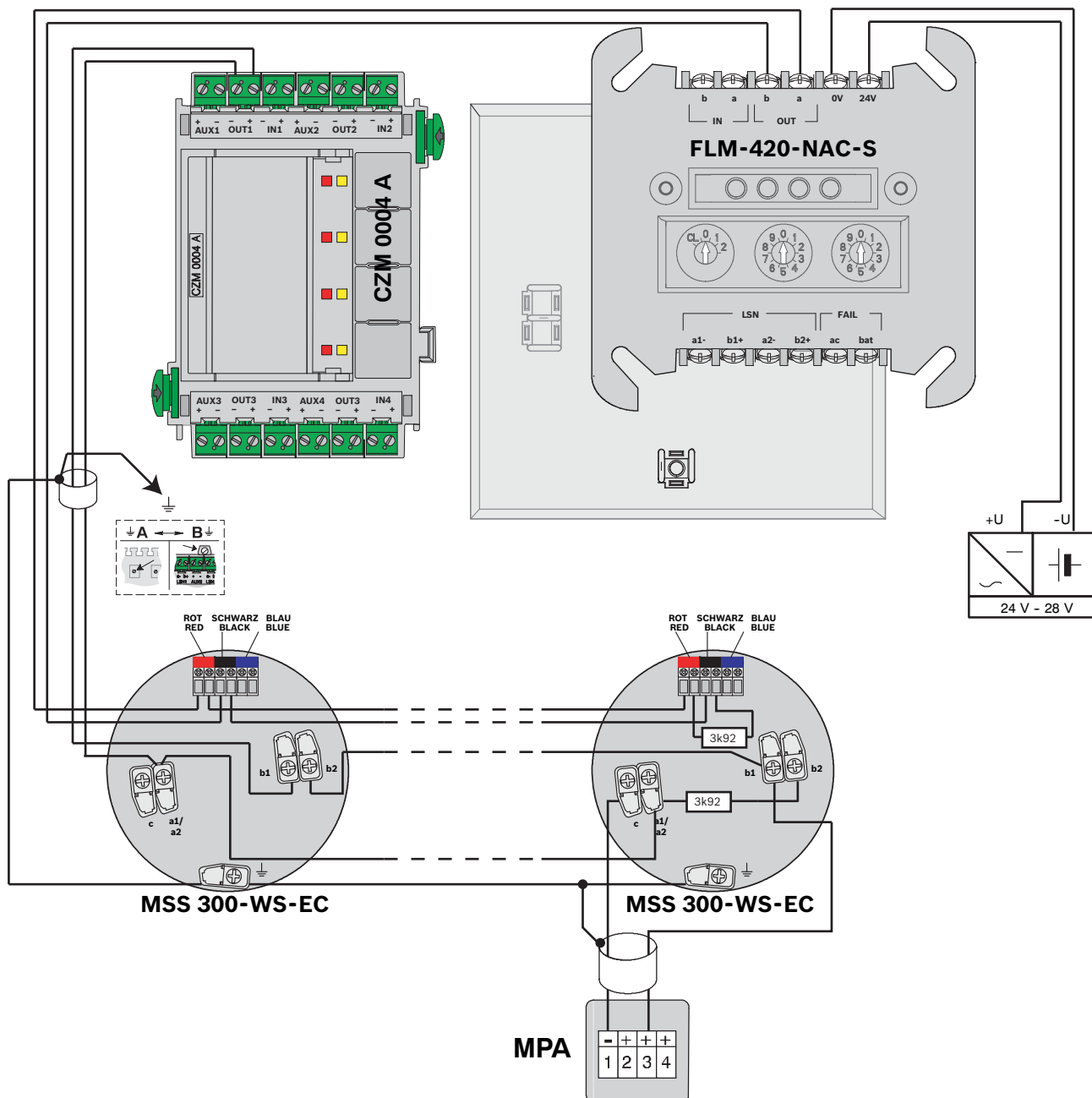
MSS 300-WS

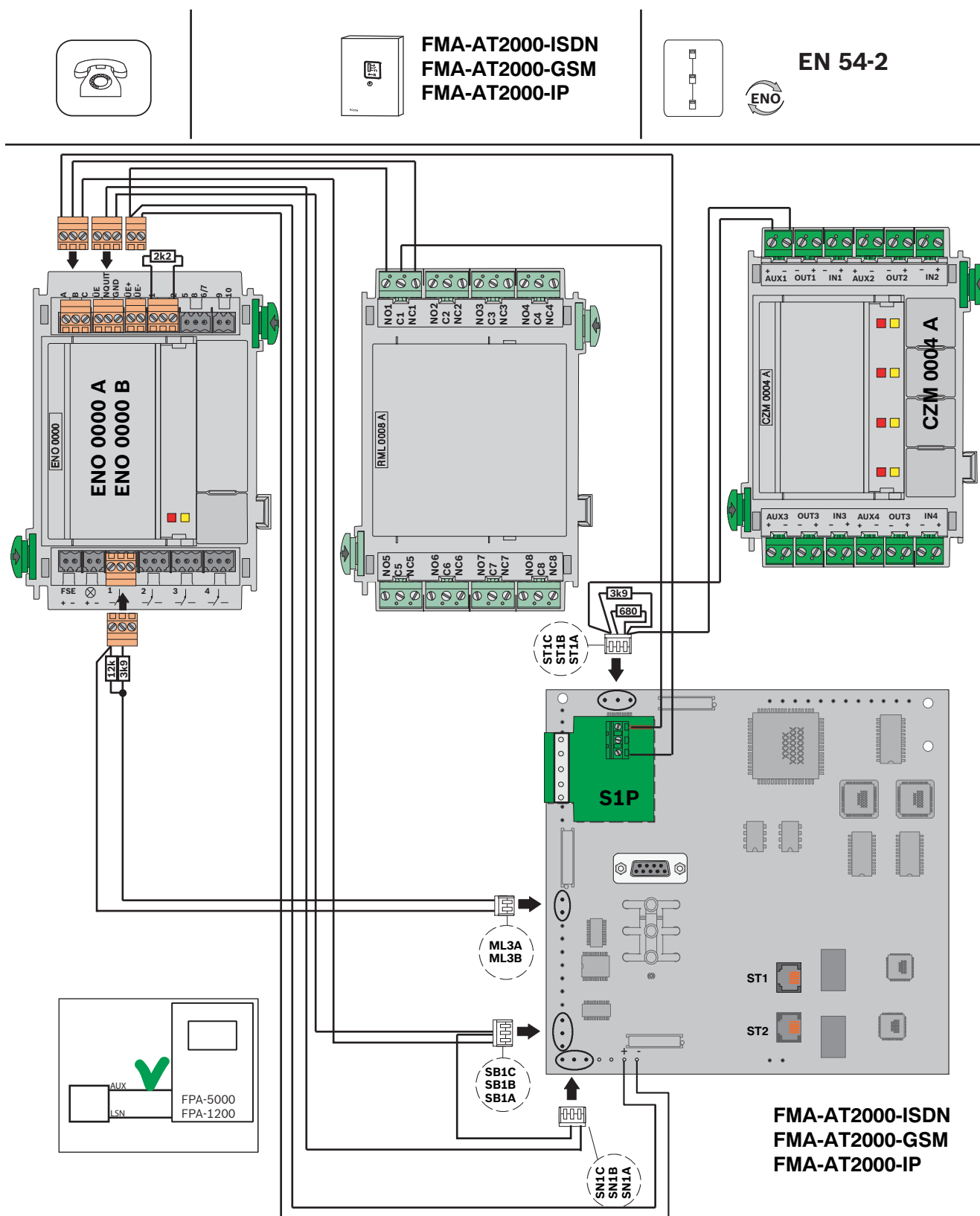
EN 54-2

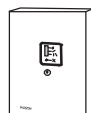




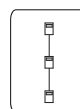
MSS 300-WS-EC



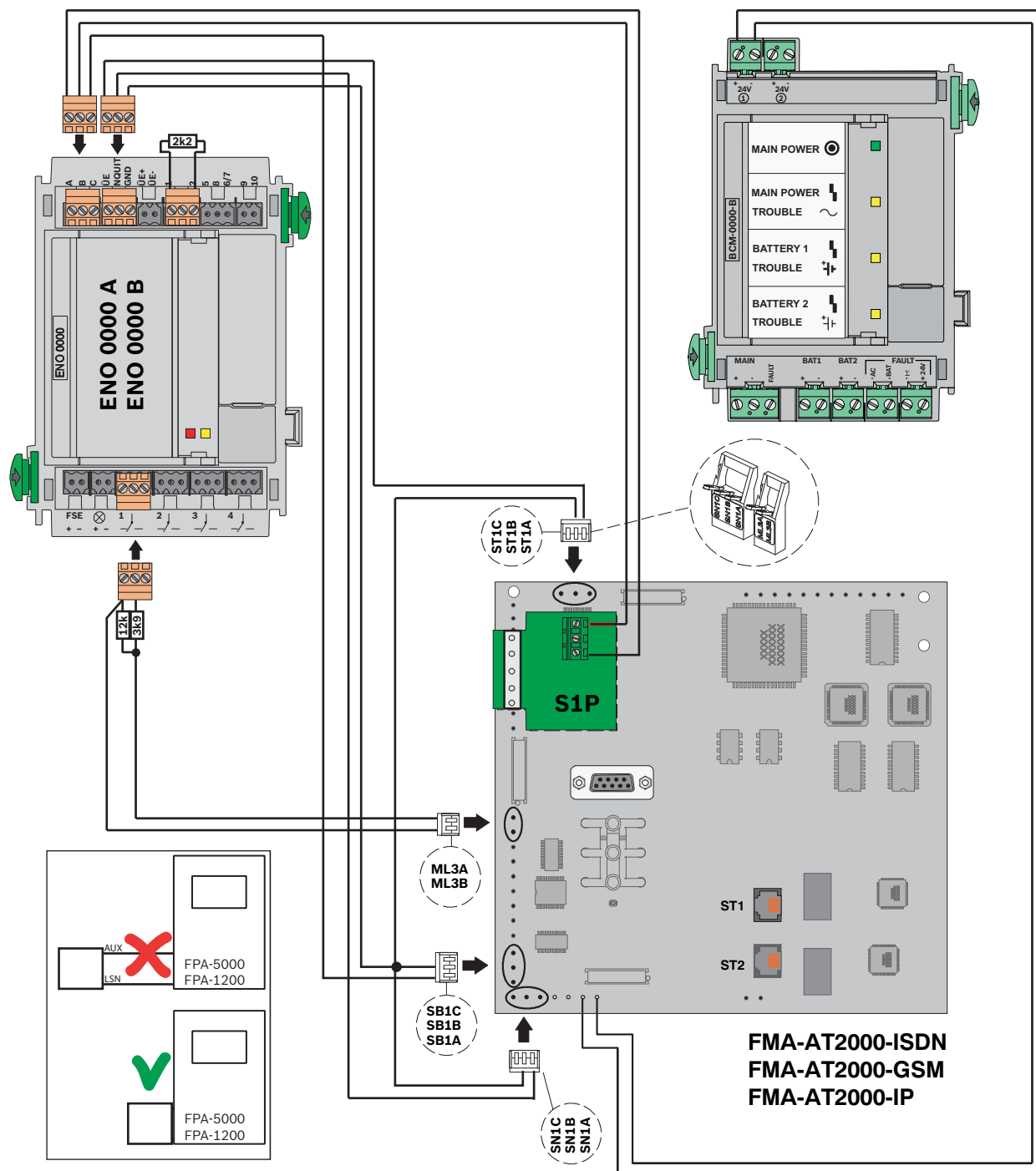


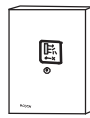


FMA-AT2000-ISDN
FMA-AT2000-GSM
FMA-AT2000-IP

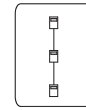


EN 54-2

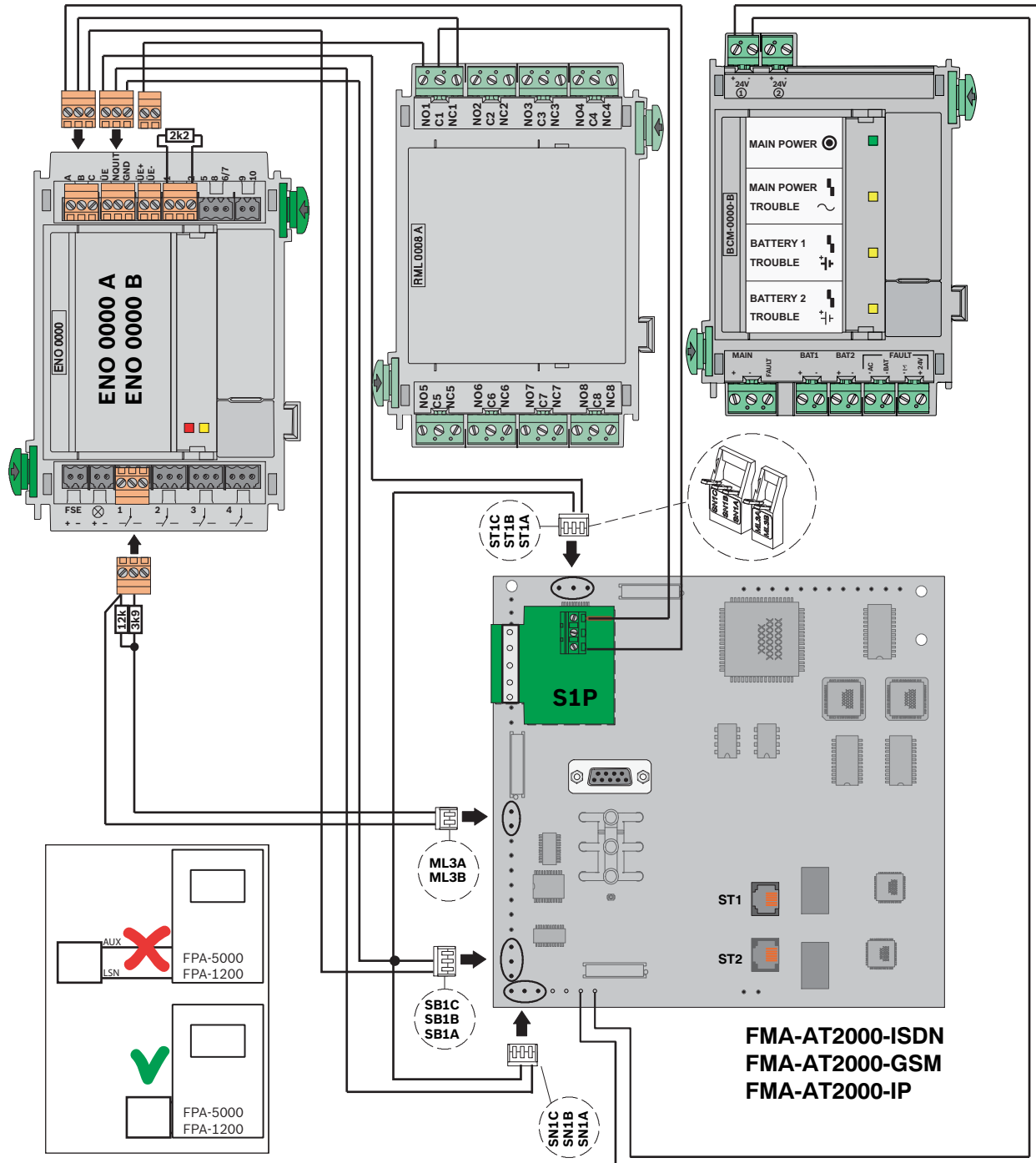


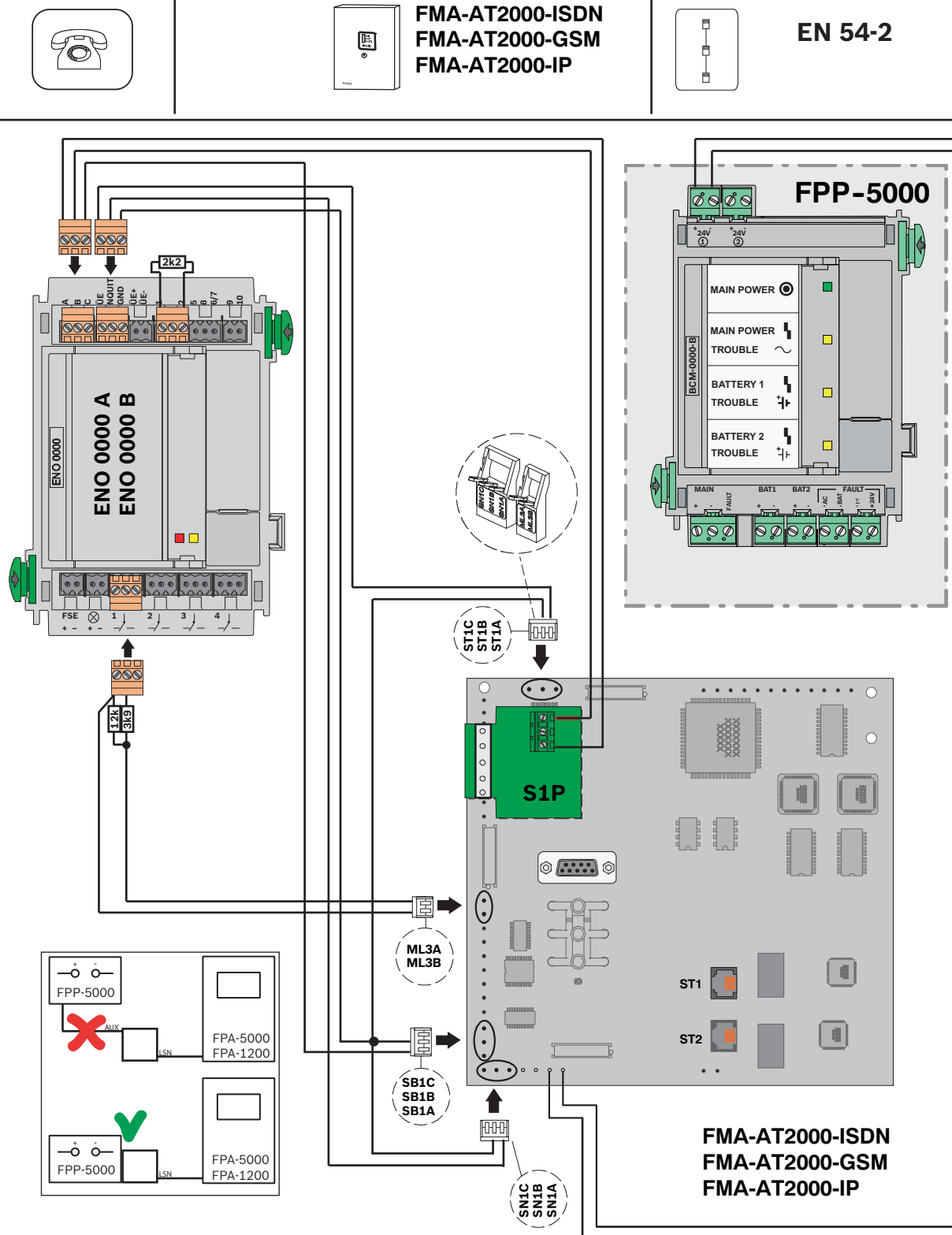


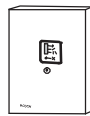
FMA-AT2000-ISDN
FMA-AT2000-GSM
FMA-AT2000-IP



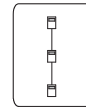
EN 54-2



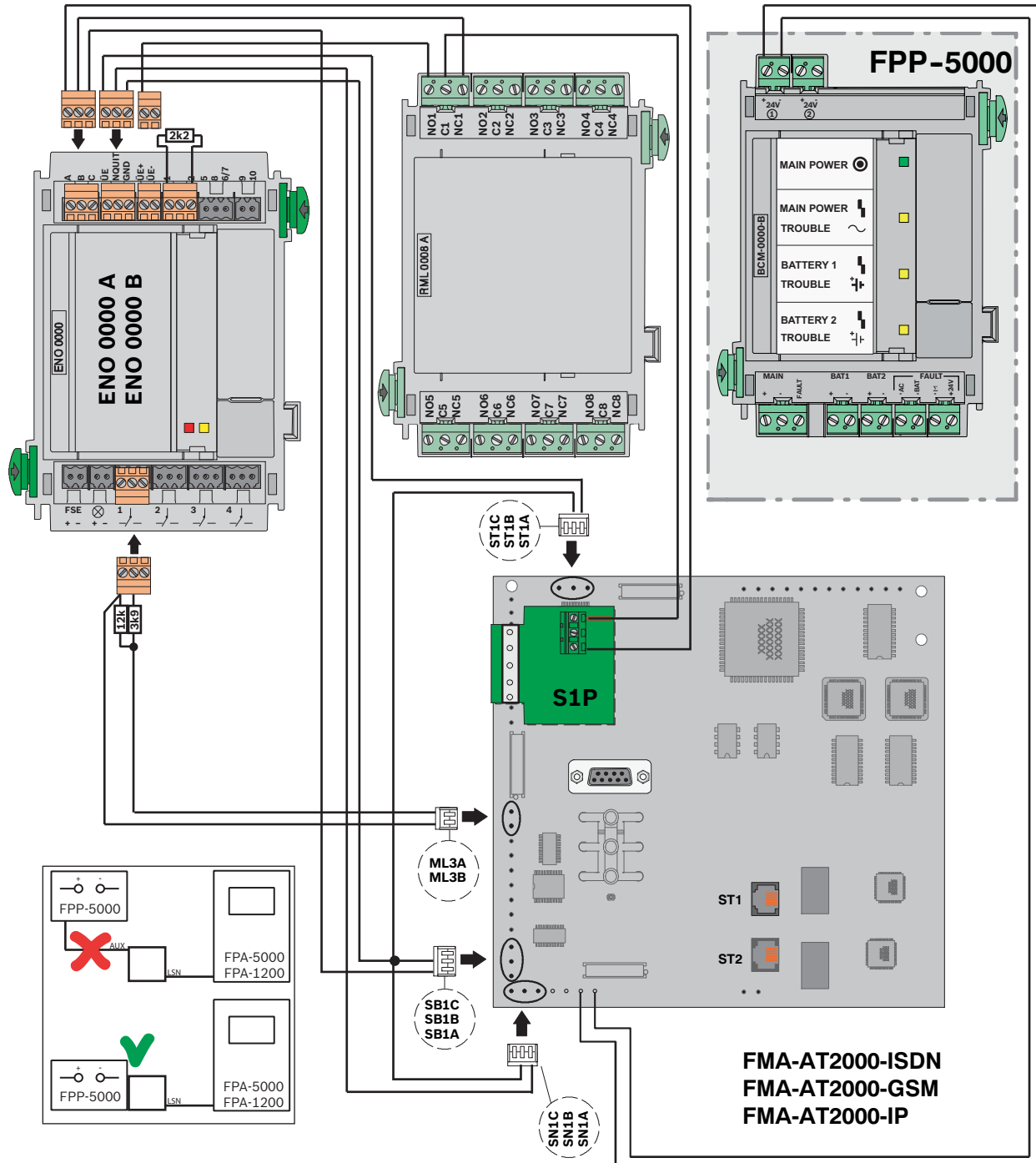




FMA-AT2000-ISDN
FMA-AT2000-GSM
FMA-AT2000-IP

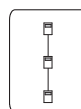


EN 54-2

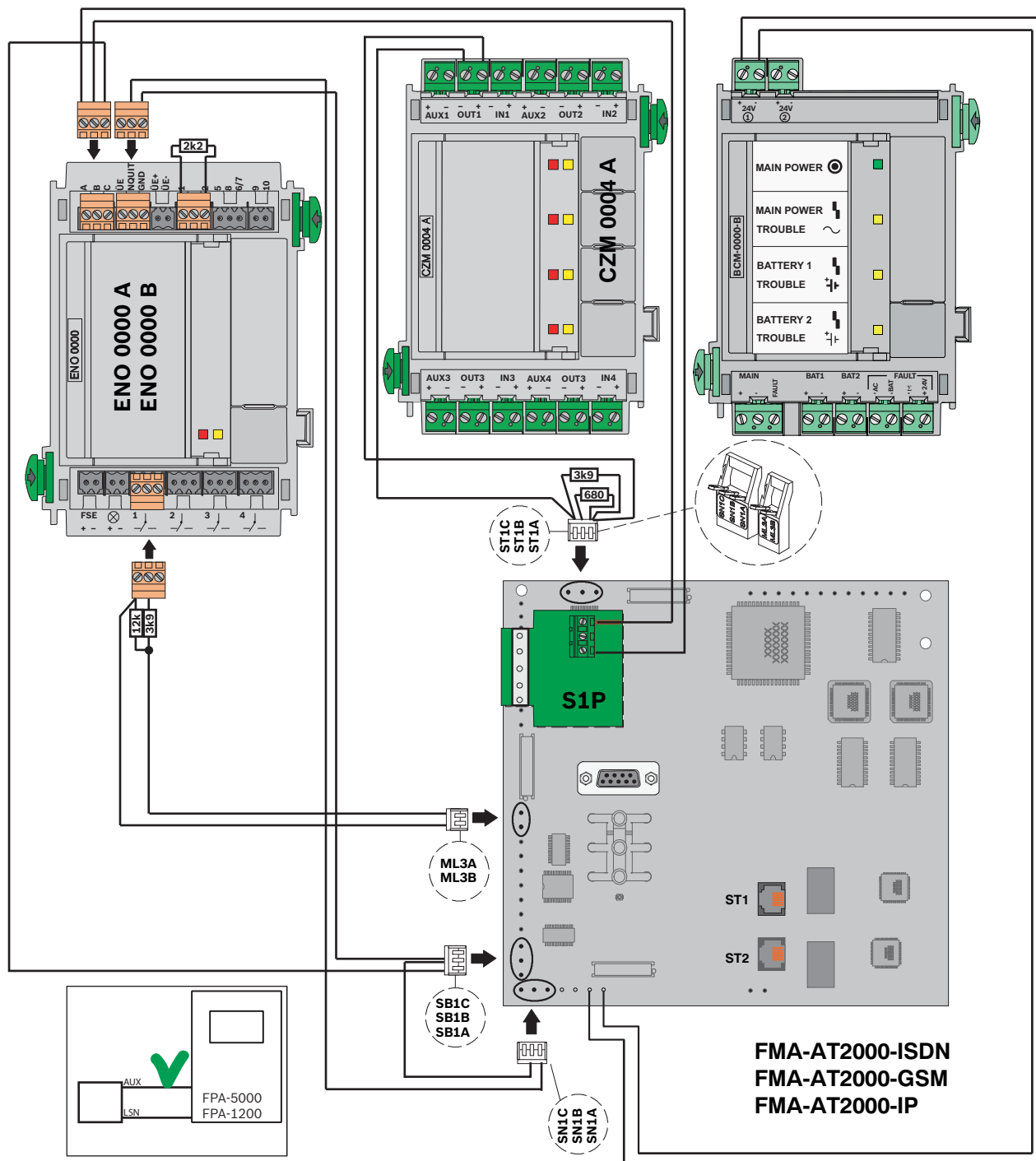


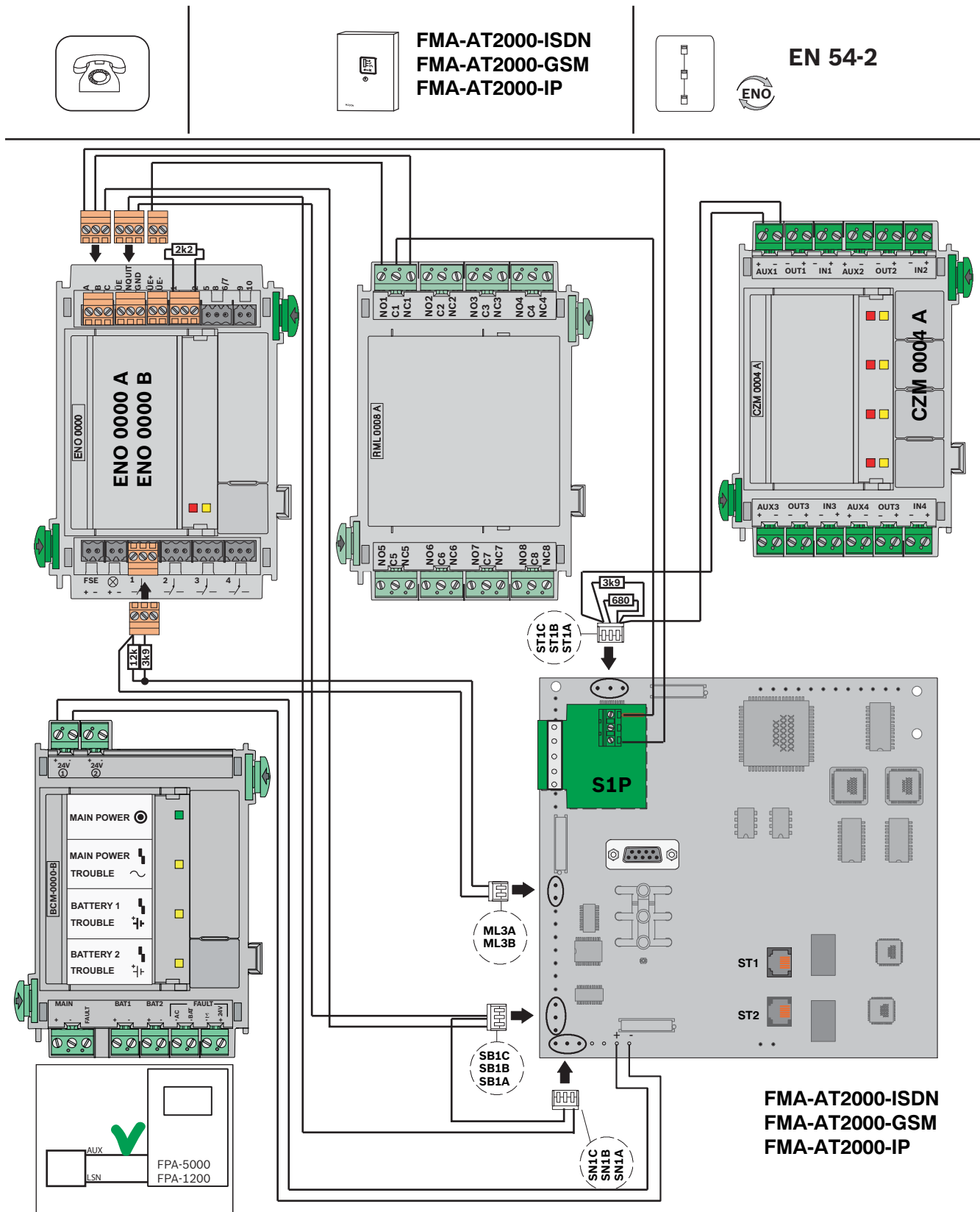


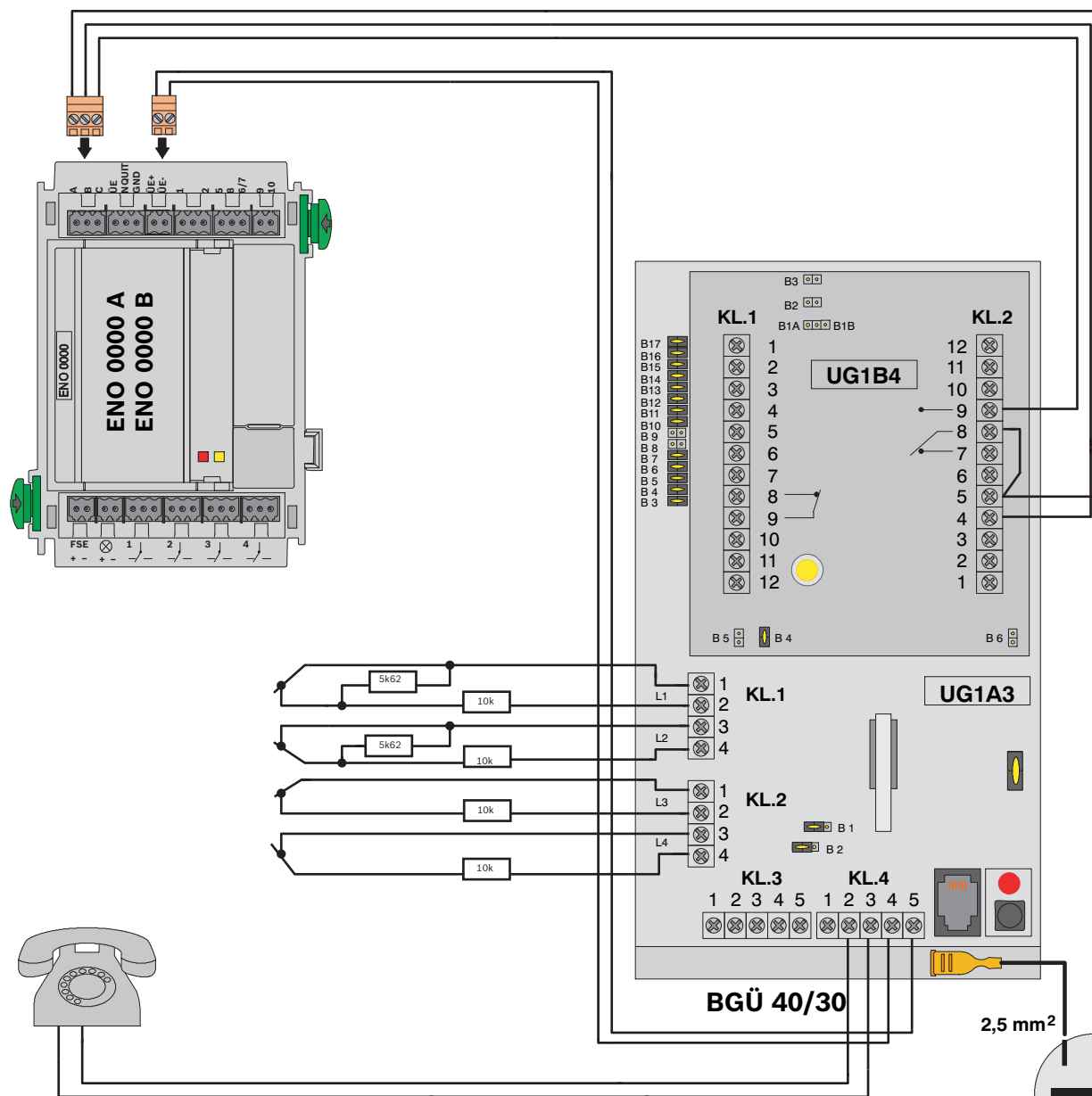
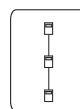
FMA-AT2000-ISDN
FMA-AT2000-GSM
FMA-AT2000-IP



EN 54-2

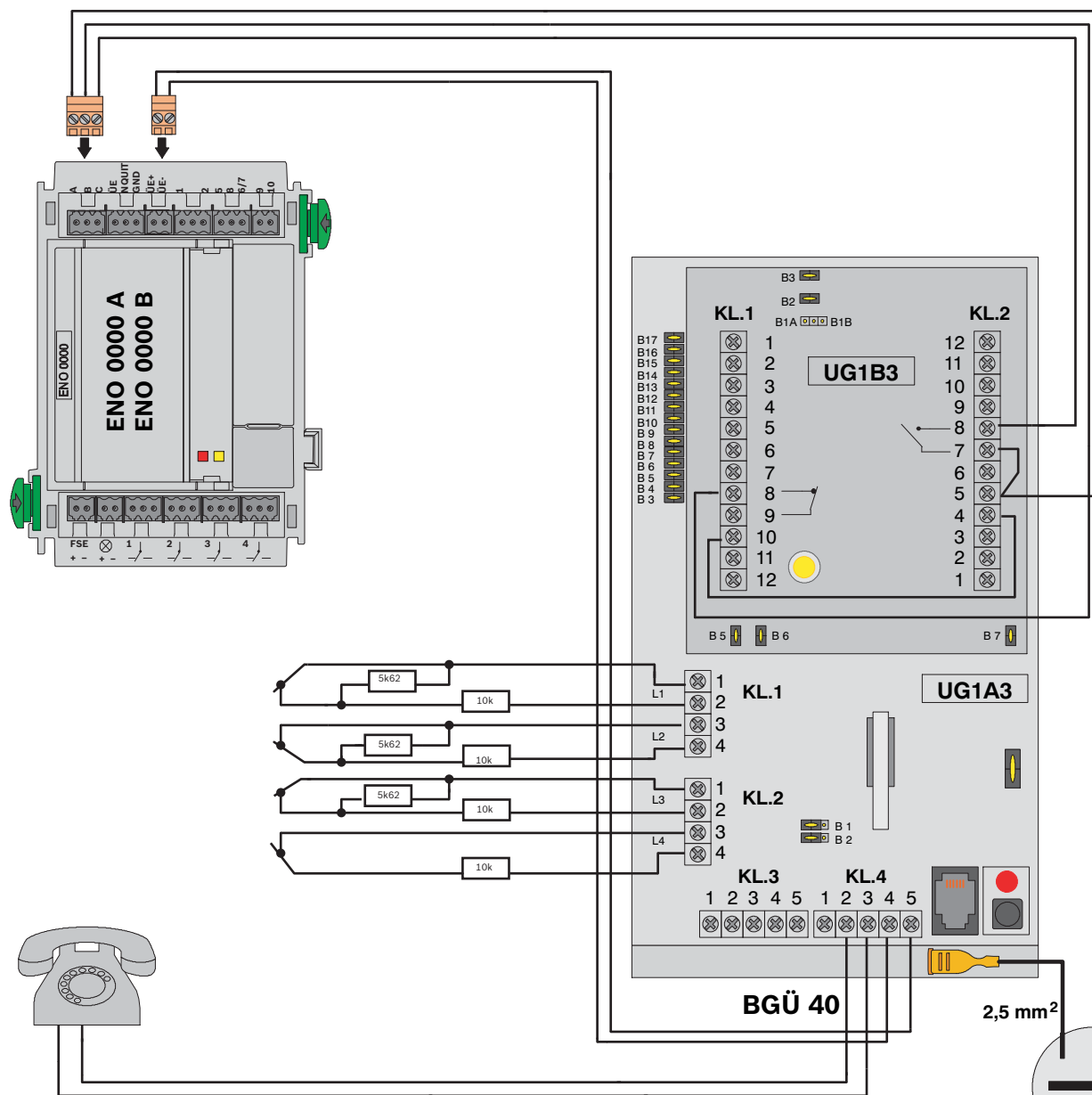
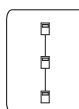


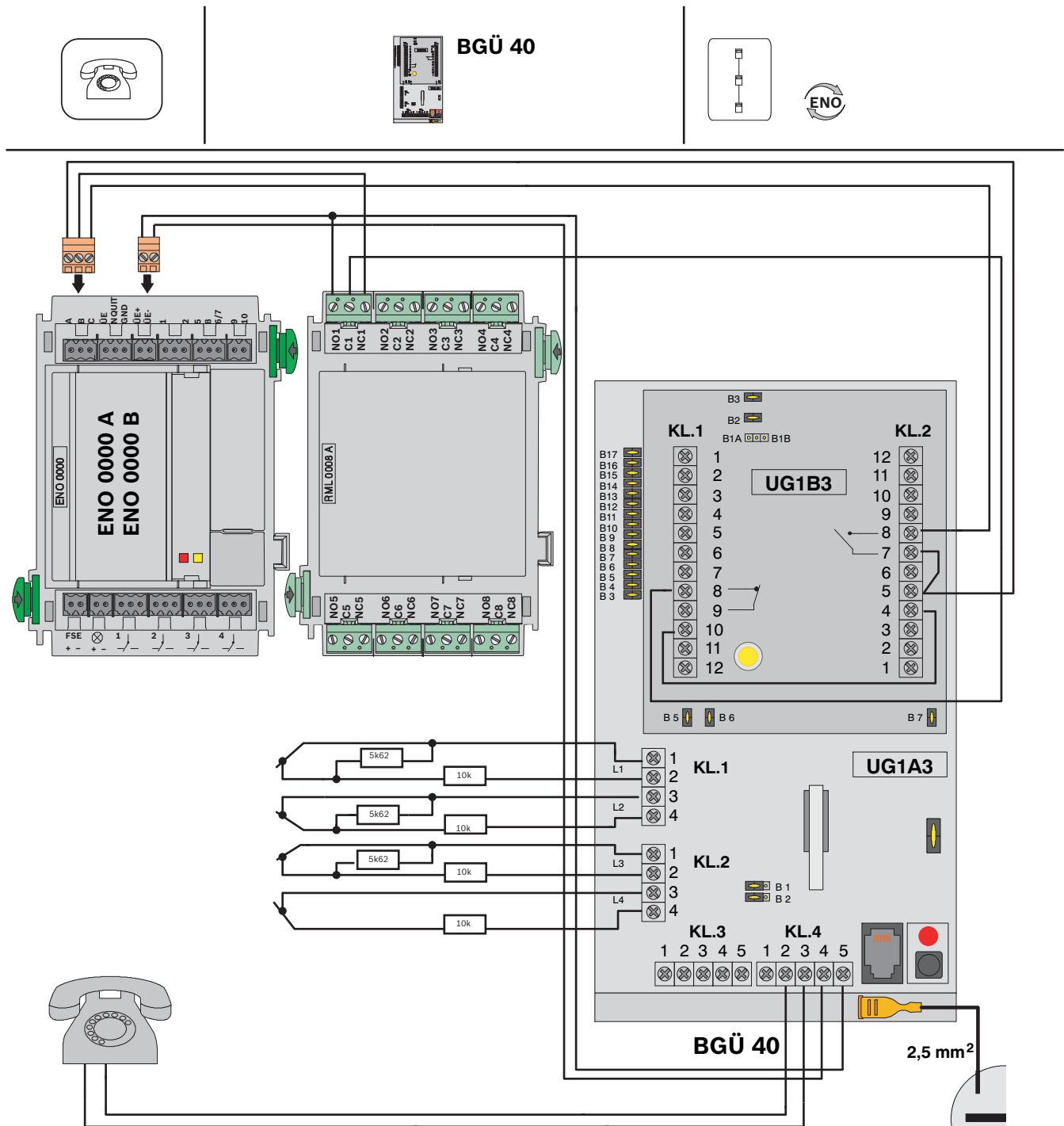


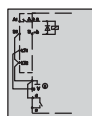

BGÜ 40/30




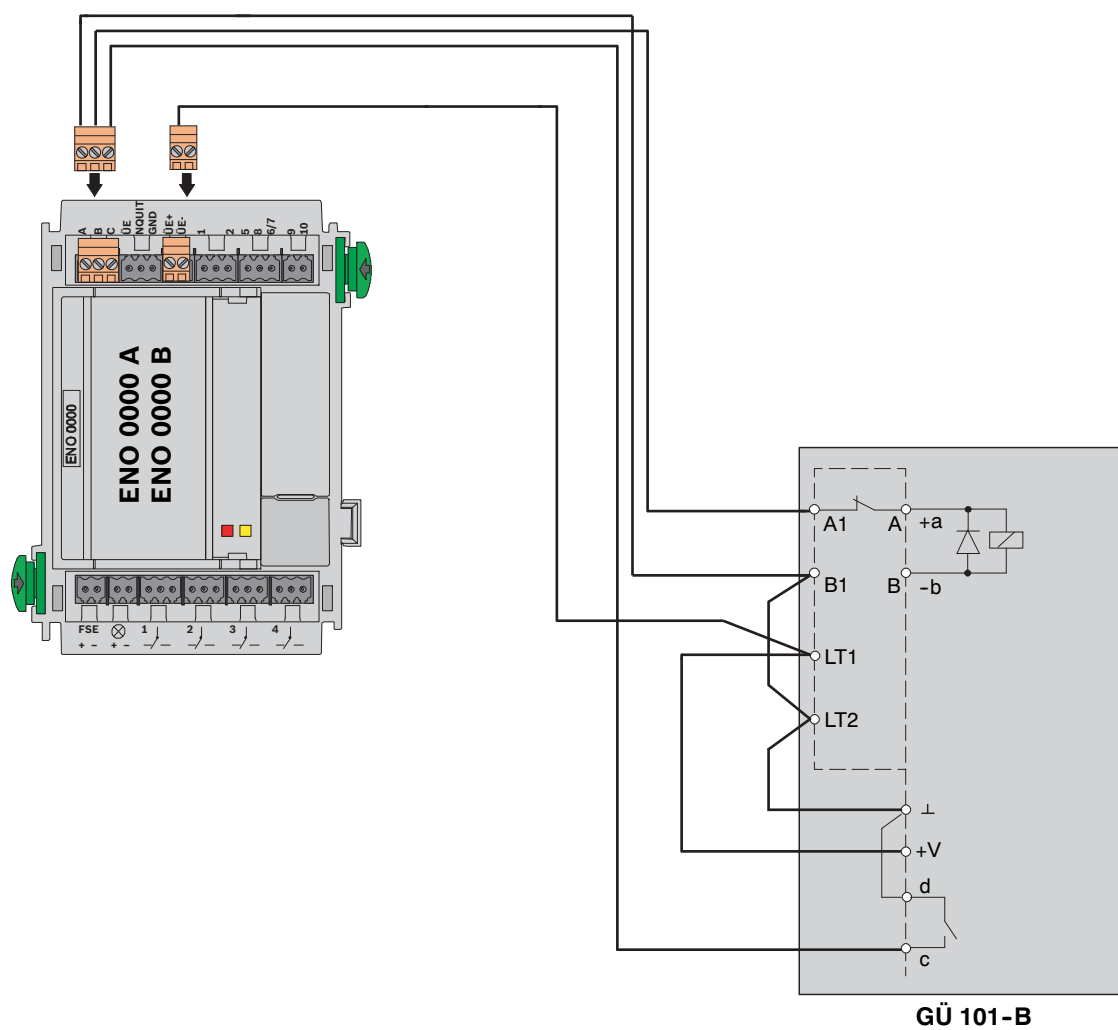
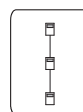
BGÜ 40

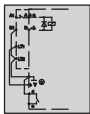




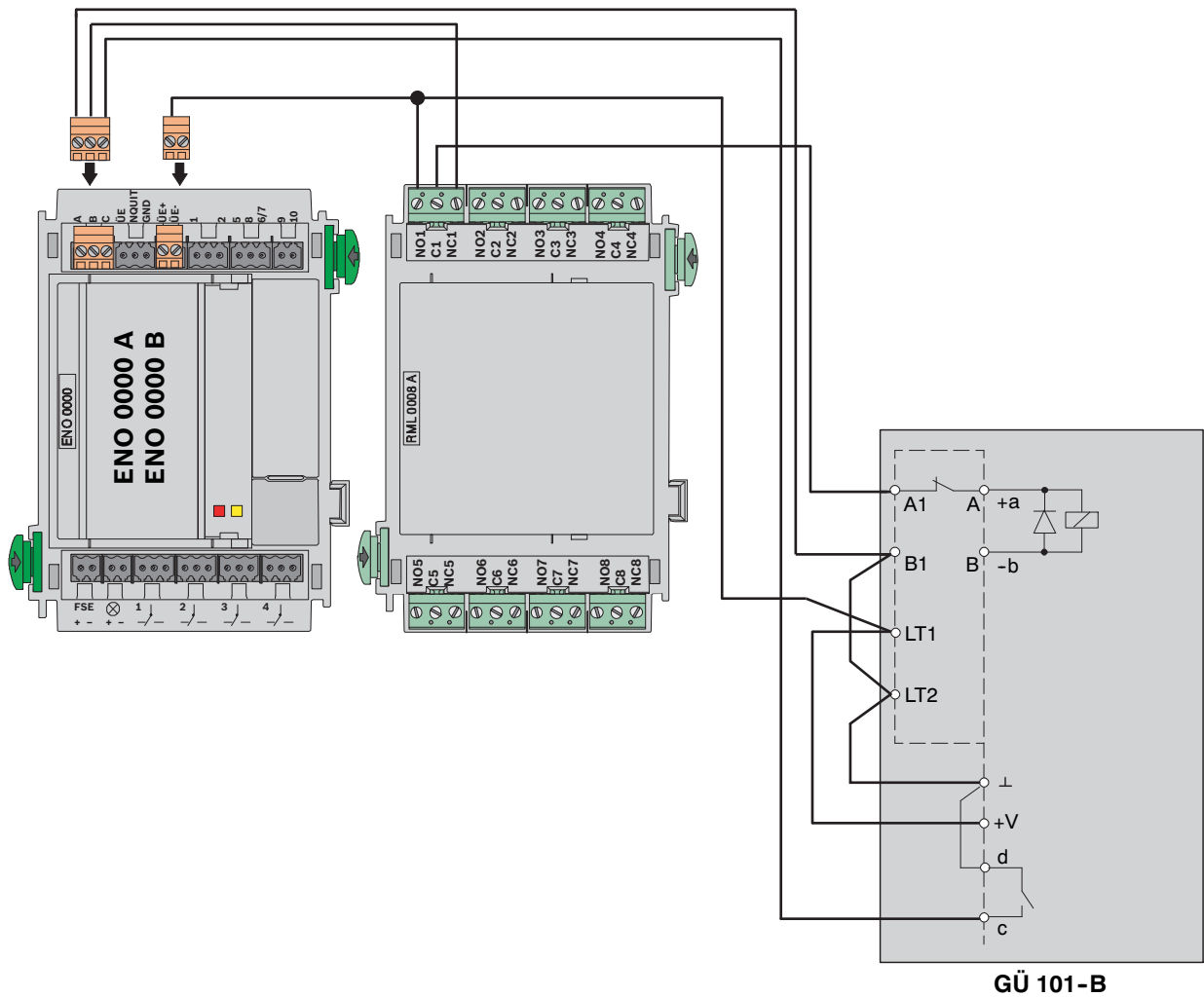
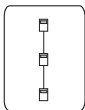


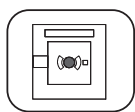
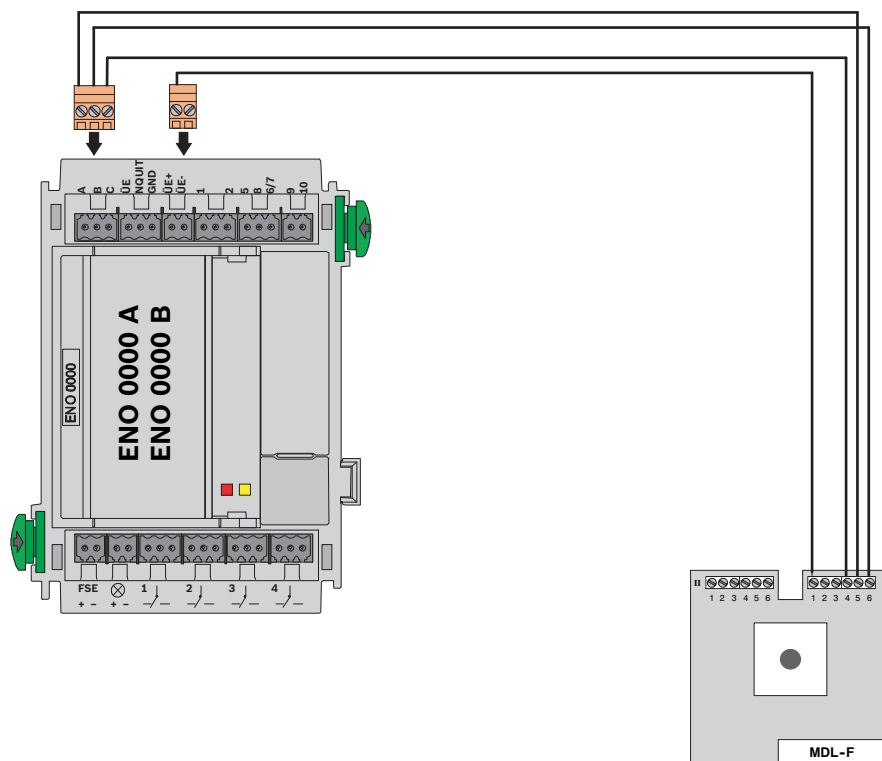
GÜ 101-B

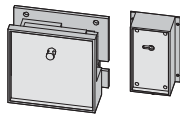




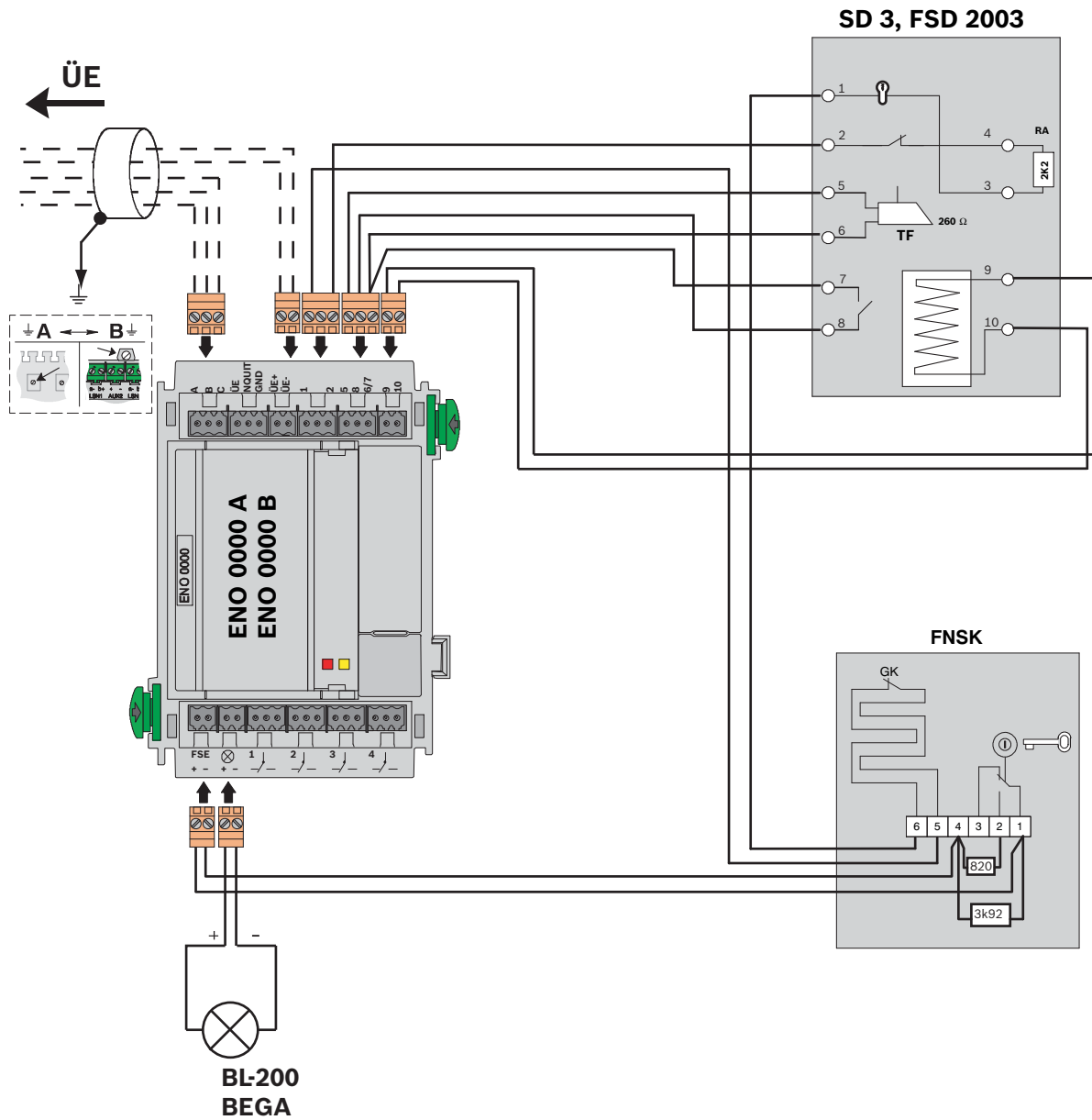
GÜ 101-B

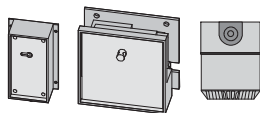


**MDL-F**

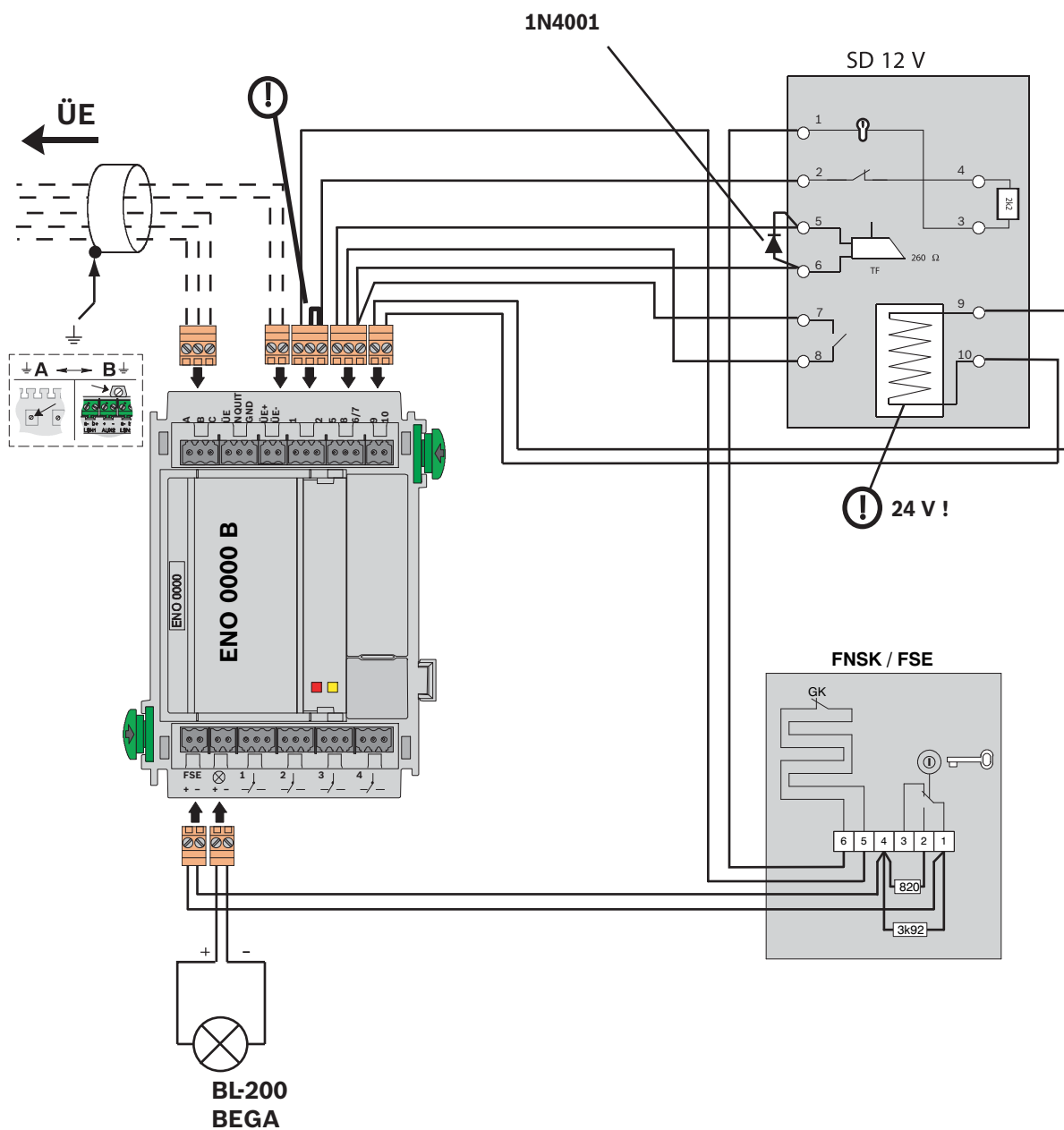


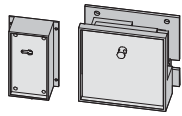
**SD 3
FSD 2003
FNSK
BL 200**



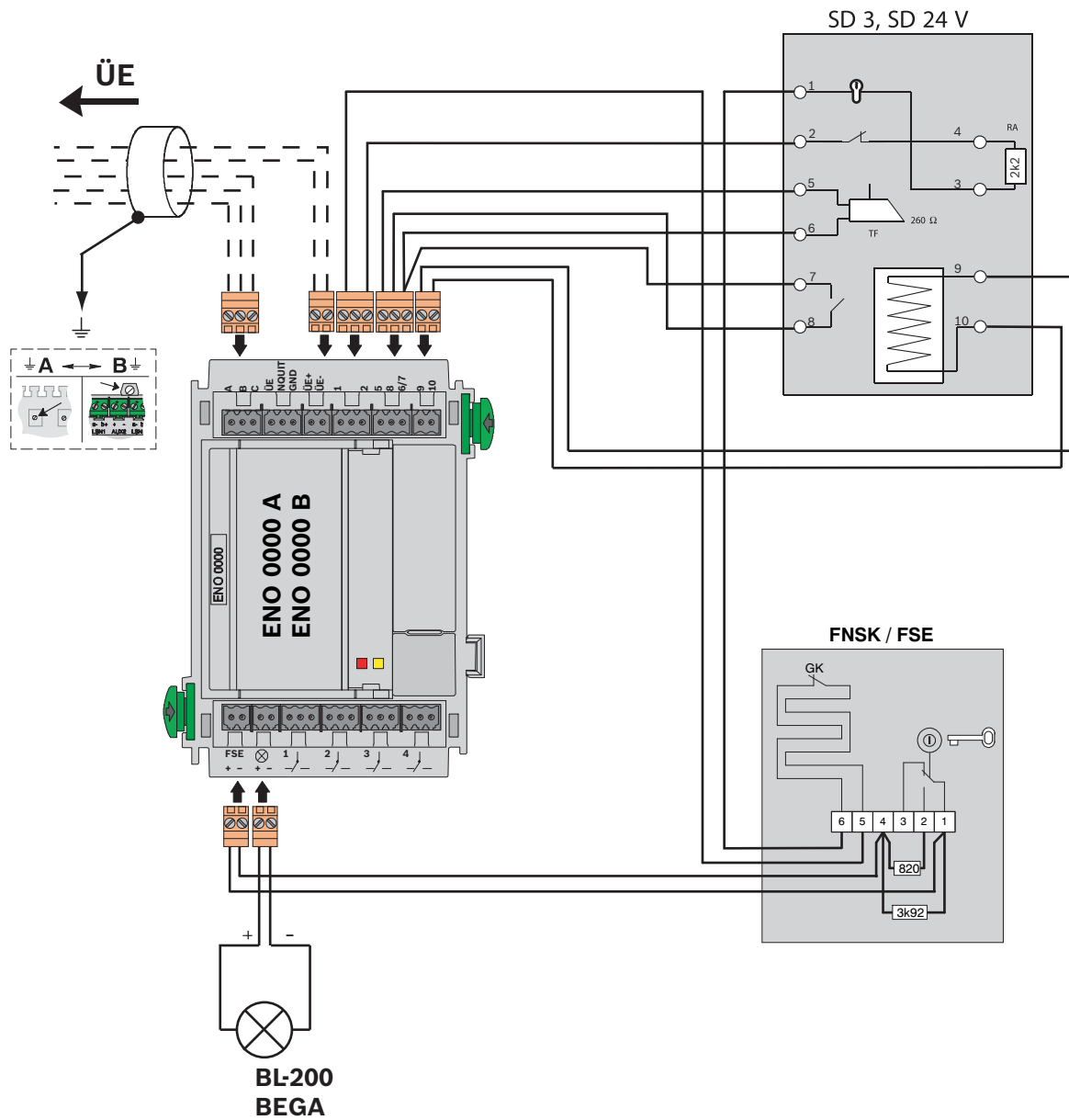


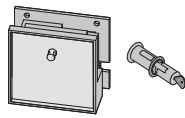
**SD 12V
FNSK
BL 200**



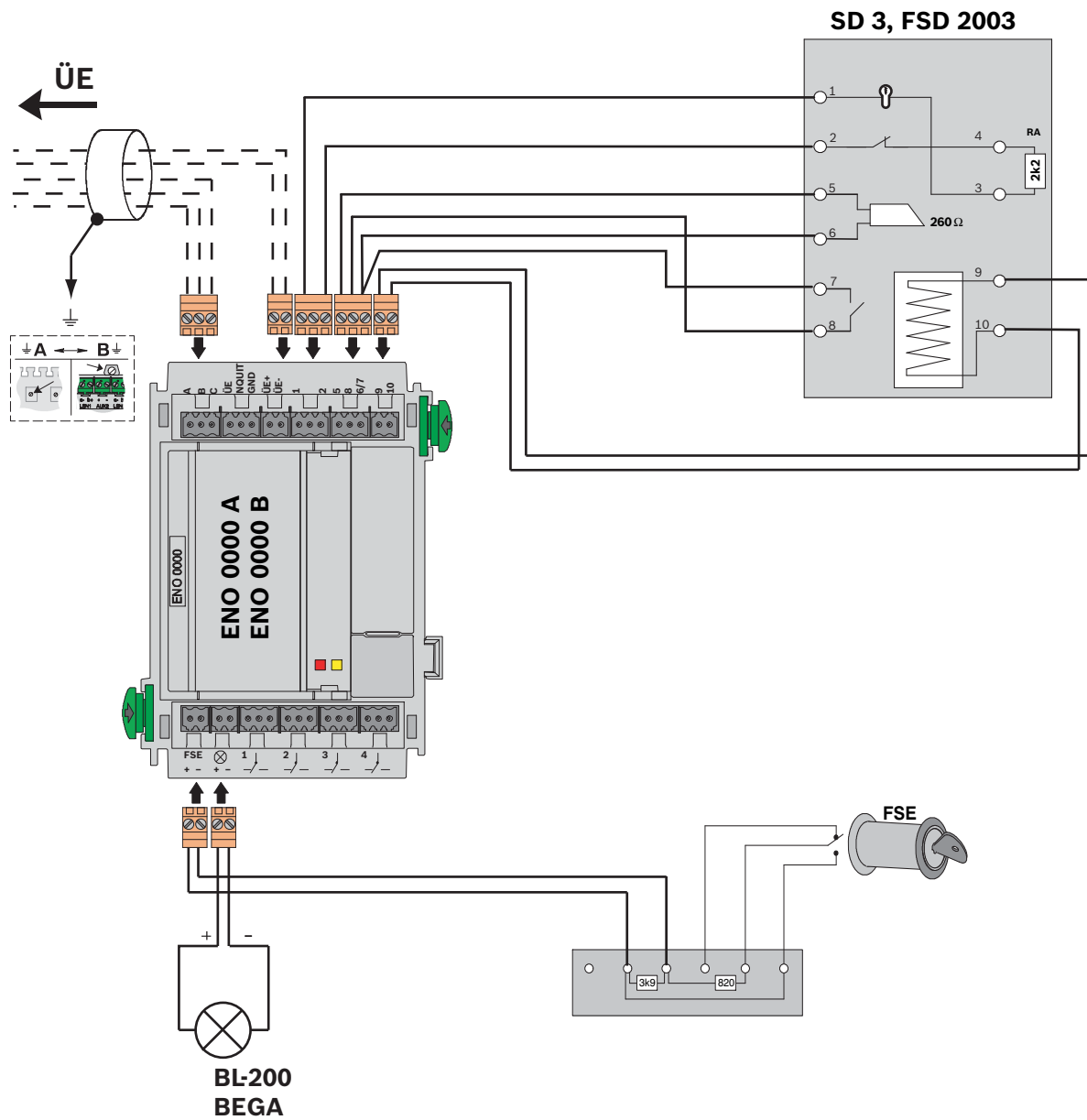


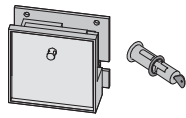
SD 3
SD 24V
FNSK
BL 200



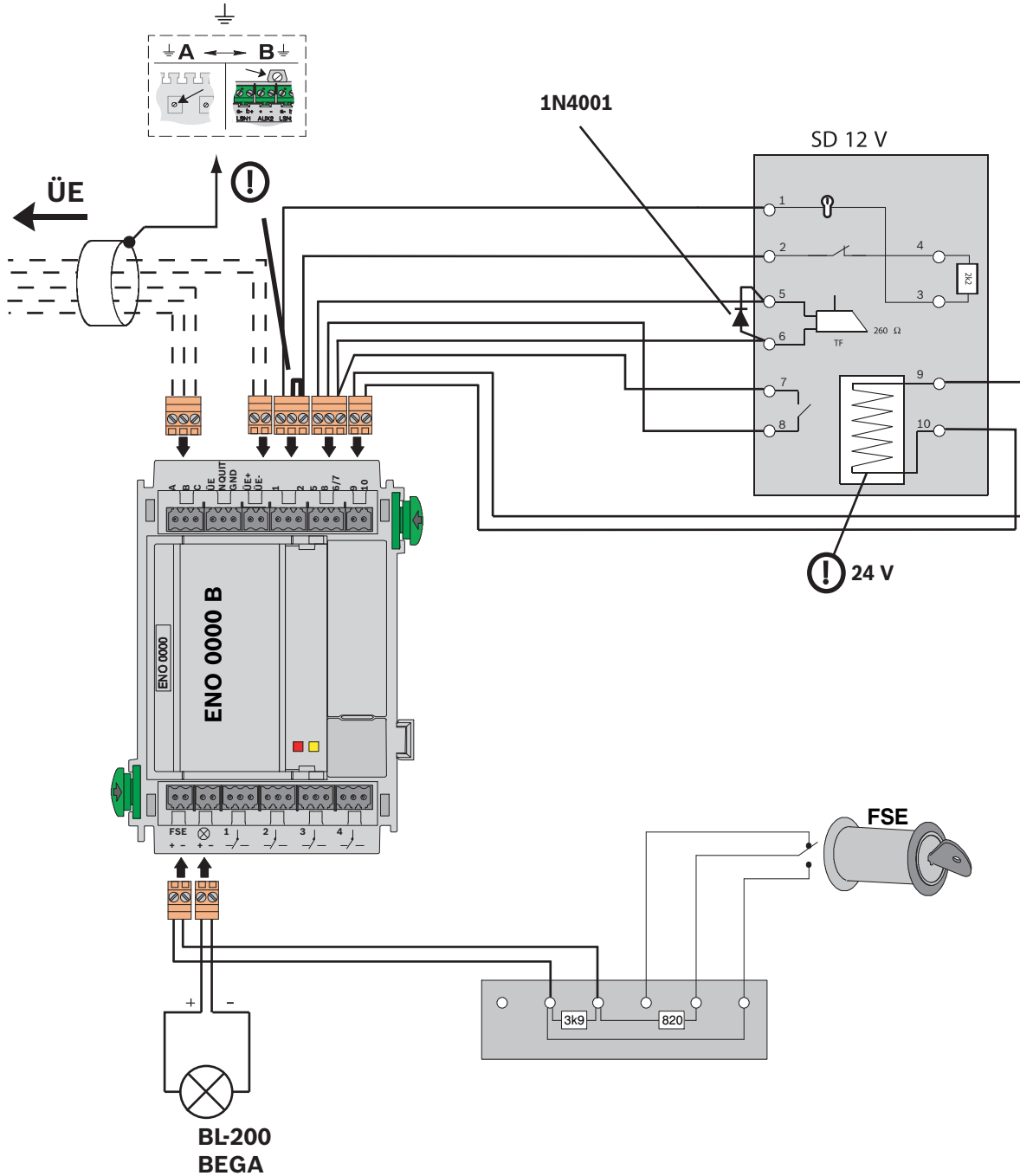


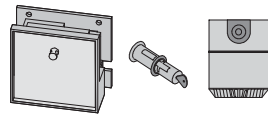
SD 3
FSD 2003
FSE
BL 200



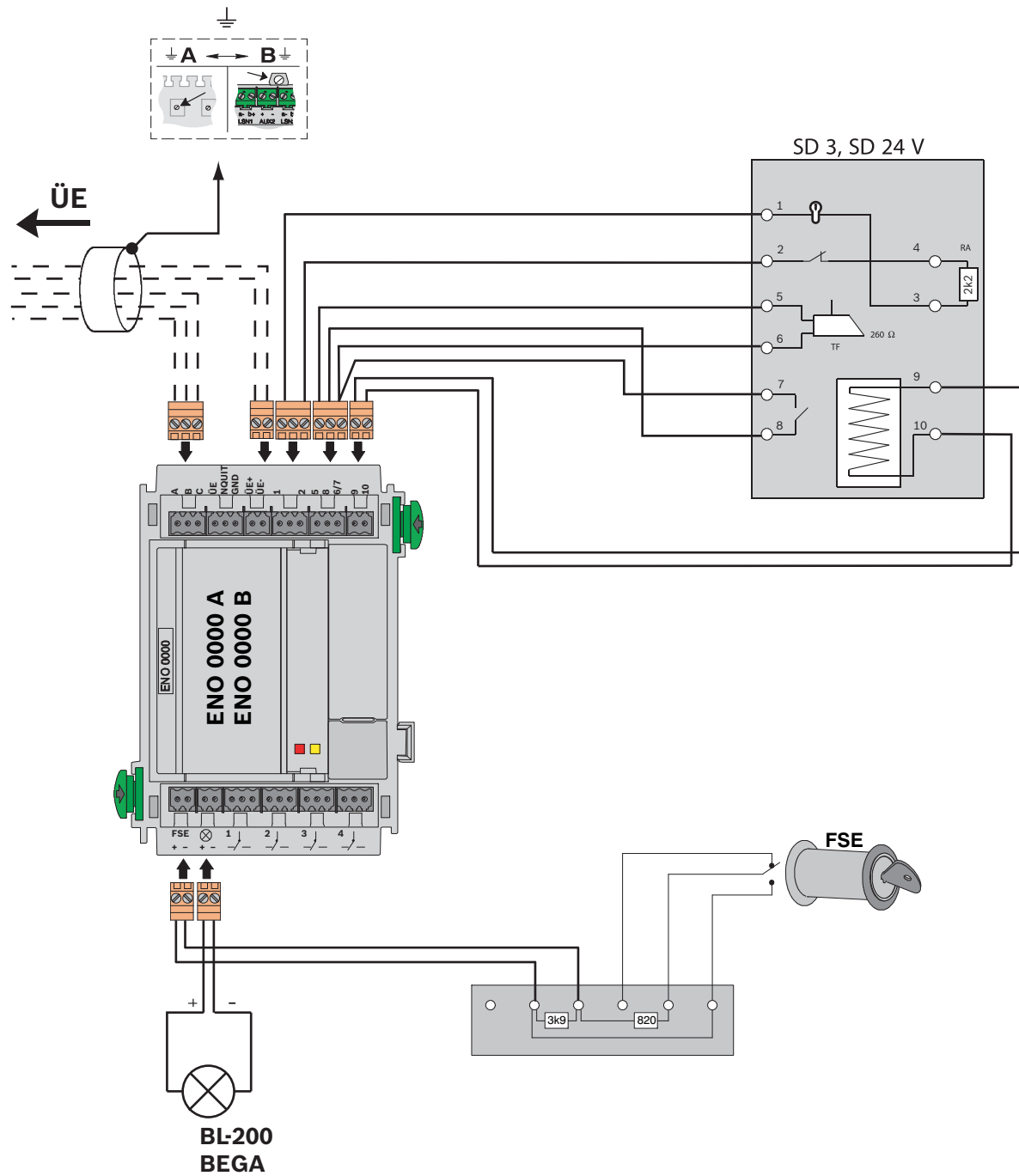


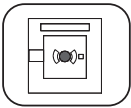
**SD 12V
FSE
BL200**



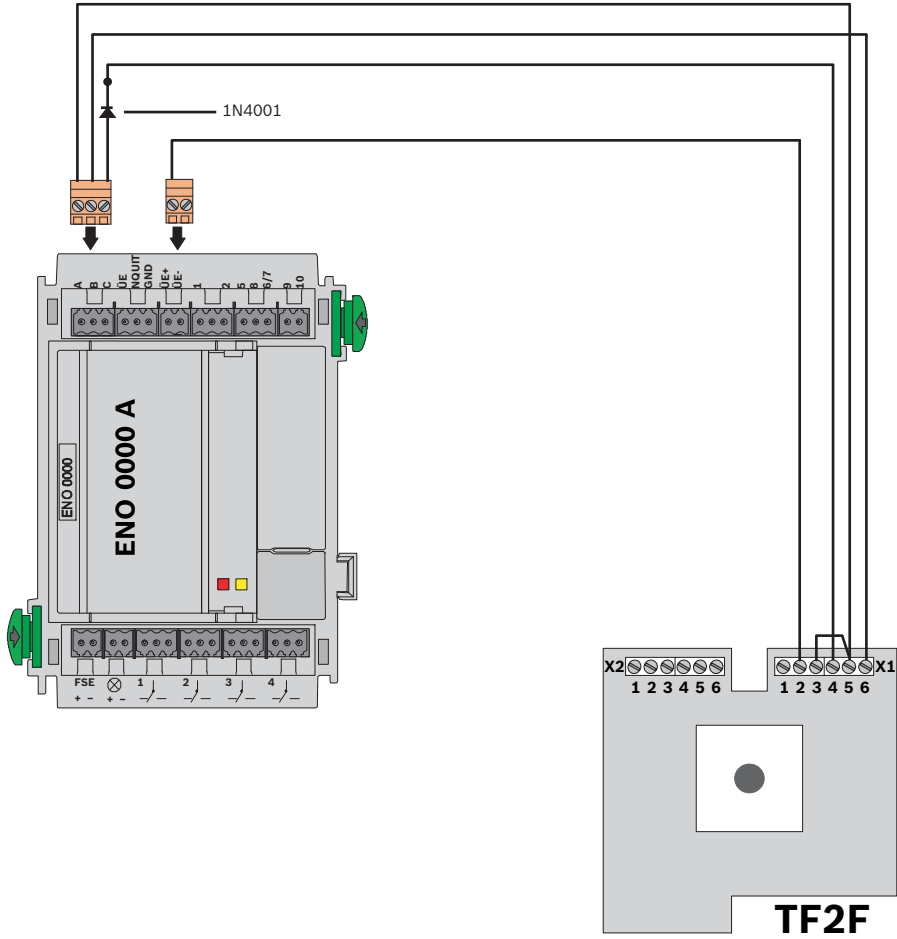
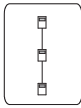


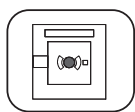
**SD 3
SD 24V
FSE
BL 200**



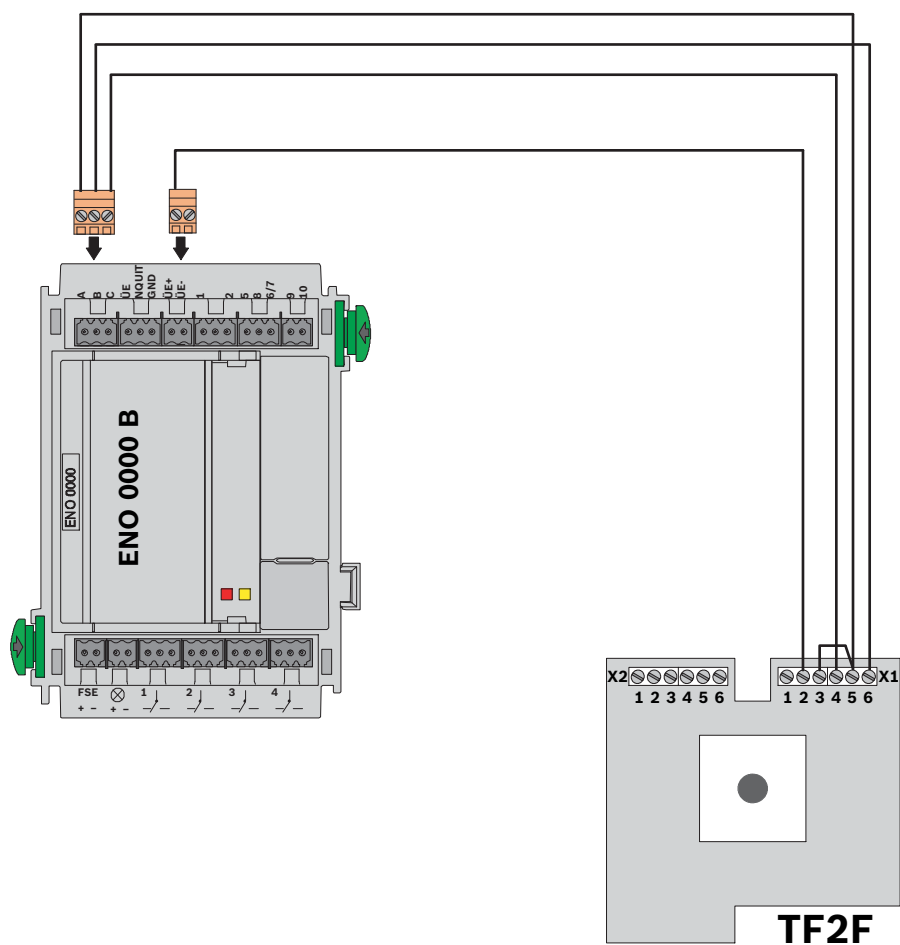
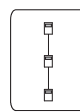


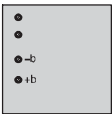
TF2F



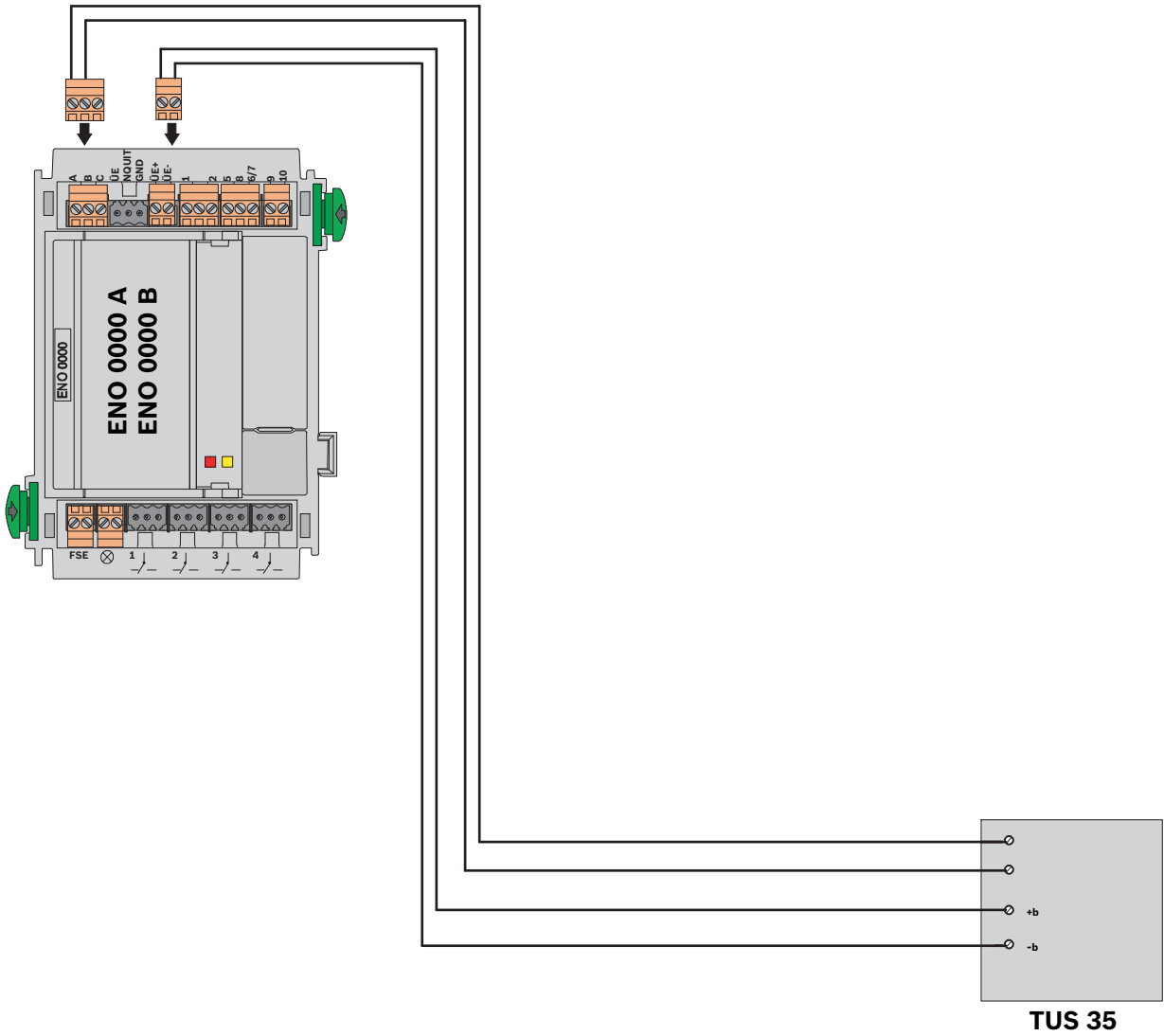


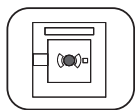
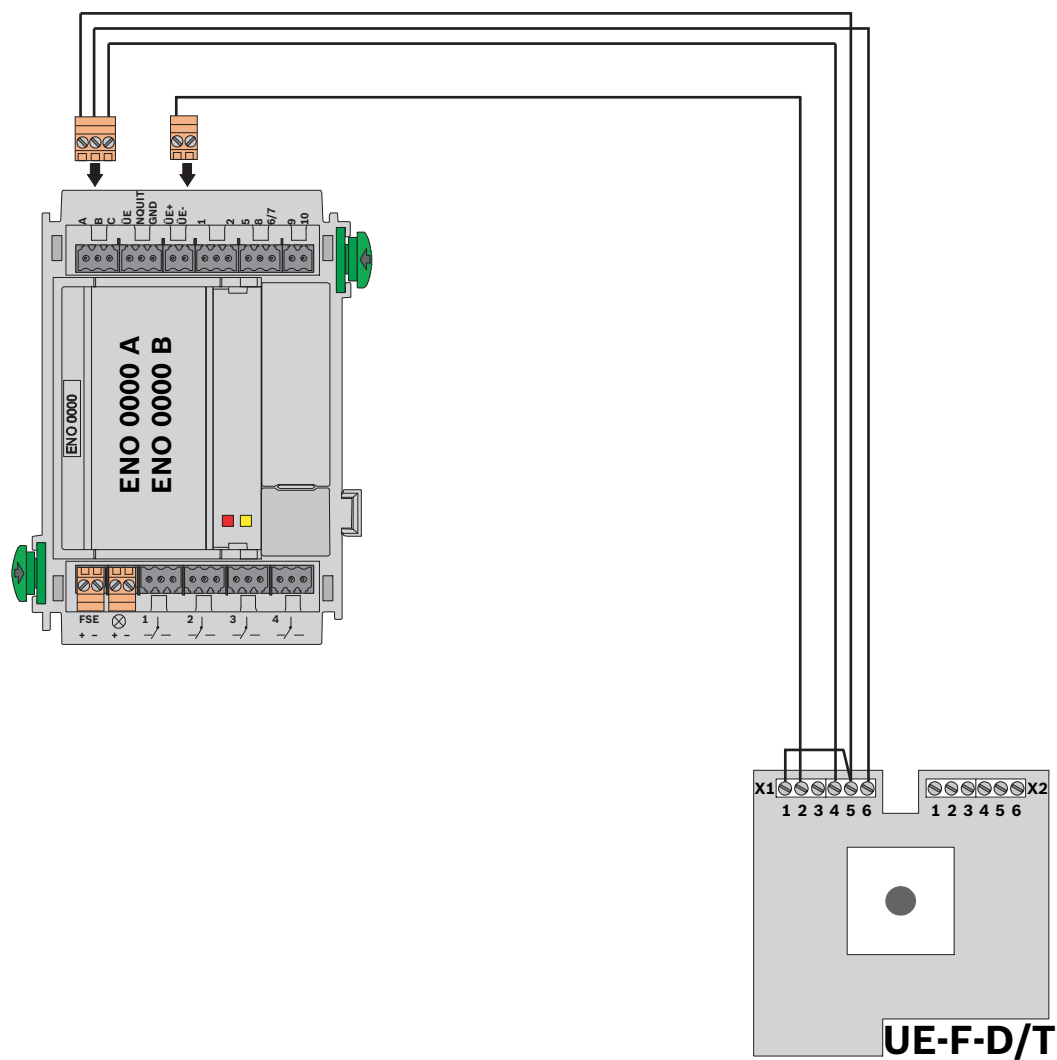
TF2F

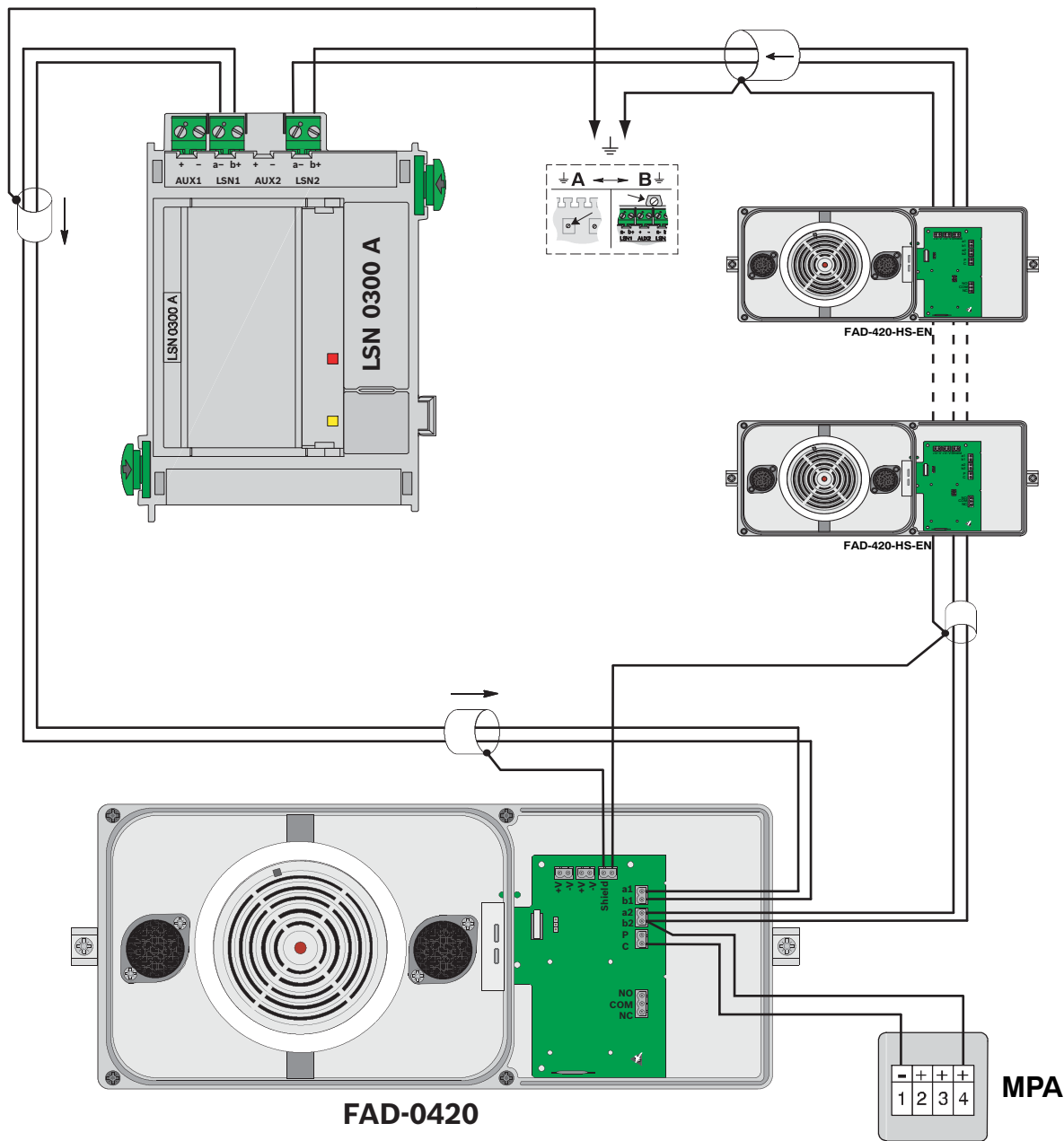


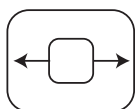


TUS 35

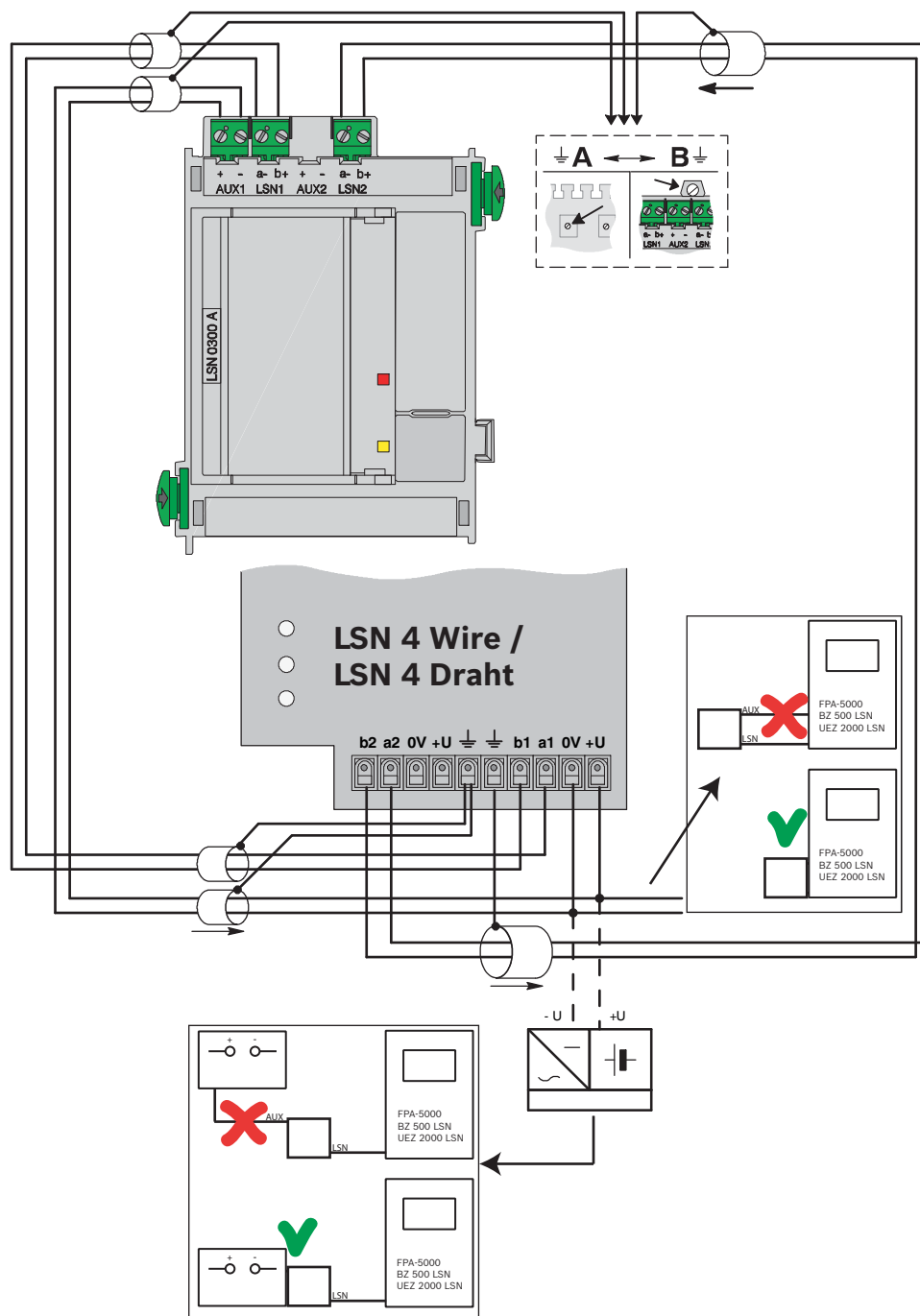
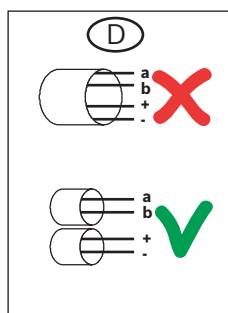
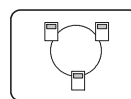


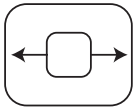
**UE-F-D/T**

**FAD-0420**

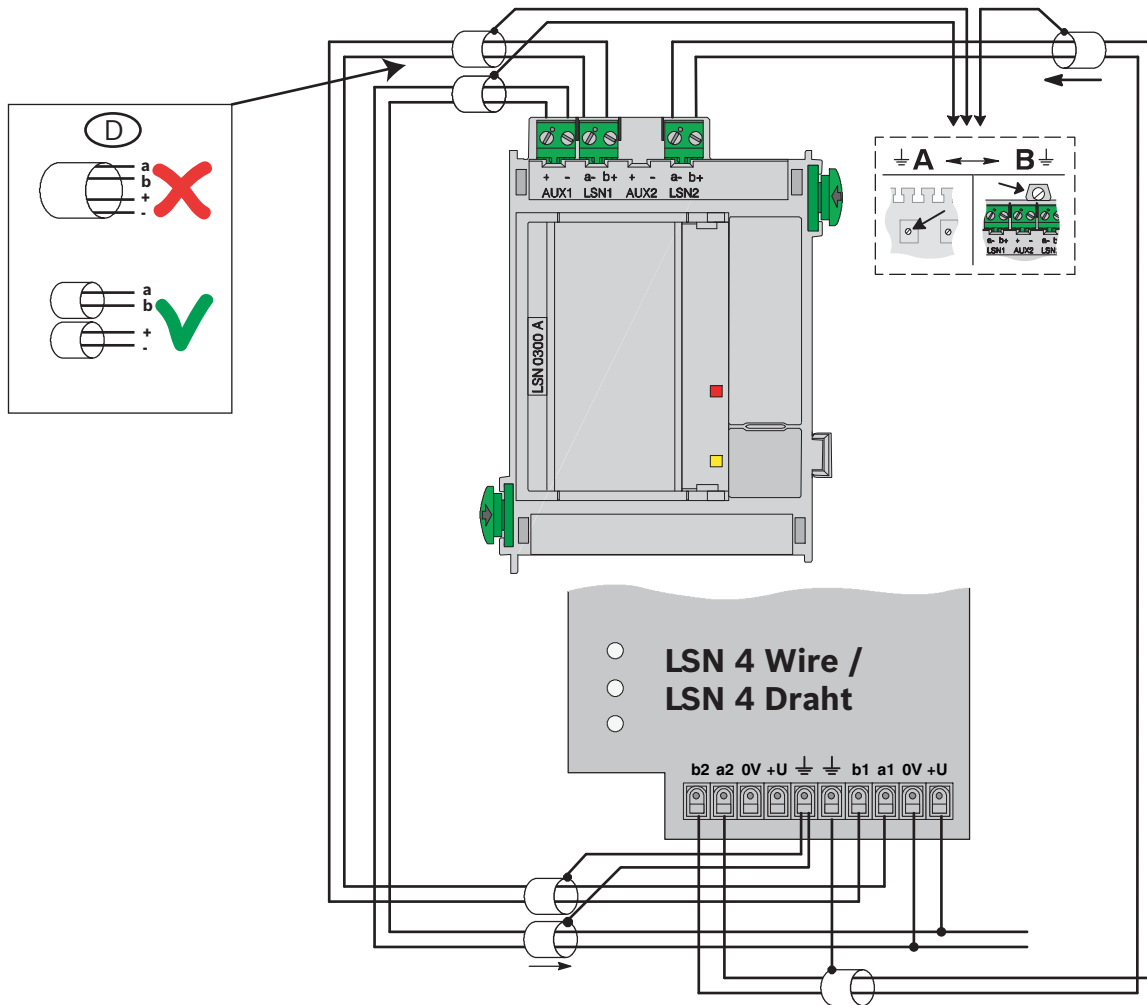
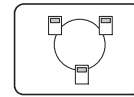


EN 54-13
EN 54-2





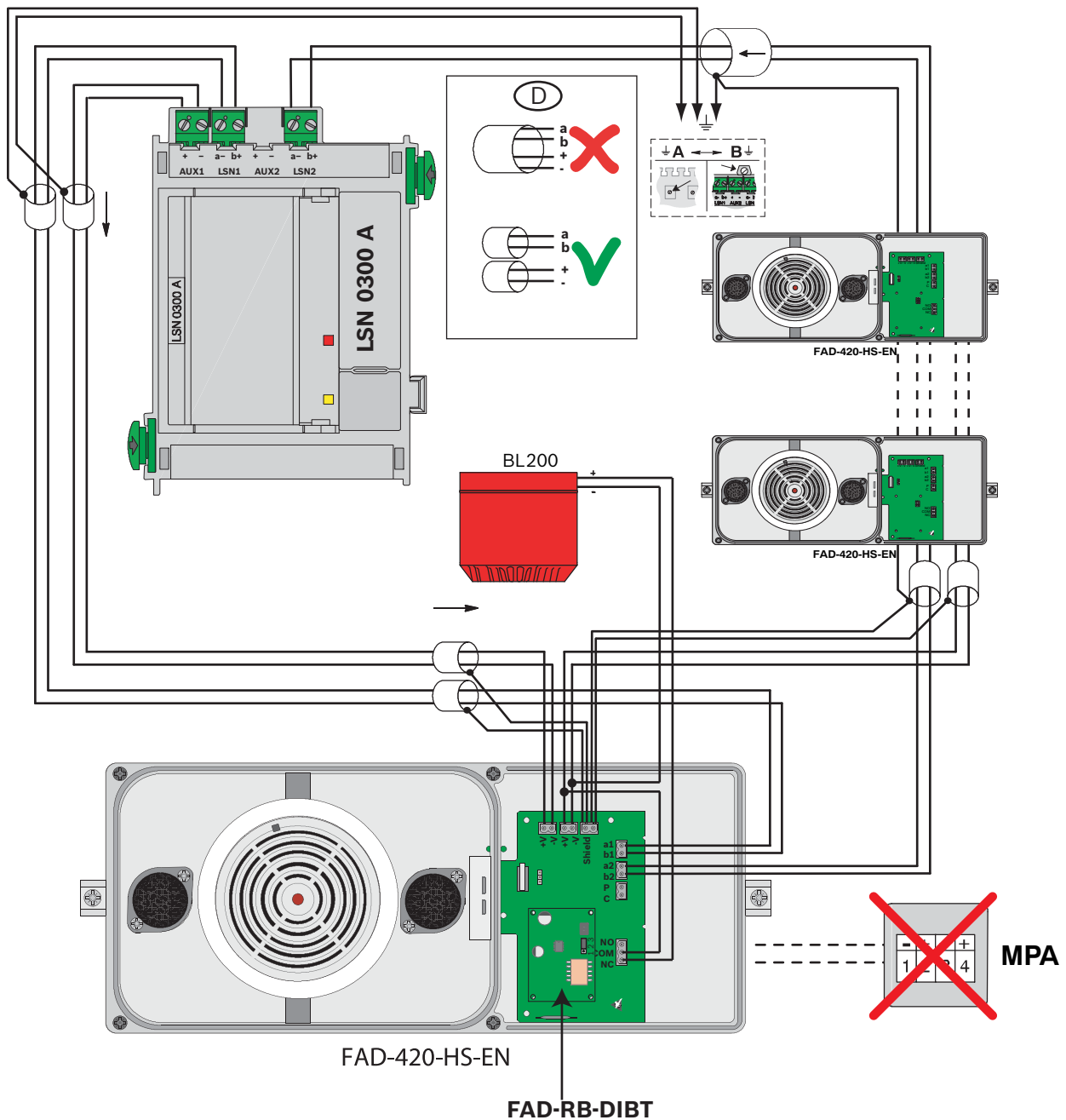
EN 54-2

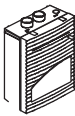




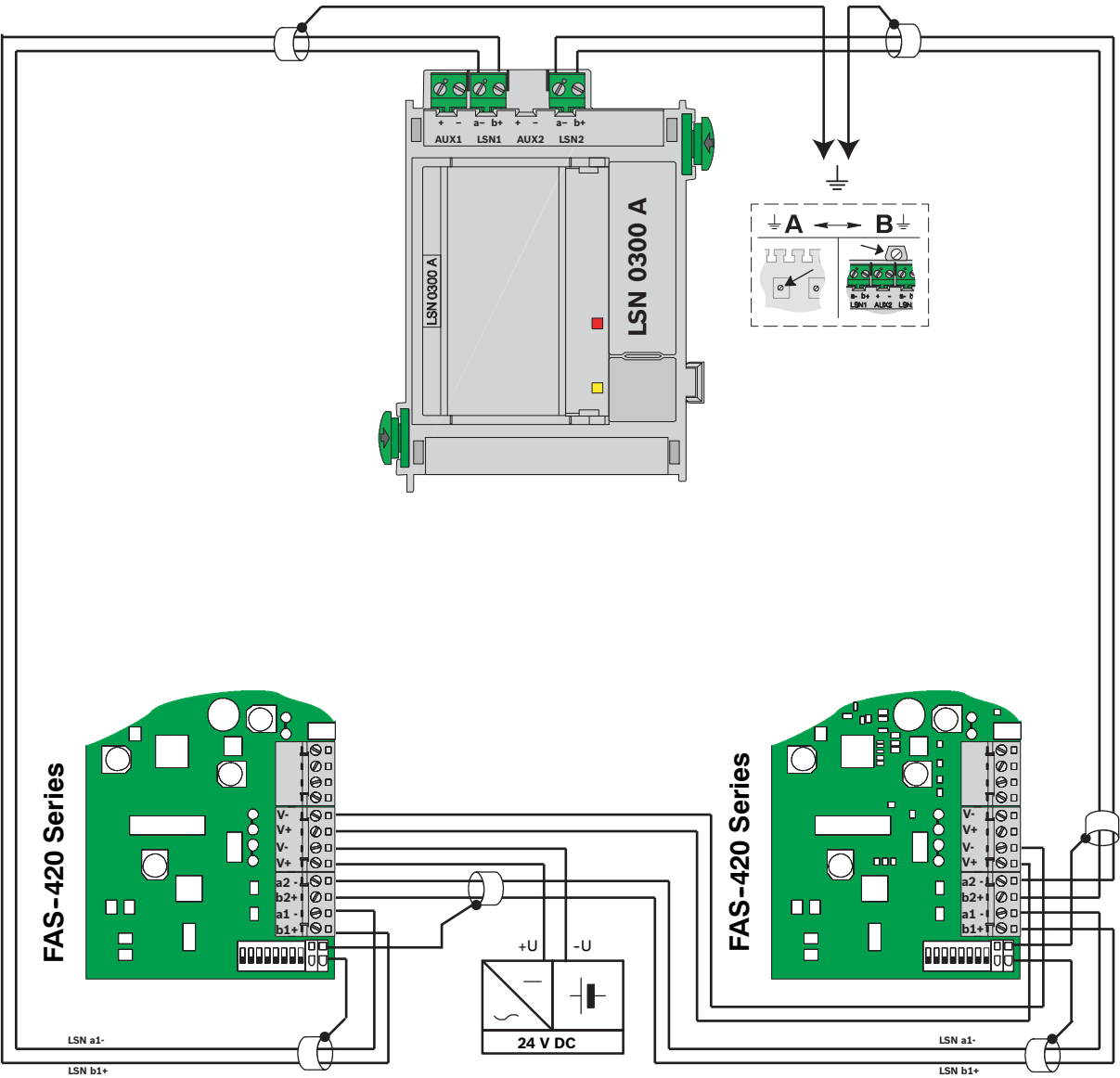
FAD-420-HS-EN

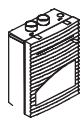
EN 54-2



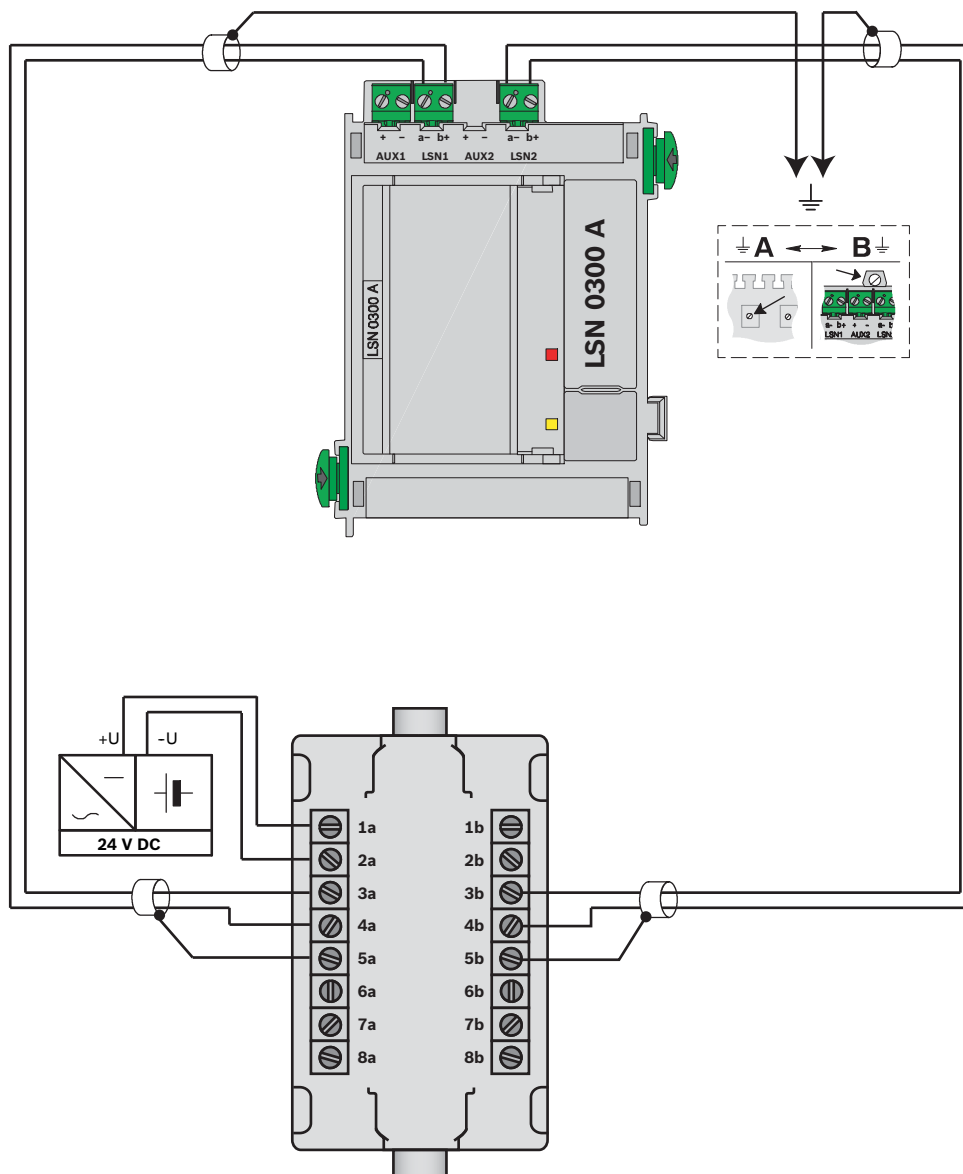


FAS-420 Series



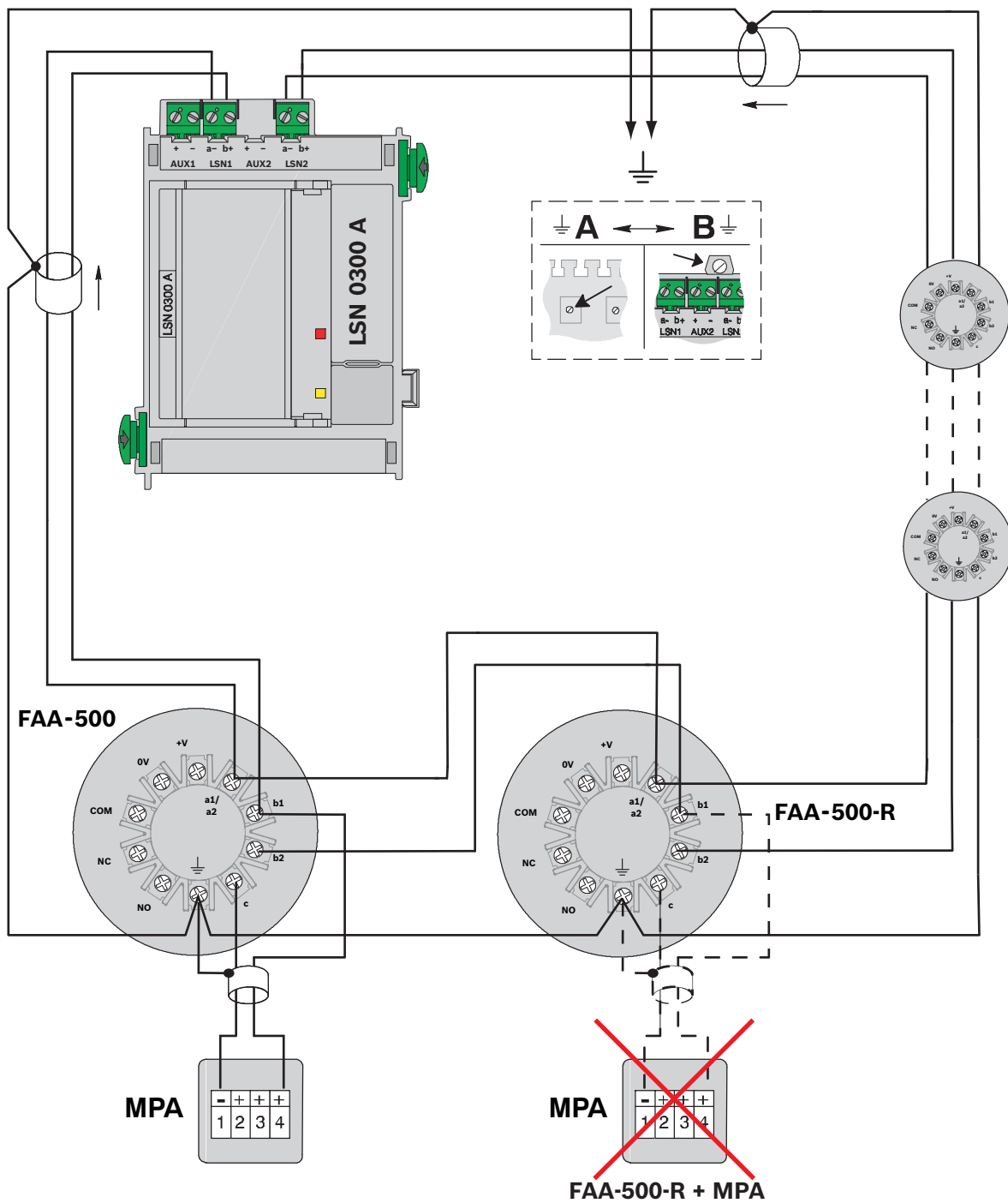
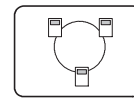


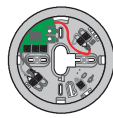
FAS-420-TM Series



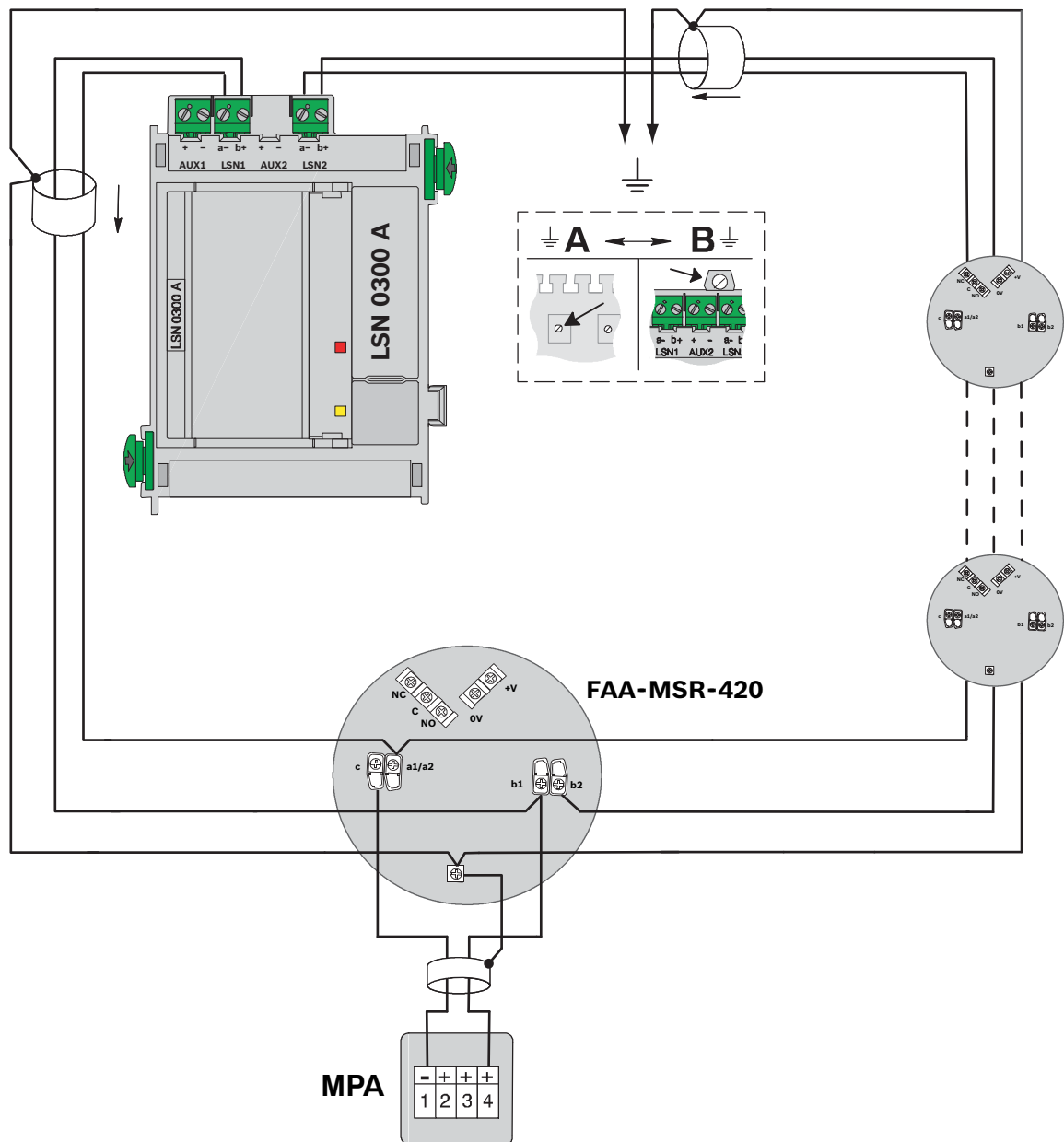
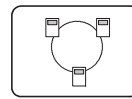


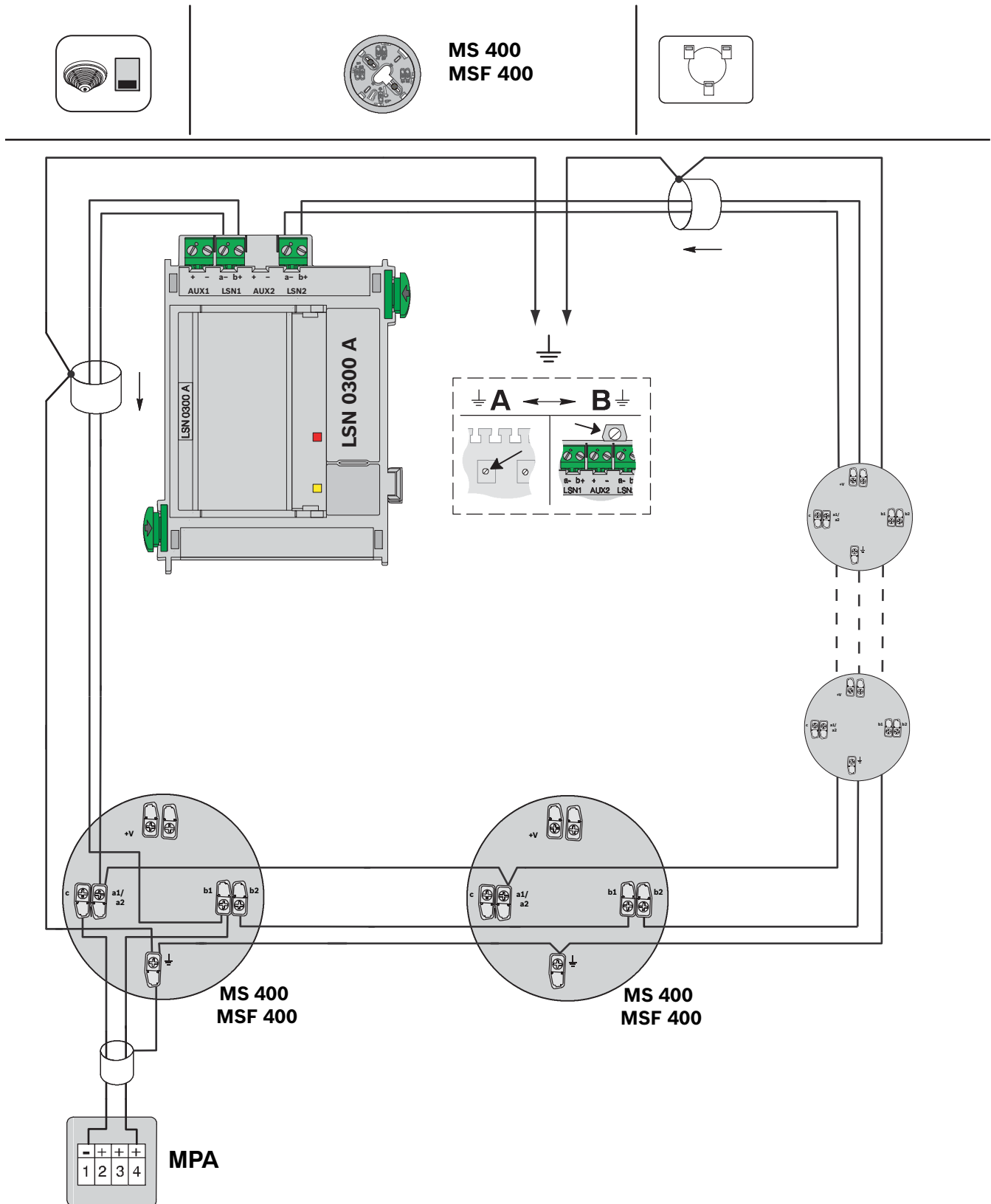
FAA-500
FAA-500-R





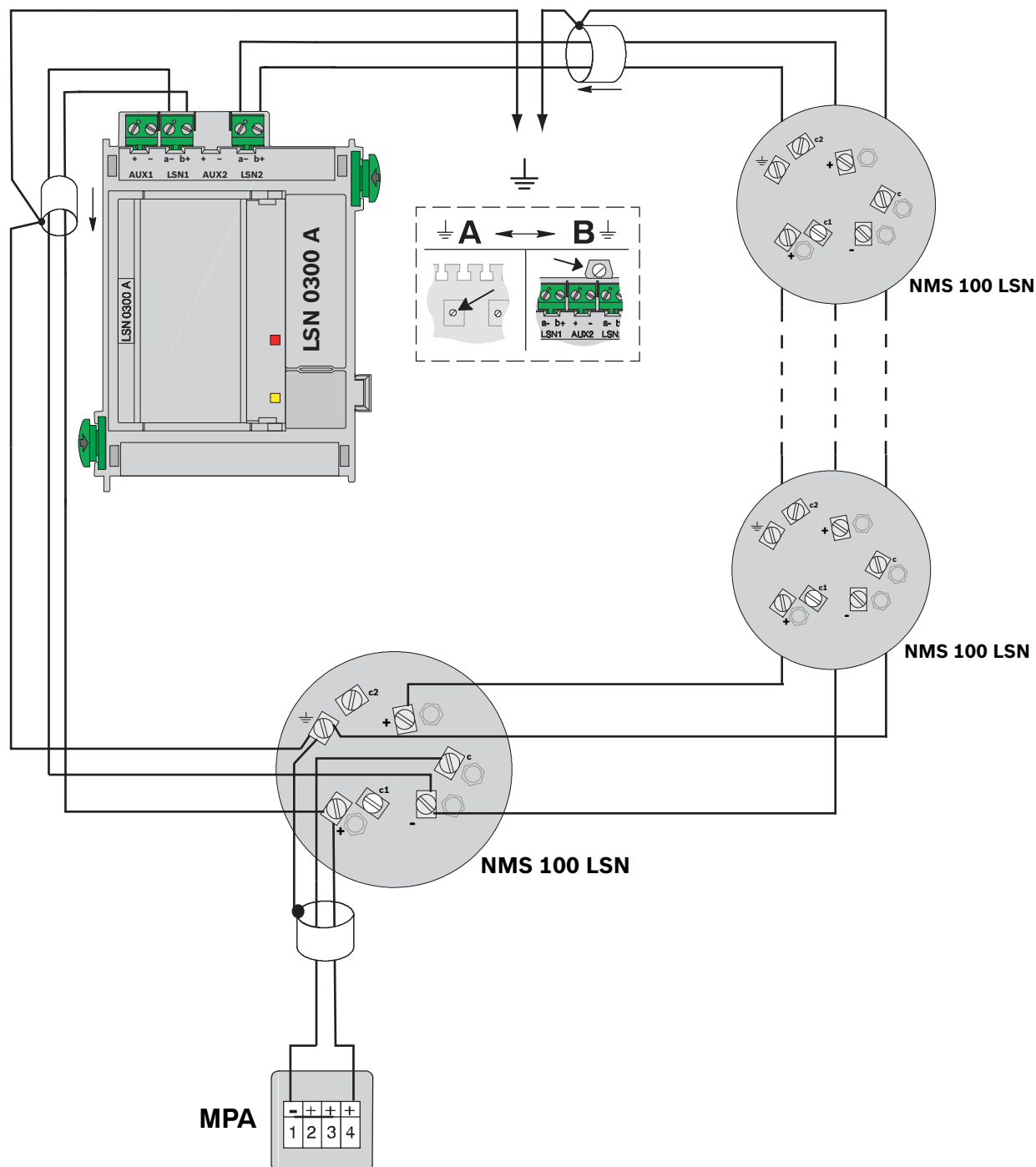
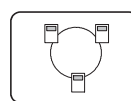
FAA-MSR 420

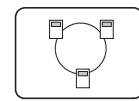
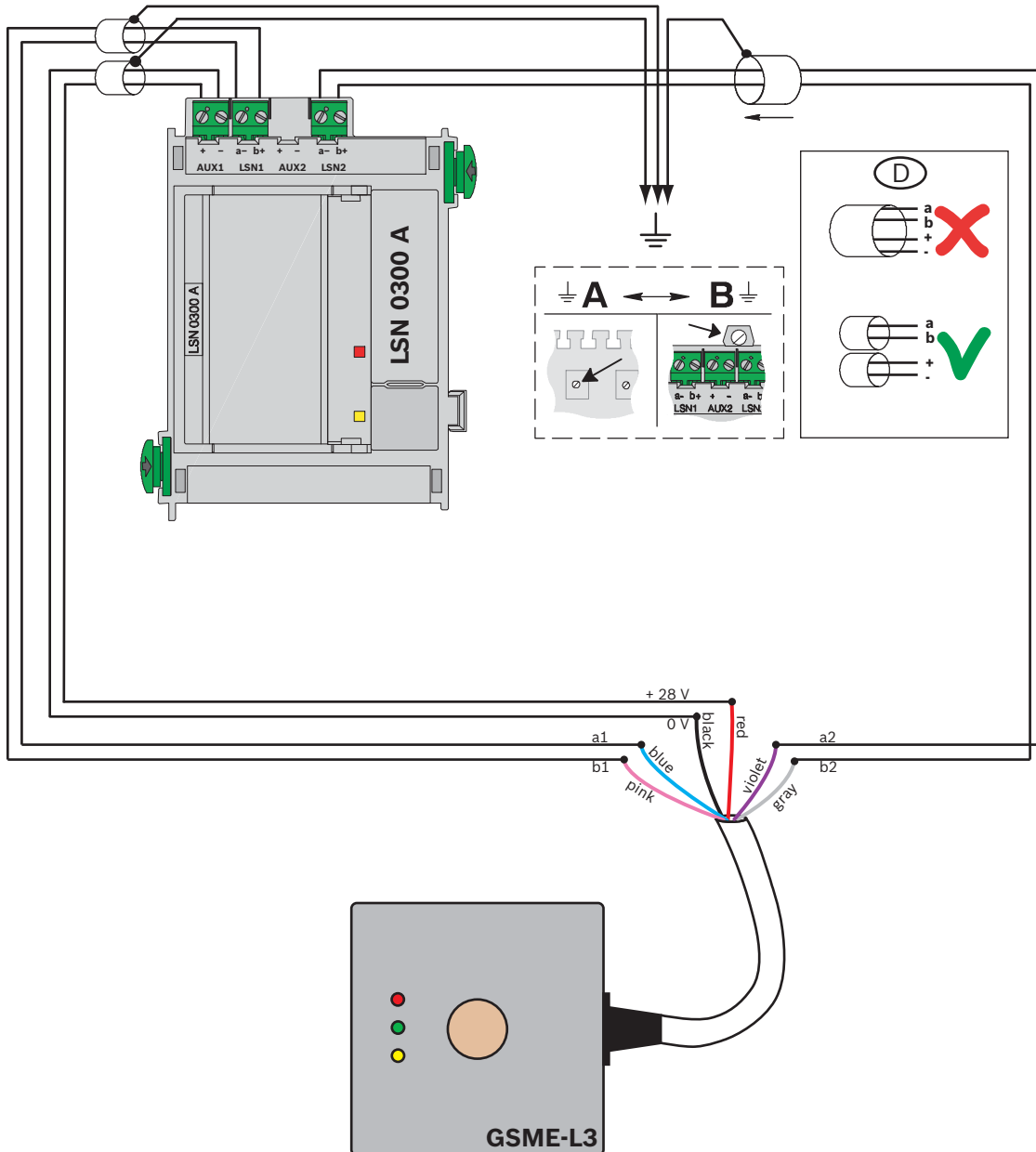


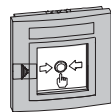
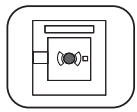




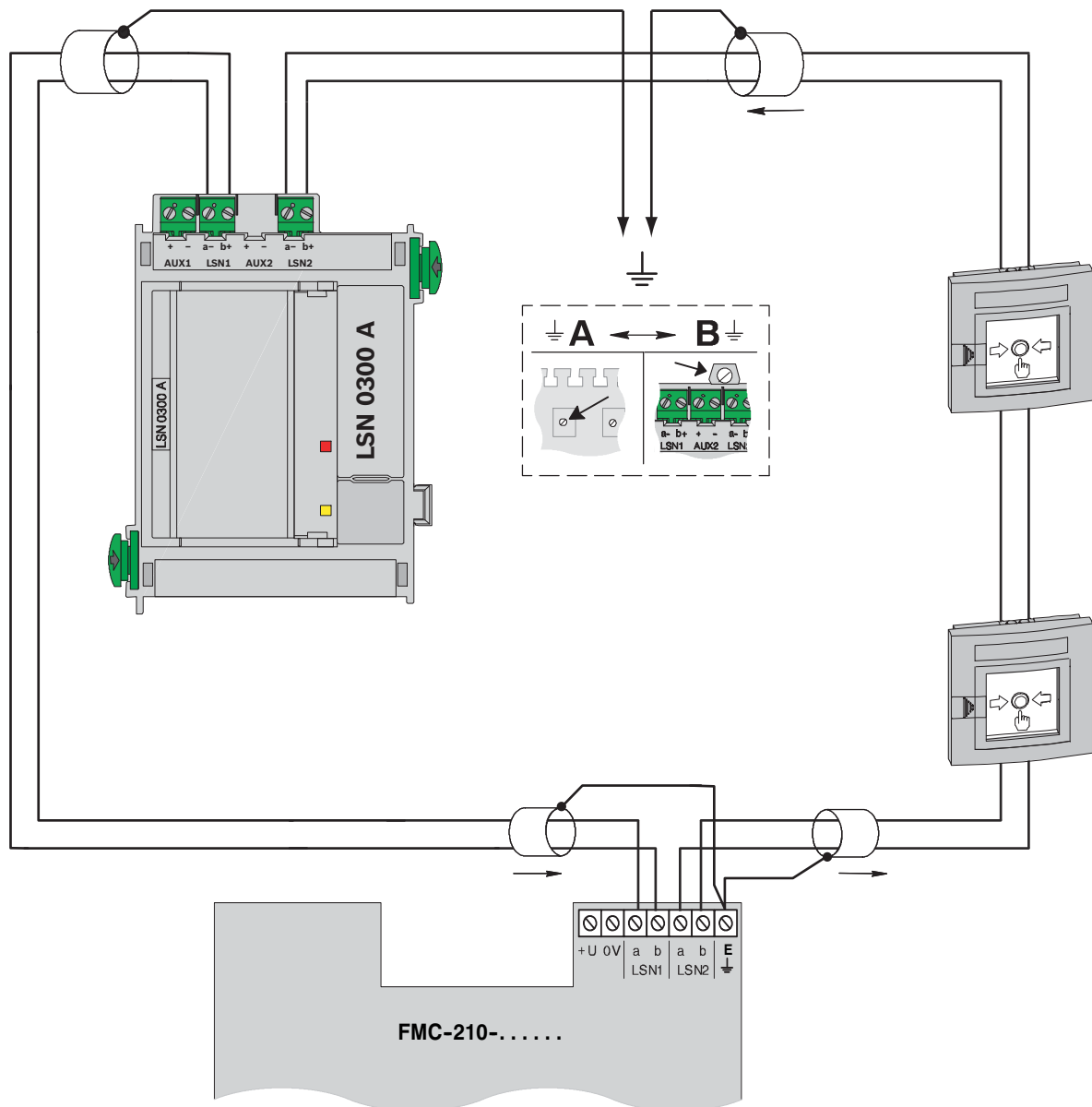
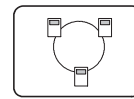
NMS 100 LSN

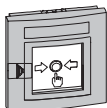
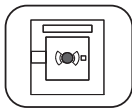



EN 54-2


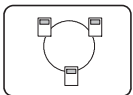


FMC-210-...

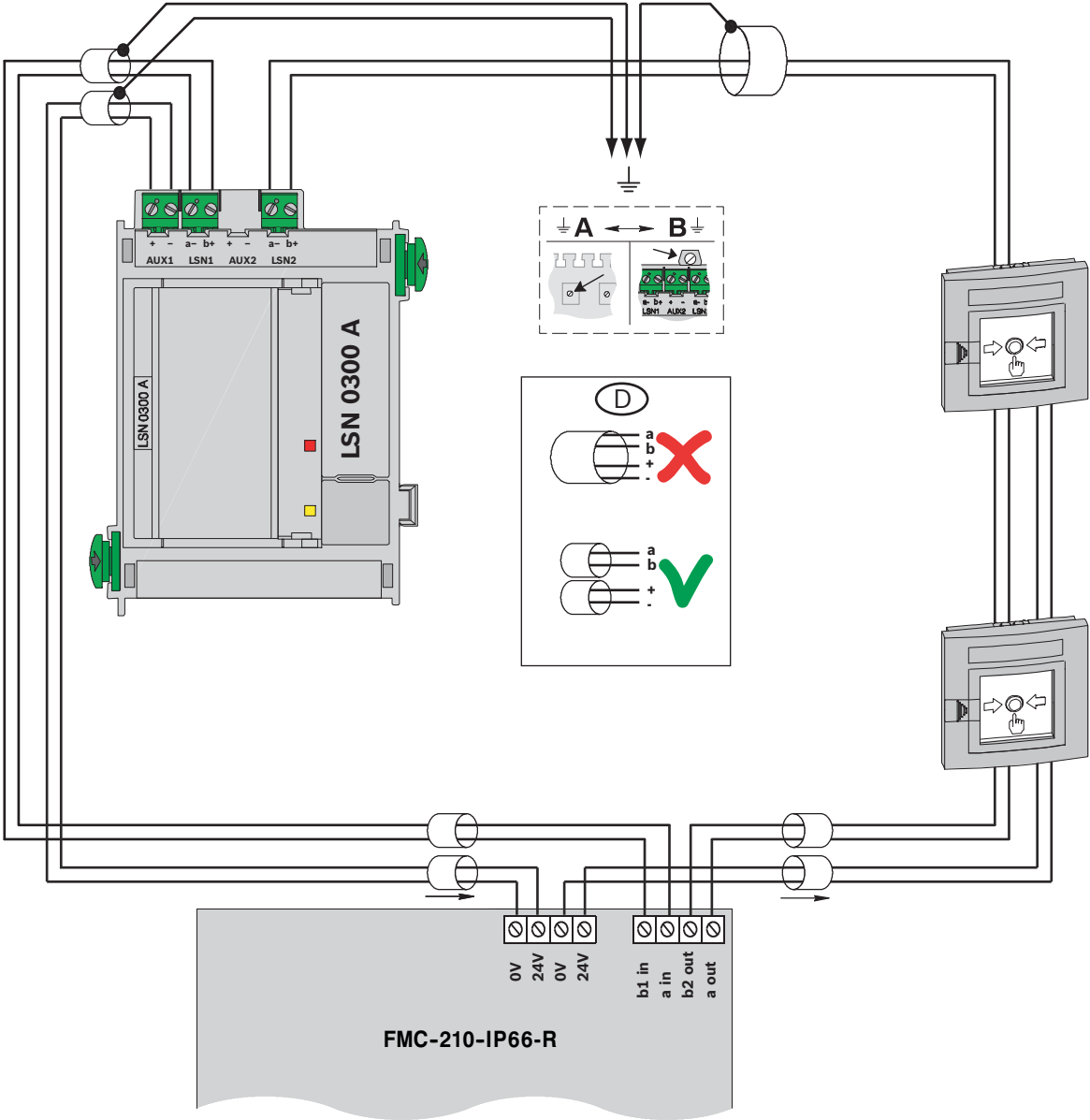


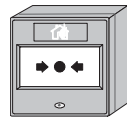
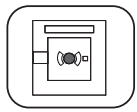
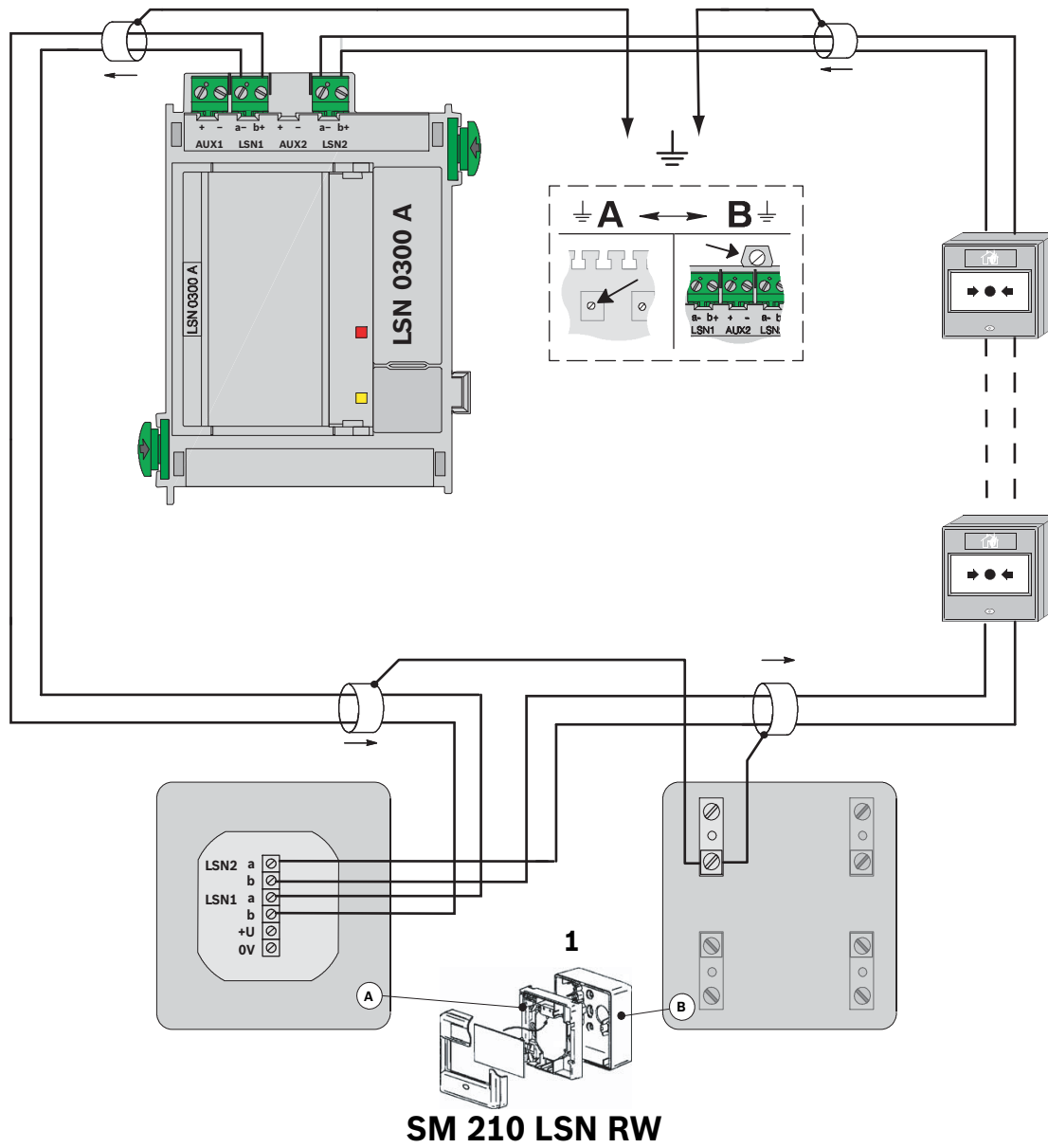
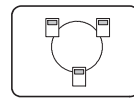


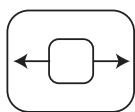
FMC-210-IP66-R



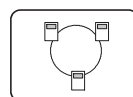
EN 54-2



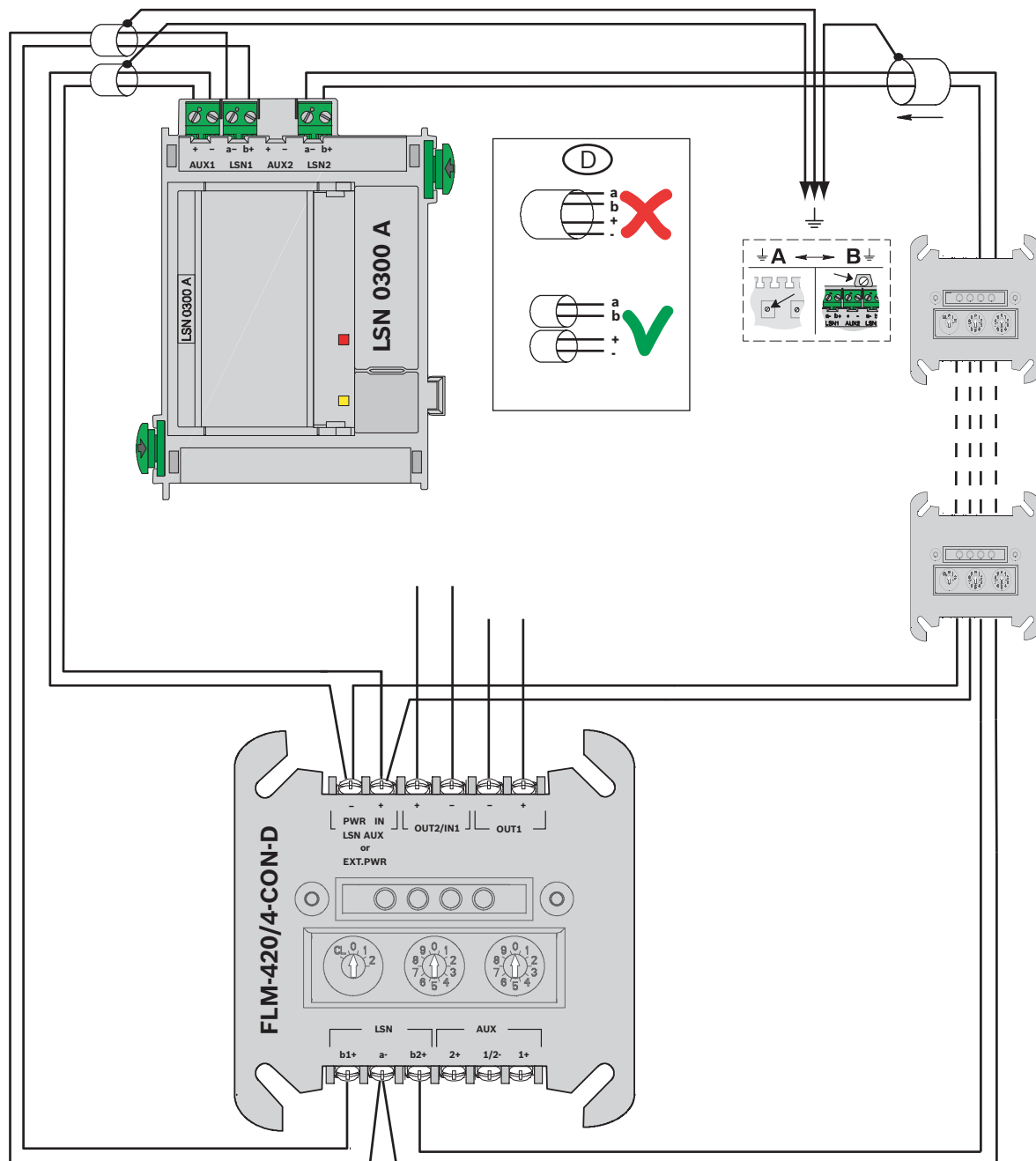
**SM 210 LSN RW****SM 210 LSN RW**

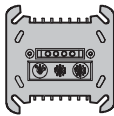
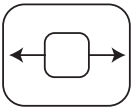


**FLM-420/
4-CON-D**

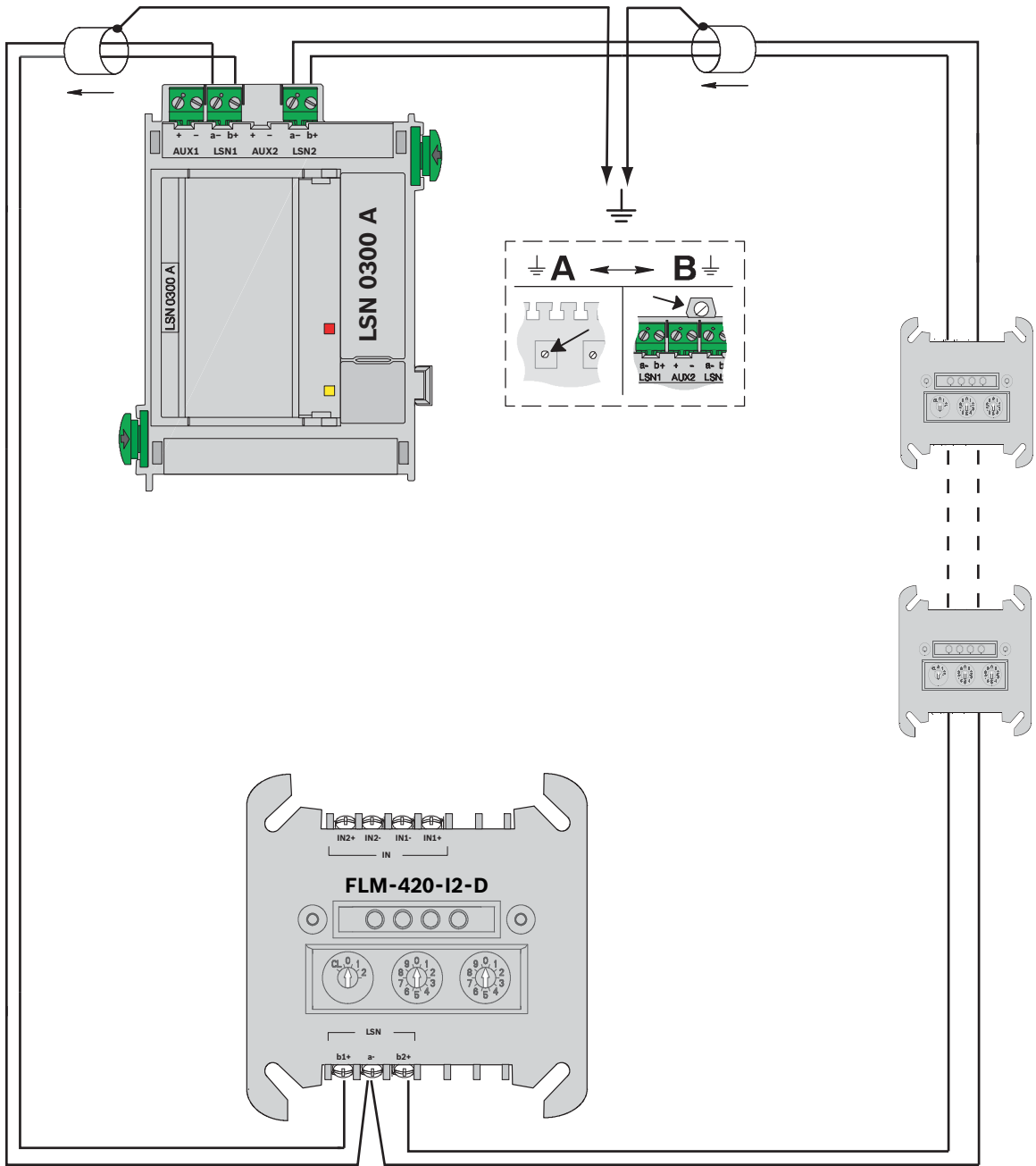
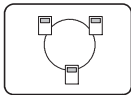


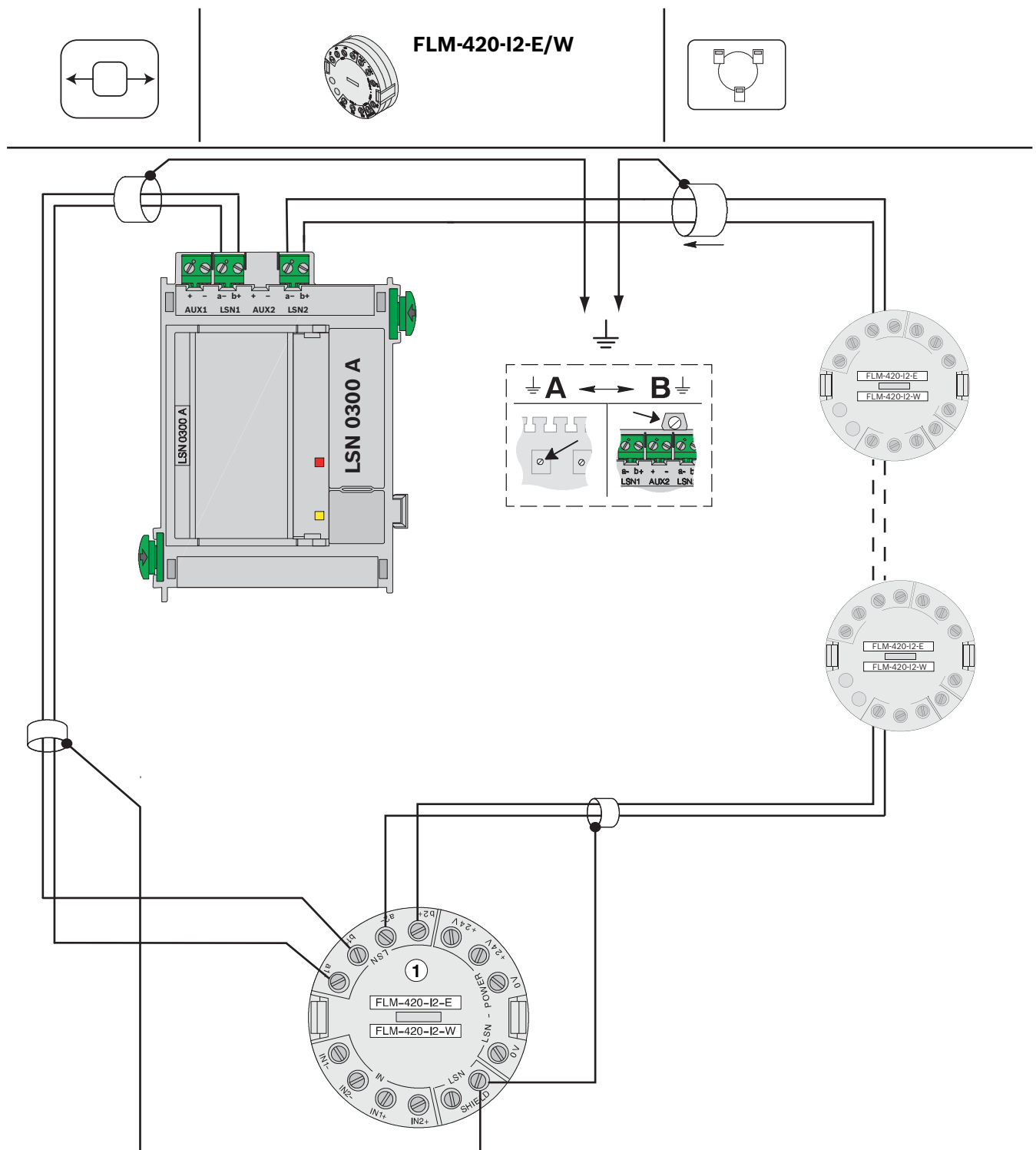
EN 54-2

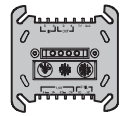
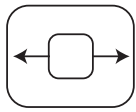




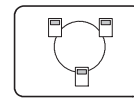
FLM-420-I2-D



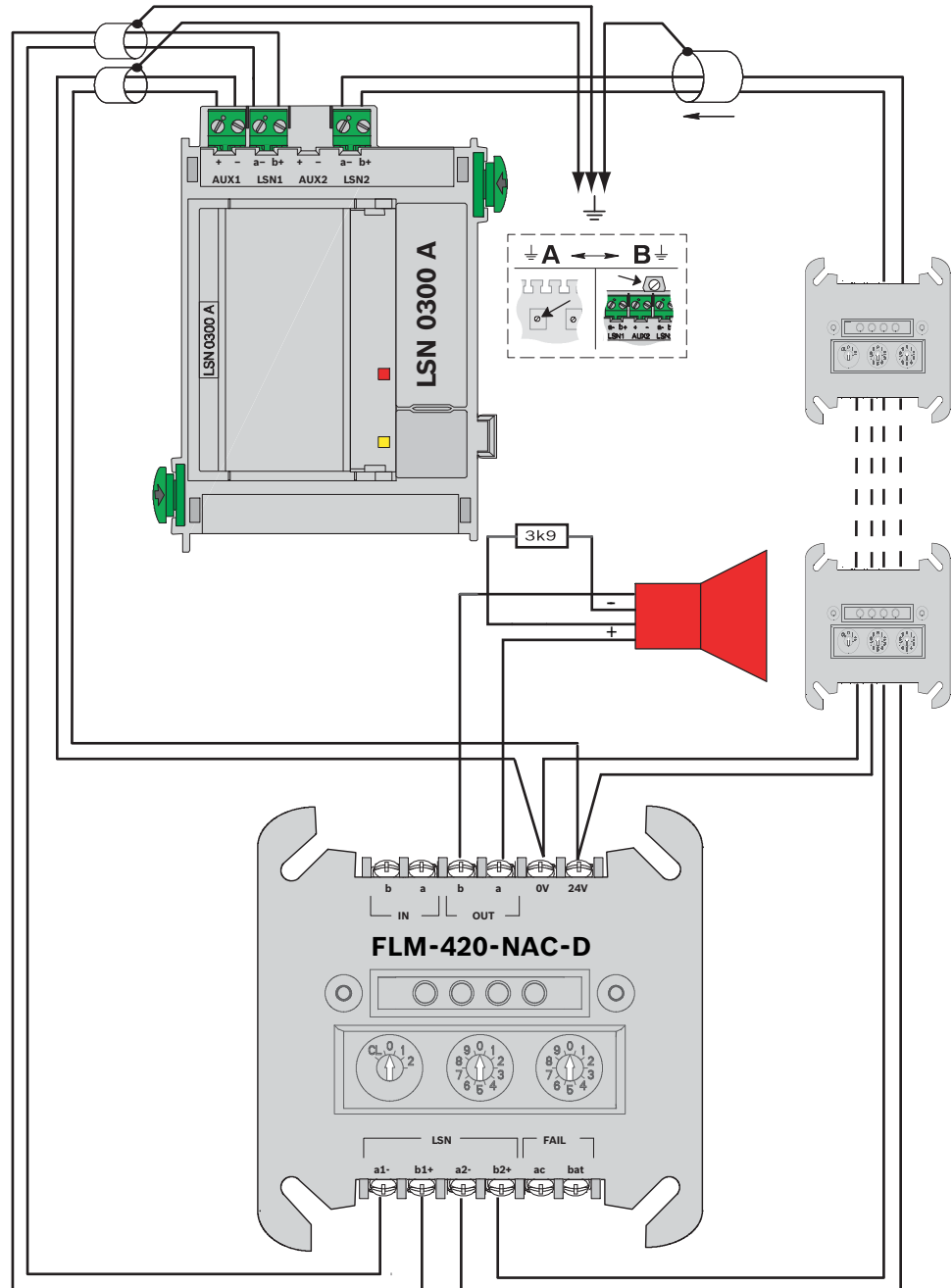
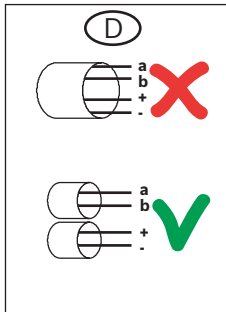


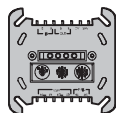
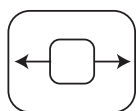


FLM-420-NAC-D/S

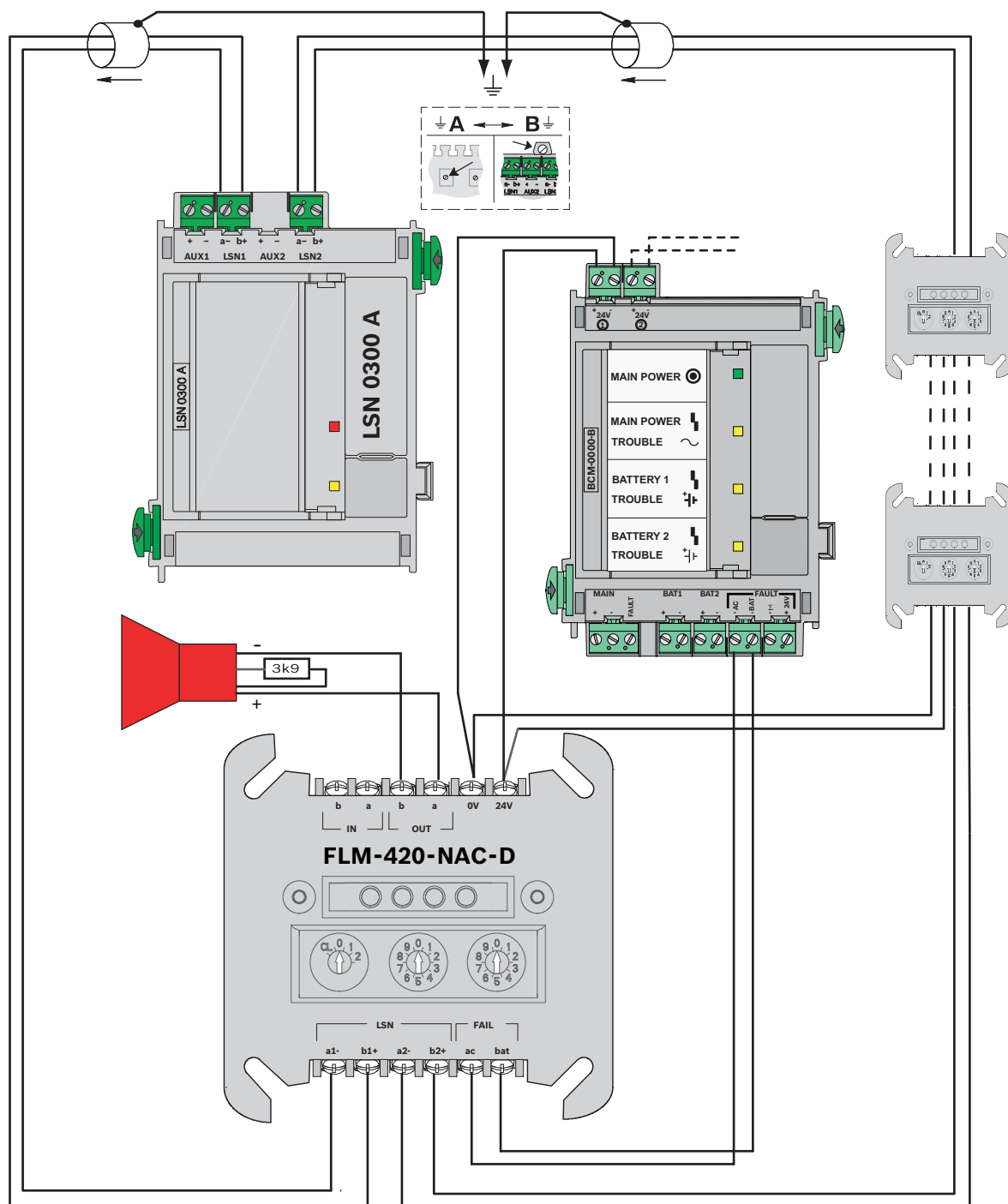
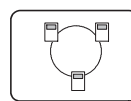


EN 54-2

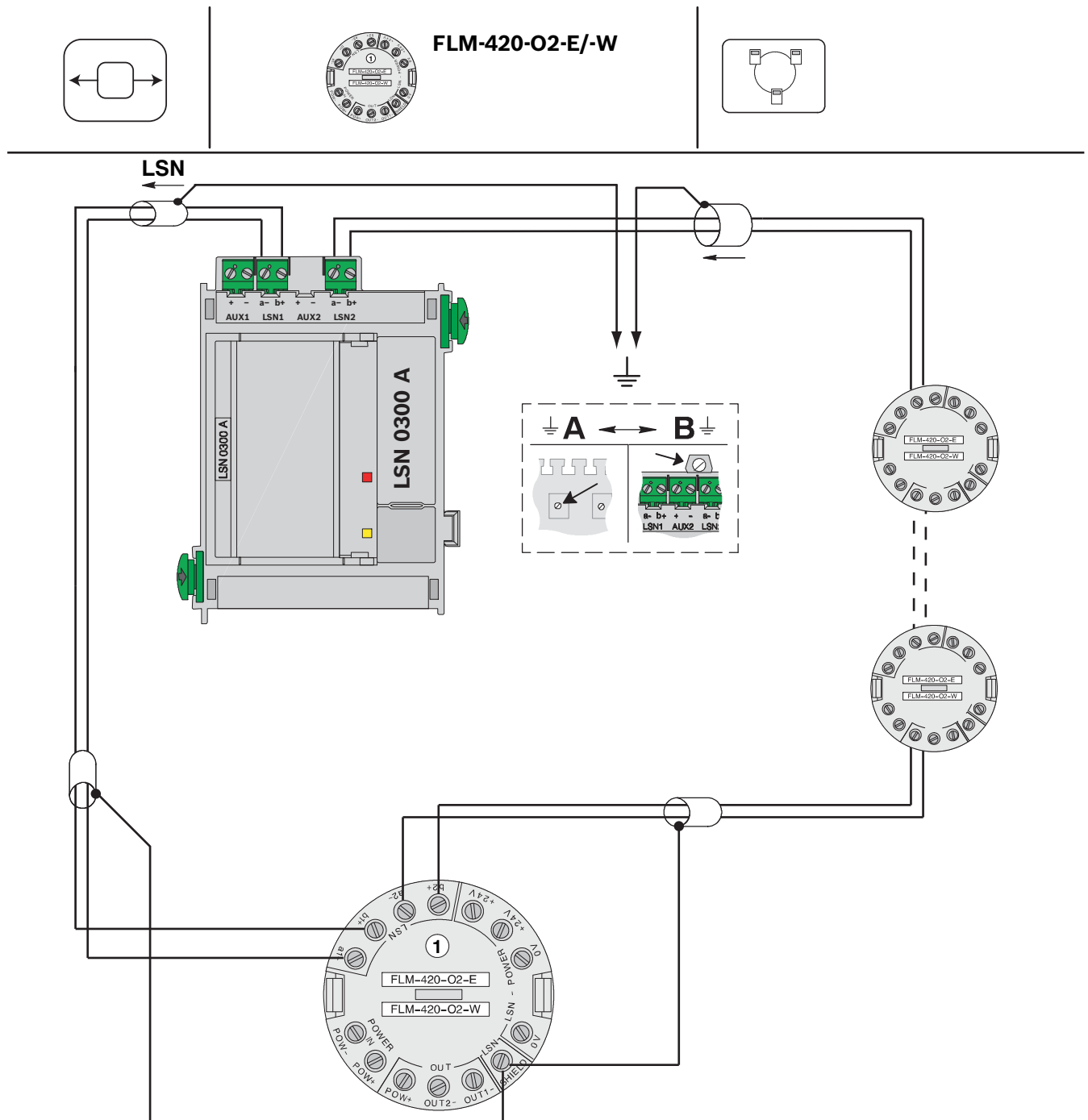


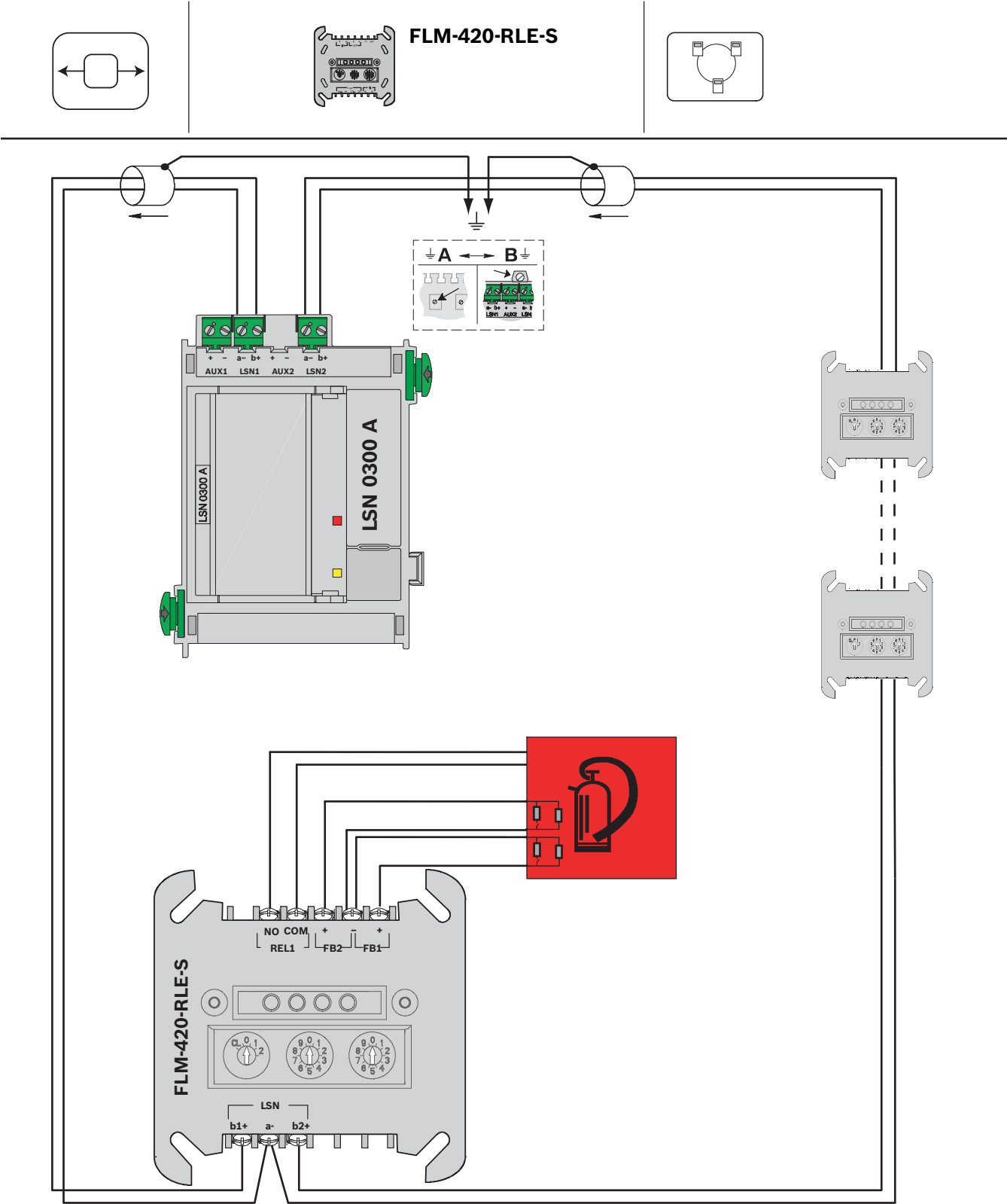


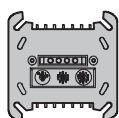
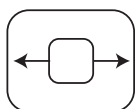
FLM-420-NAC-D/S



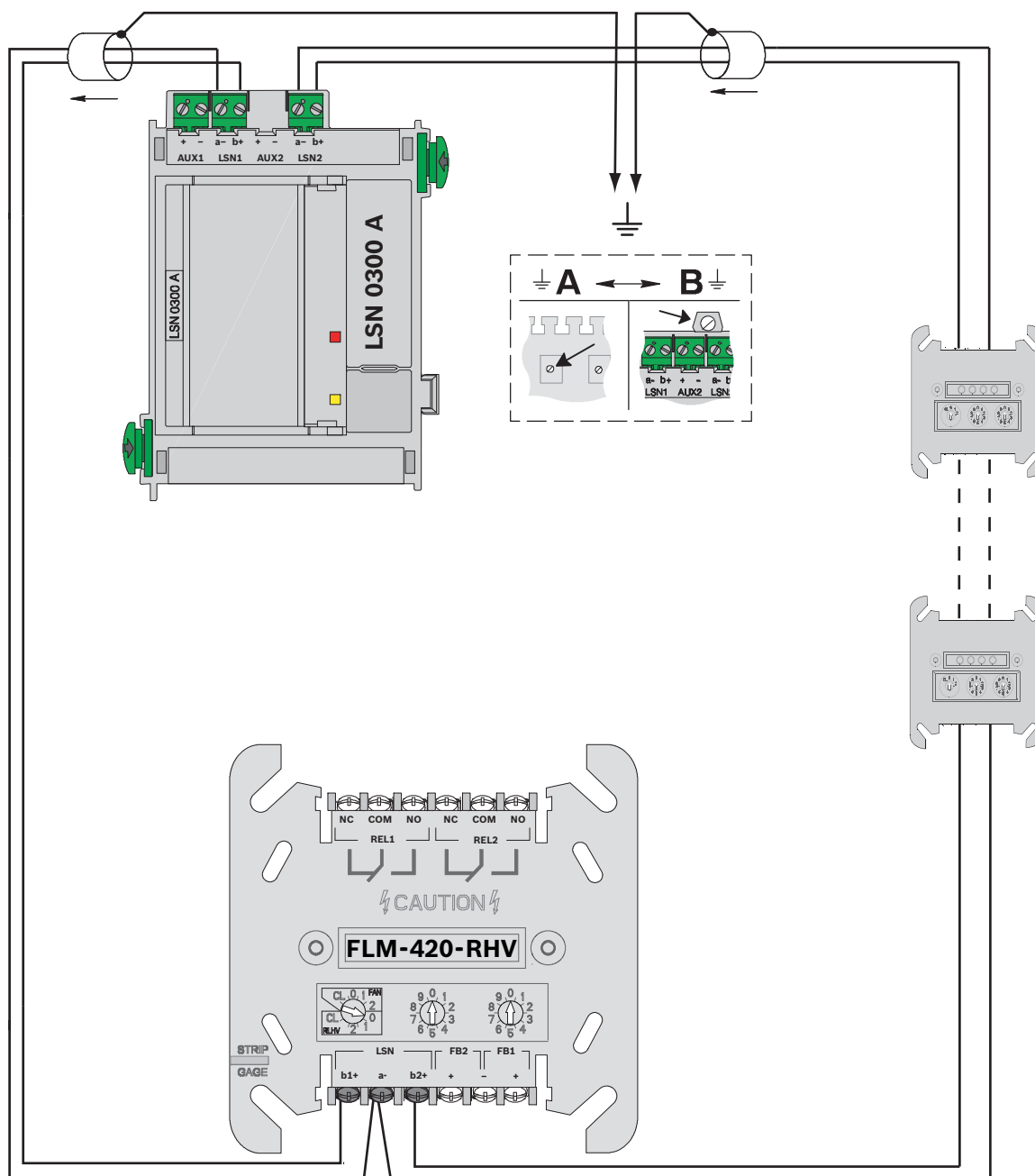
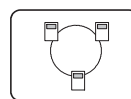
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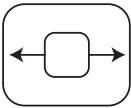




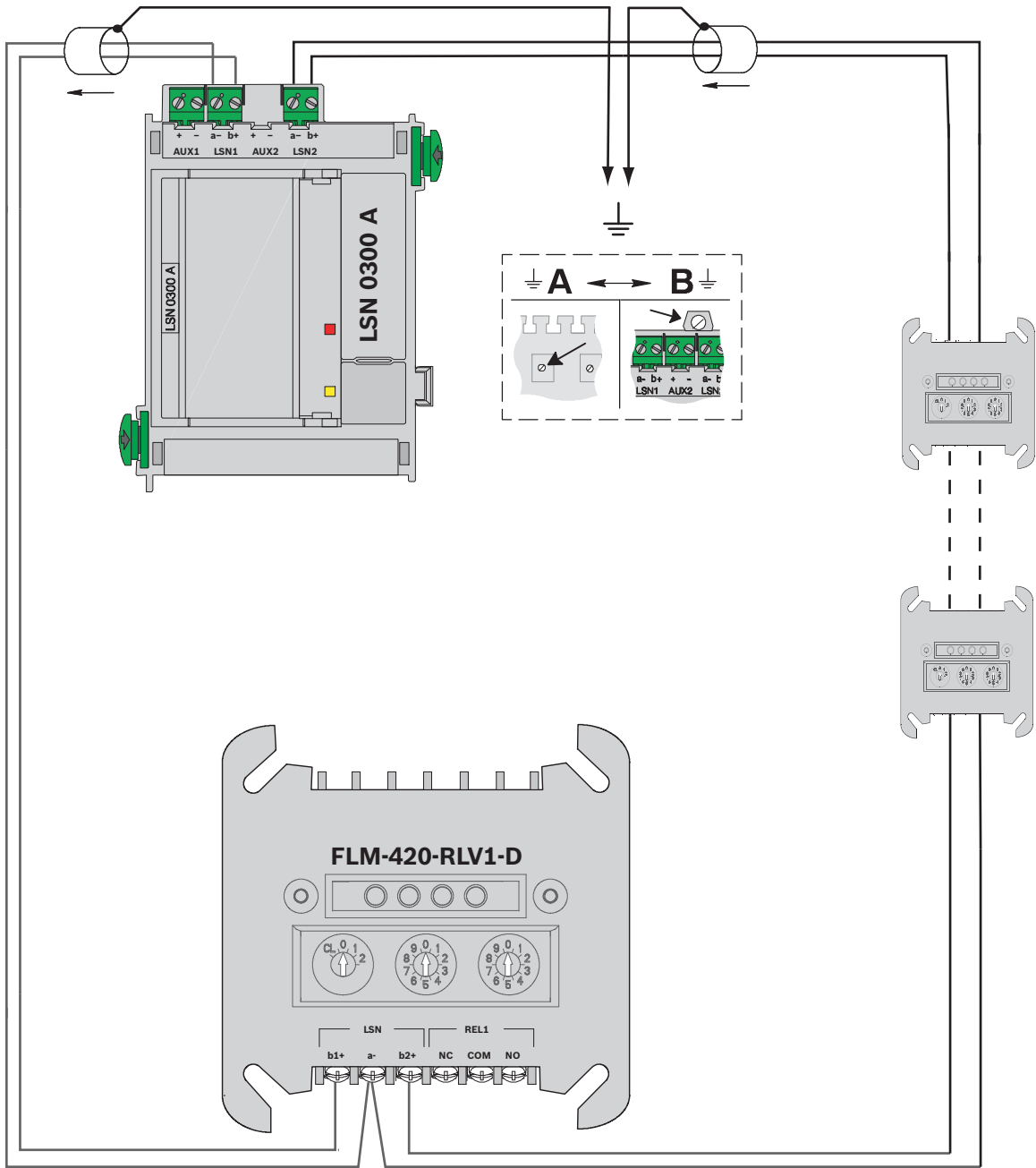
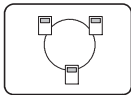


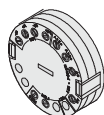
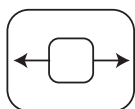
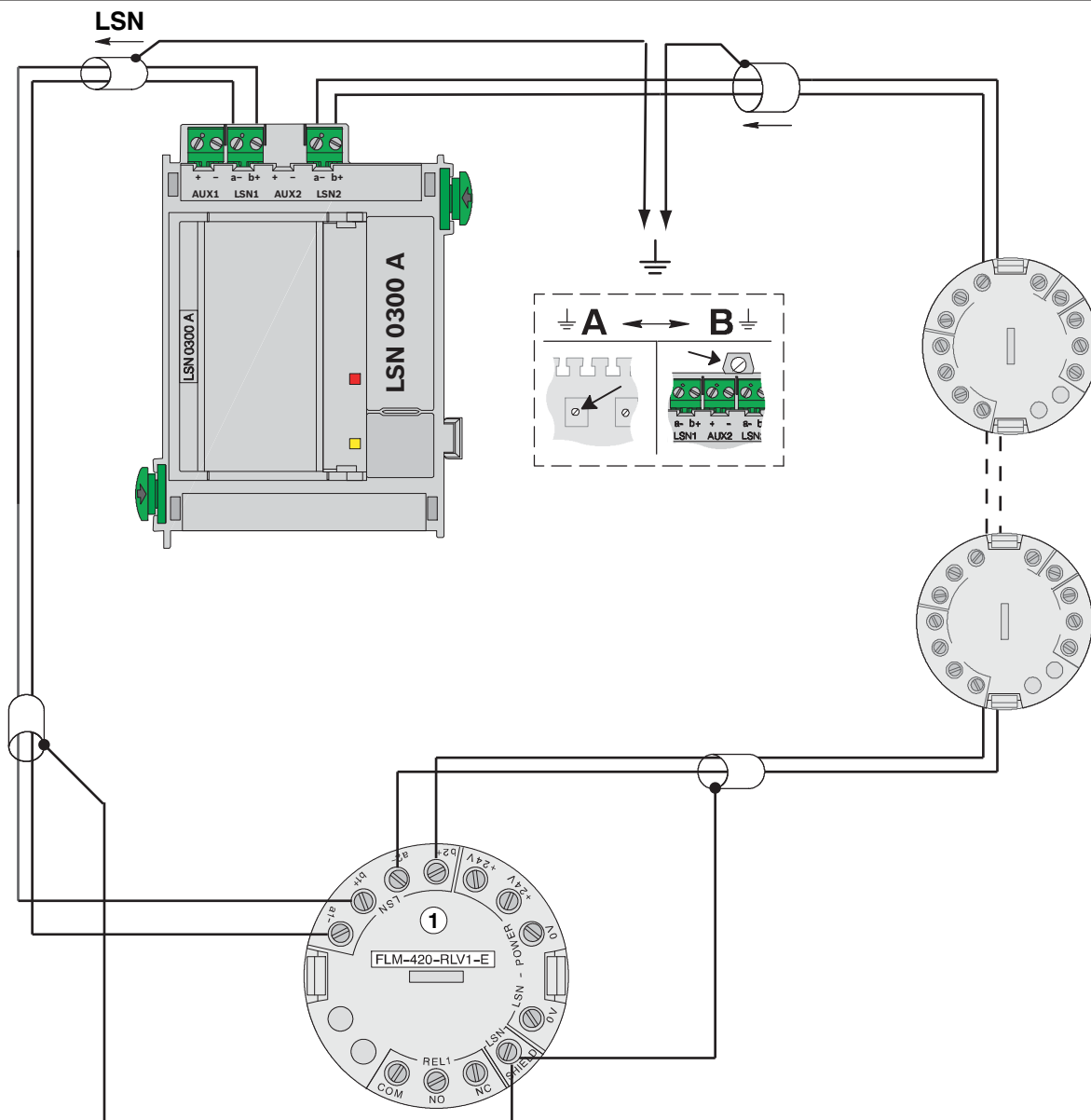
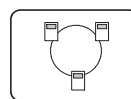
FLM-420-RHV-D/S

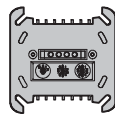
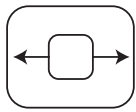
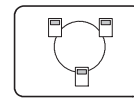
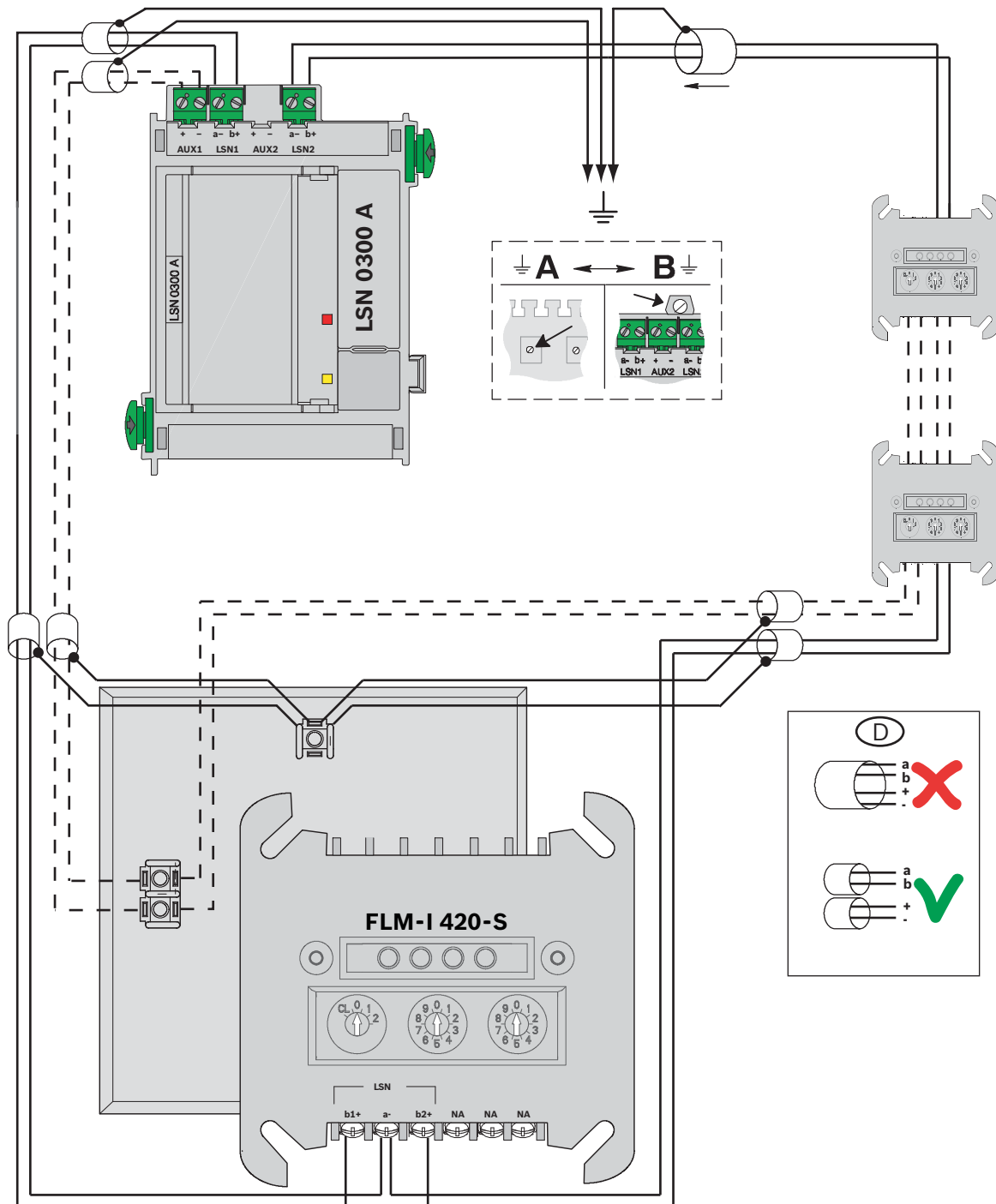


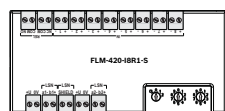
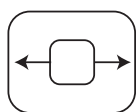


FLM-420-RLV1-D

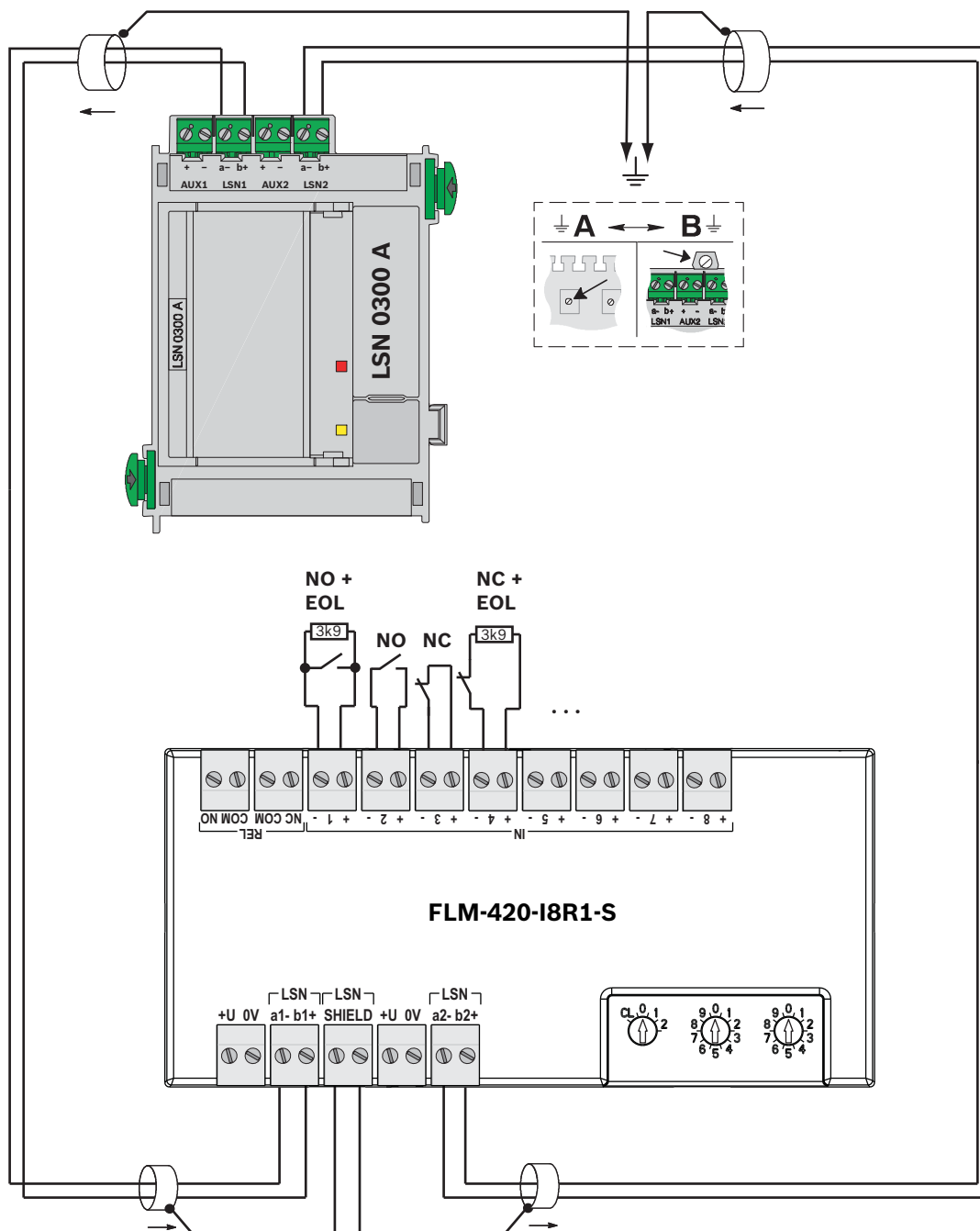
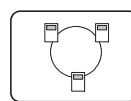


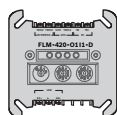
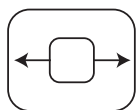
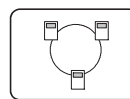
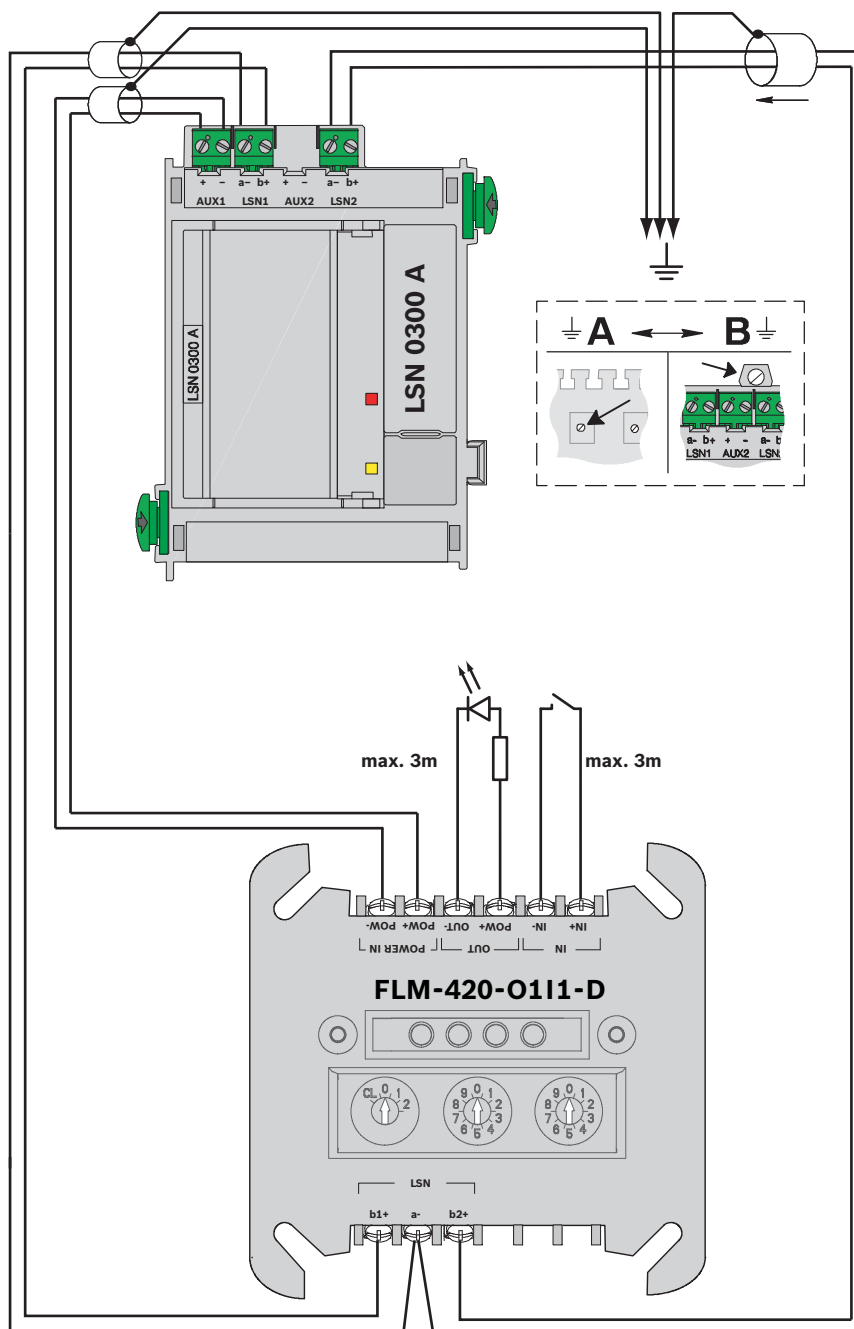
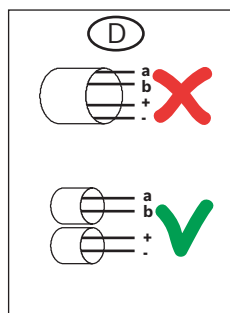
**FLM-420-RLV1-E**

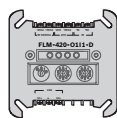
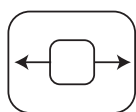
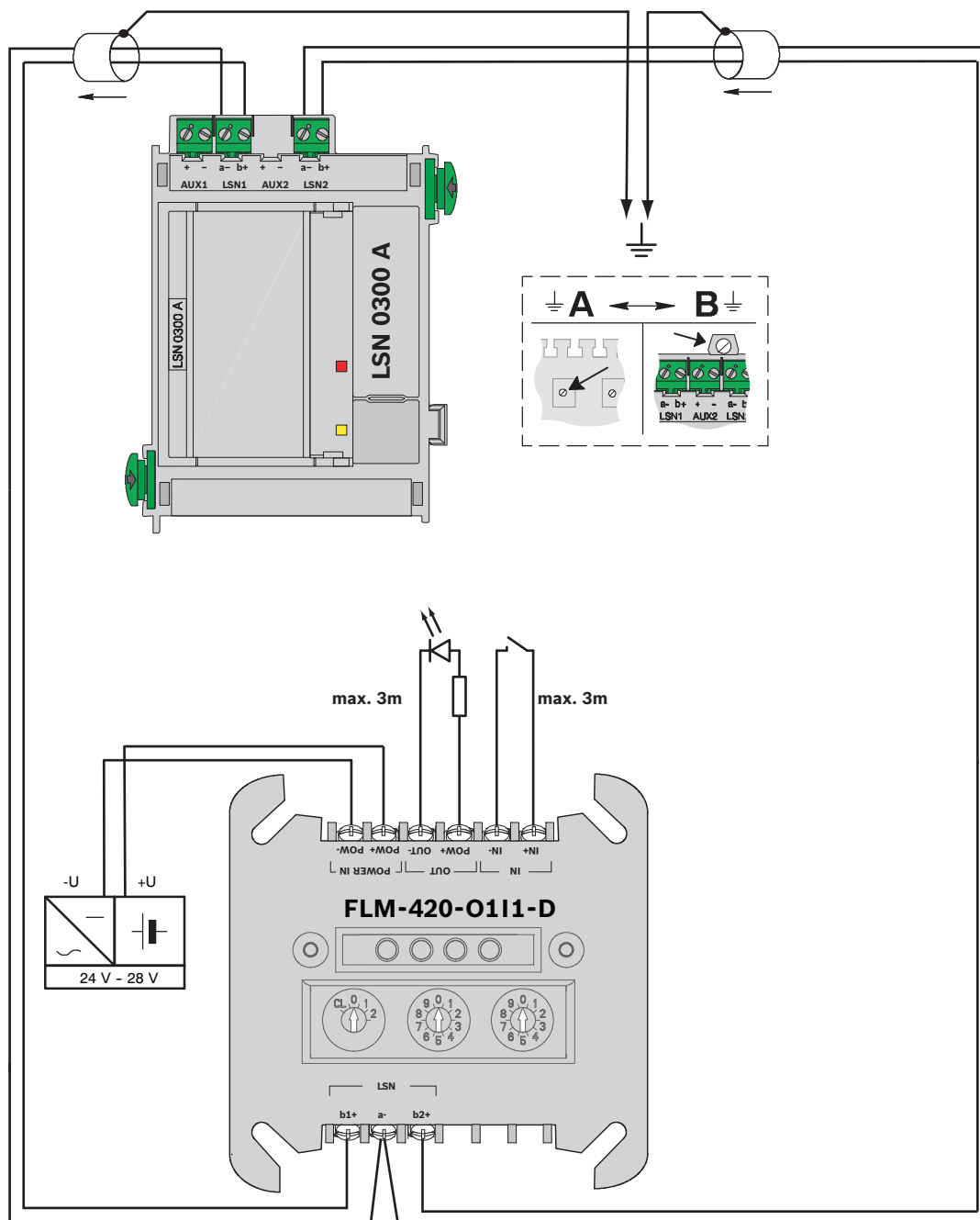
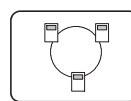
**FLM-I 420-S****EN 54-2**

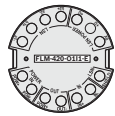
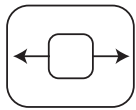


FLM-420-I8R1-S

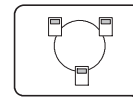


**FLM-420-O111-D****EN 54-2**

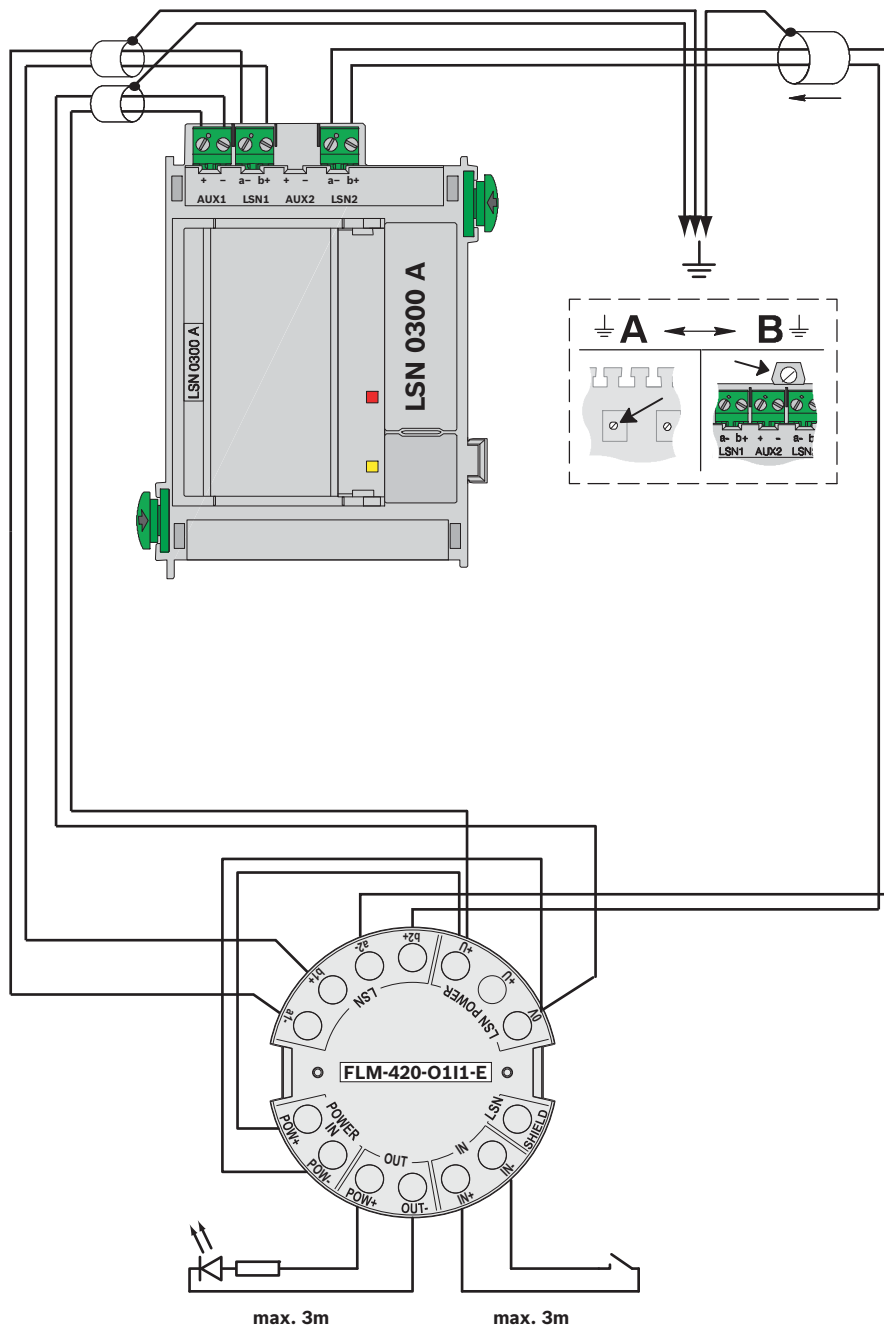
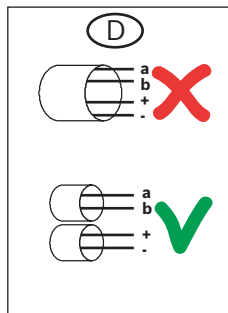
**FLM-420-O1I1-D**

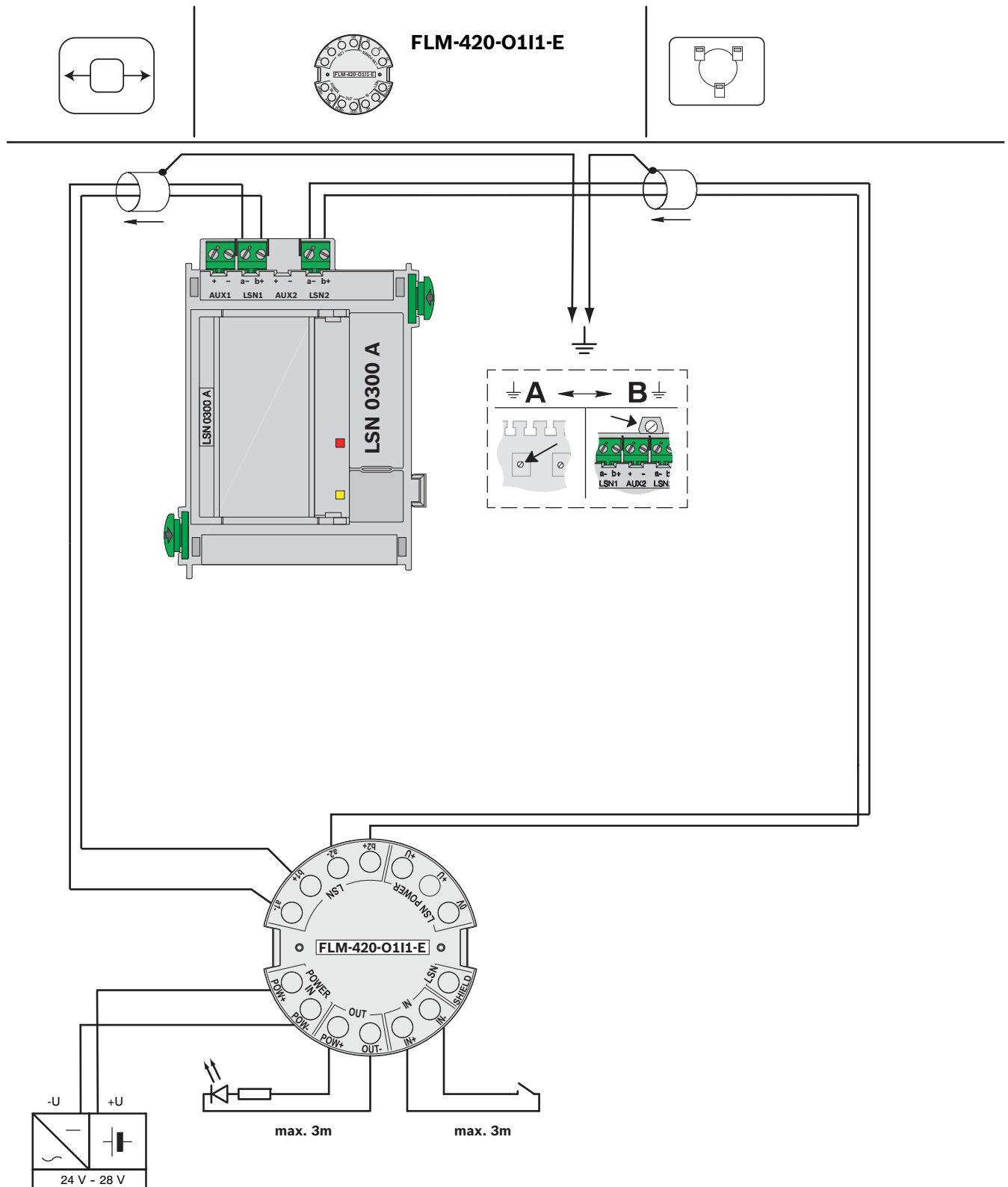


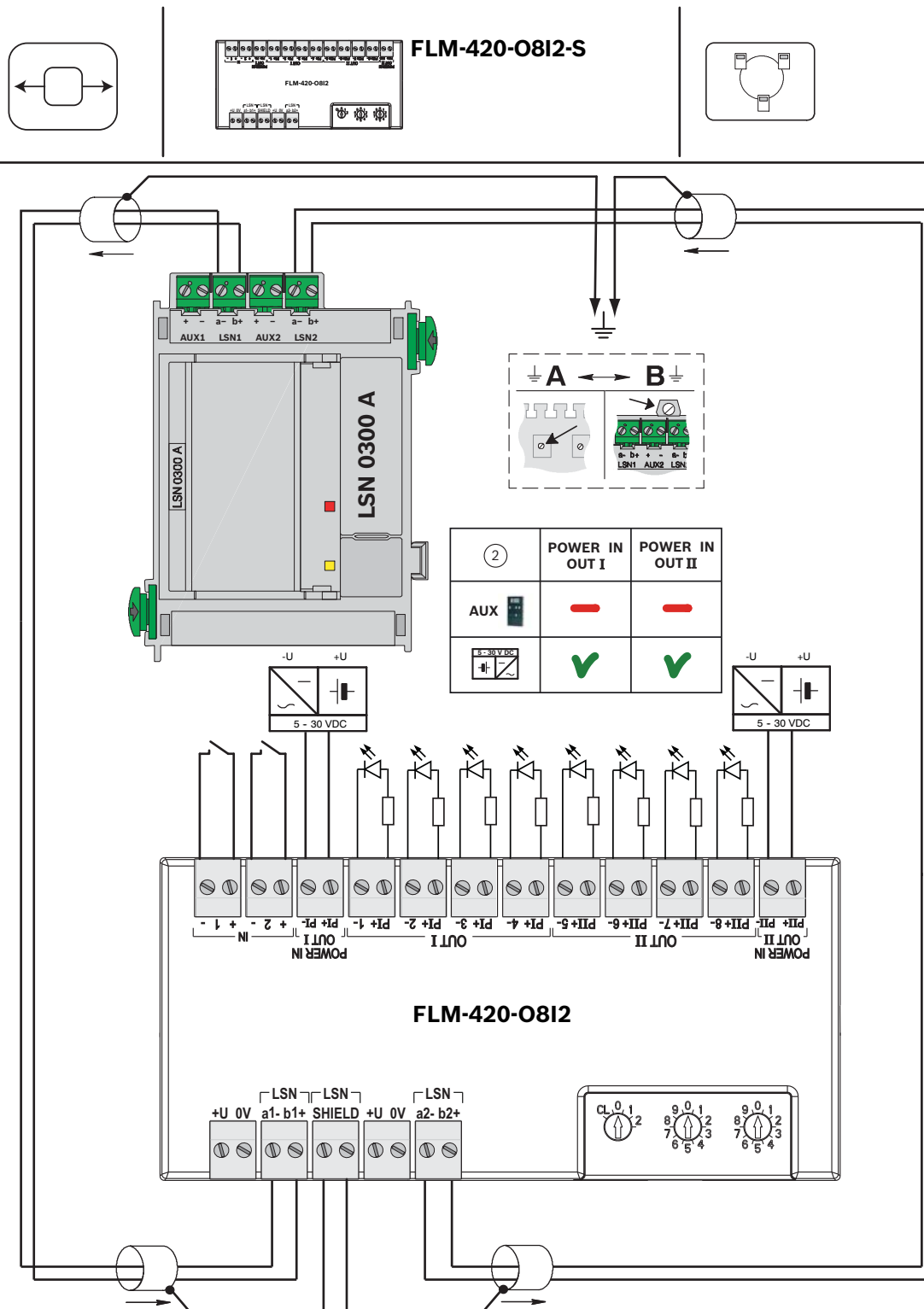
FLM-420-O1I1-E

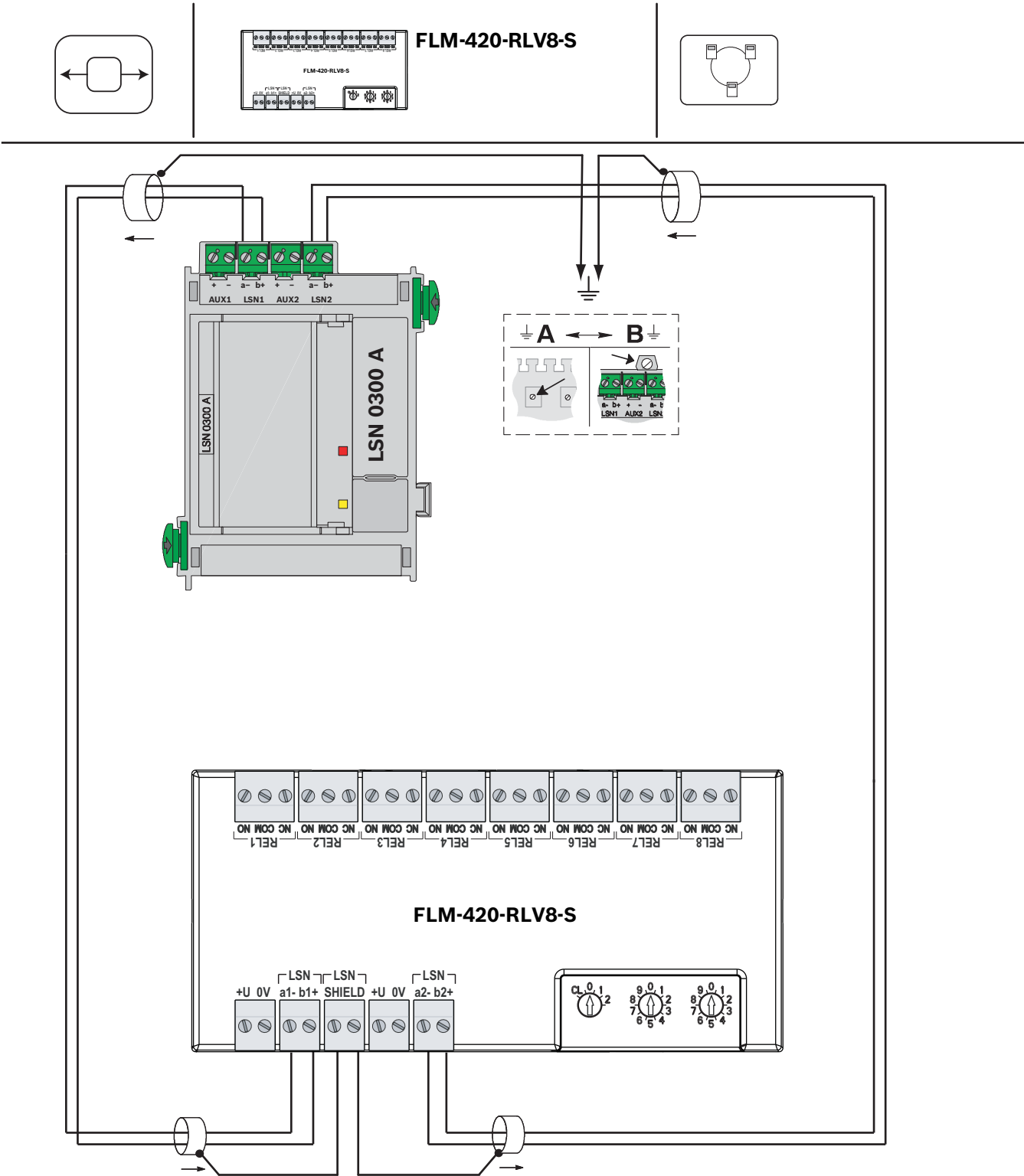


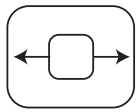
EN 54-2



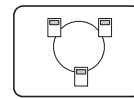




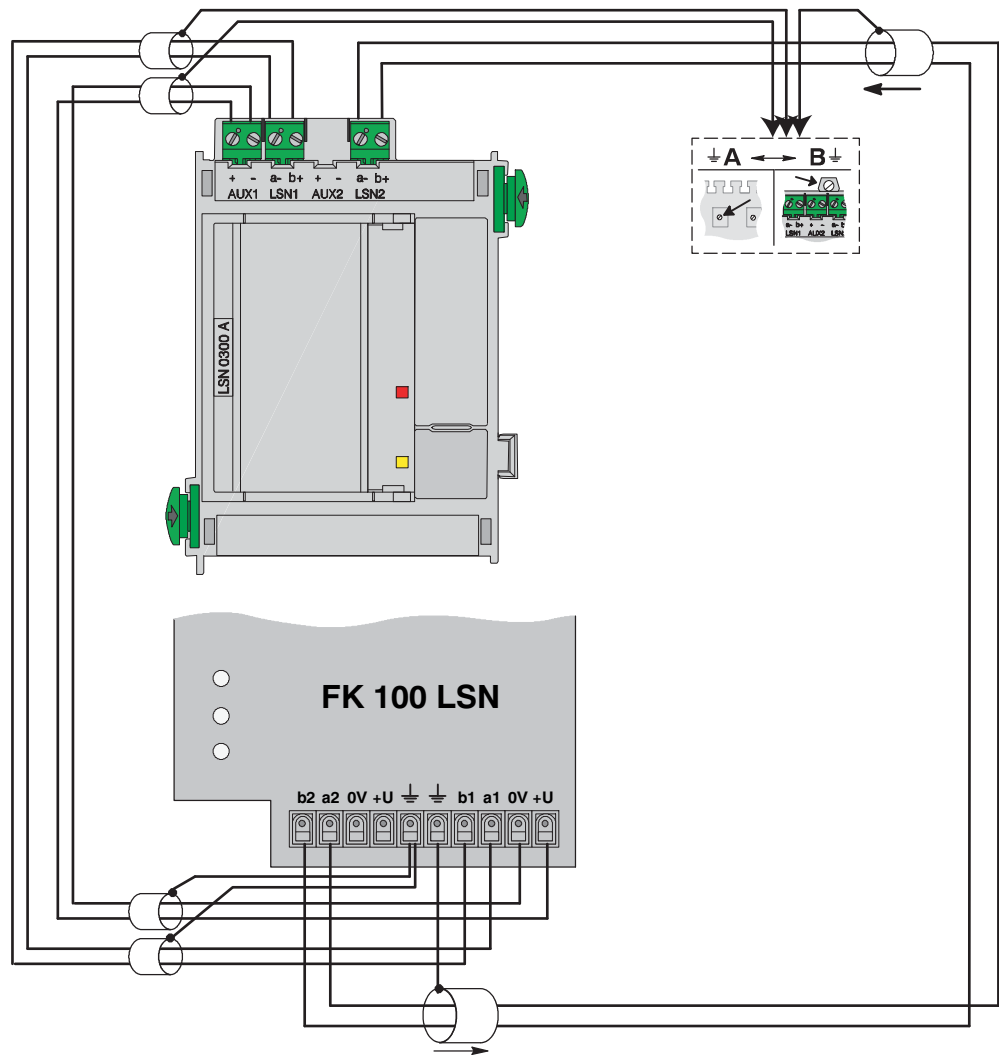
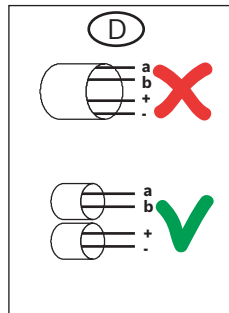


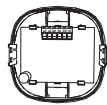
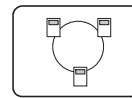
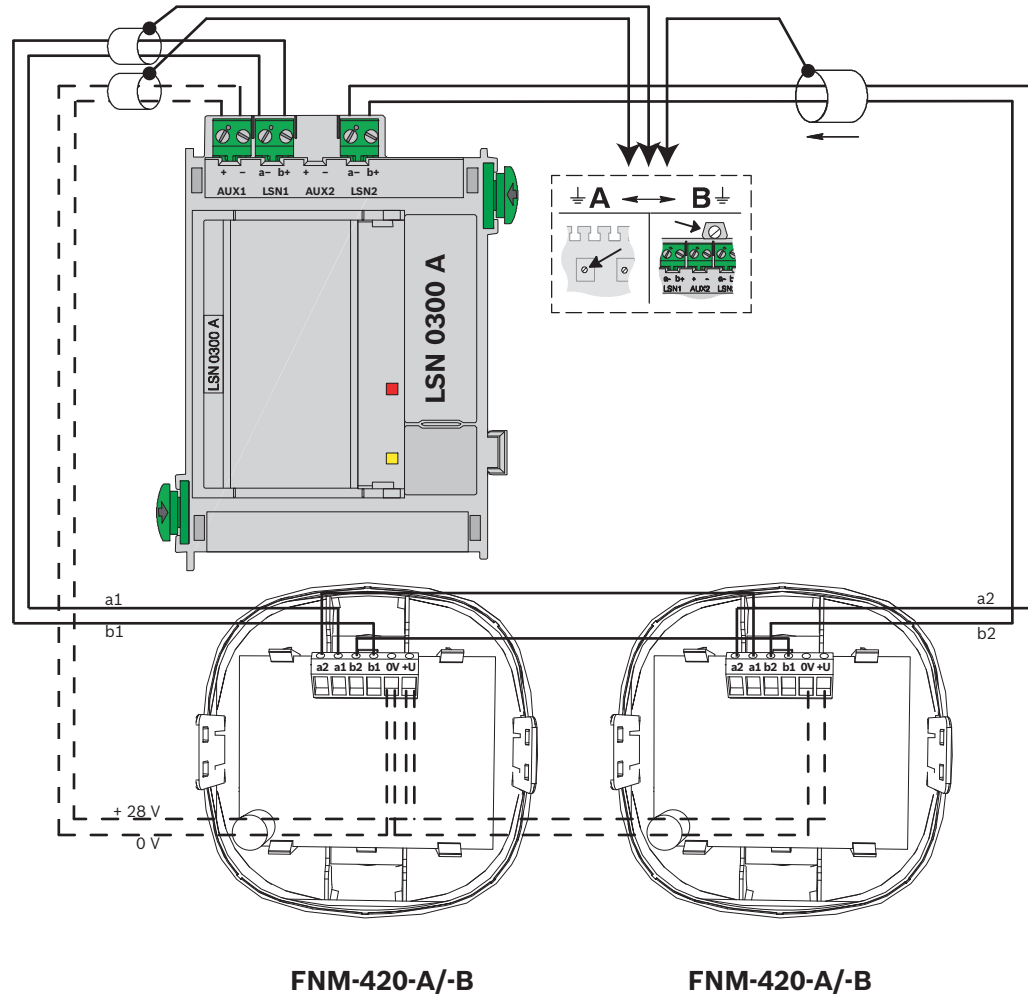
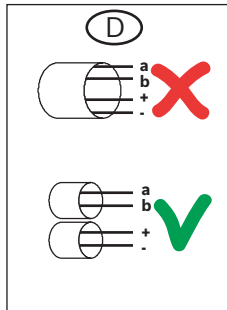


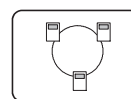
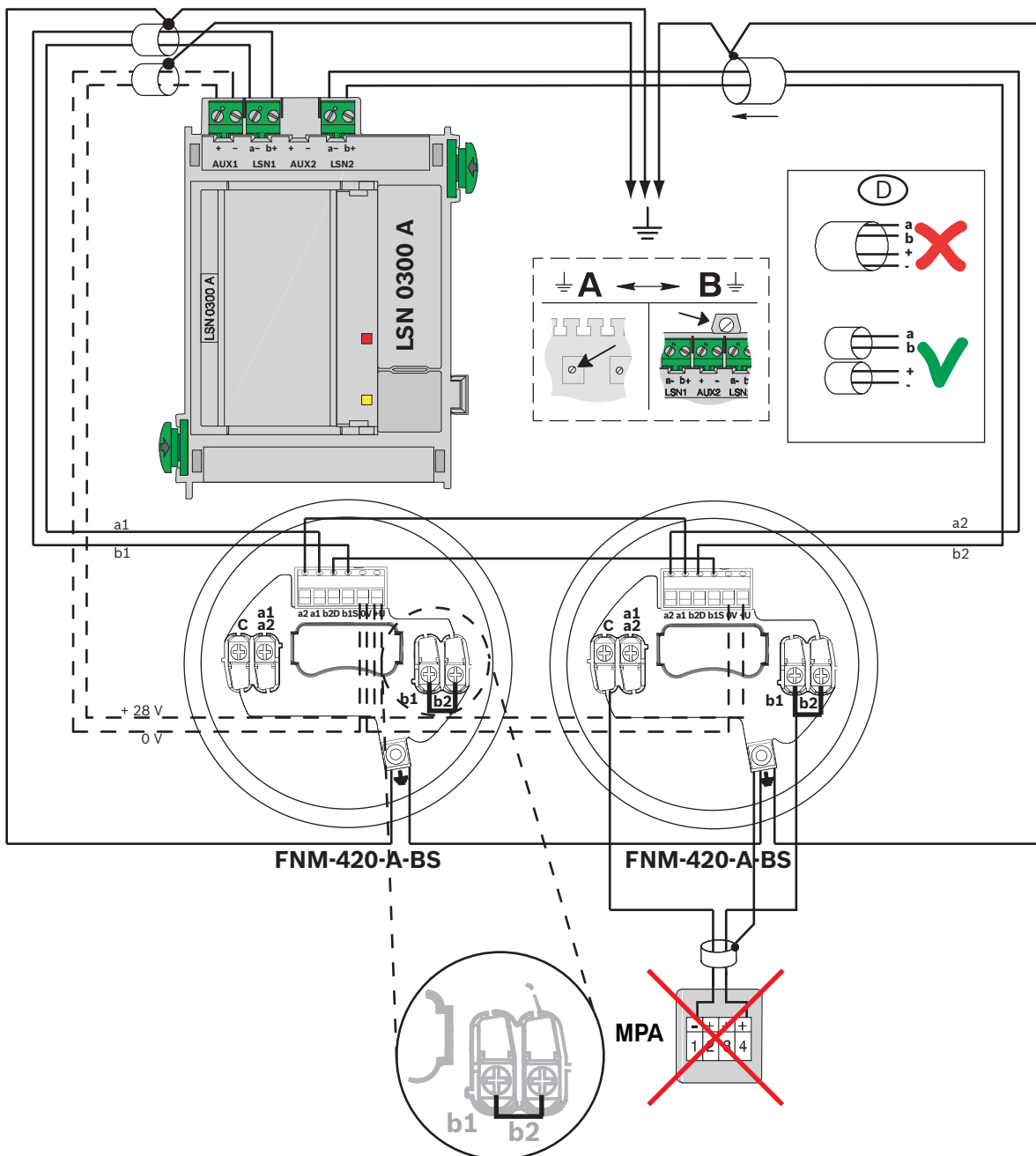
FK 100 LSN



EN 54-2

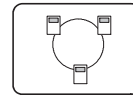


**FNM-420-A/-B****EN 54-2**

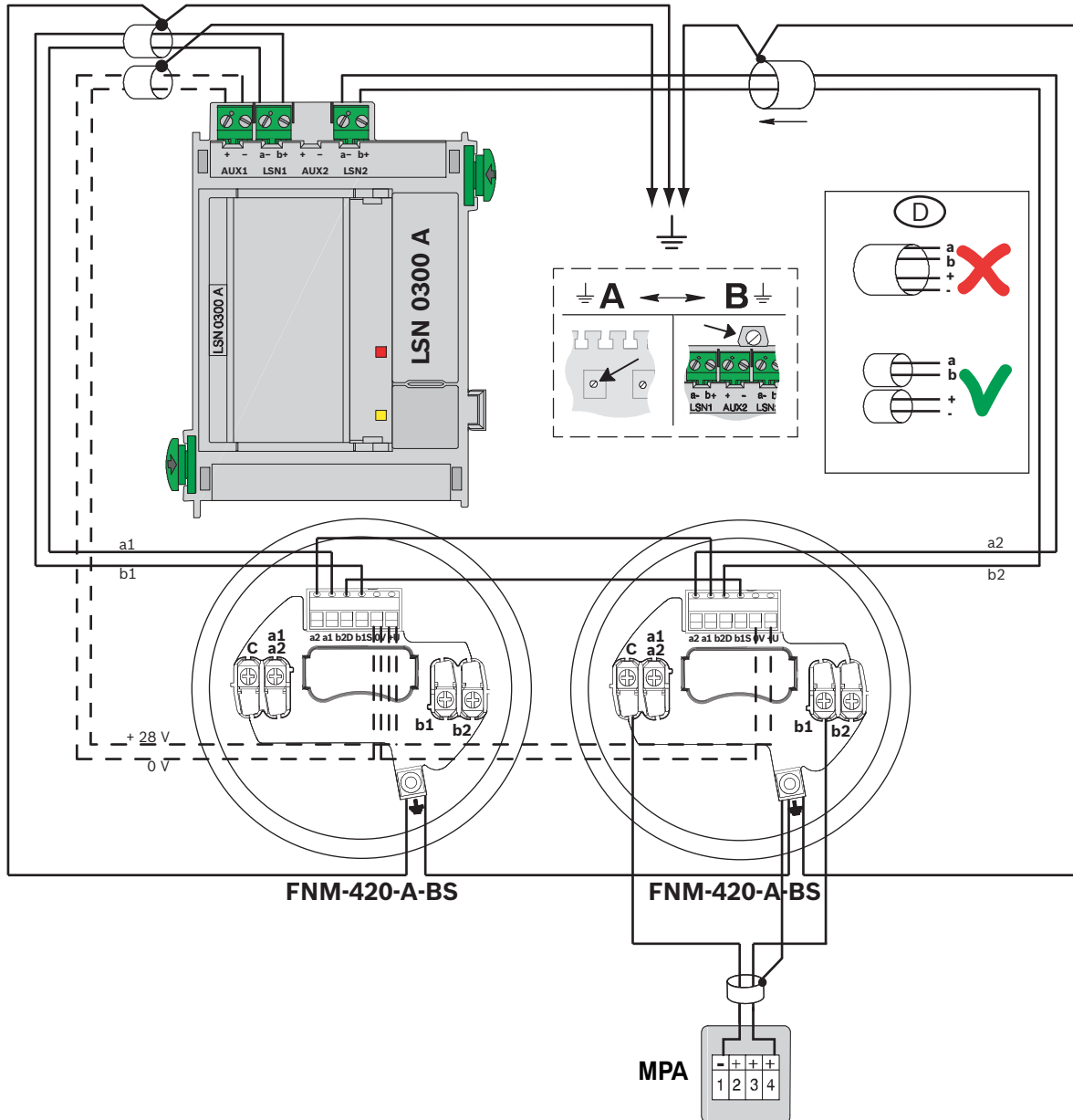
**FNM-420-A-BS****EN 54-2**

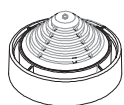
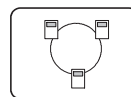
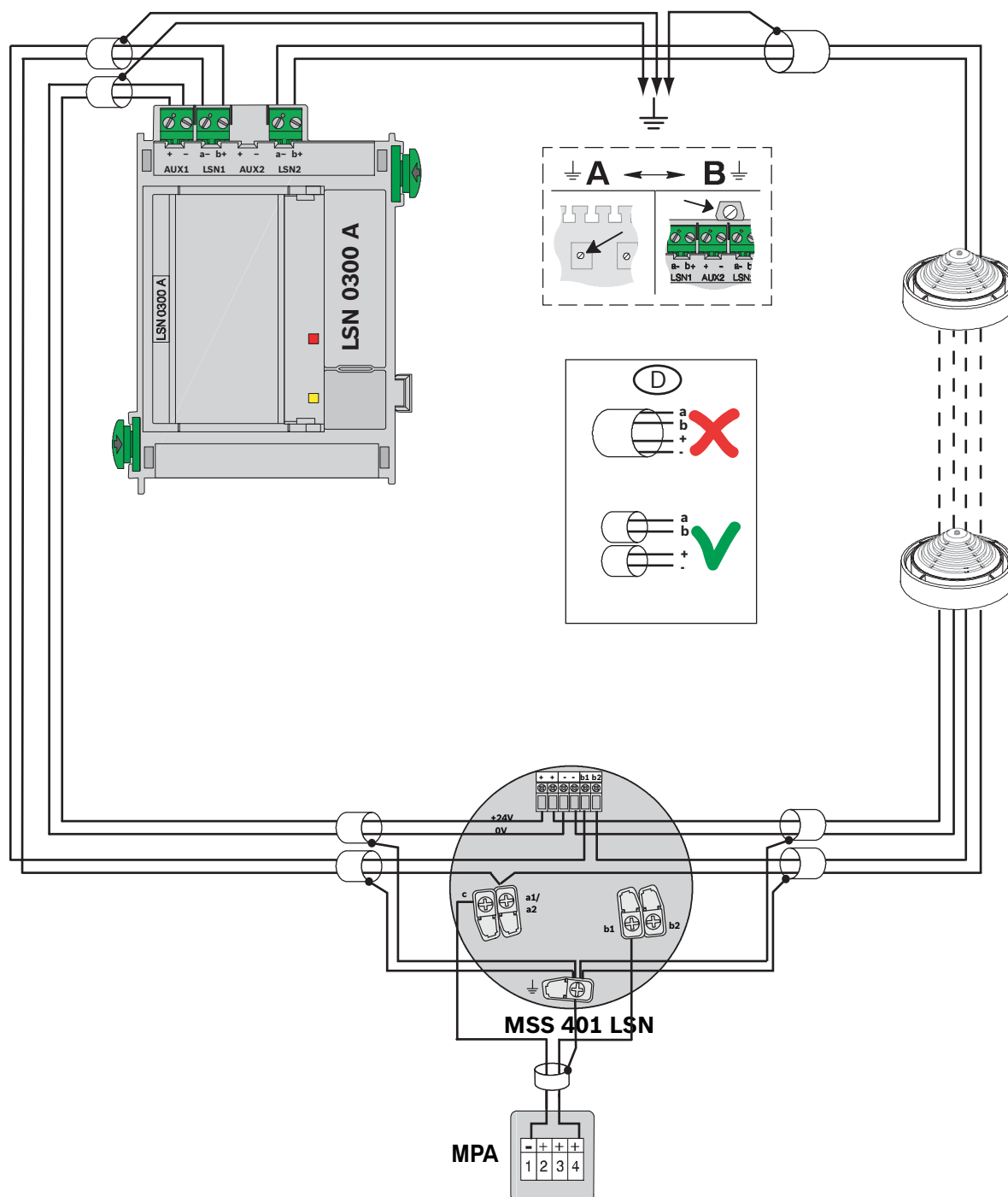


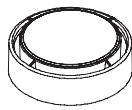
FNM-420-A-BS



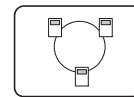
EN 54-2



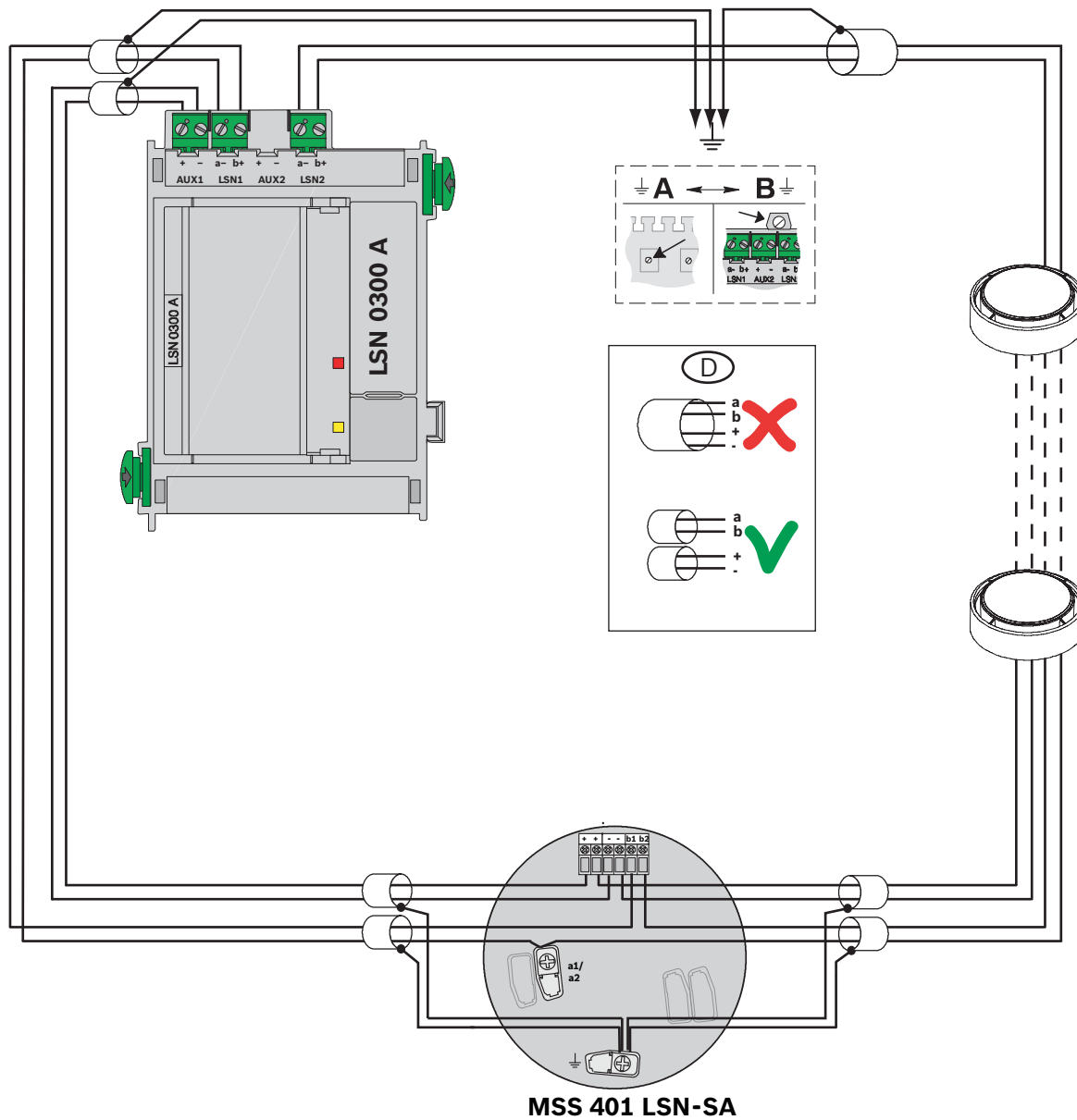
**MSS 401LSN****EN 54-2**

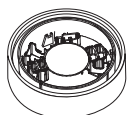


MSS 401 LSN-SA

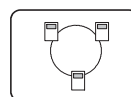


EN 54-2

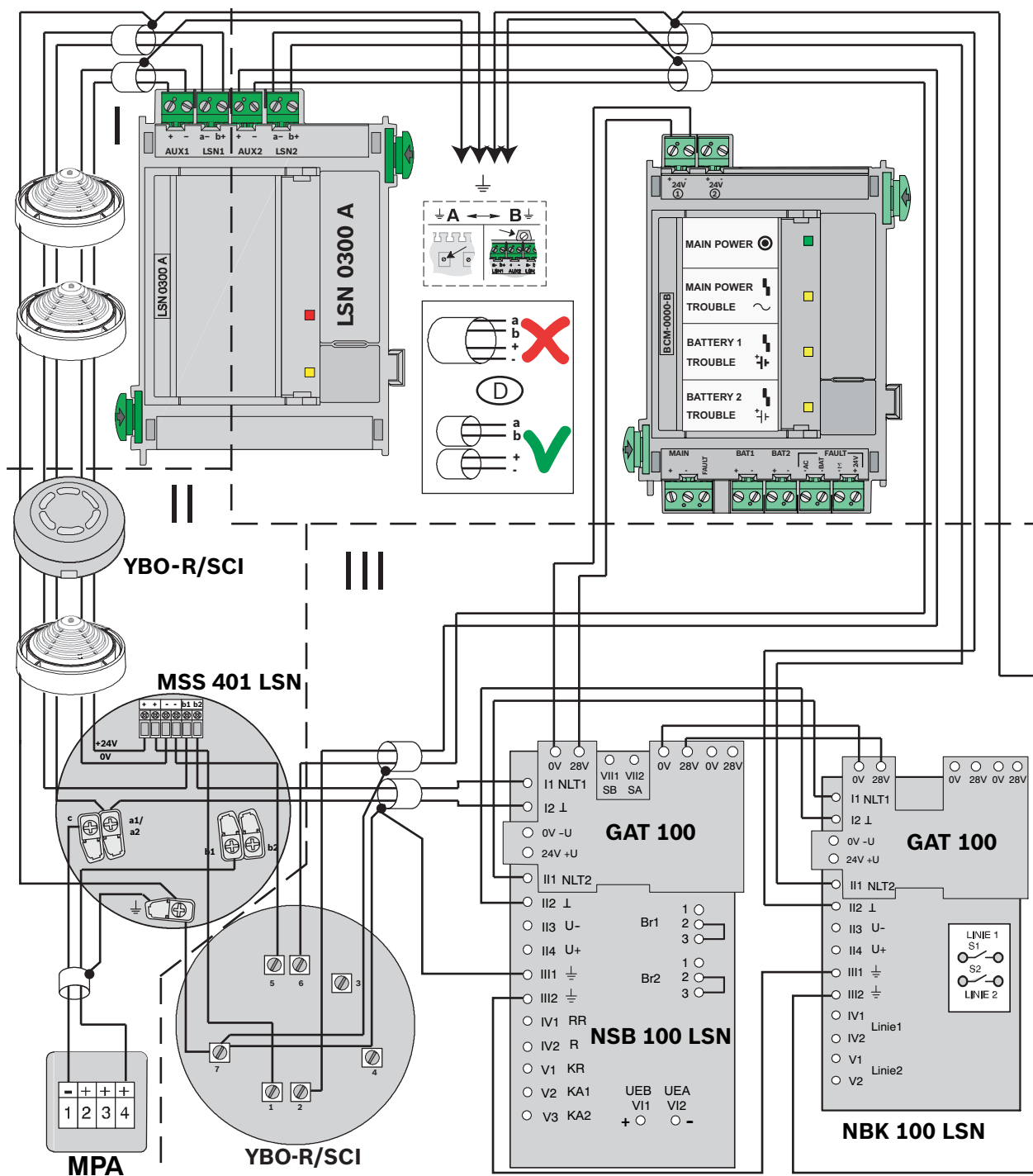


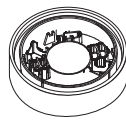
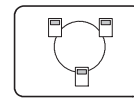
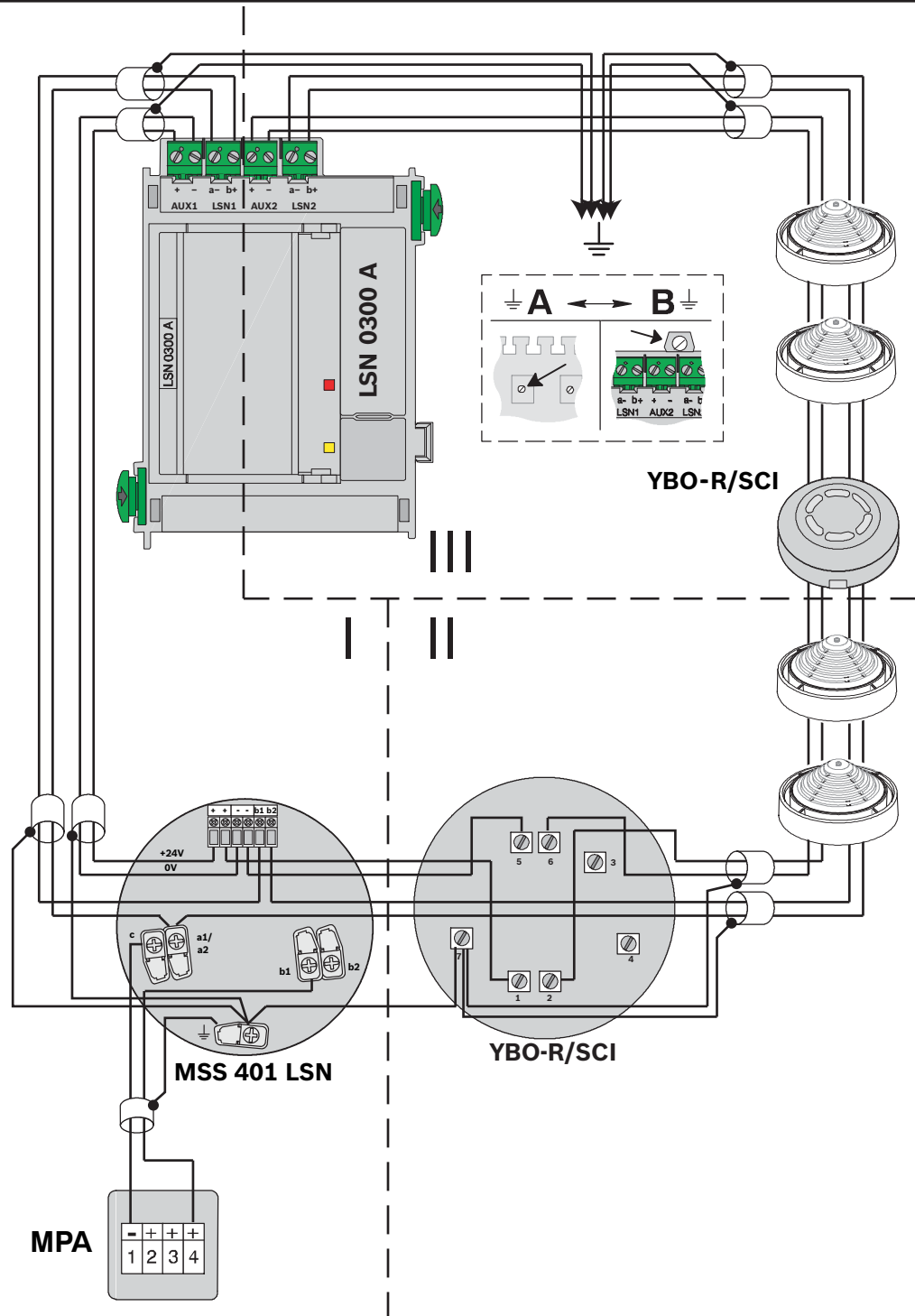
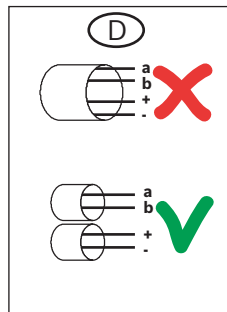


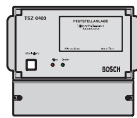
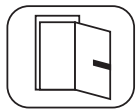
MSS 401 LSN



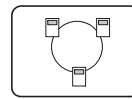
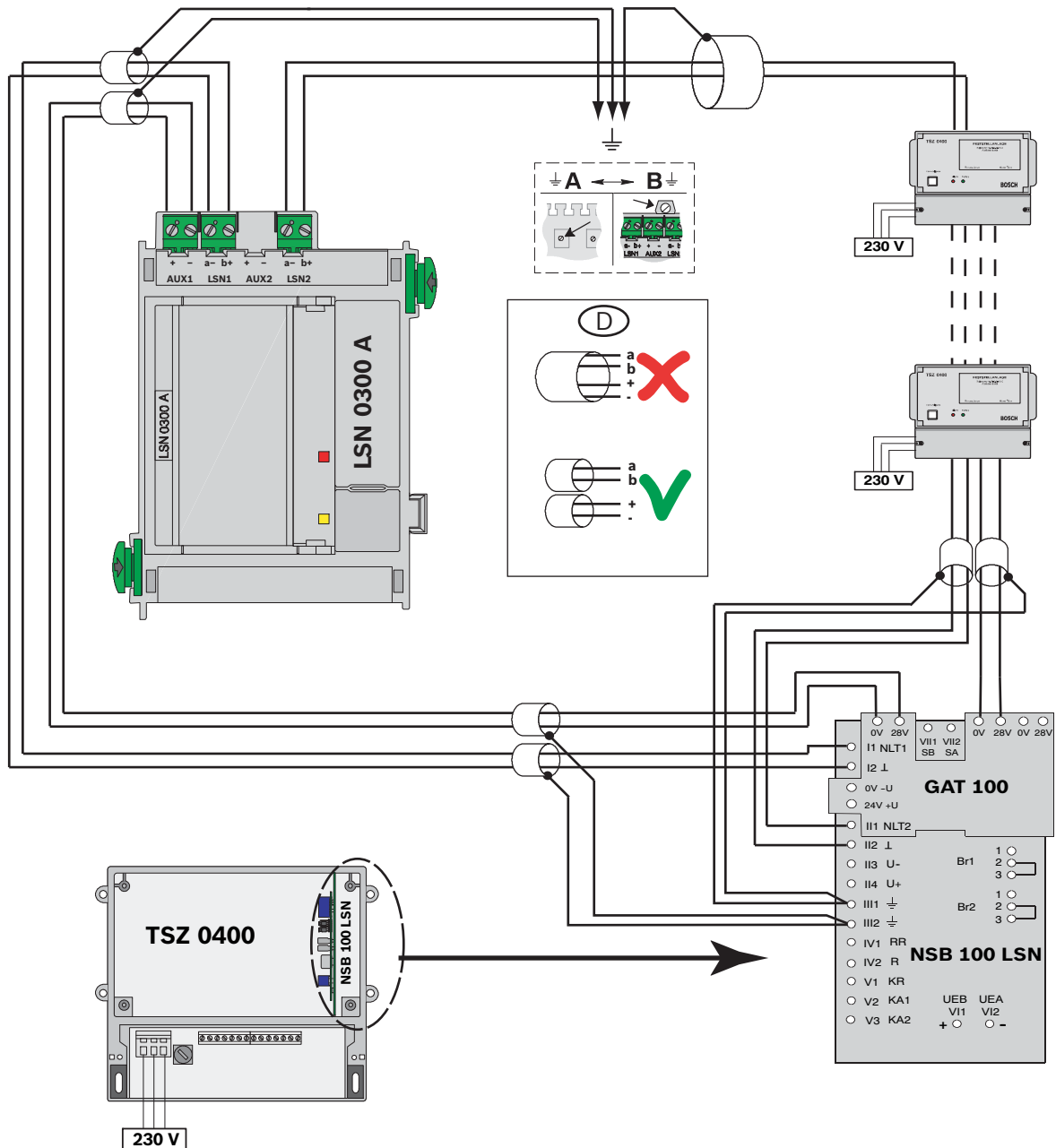
EN 54-2



**MSS 401 LSN (ERT)****EN 54-2**

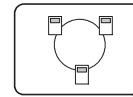


TSZ 0400

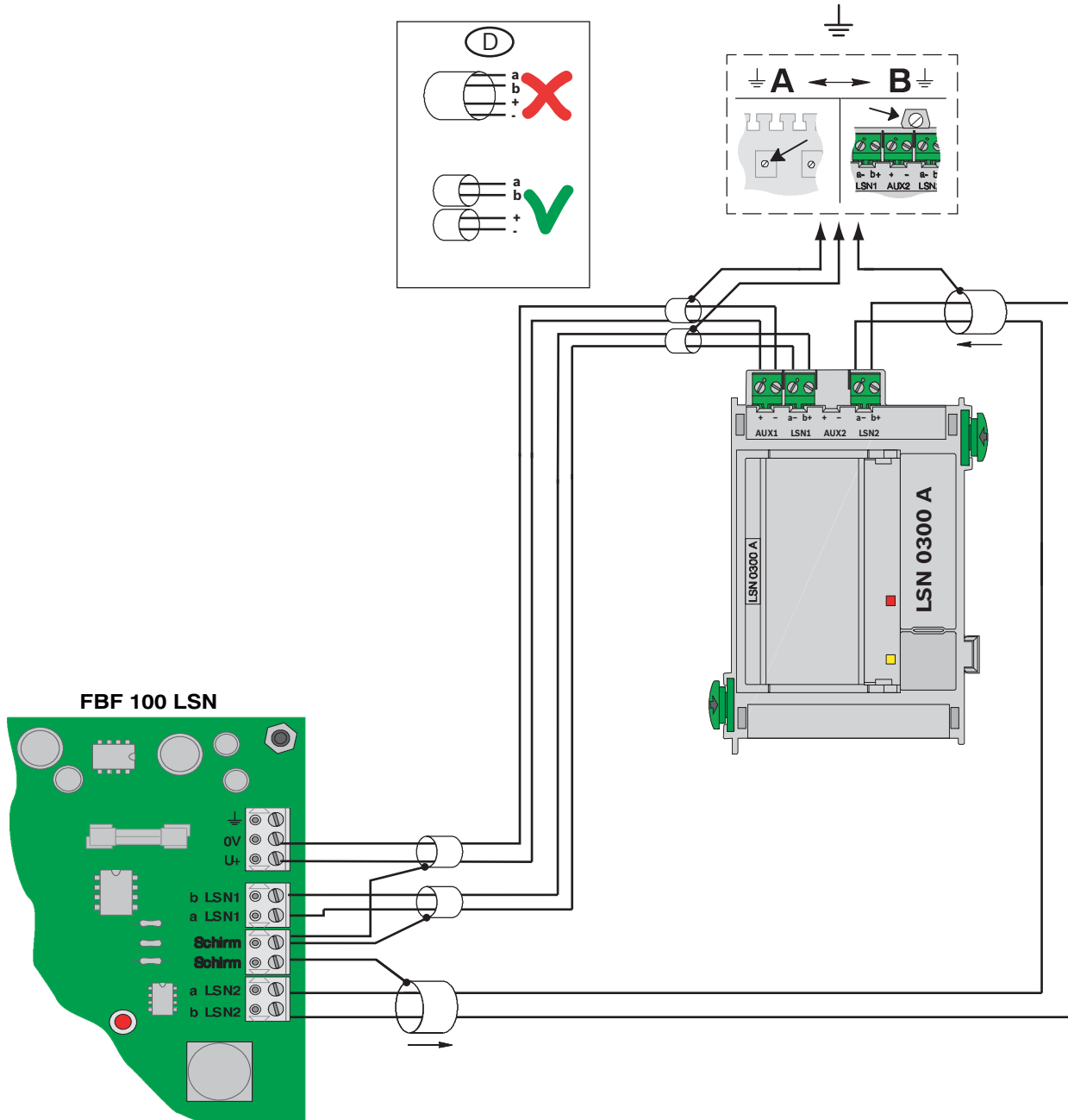
**EN 54-2**

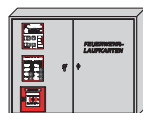


FBF 100 LSN



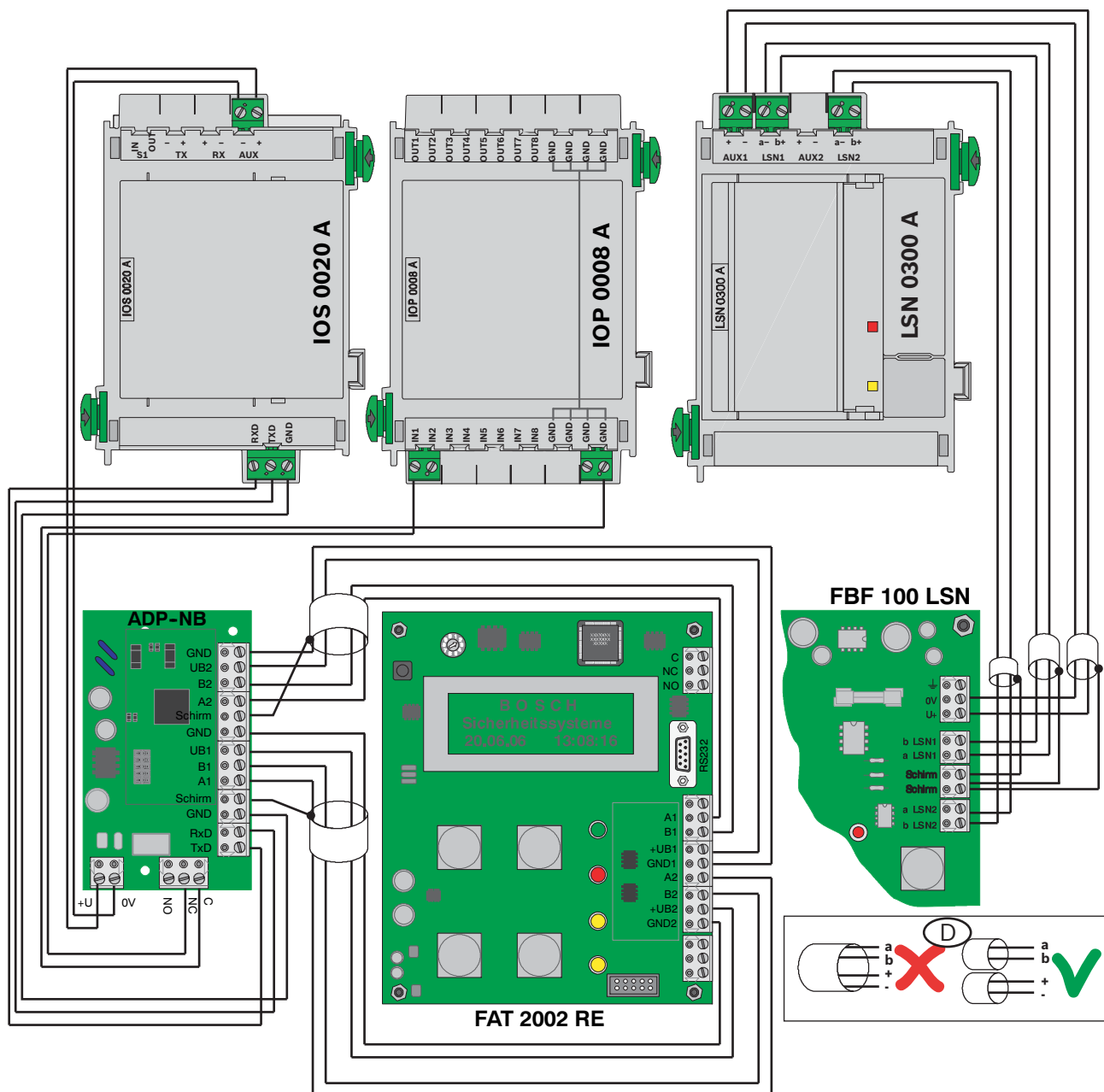
EN 54-2

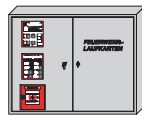




FIBS

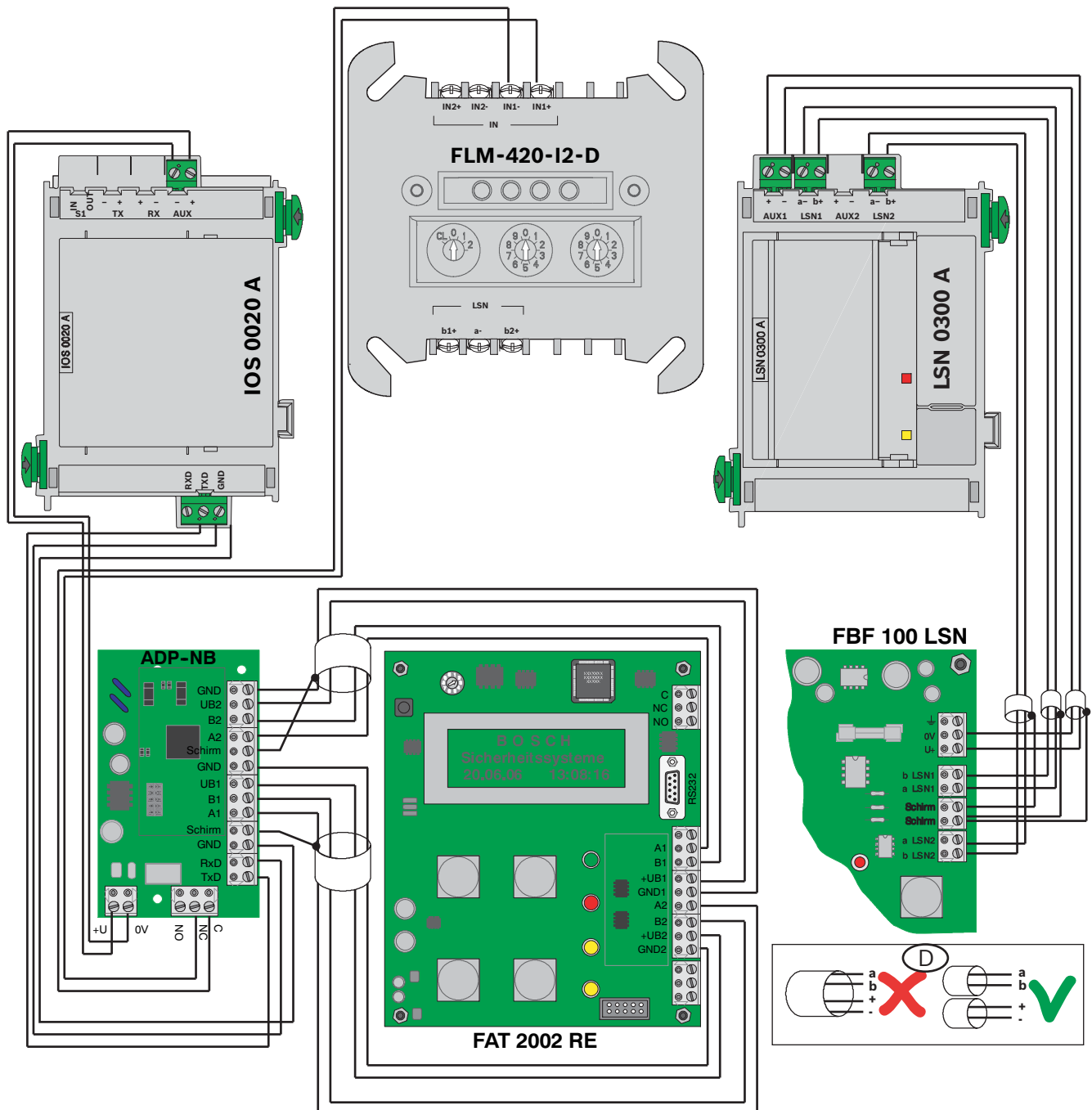
EN 54-2

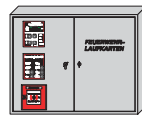




FIBS

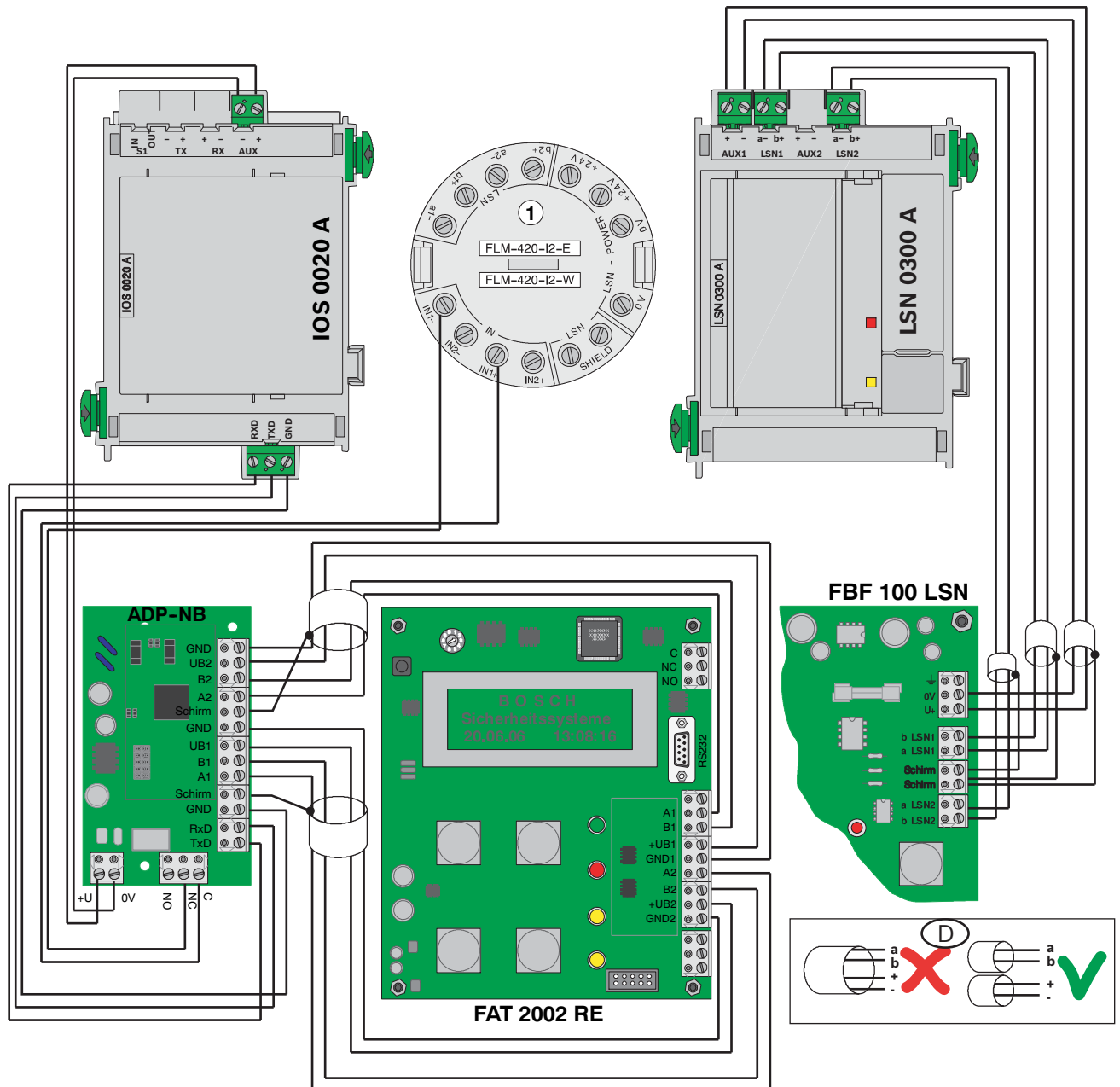
EN 54-2

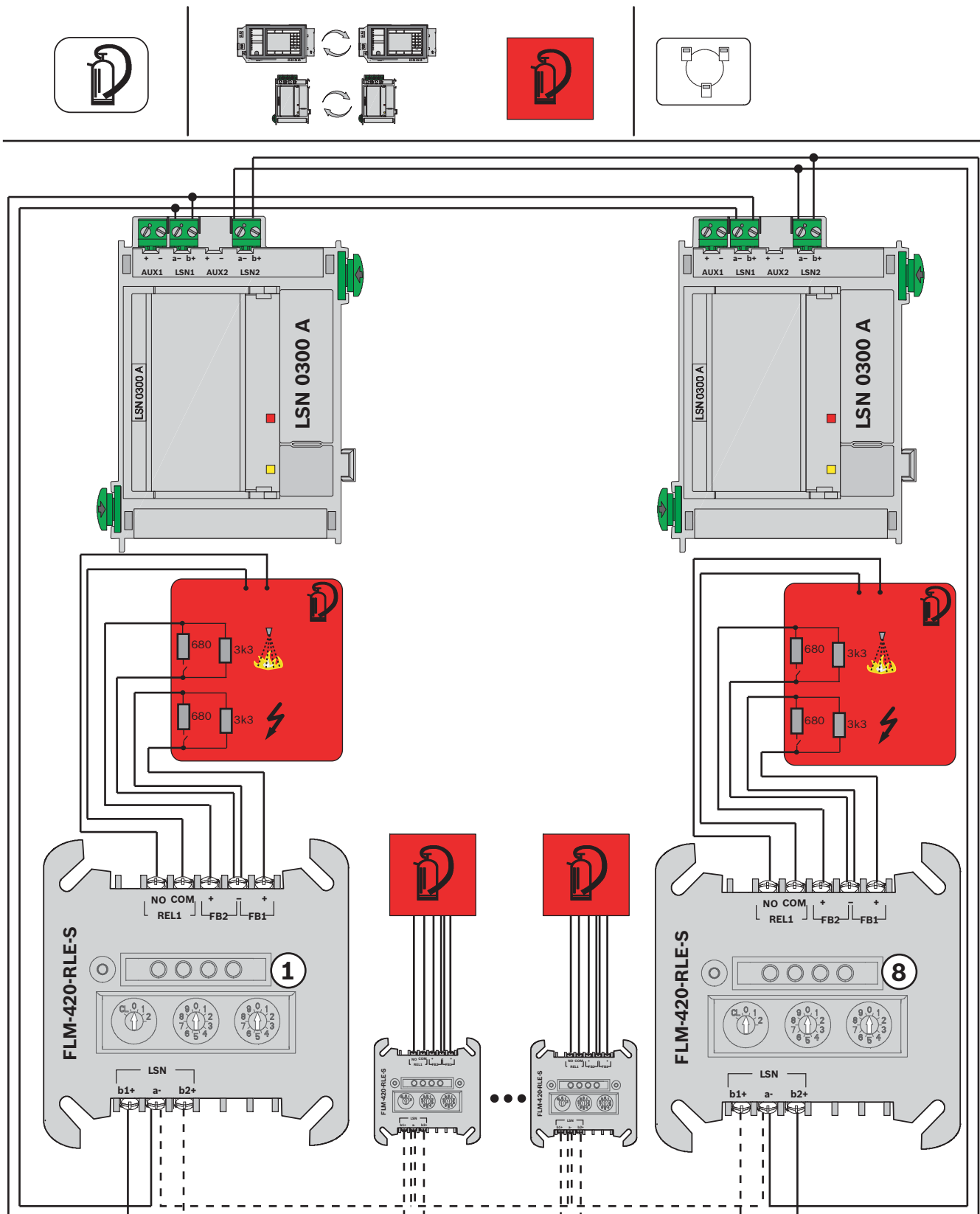


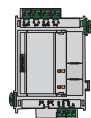
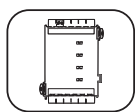
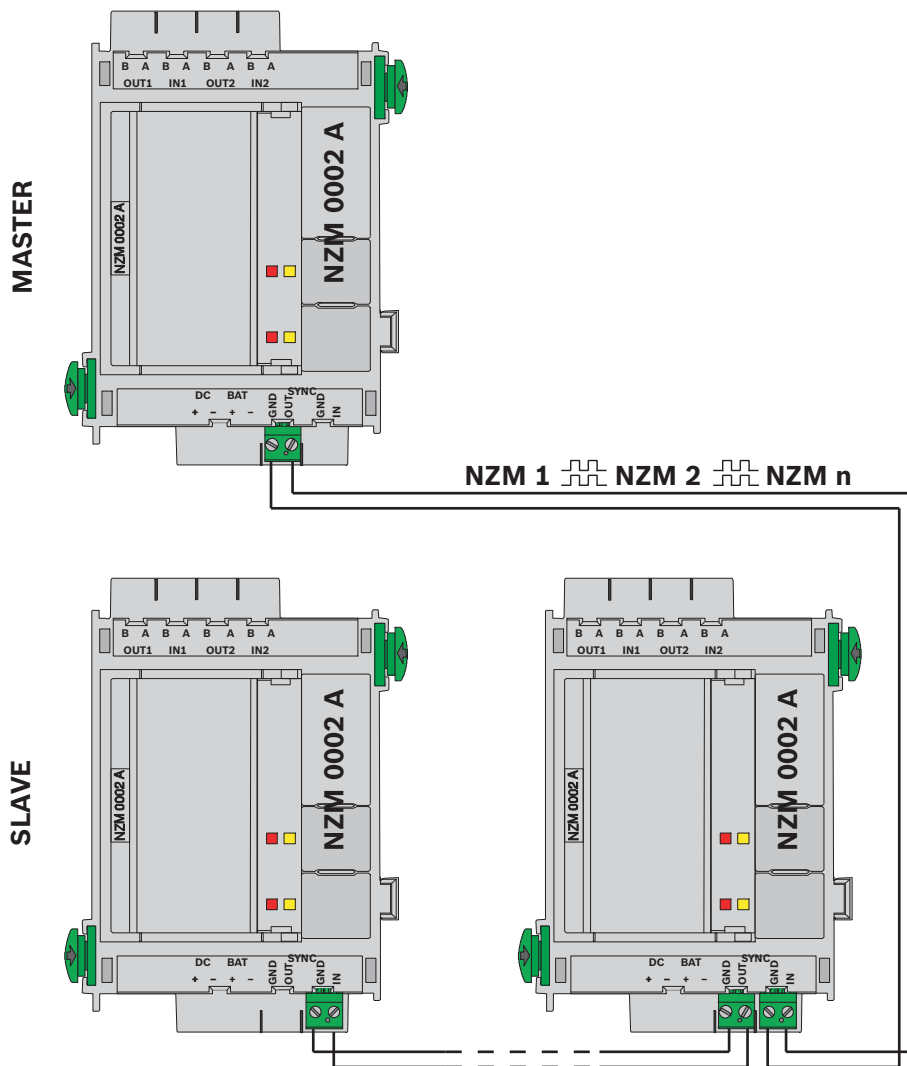


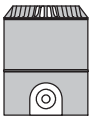
FIBS

EN 54-2

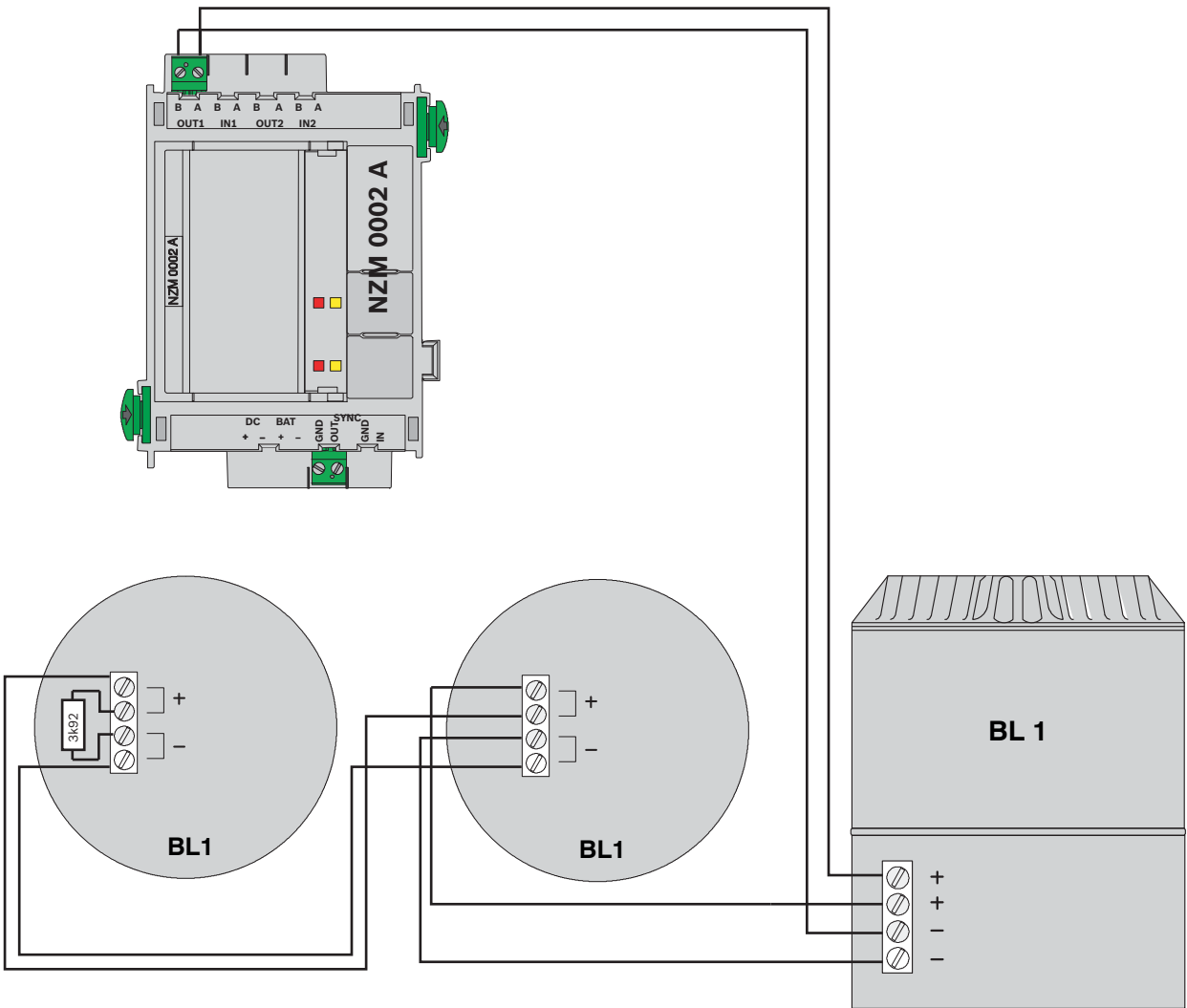
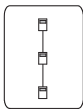


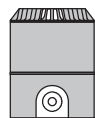


**NZM 0002 A**

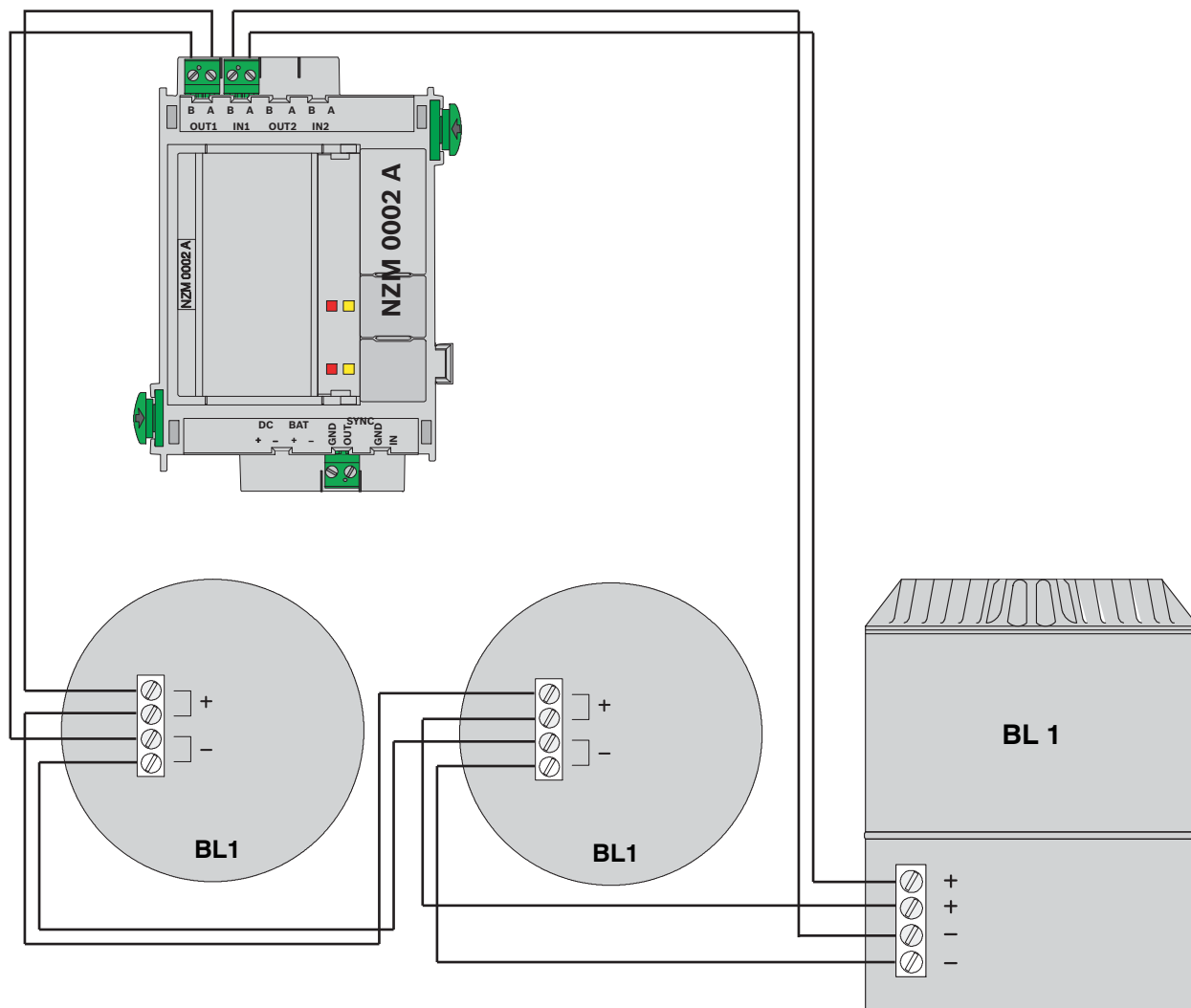
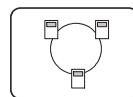


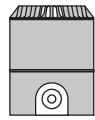
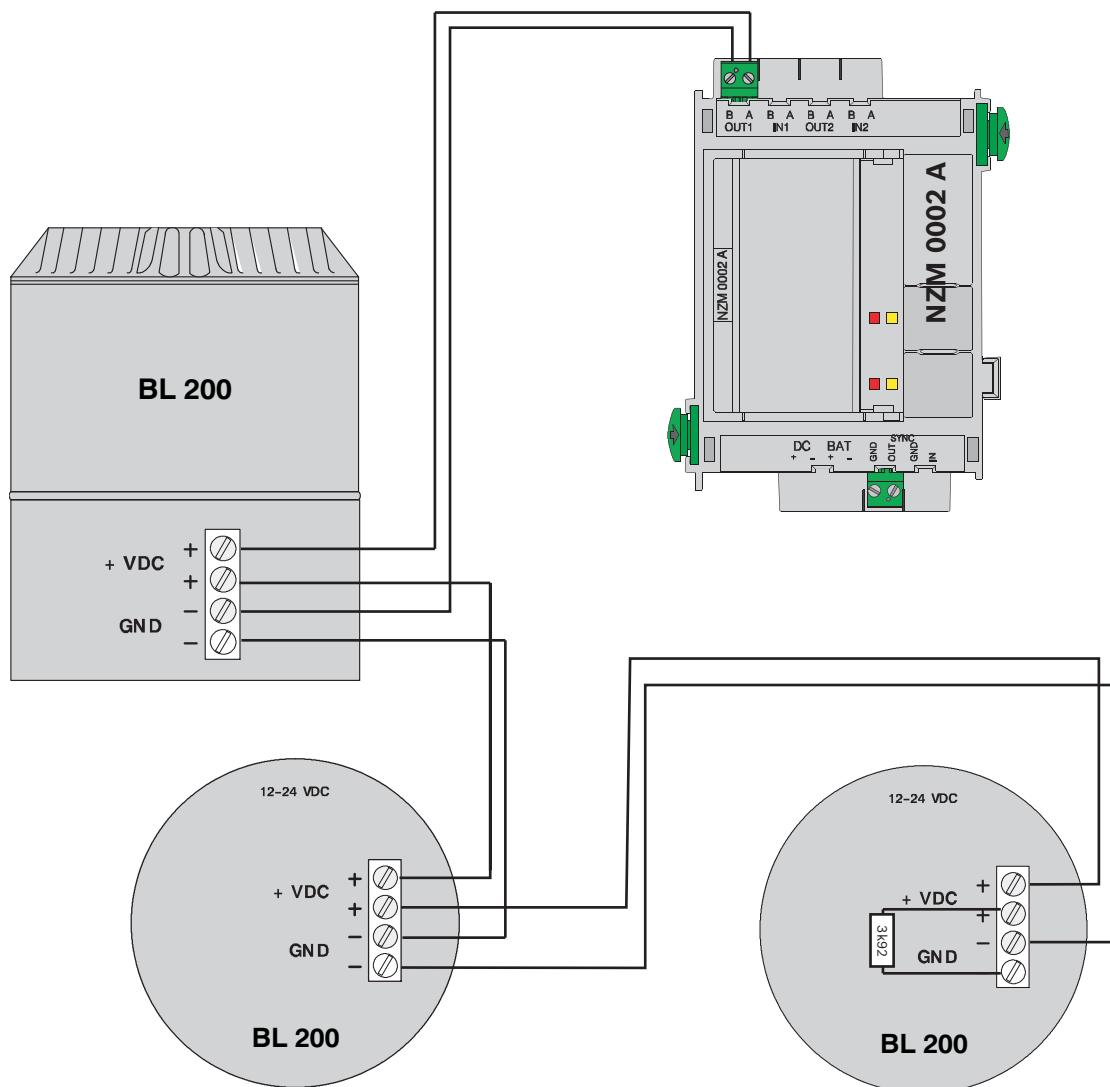
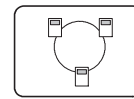
BL 1





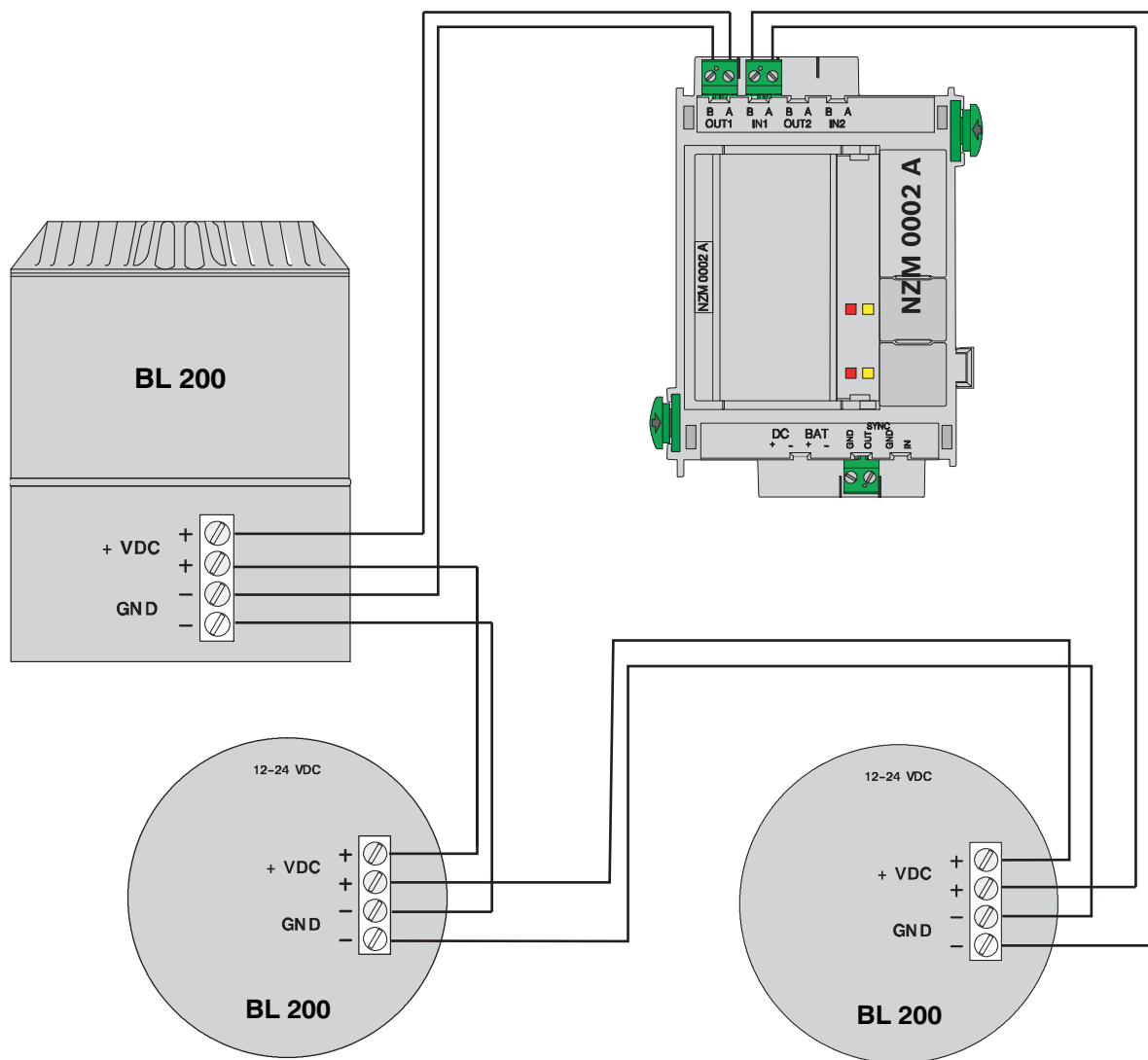
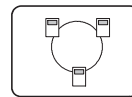
BL 1

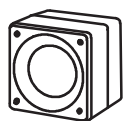
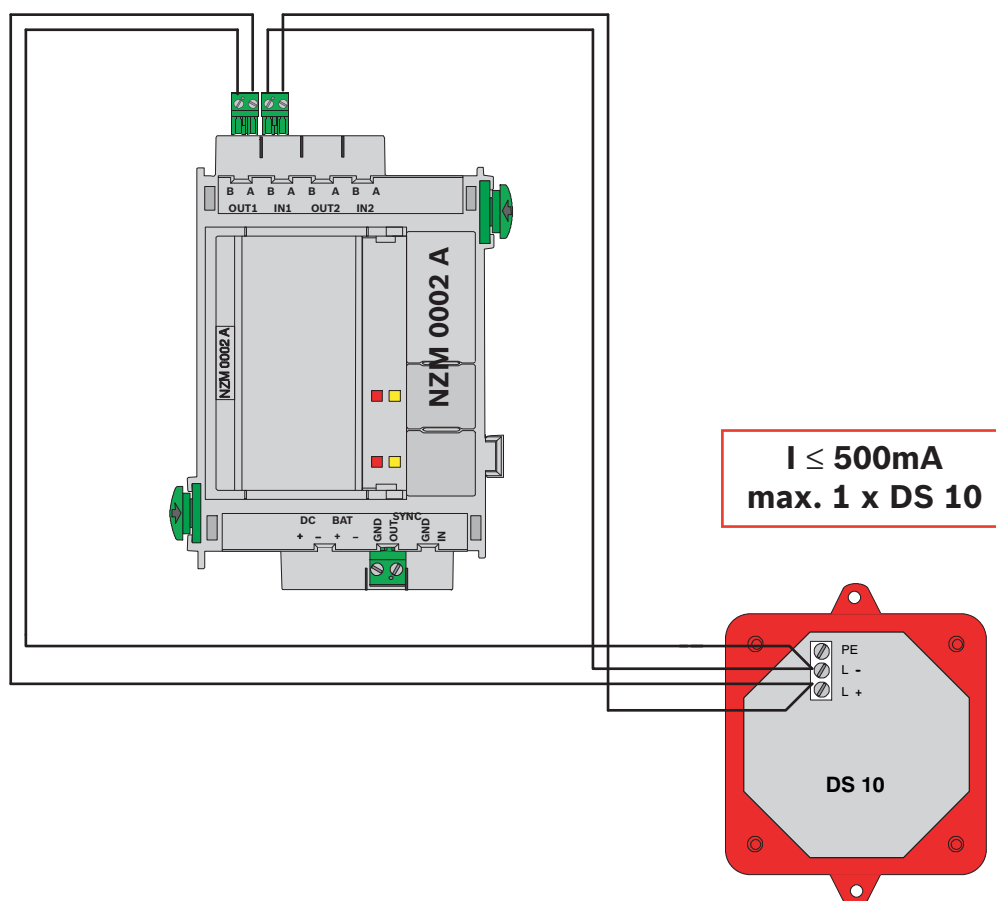
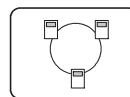


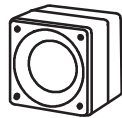
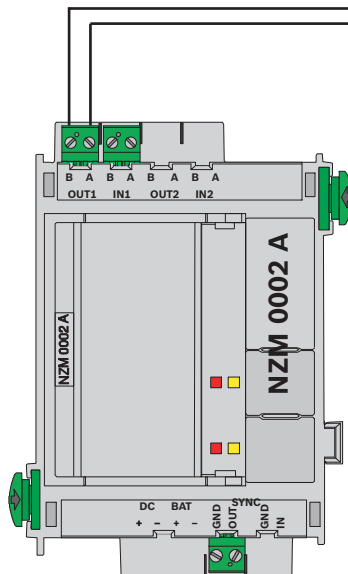
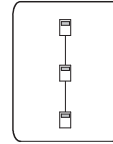
**BL 200**



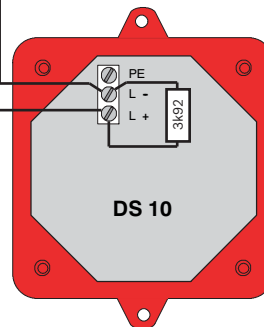
BL 200

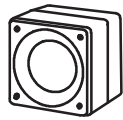
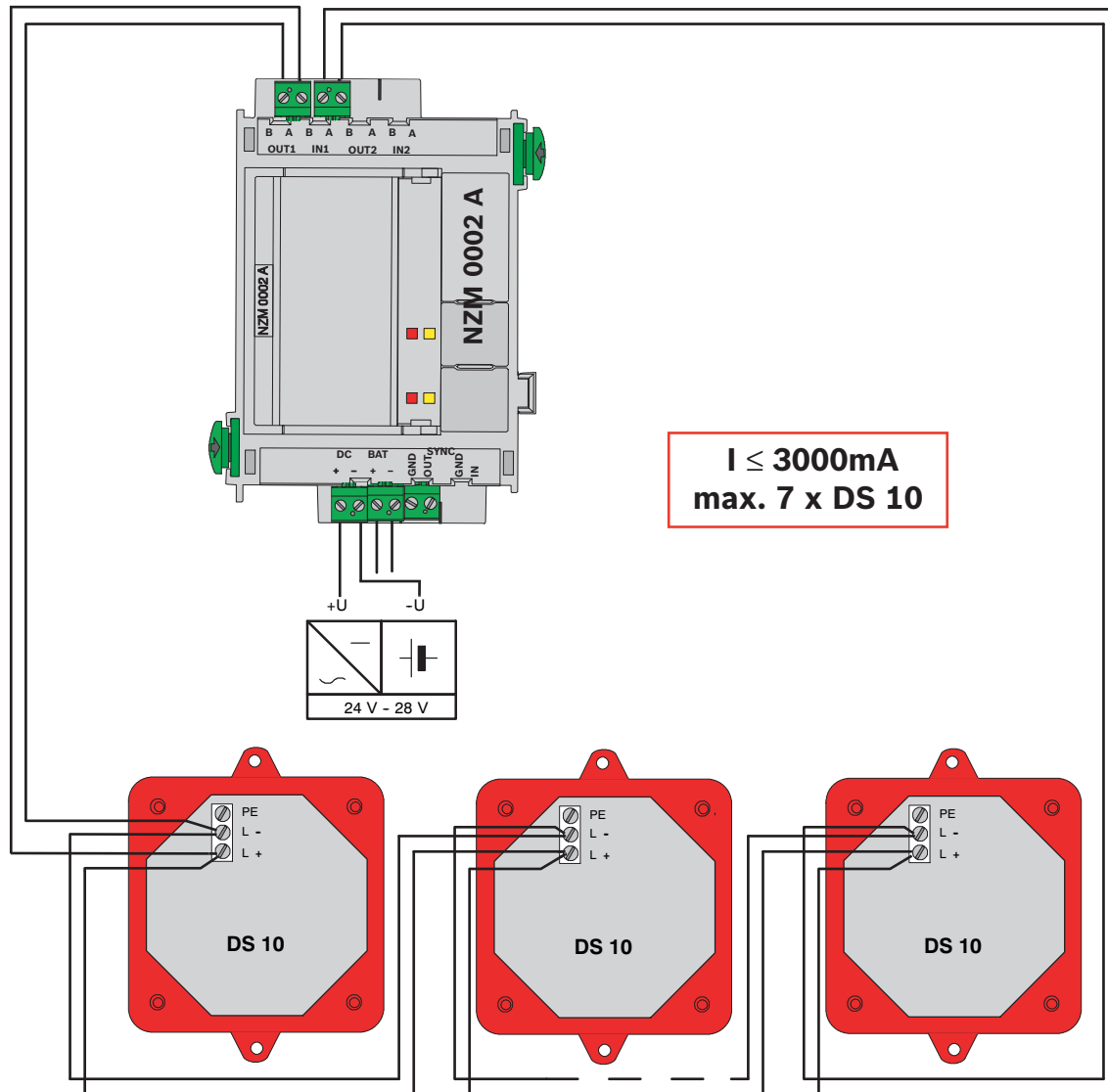
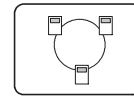


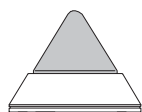
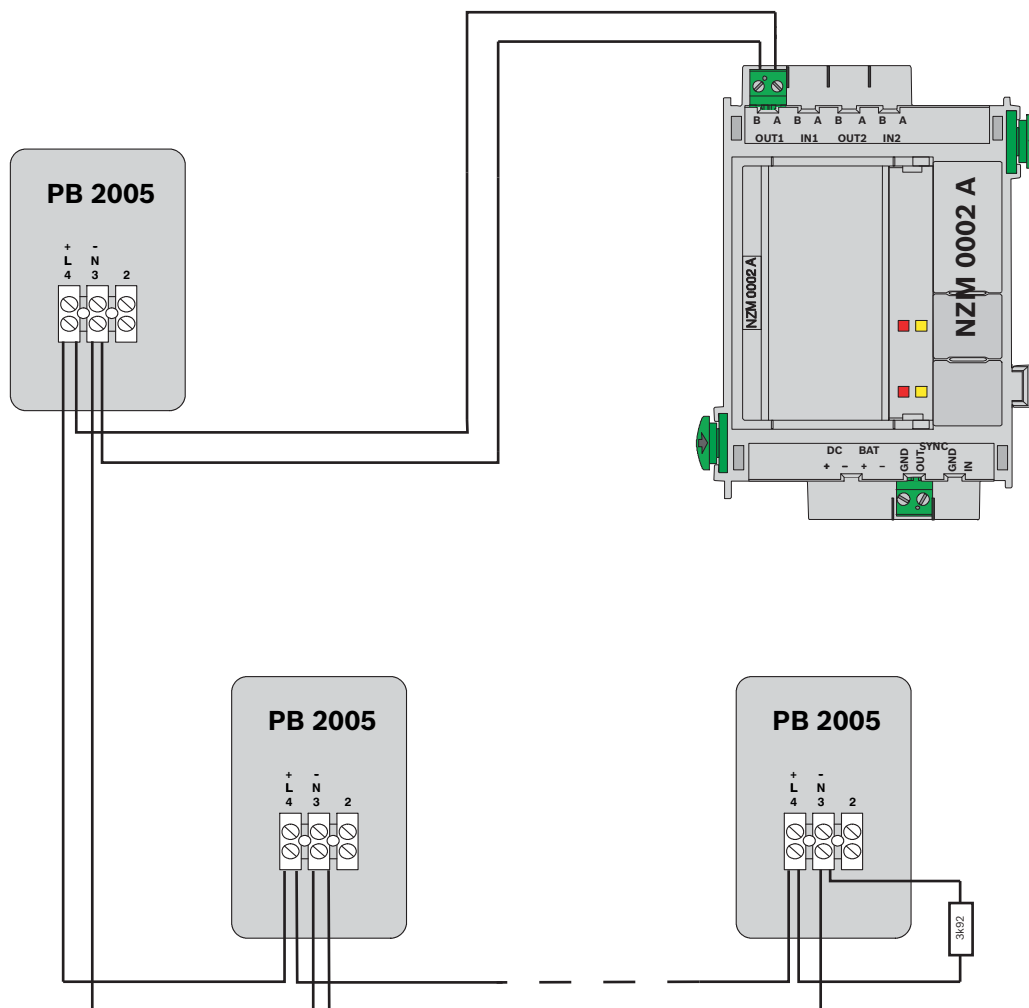
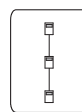
**DS 10**

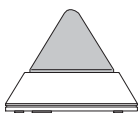
**DS 10**

$I \leq 500\text{mA}$
max. 1 x DS 10

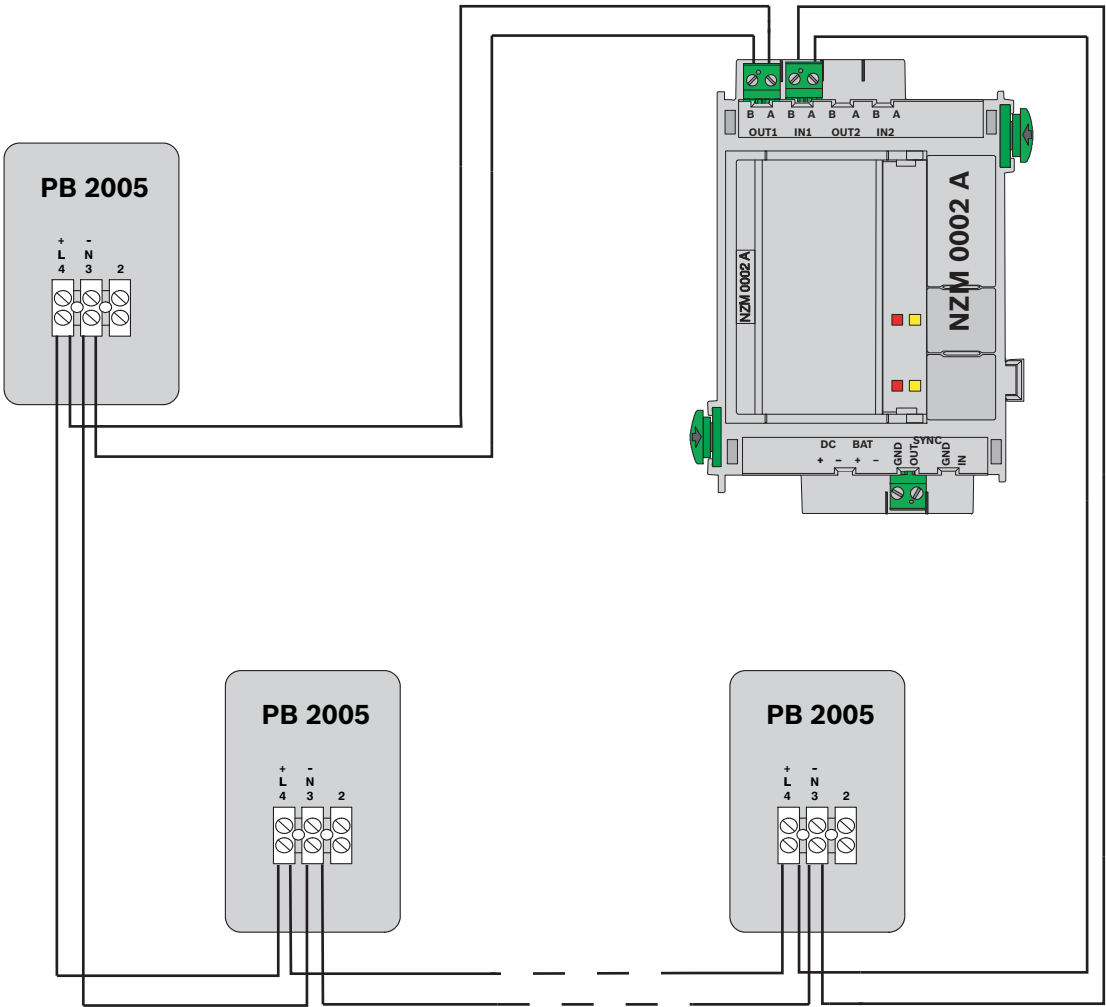
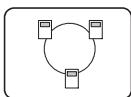


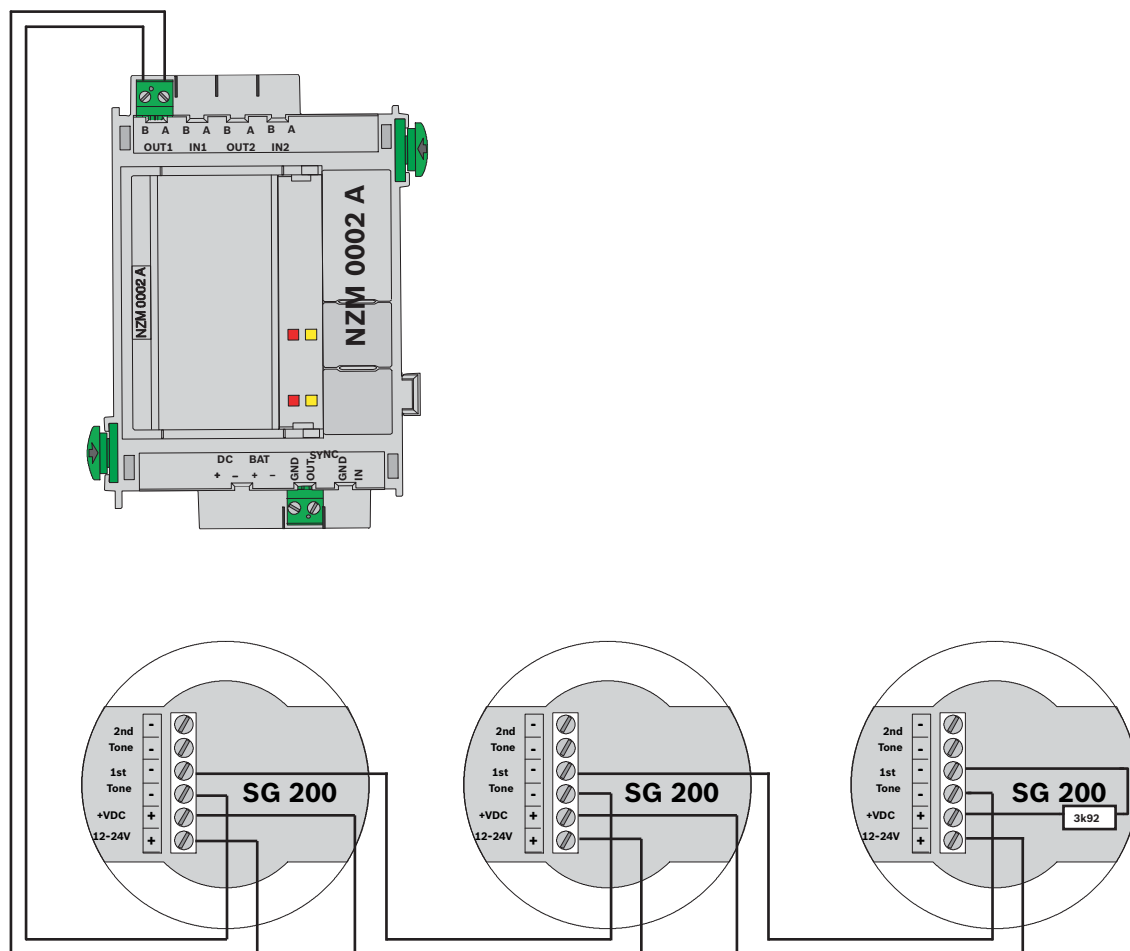
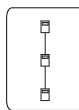
**DS 10**

**PB 2005**



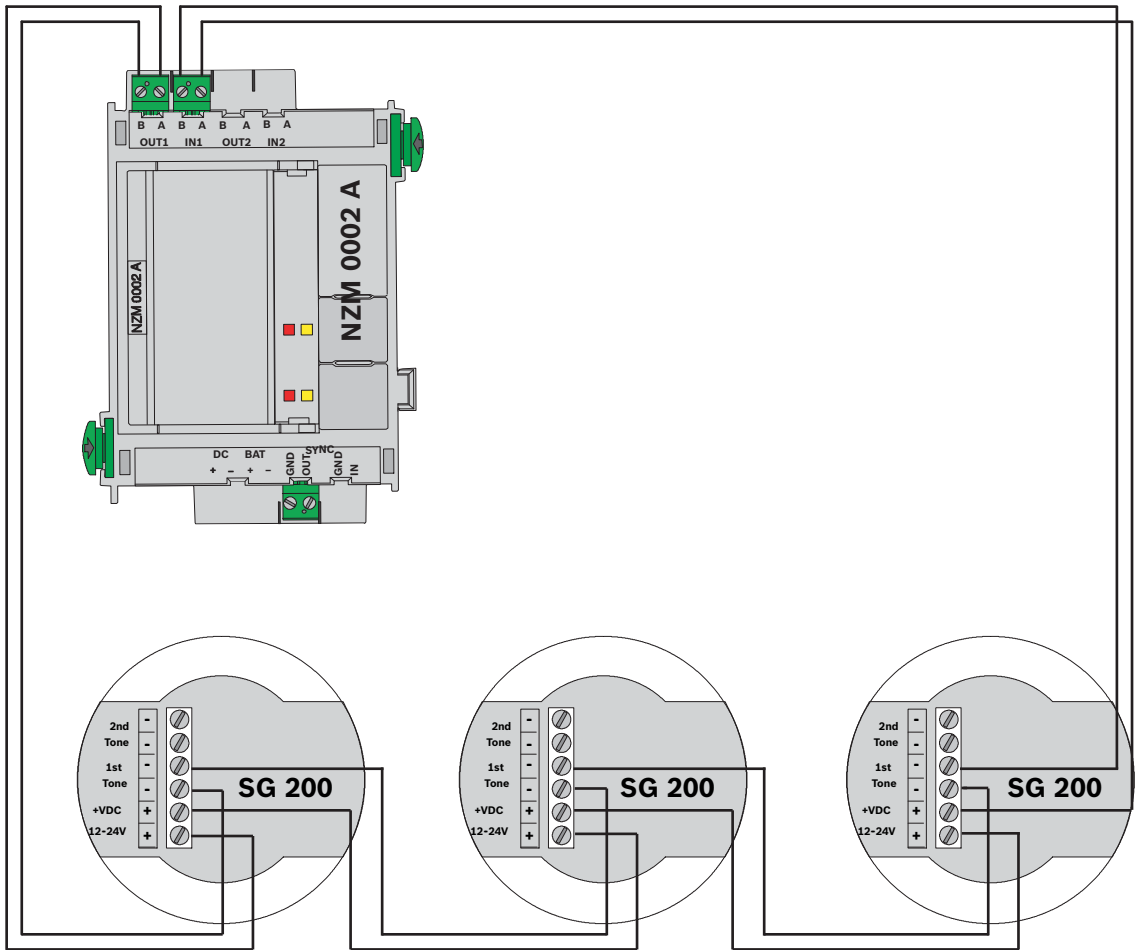
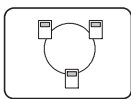
PB 2005

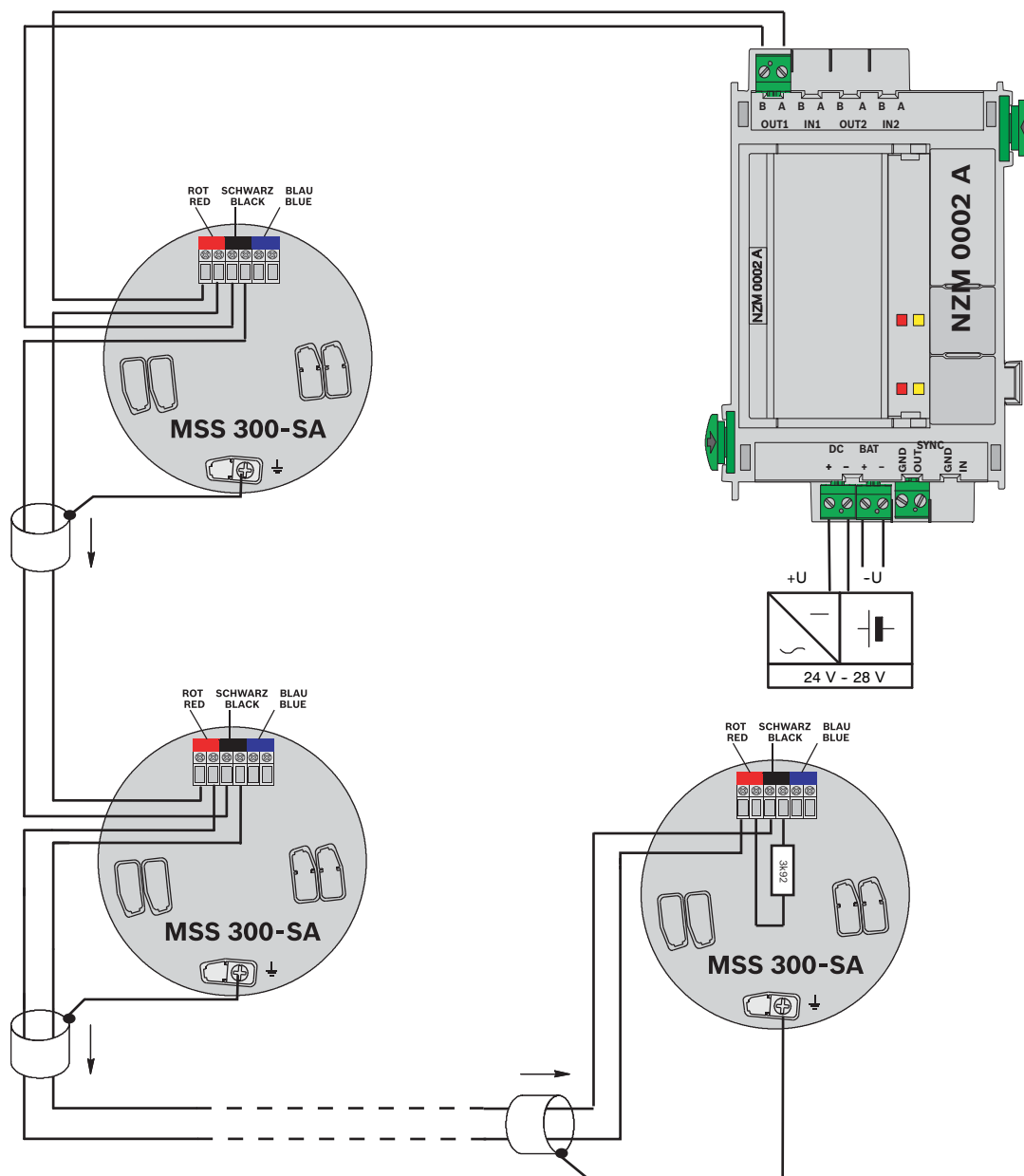
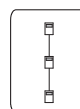


**SG 200**



SG 200

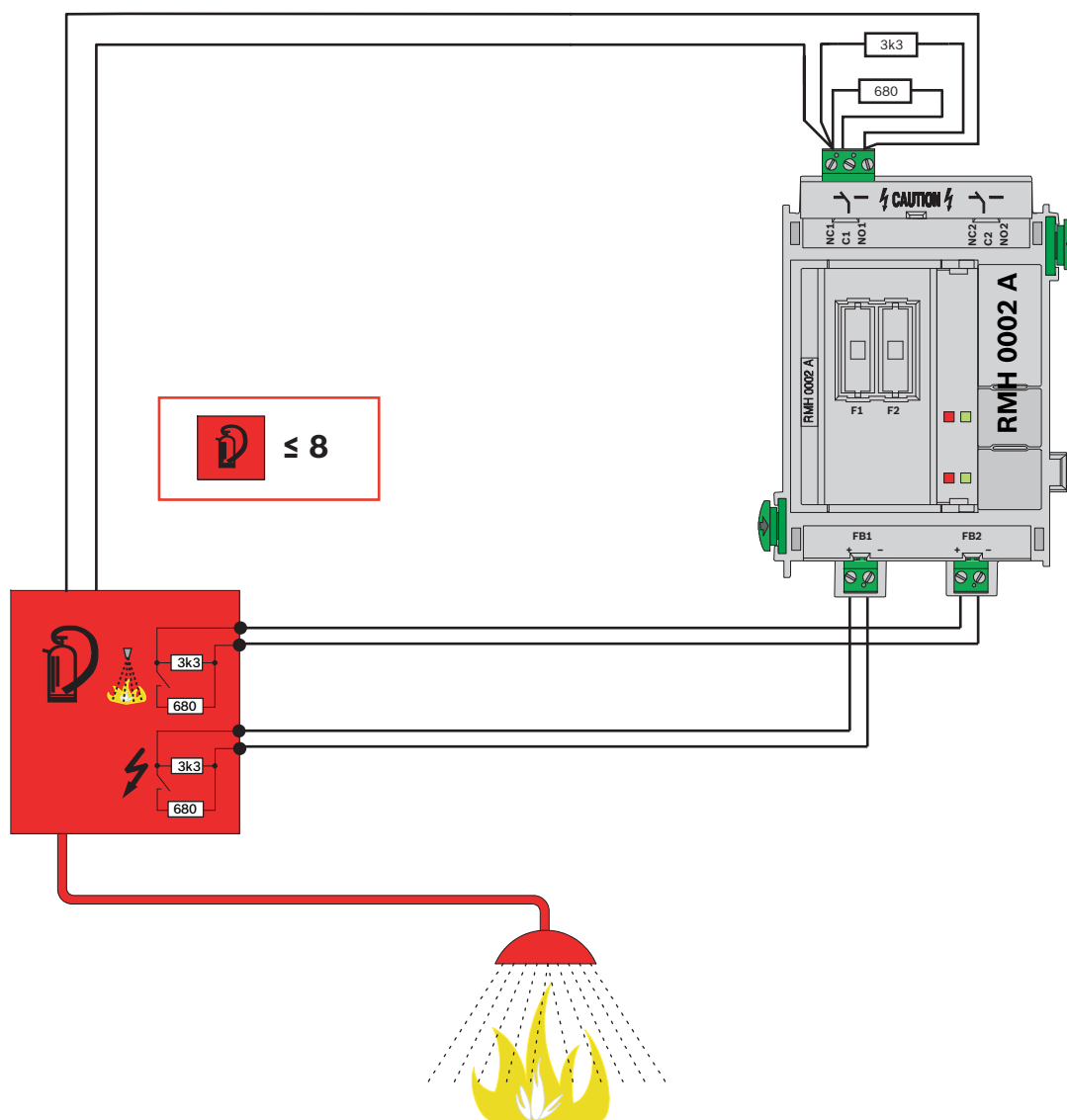


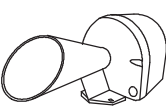
**MSS 300-SA**



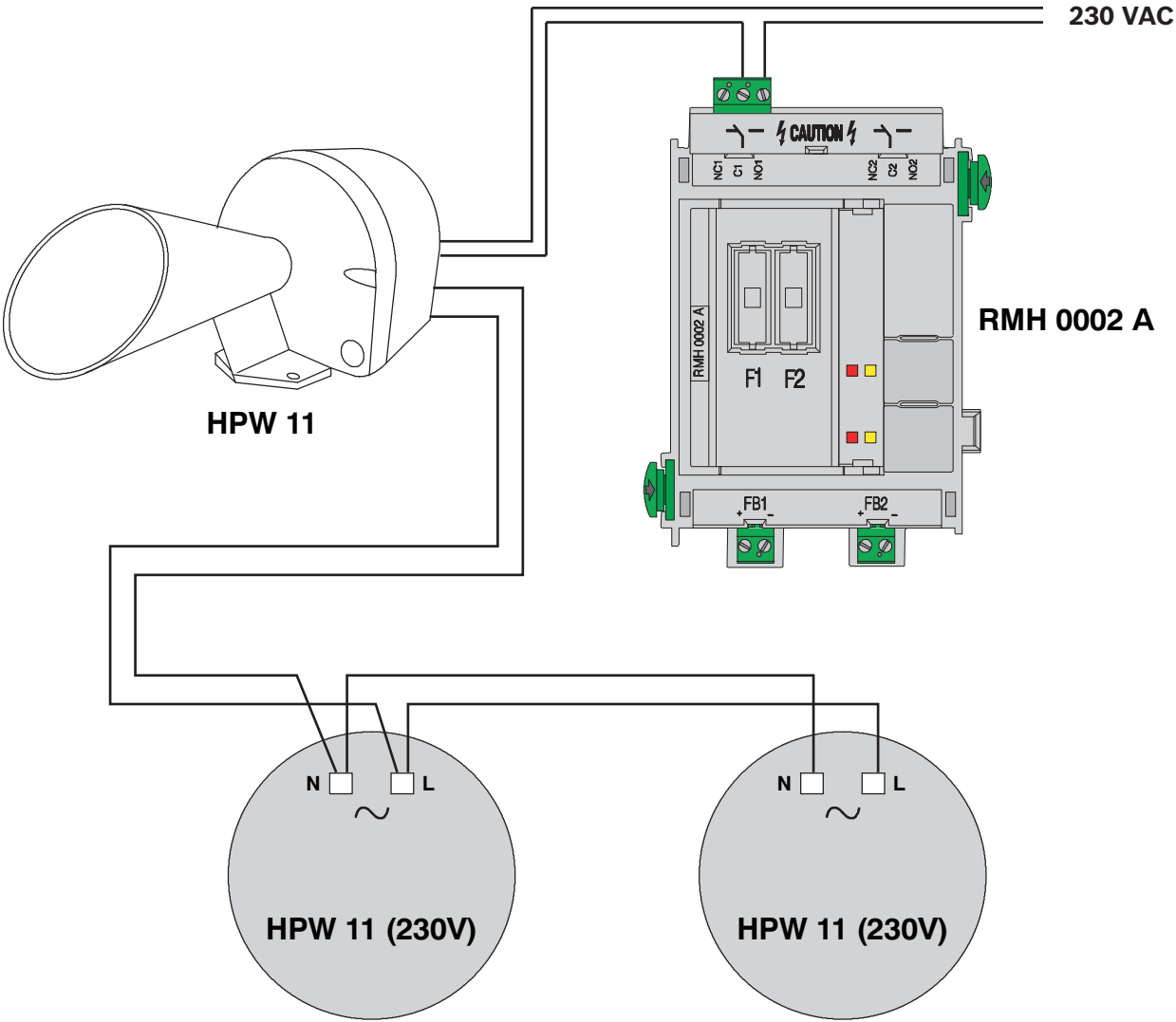
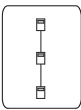
Löschanlage

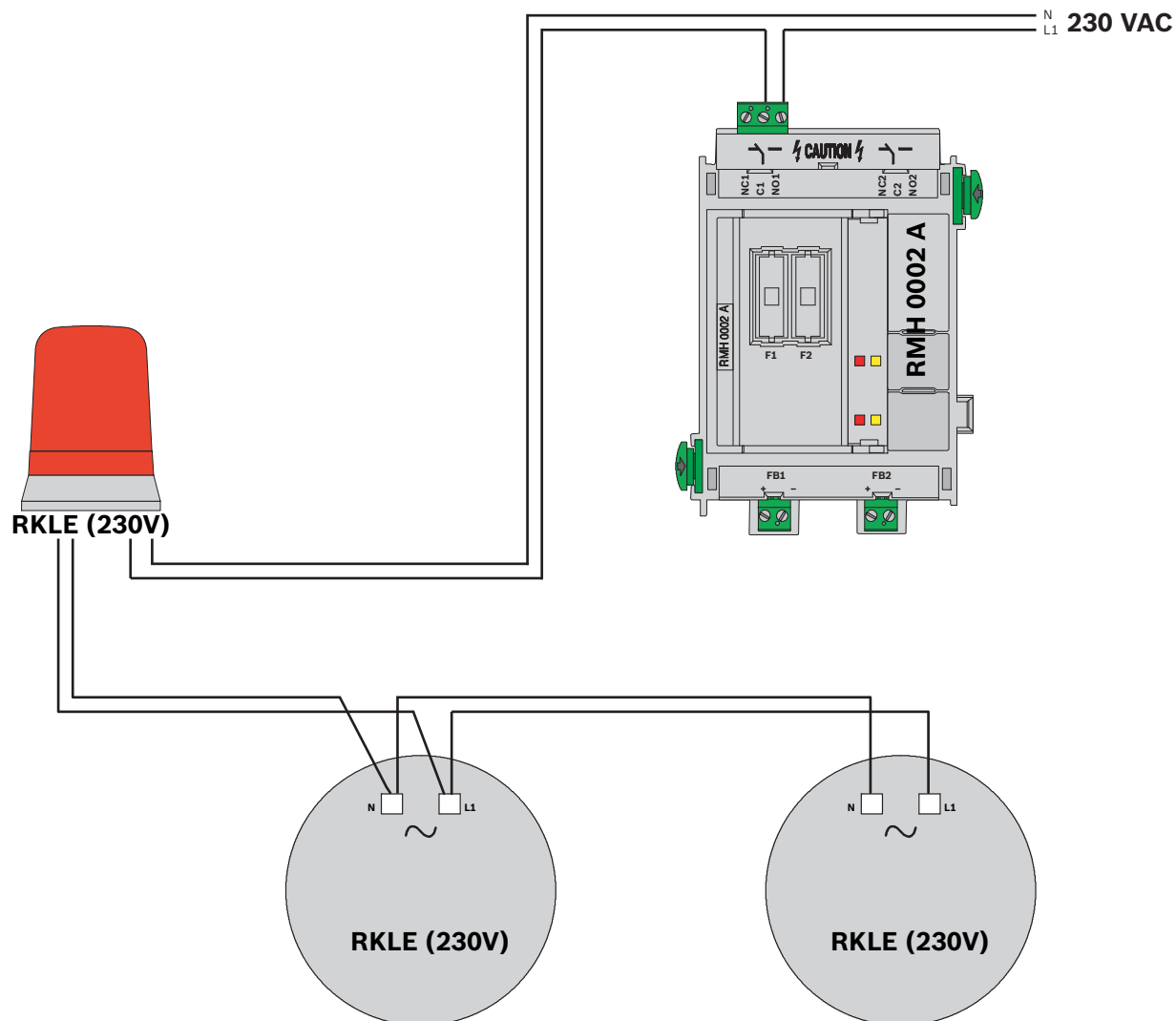
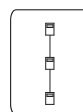
VdS 2496/2005





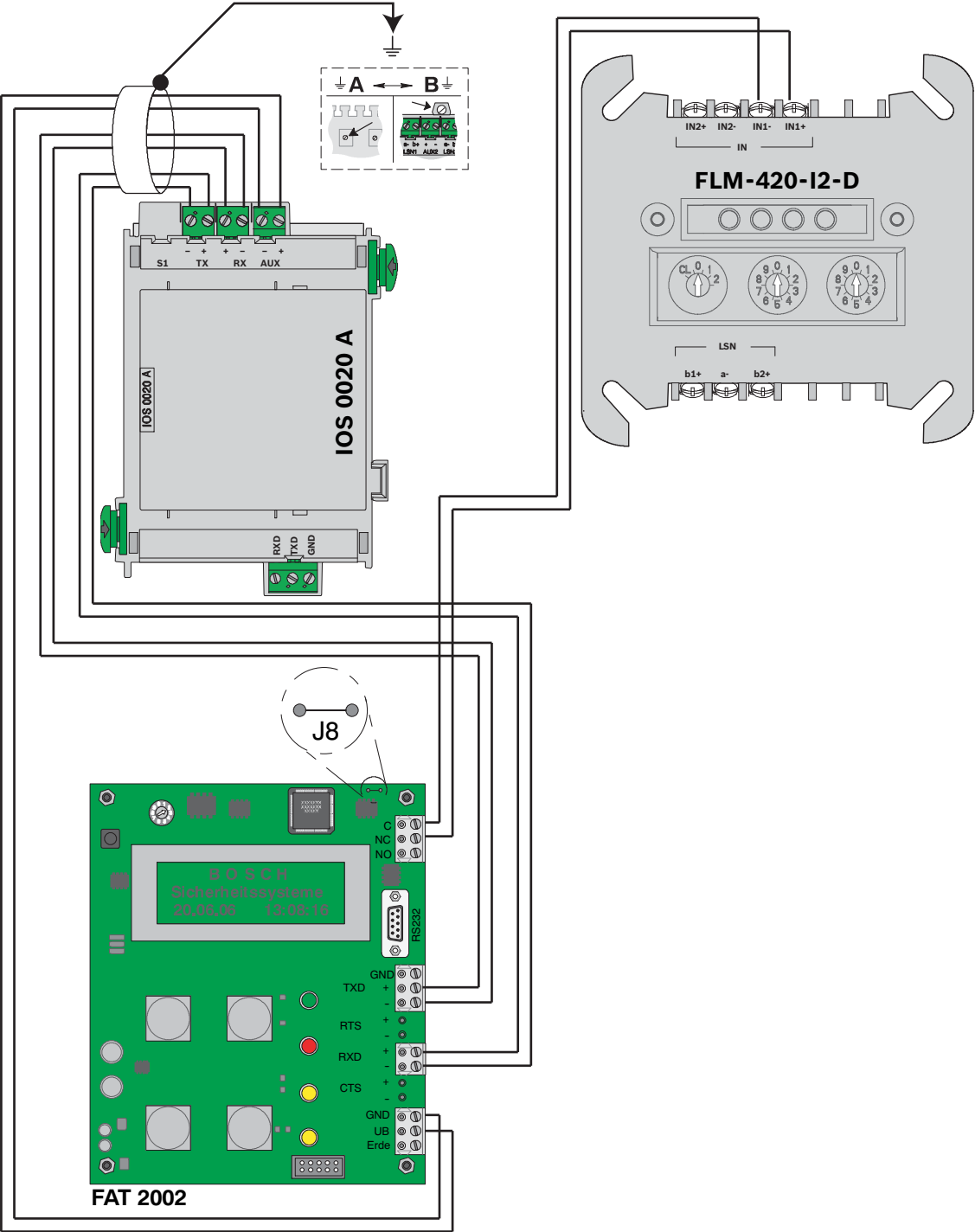
HPW 11





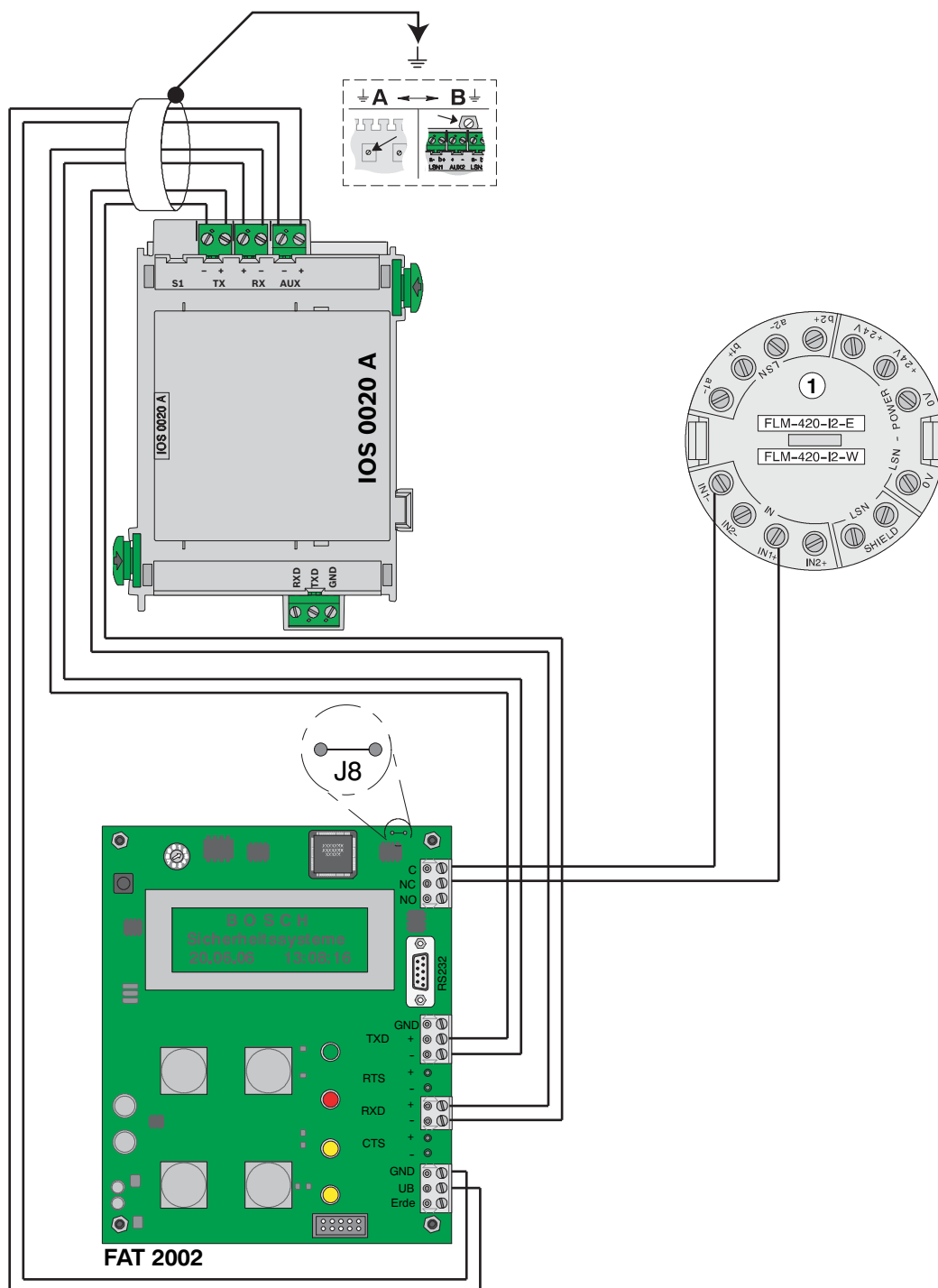


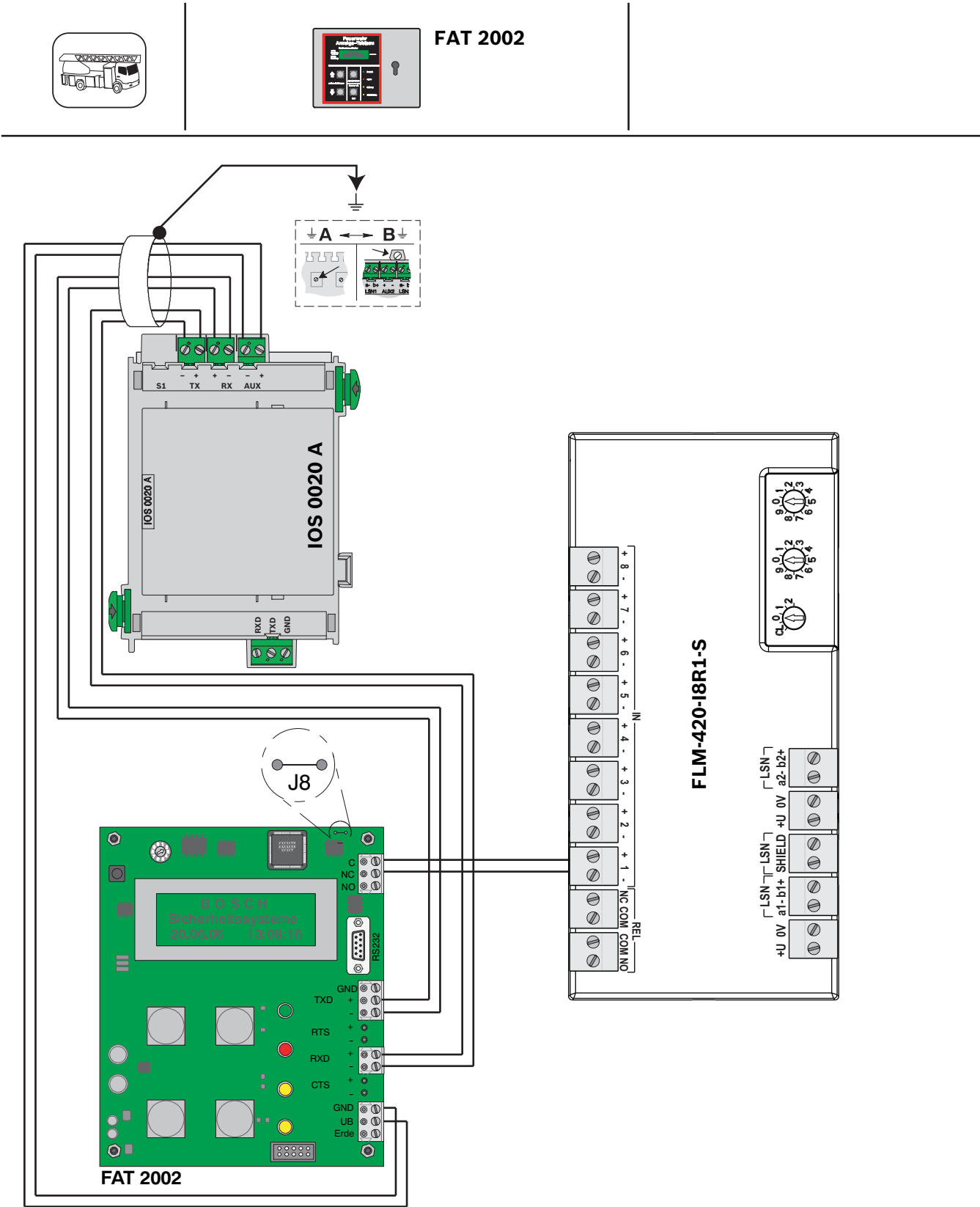
FAT 2002





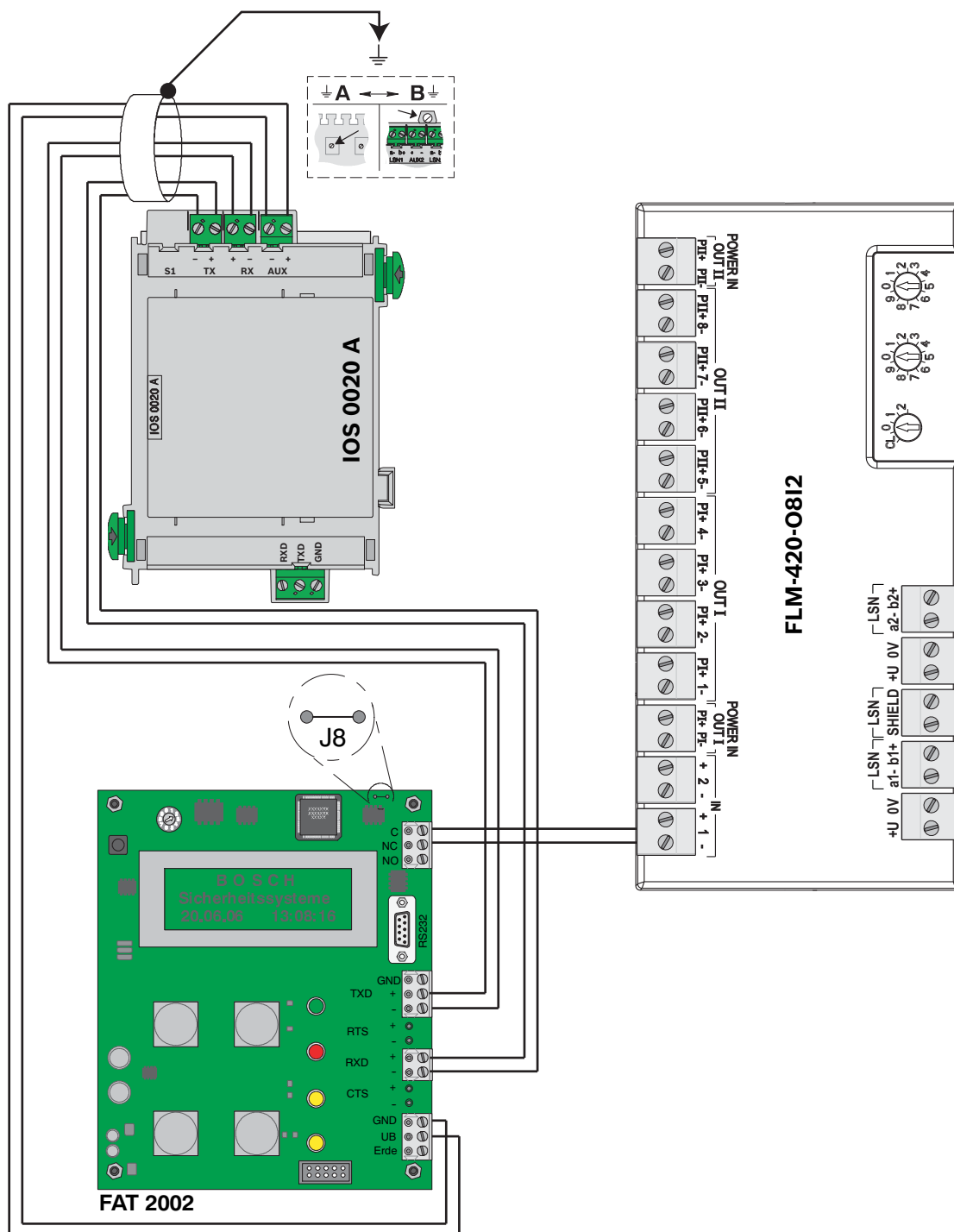
FAT 2002

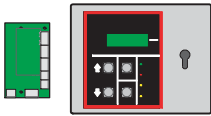




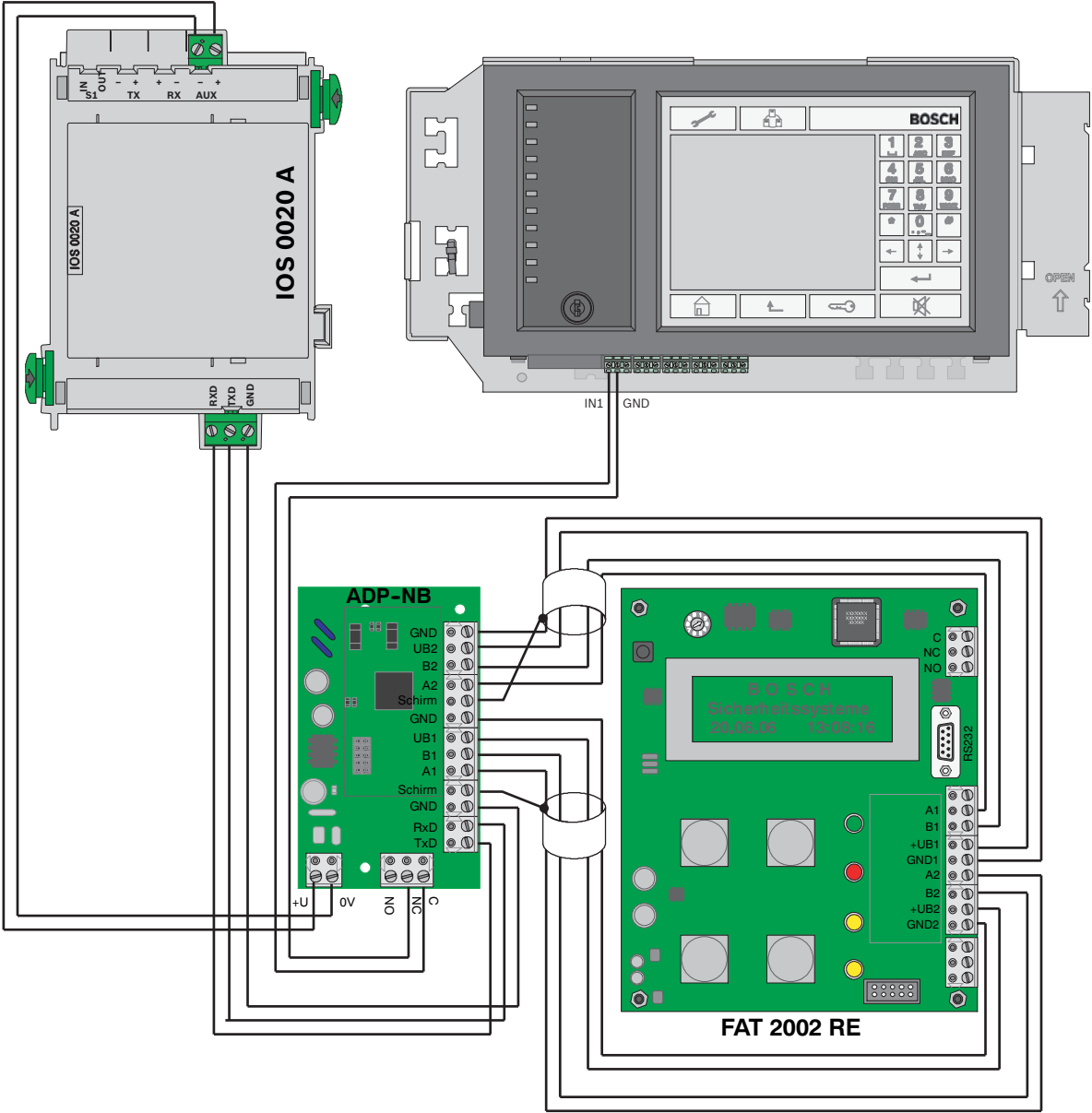


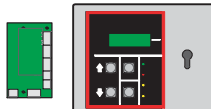
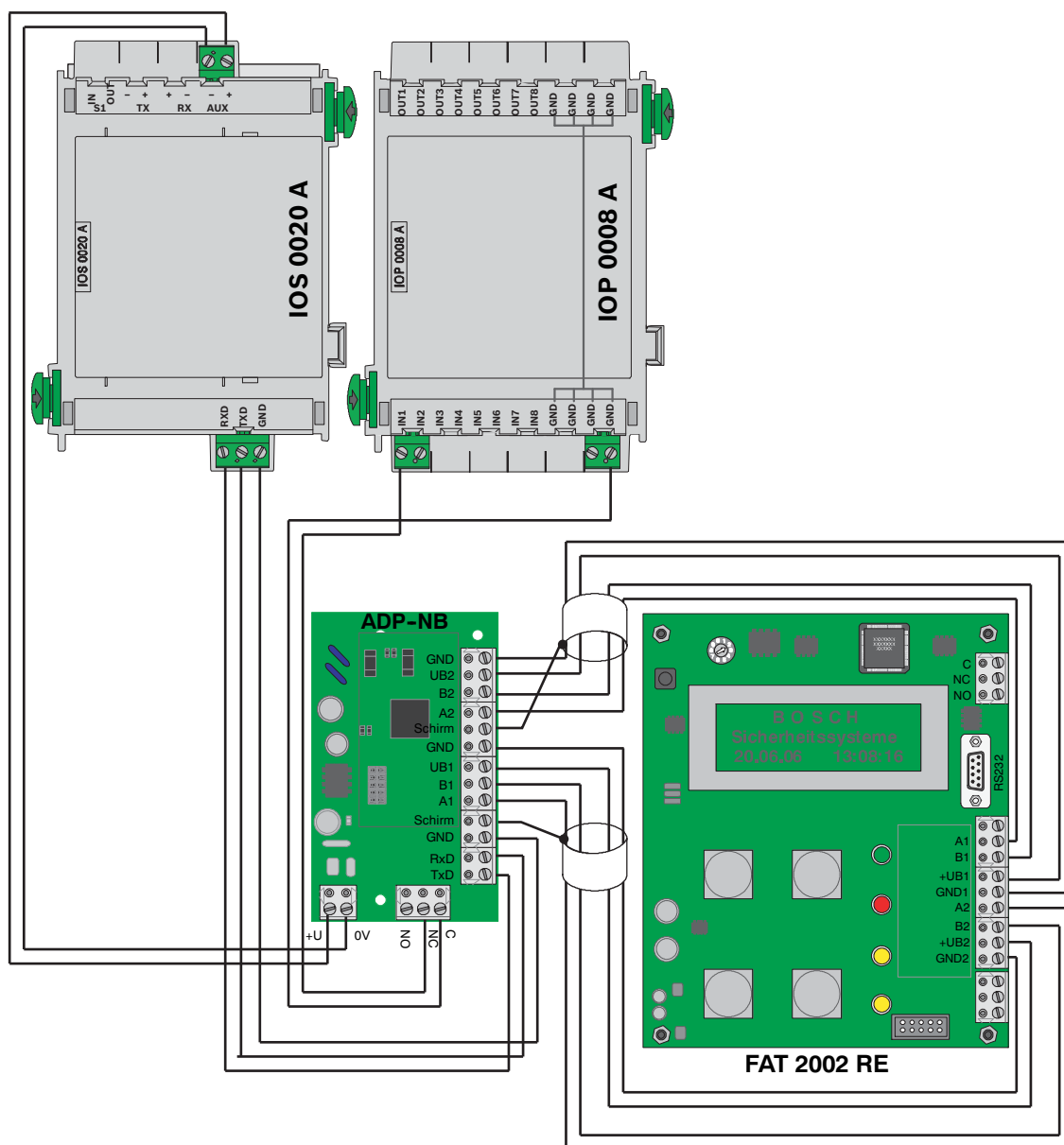
FAT 2002

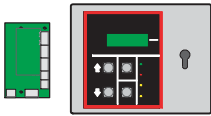




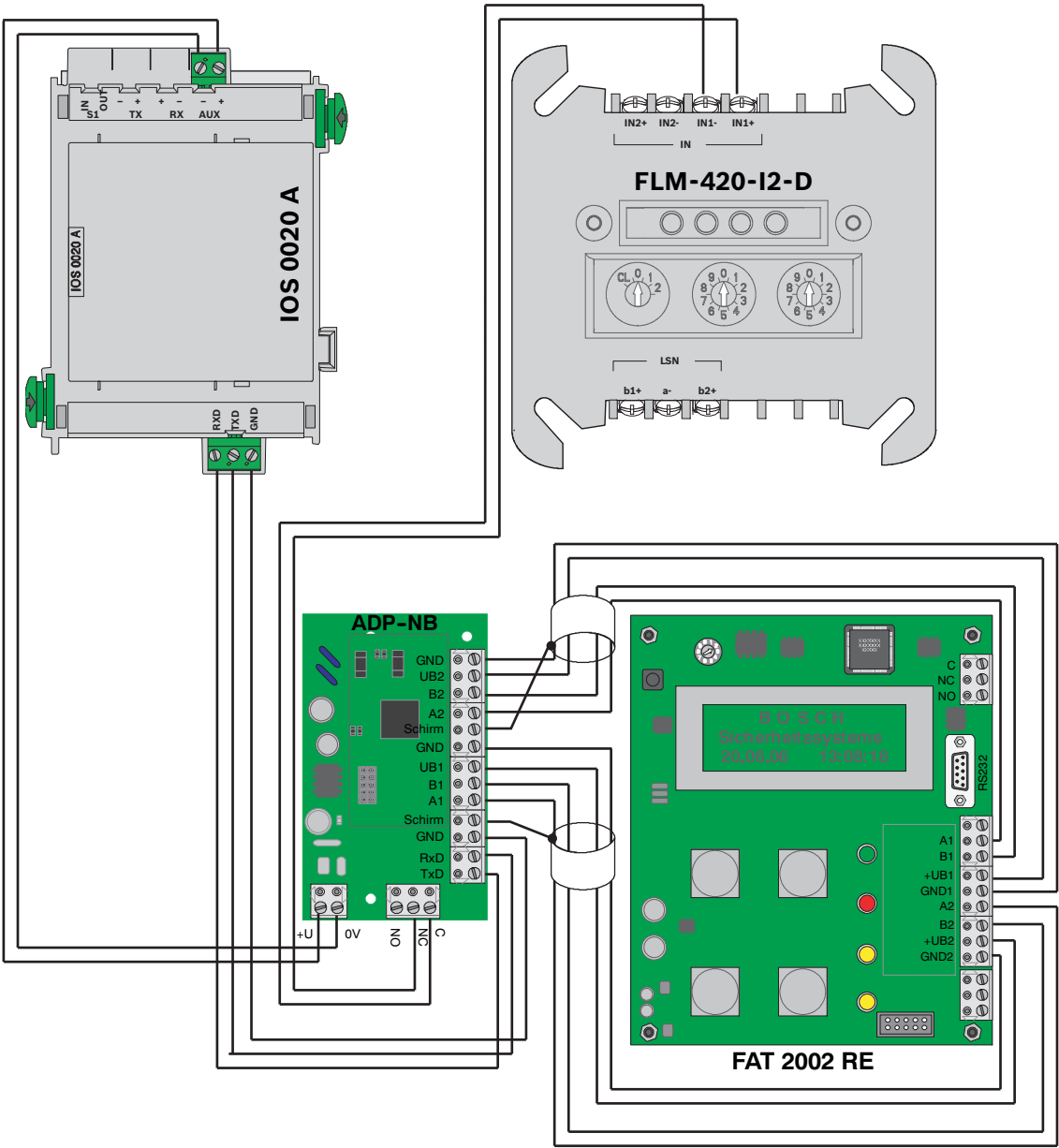
FAT 2002 RE
ADP-NB

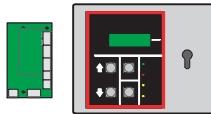



**FAT 2002 RE
ADP-NB**


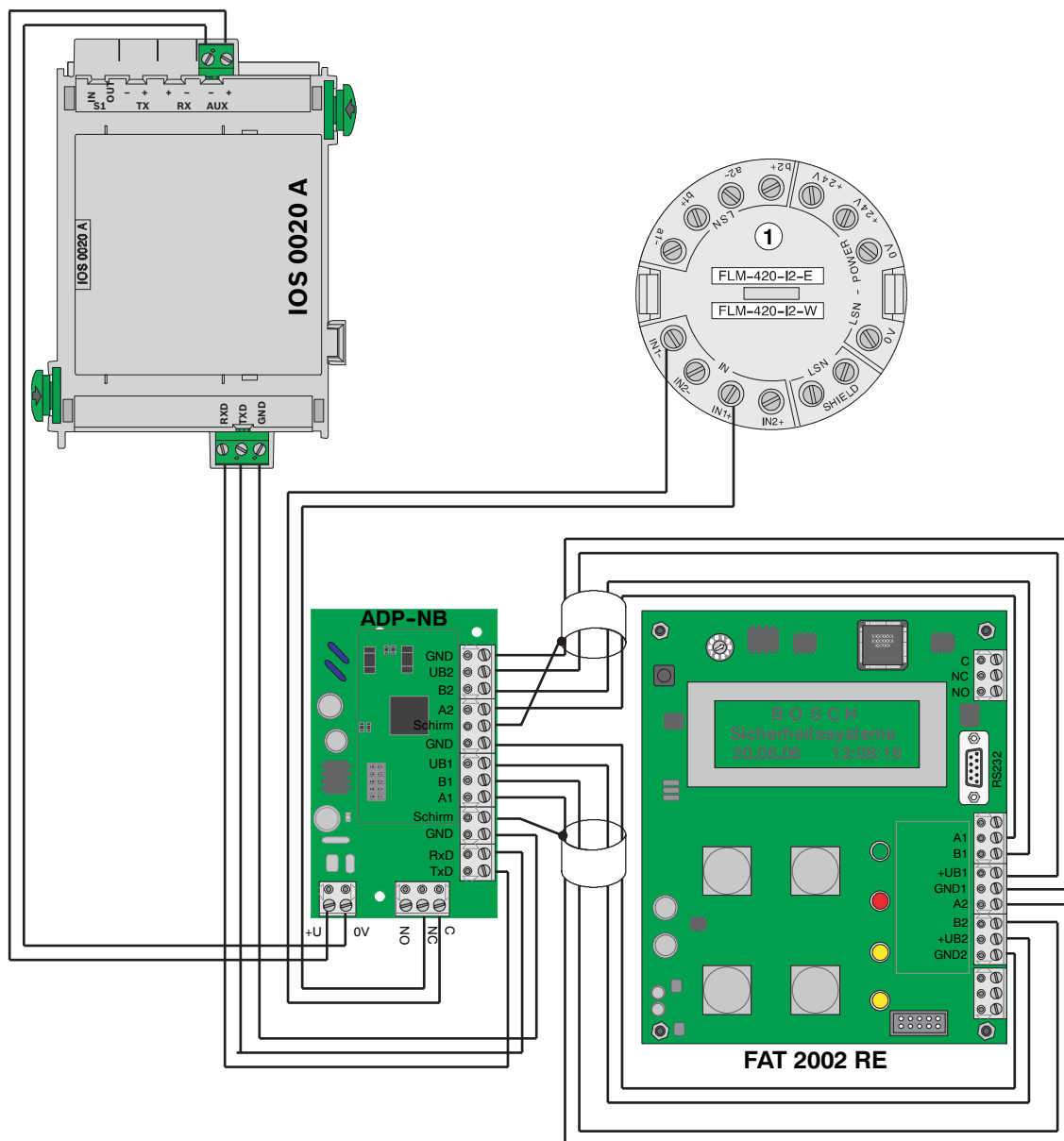


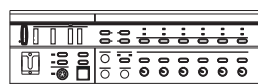
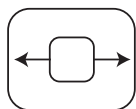
FAT 2002 RE
ADP-NB



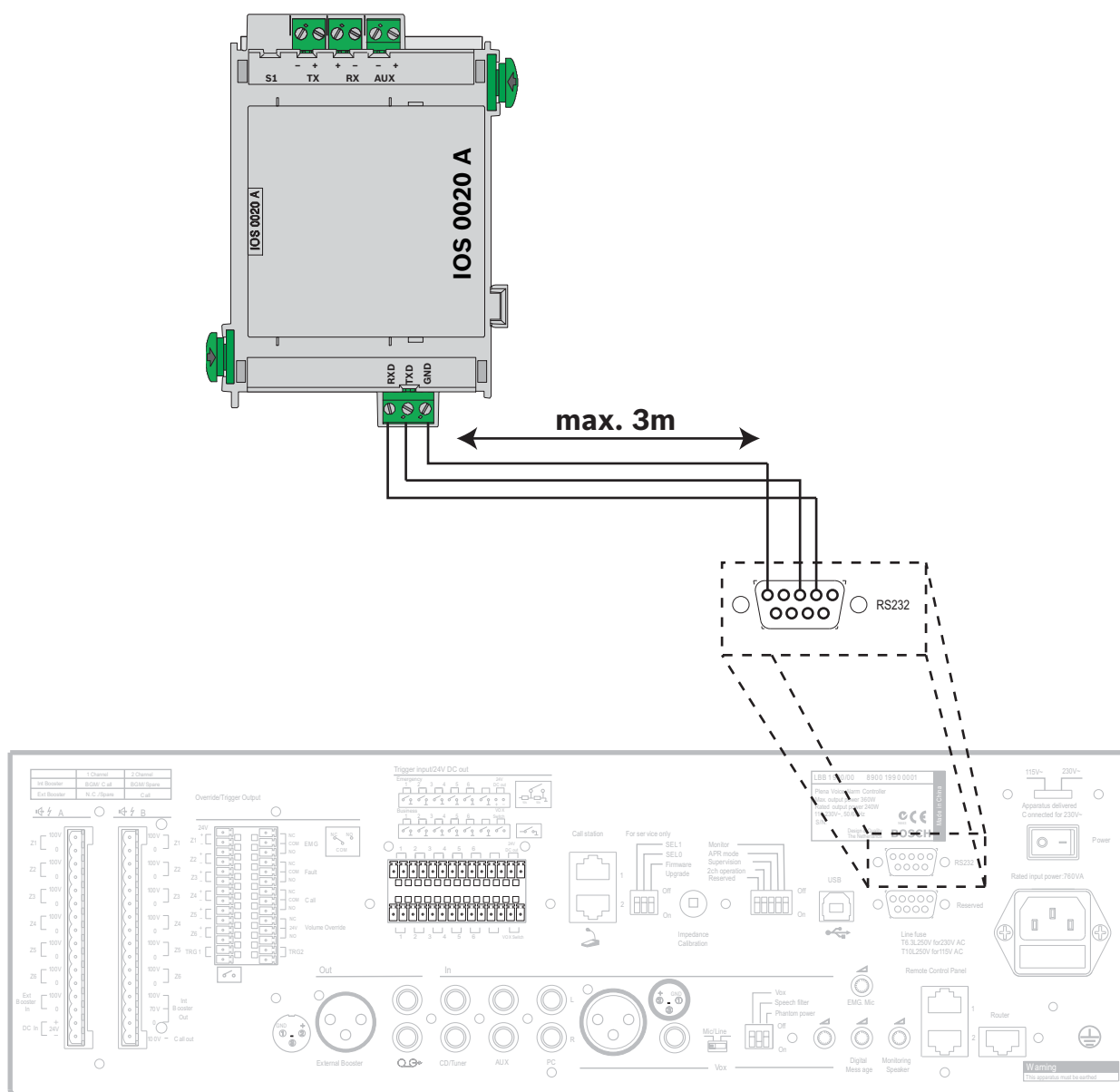
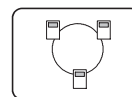


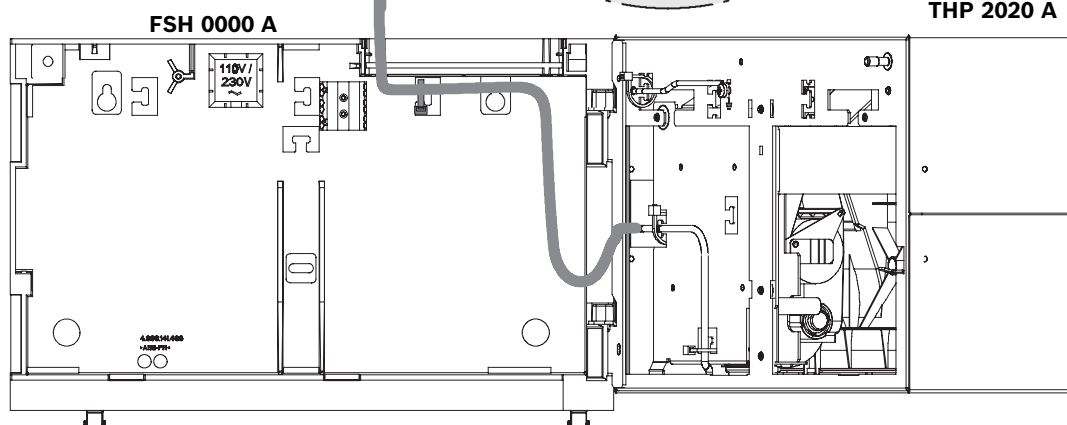
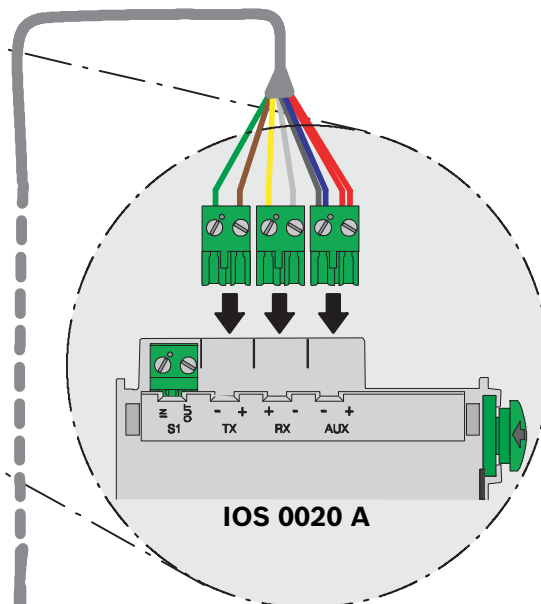
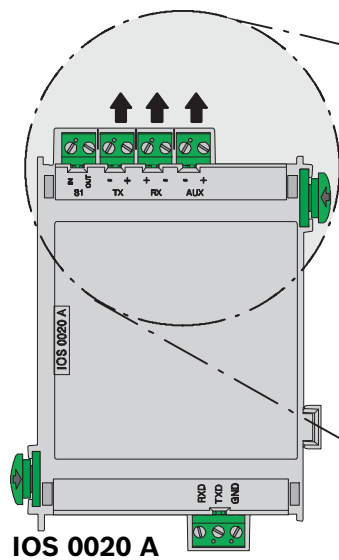
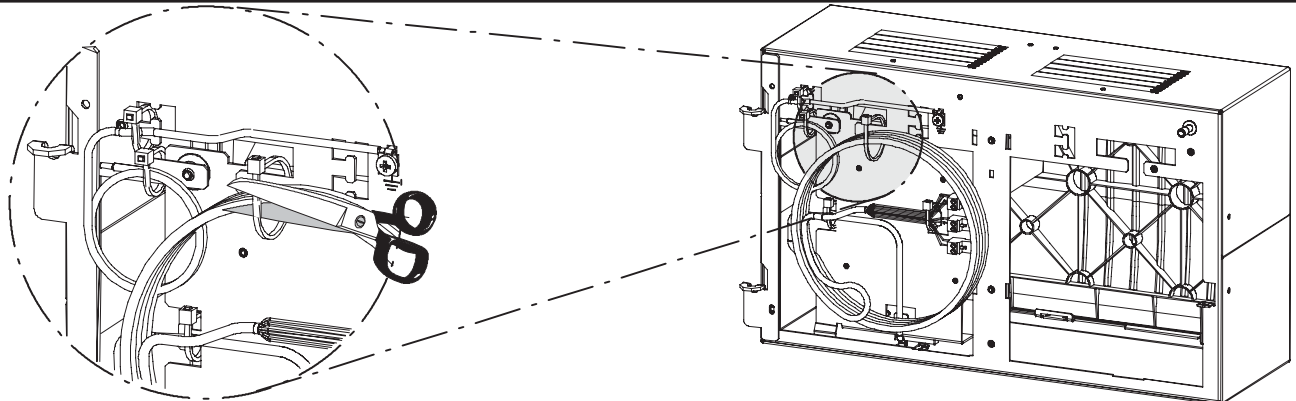
**FAT 2002 RE
ADP-NB**

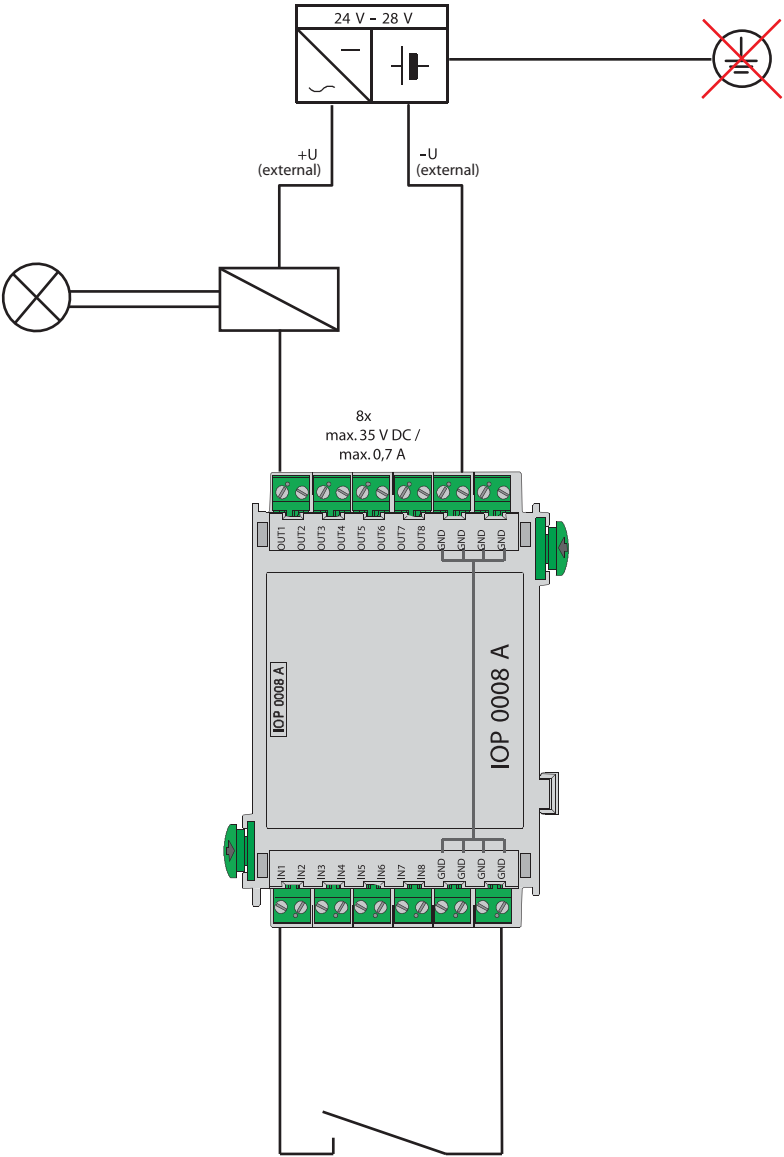
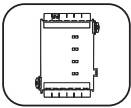




Plena



**THP 2020 A**



Koppler

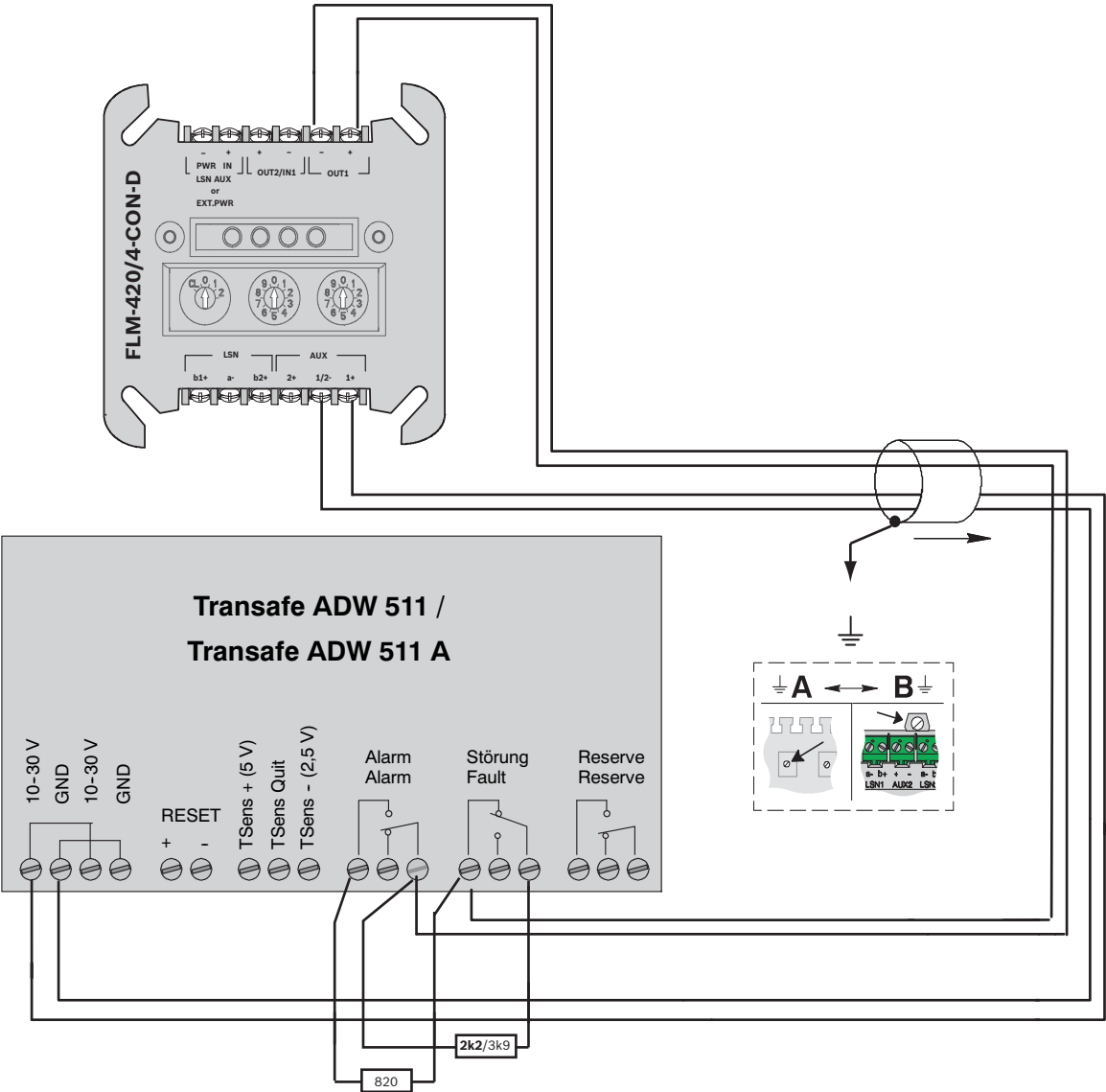
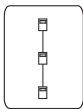
EN	Interface modules	HU	Interfész modulok
EL	Δομοστοιχεία διασύνδεσης	DA	Interface-moduler
IT	Moduli interfaccia	FR	Modules d'interface
NL	Interfacemodules	HR	Moduli sučelja
PL	Moduły interfejsu	RO	Module de interfață
PT	Módulos interface	SV	Interfacemoduler
RU	Интерфейсные модули	SL	Vmesniški moduli
ES	Módulos de interfaz	FI	Liitântämoduulit
CS	Vazební členy	NO	Grensesnittmoduler
TR	Arayüz modülleri		



FLM-420/4-CON-D/S	224
FLM-420-I2-D	247
FLM-420-I2-E/W	248
FLM-420-O1I1-E	250
FLM-420-NAC-D/S	251
FLM-420-RHV	259
FLM-420-RLE	260

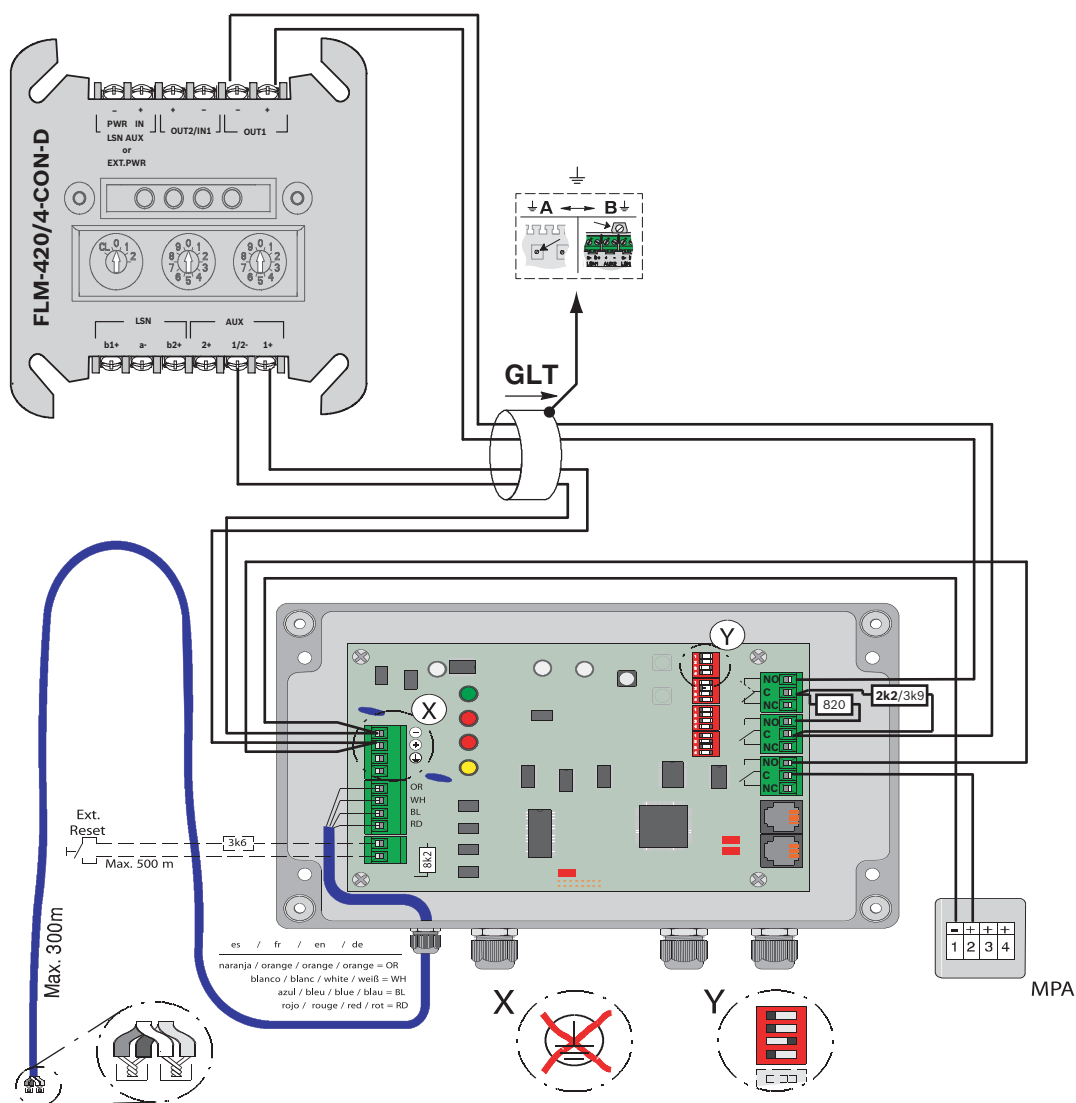
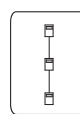


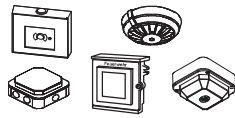
Transsafe ADW 511
Transsafe ADW 511A



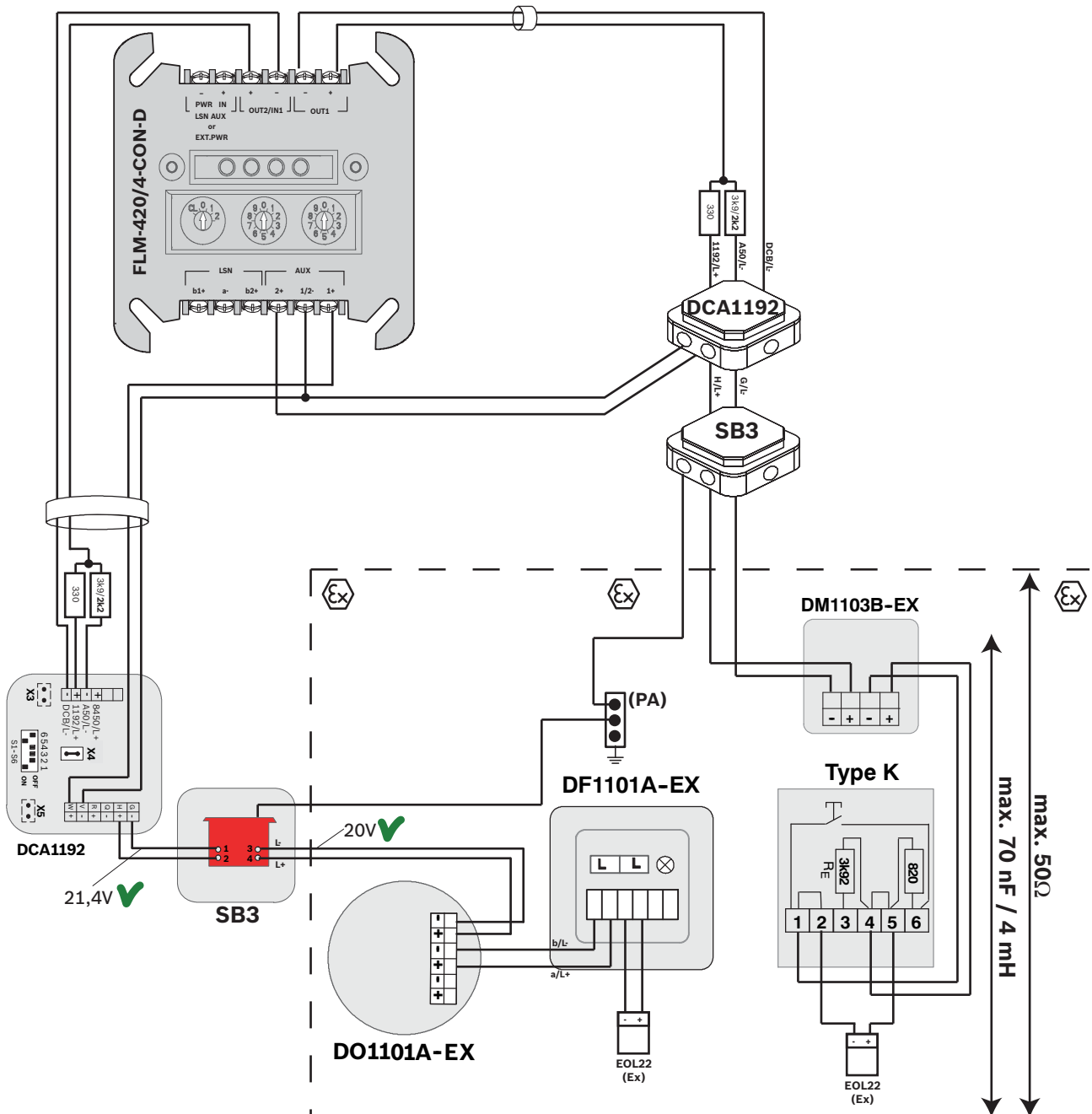
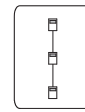


FCS-LWM-1



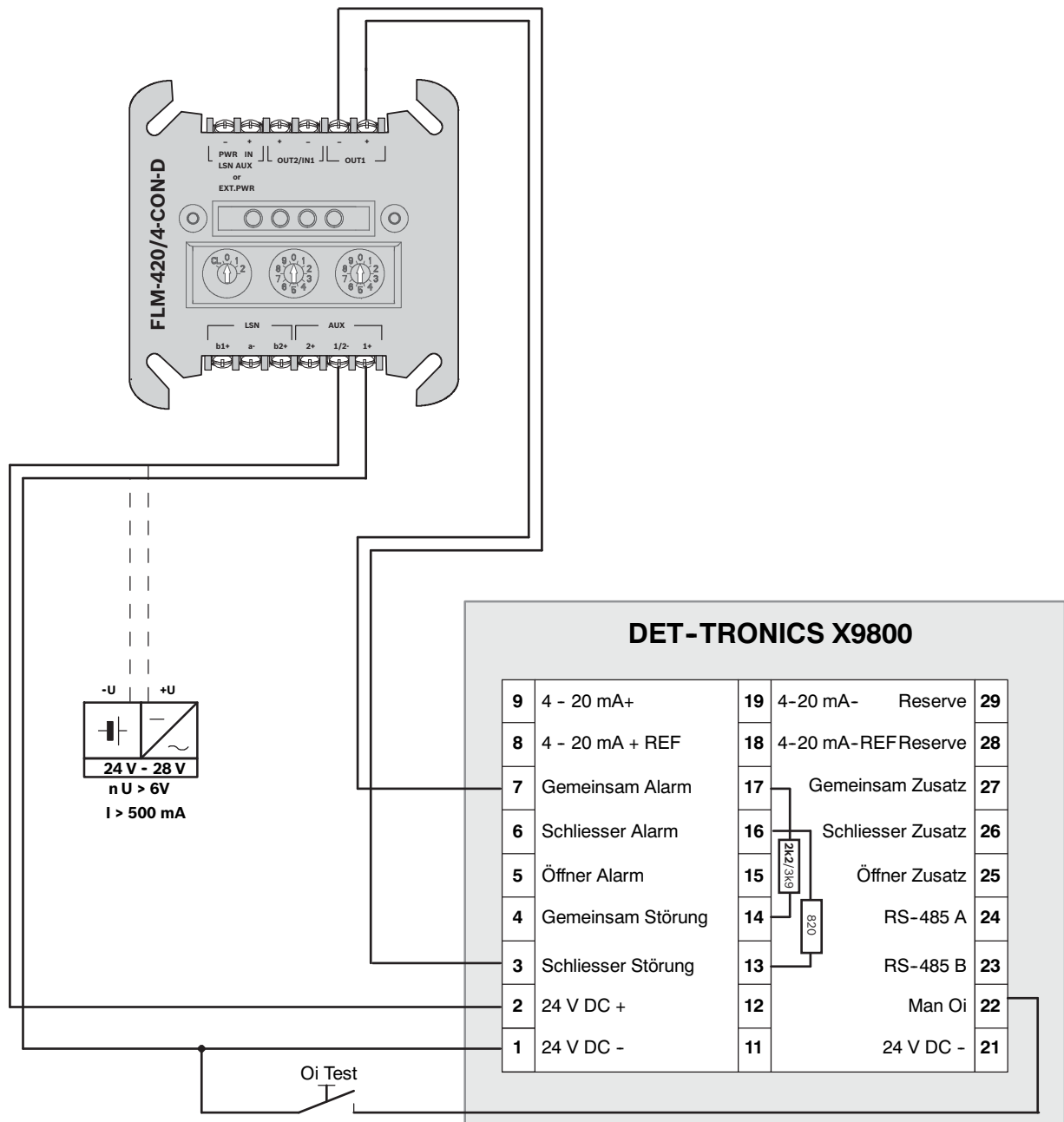
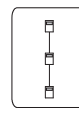


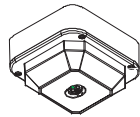
**DCA1192, SB3
DM 1103B-X
DO1101A-EX
DF1101-EX, Typ**



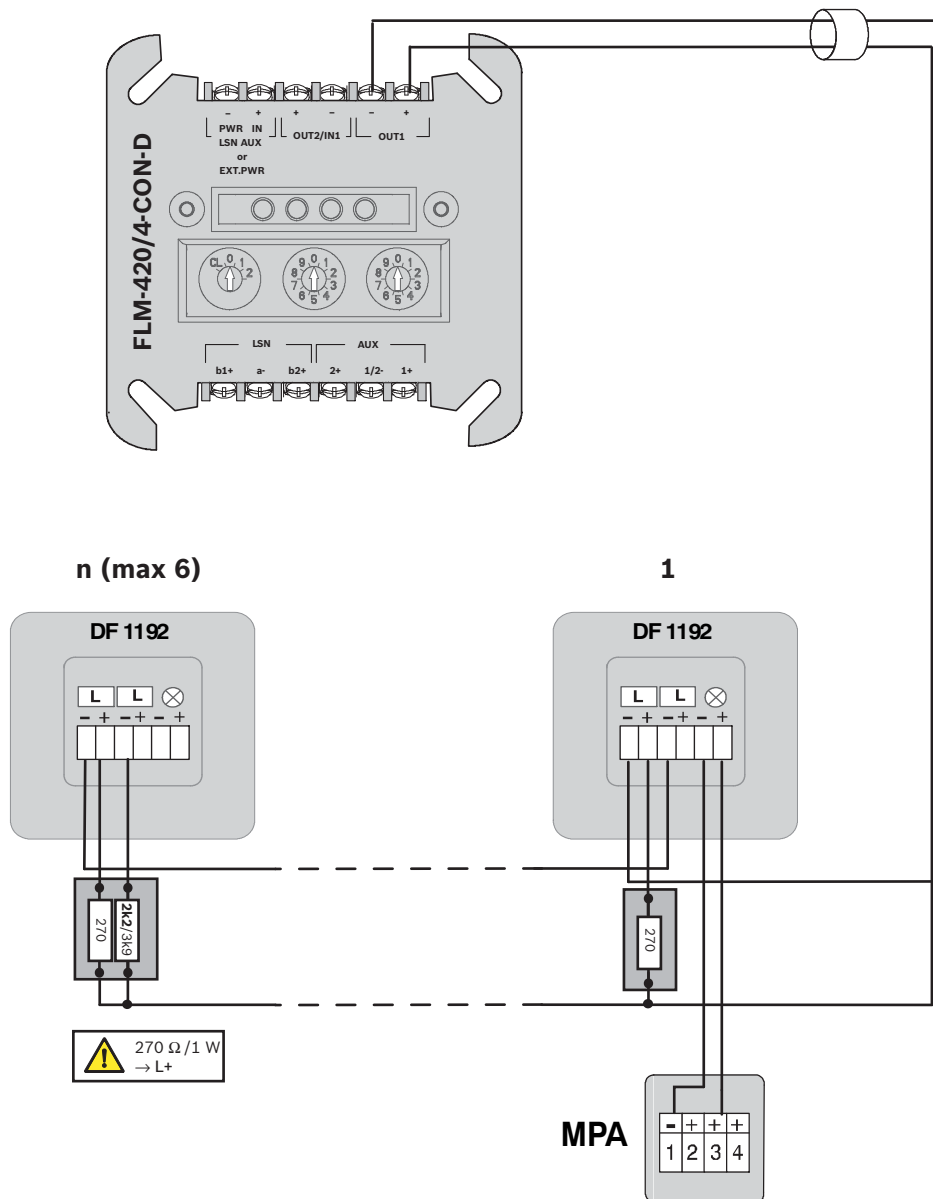
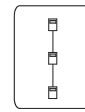


DET-TRONICS X9800



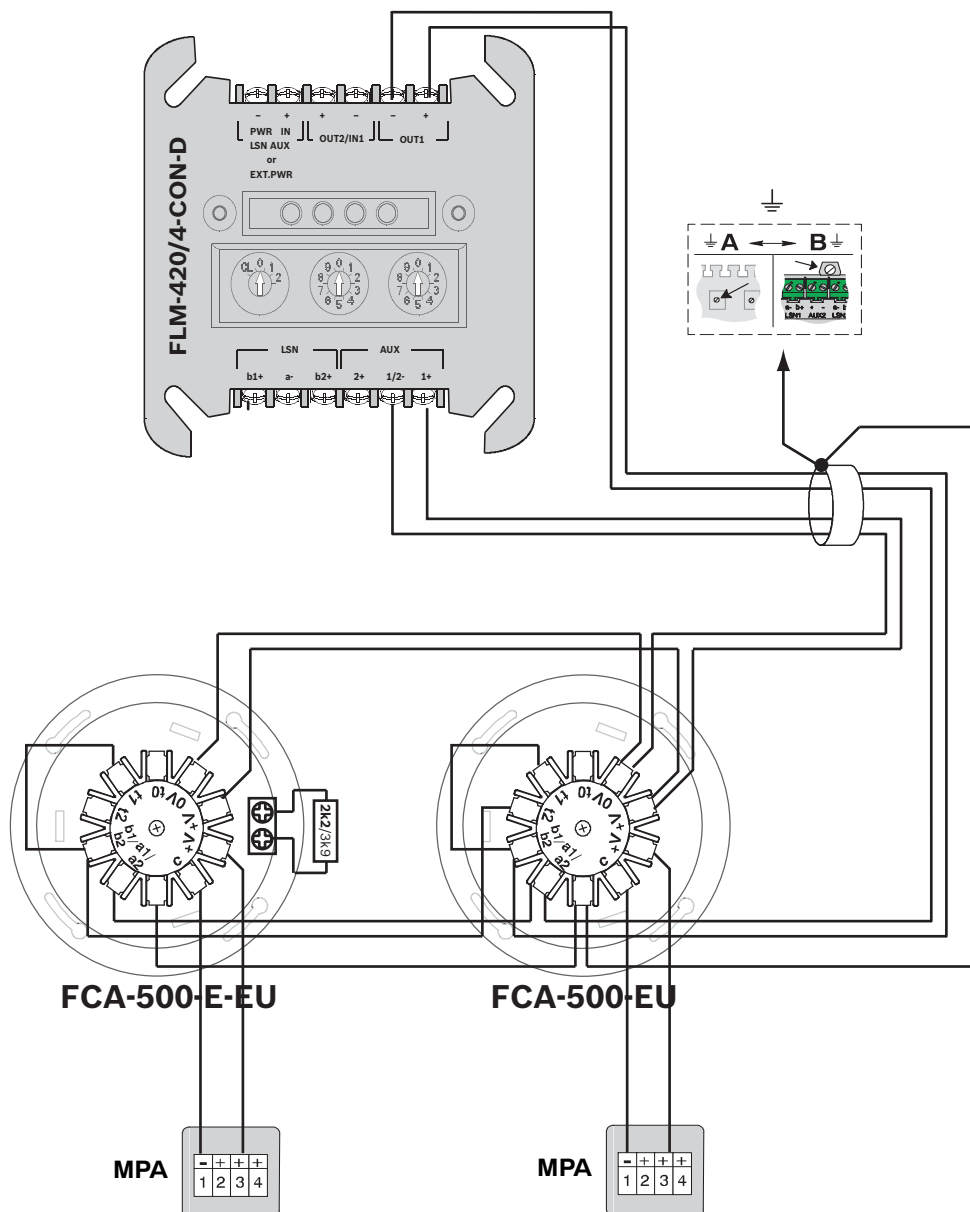
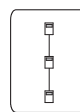


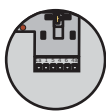
DF 1192



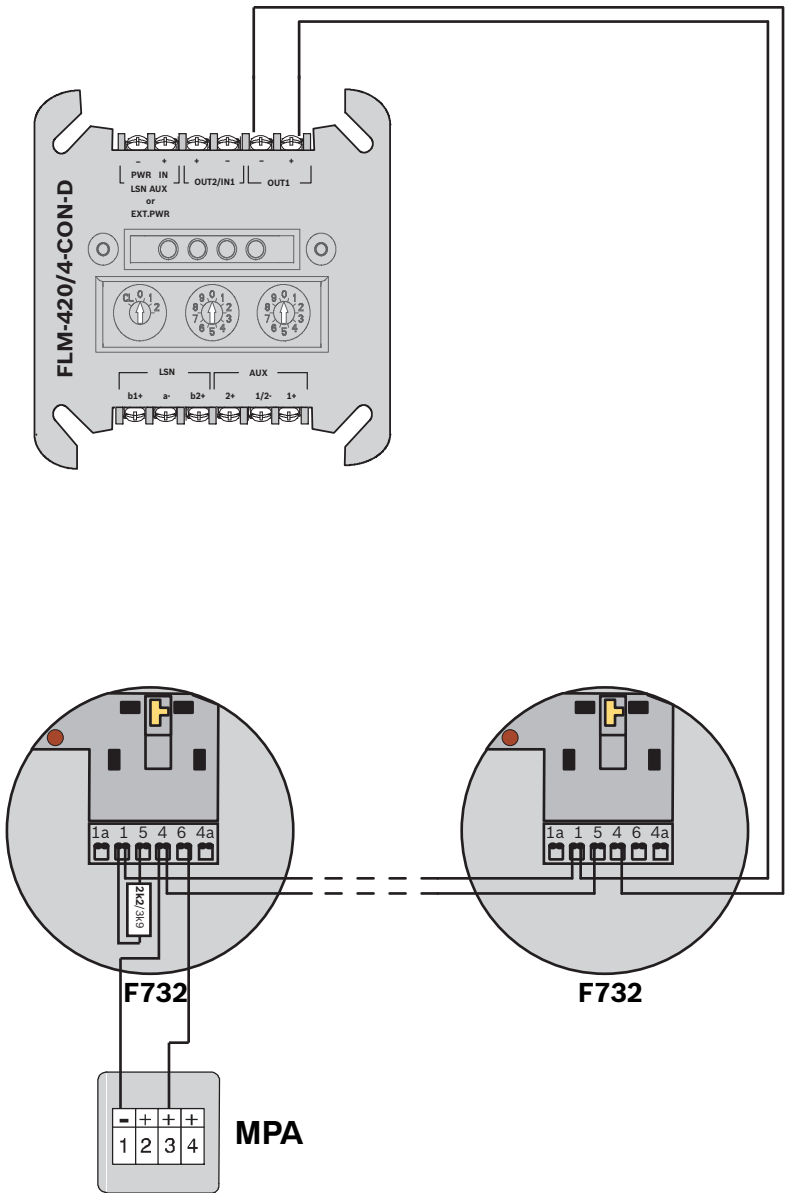
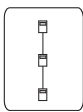


FCP-520



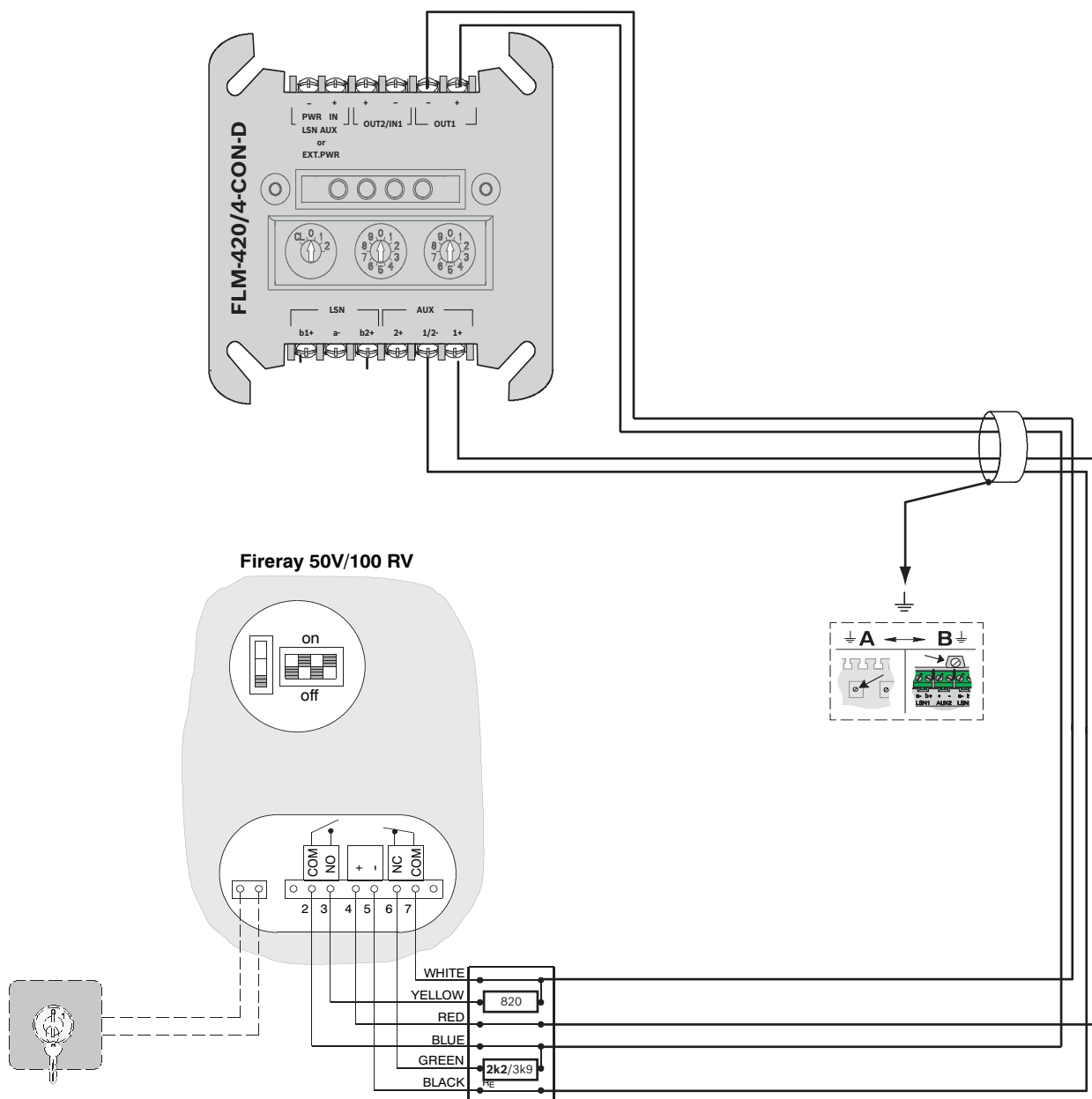
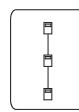


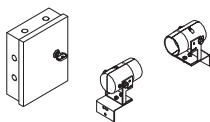
F732



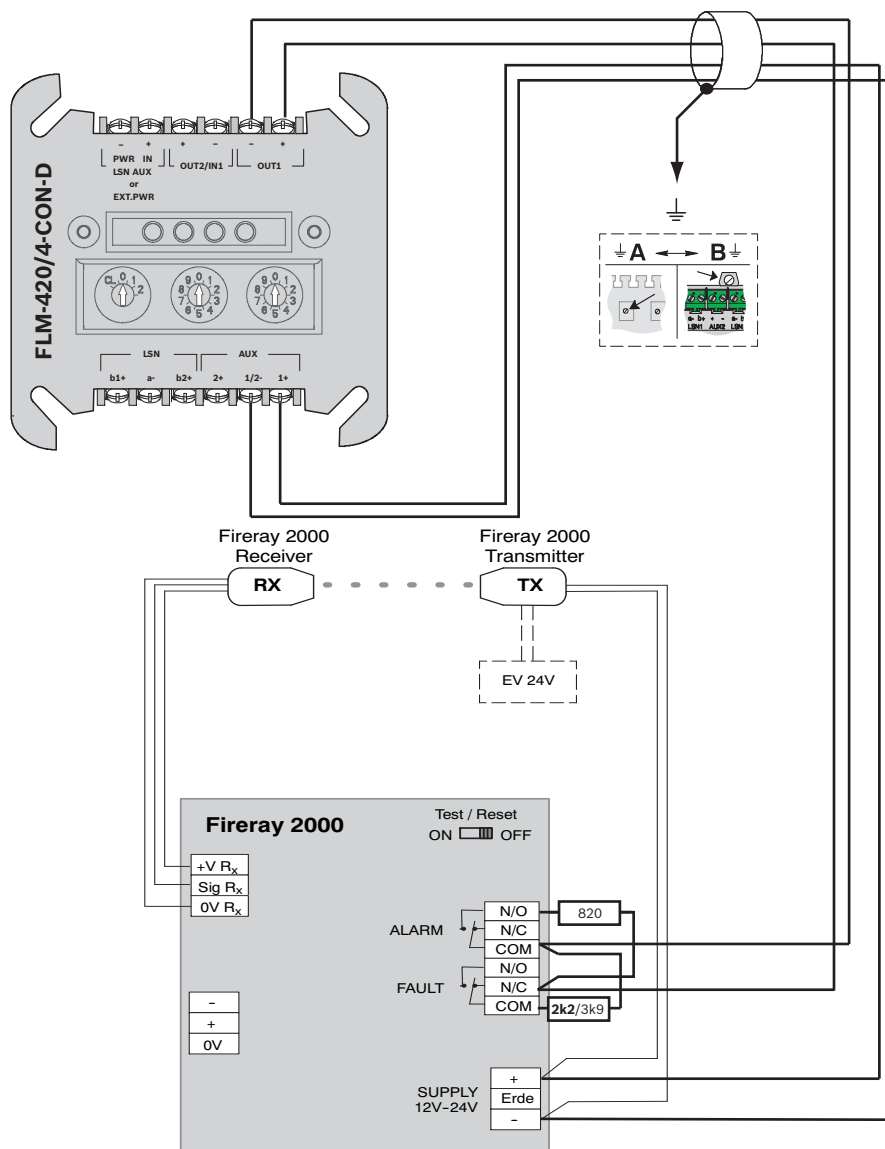
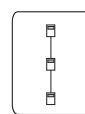


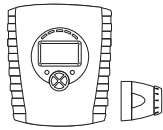
FireRay 50RV
FireRay 100RV



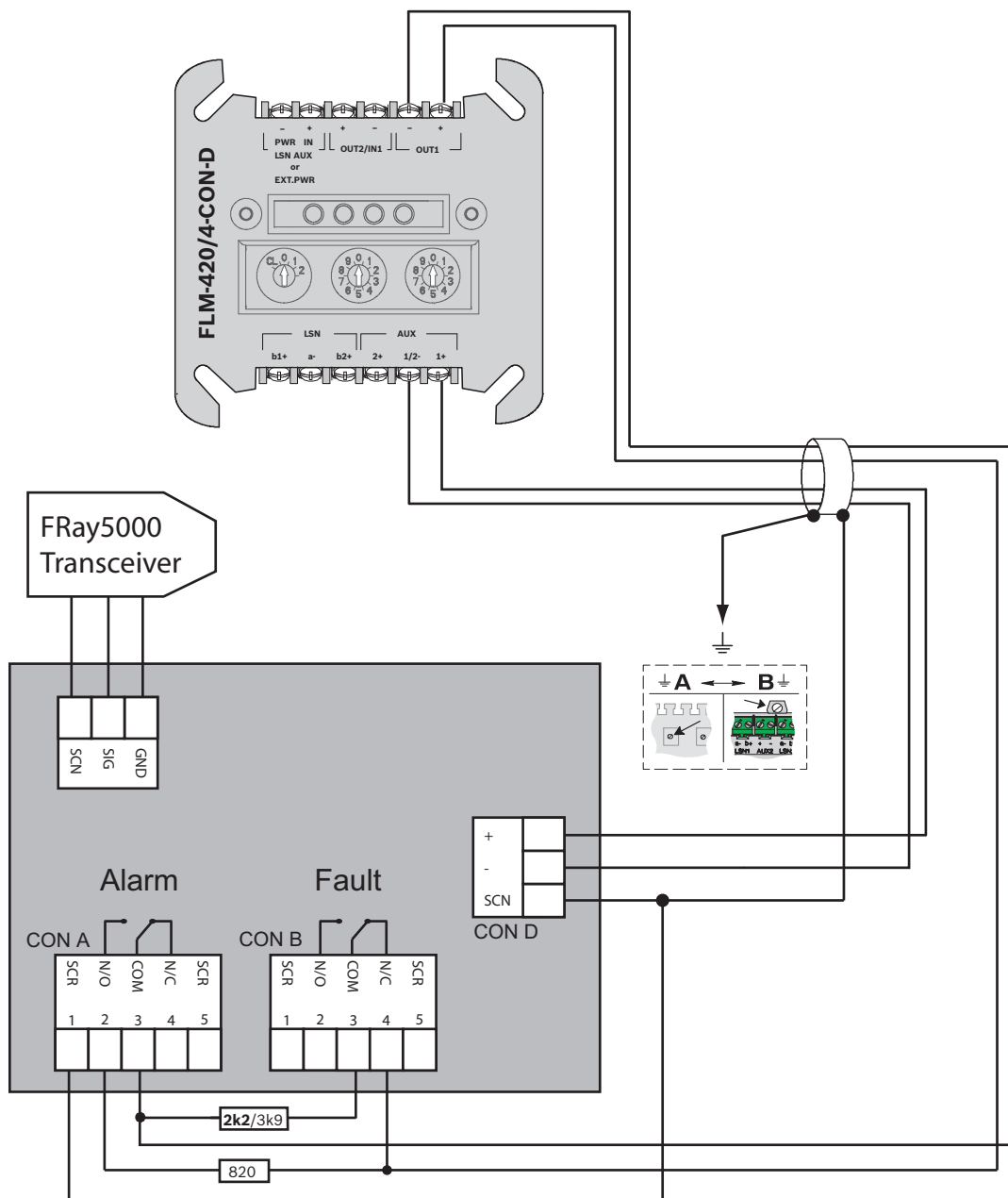
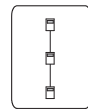


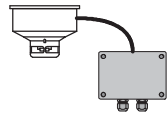
Fireray 2000



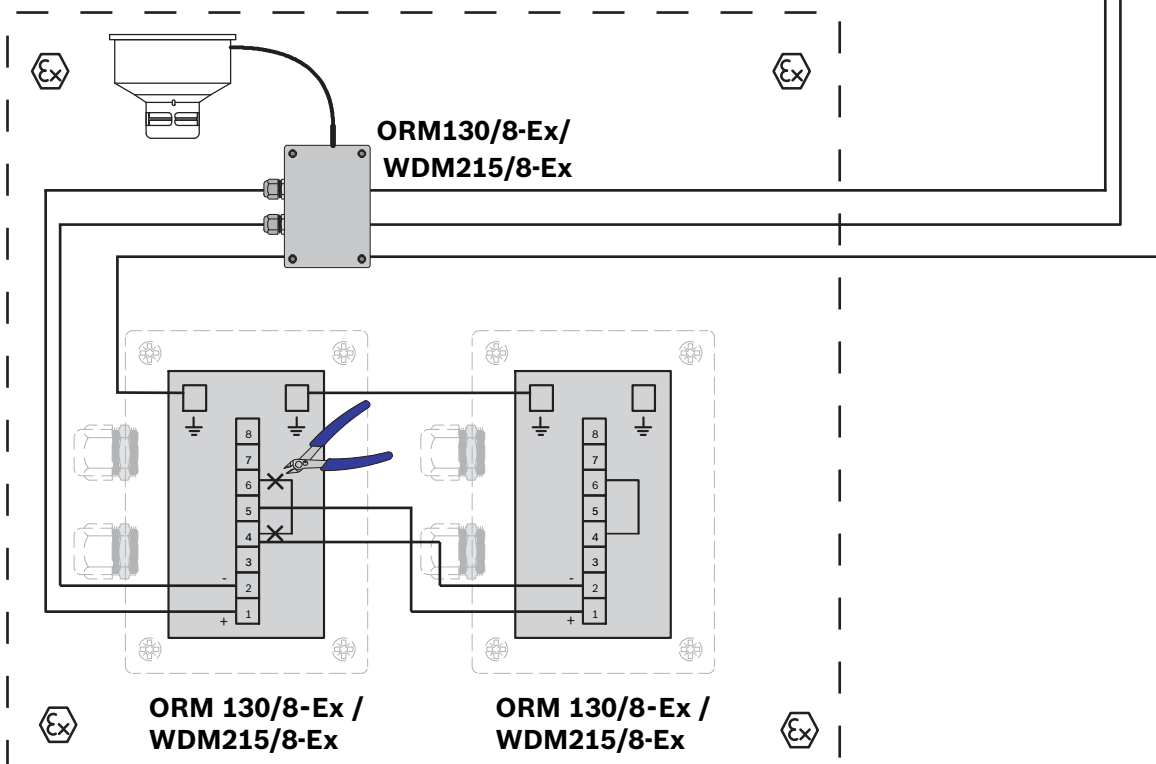
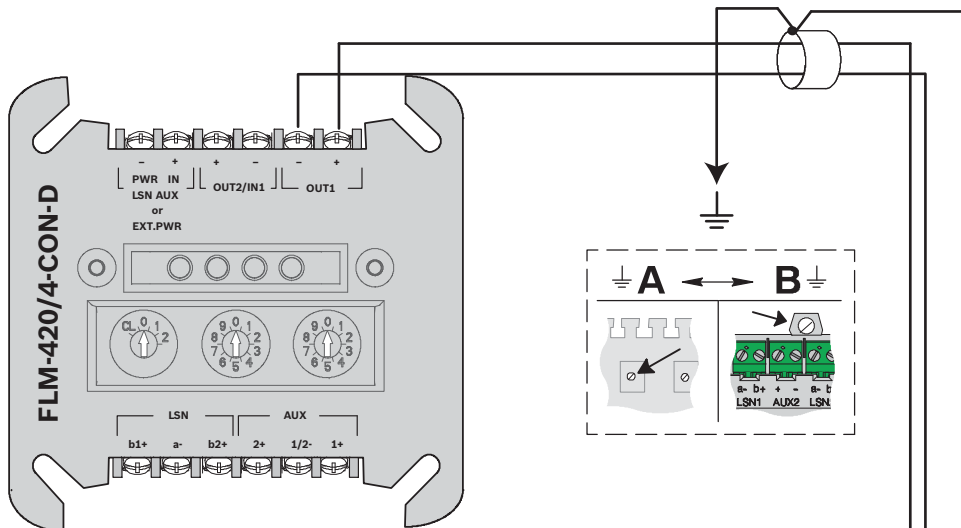
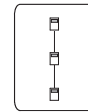


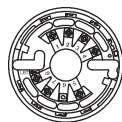
FRay5000-series



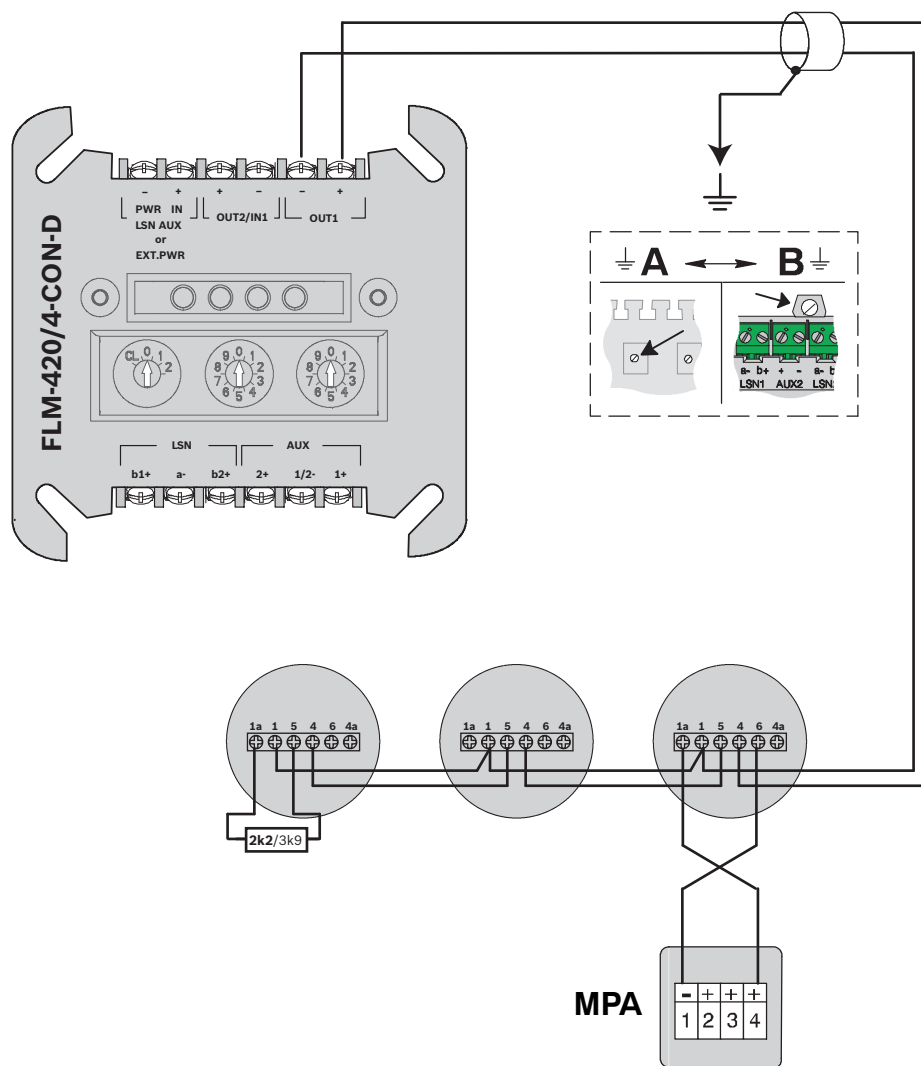
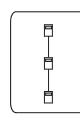


**ORM 130/8-Ex
WDM 215/8-Ex**



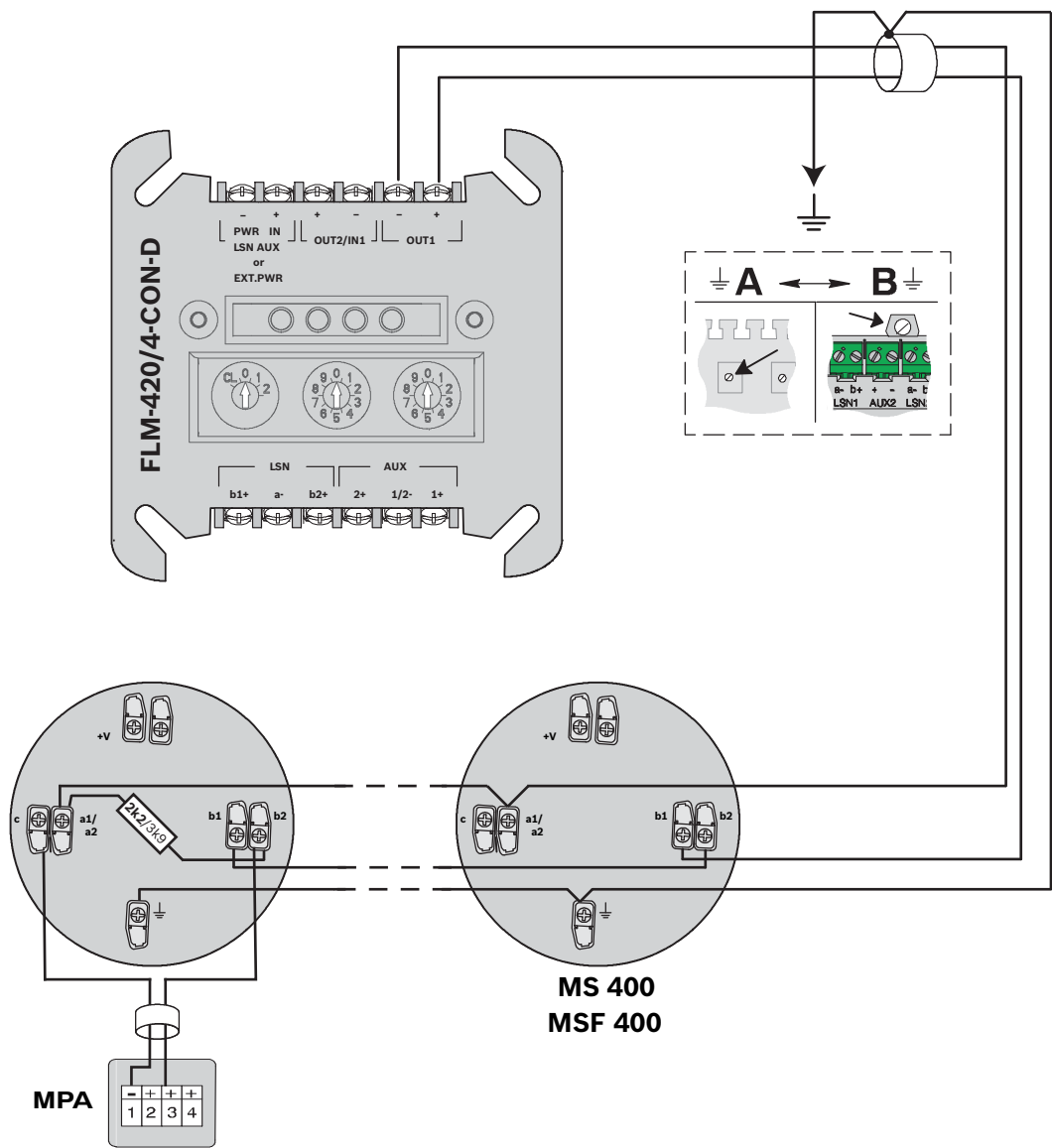
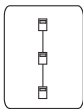


MS94/94D



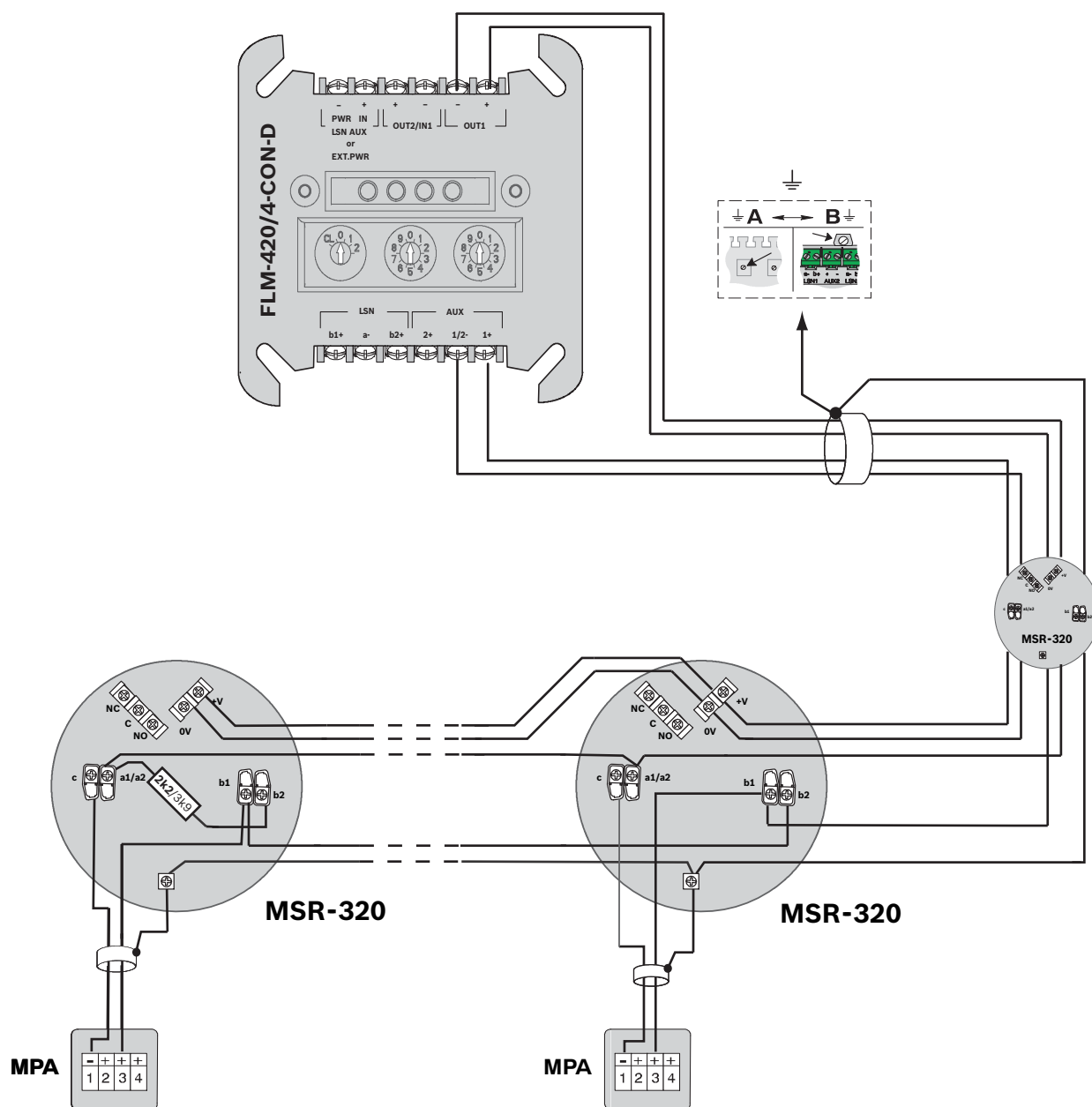
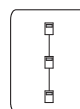


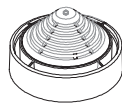
MS 400
MSF 400



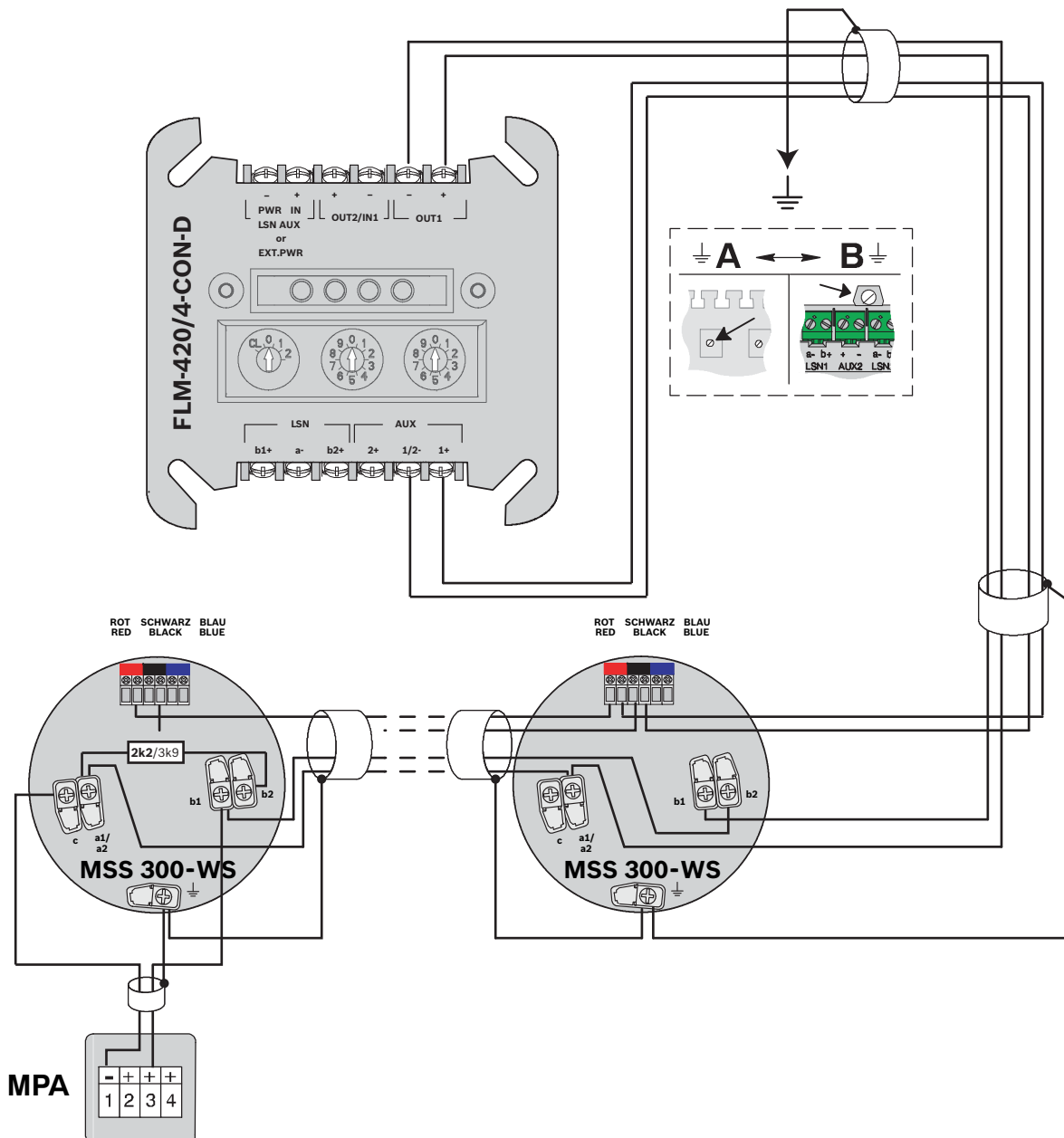
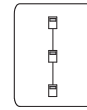


MSR 320



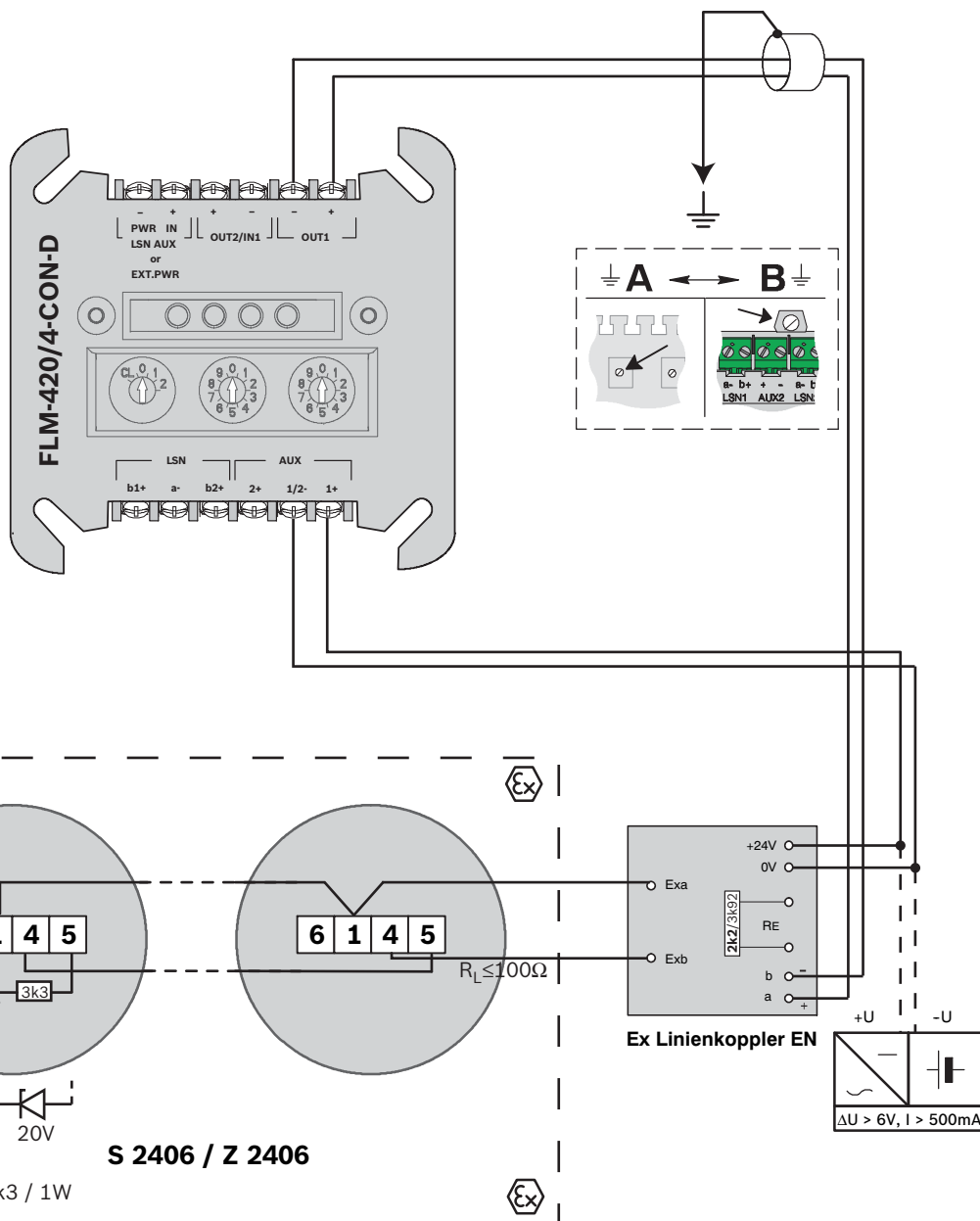
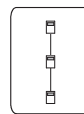


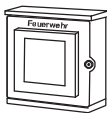
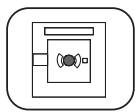
MSS 300-WS



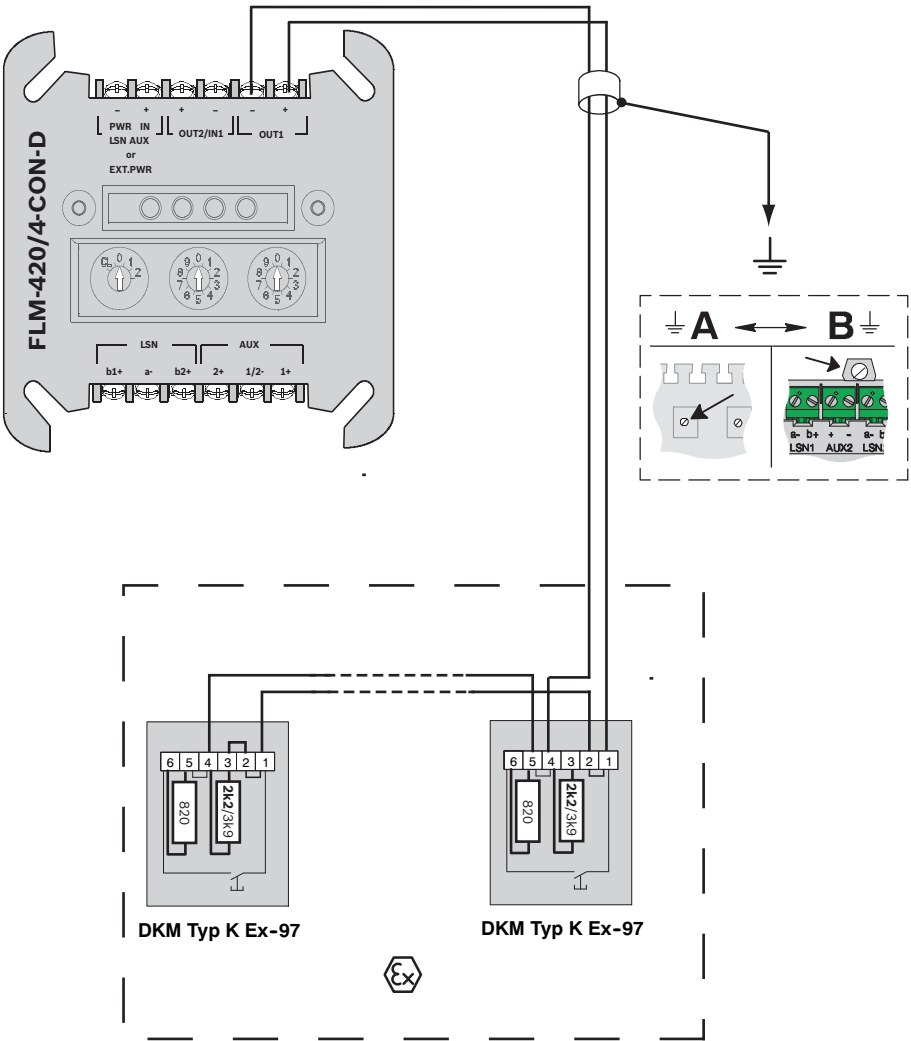
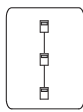


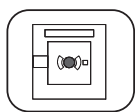
Ex-Linienkoppler **Z 2406** **S 2406**



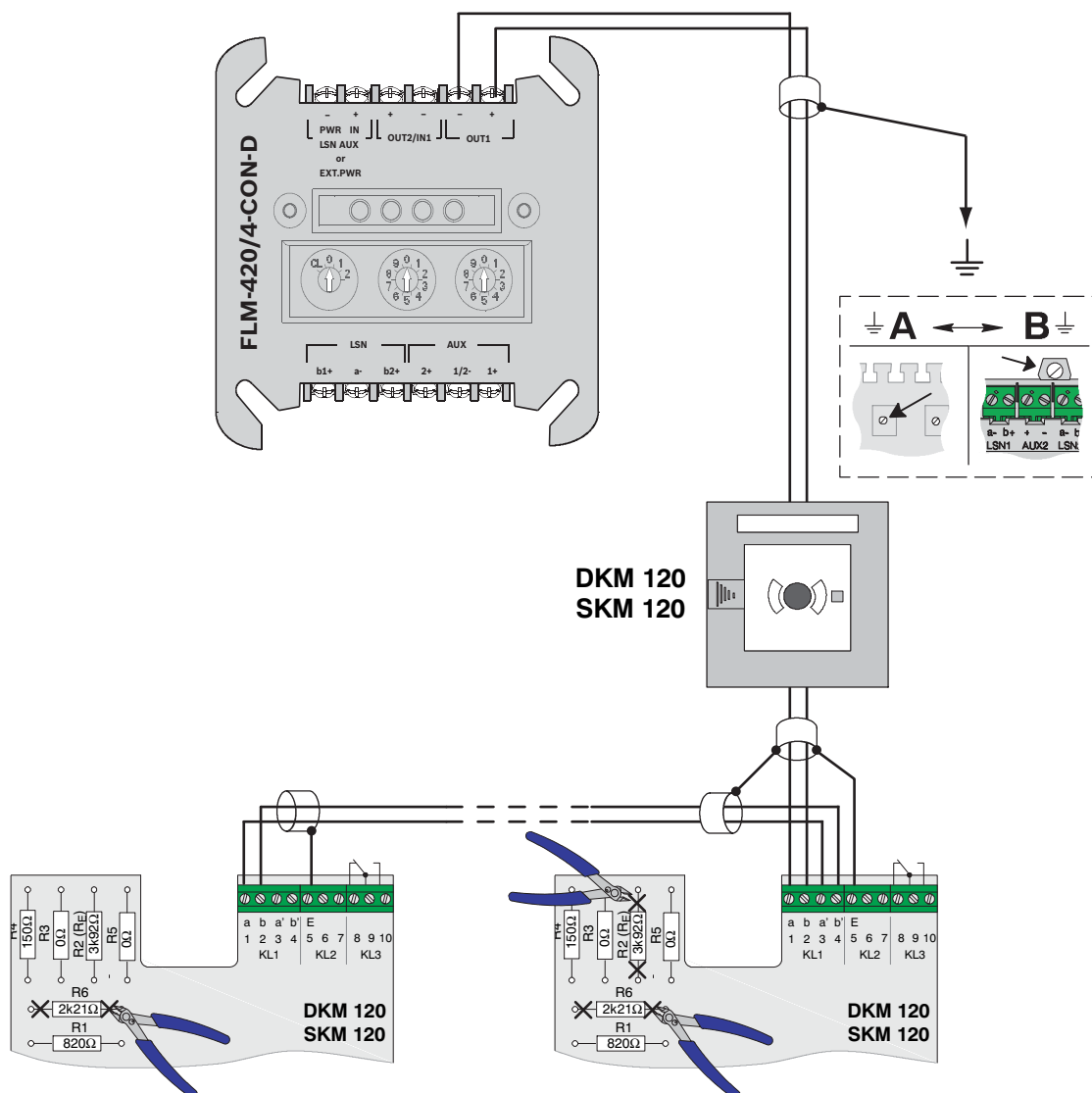
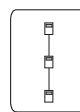


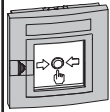
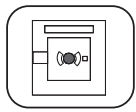
DKM Typ K Ex-97



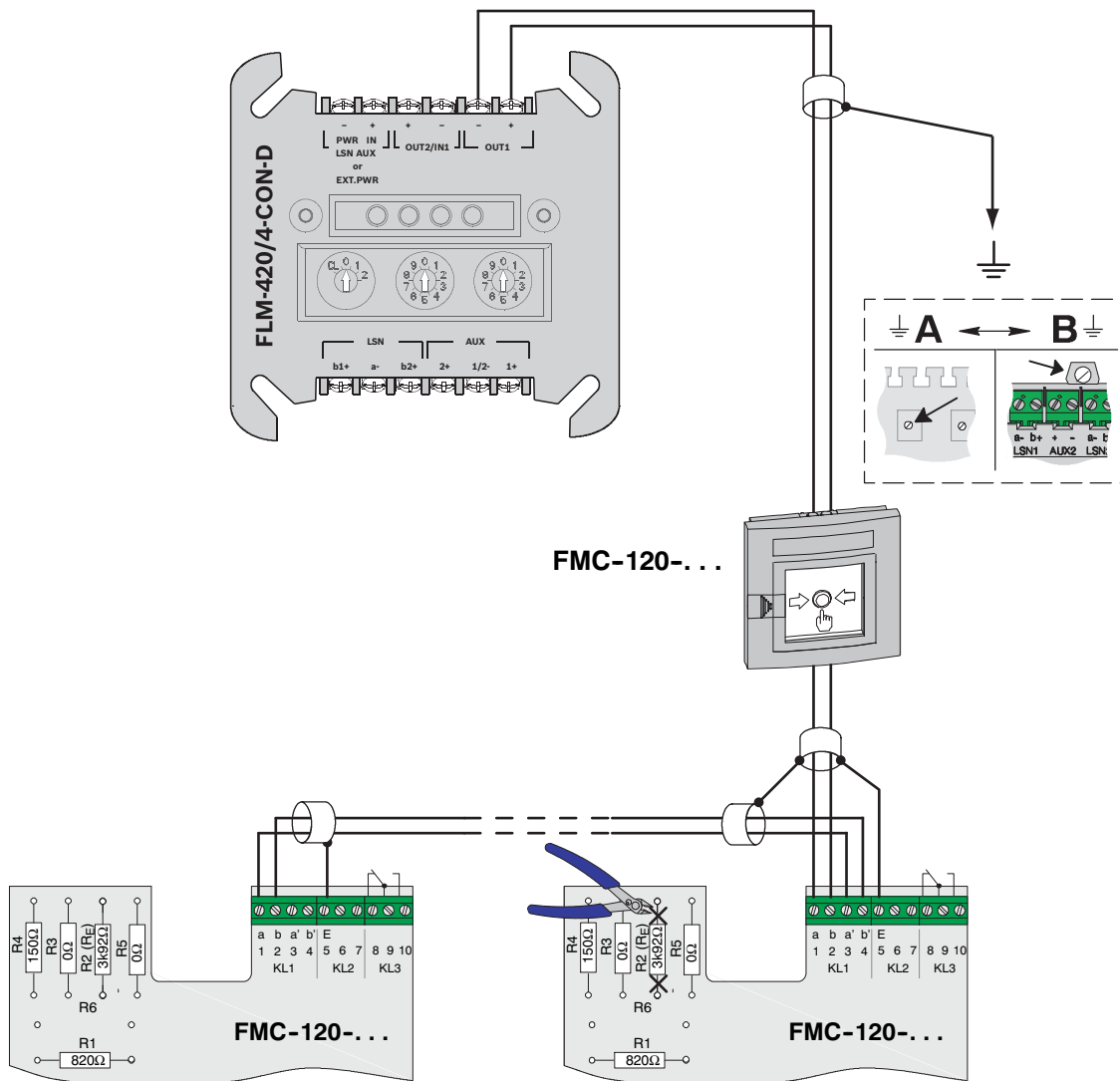
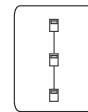


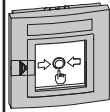
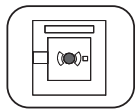
**DKM 120
SKM 120**



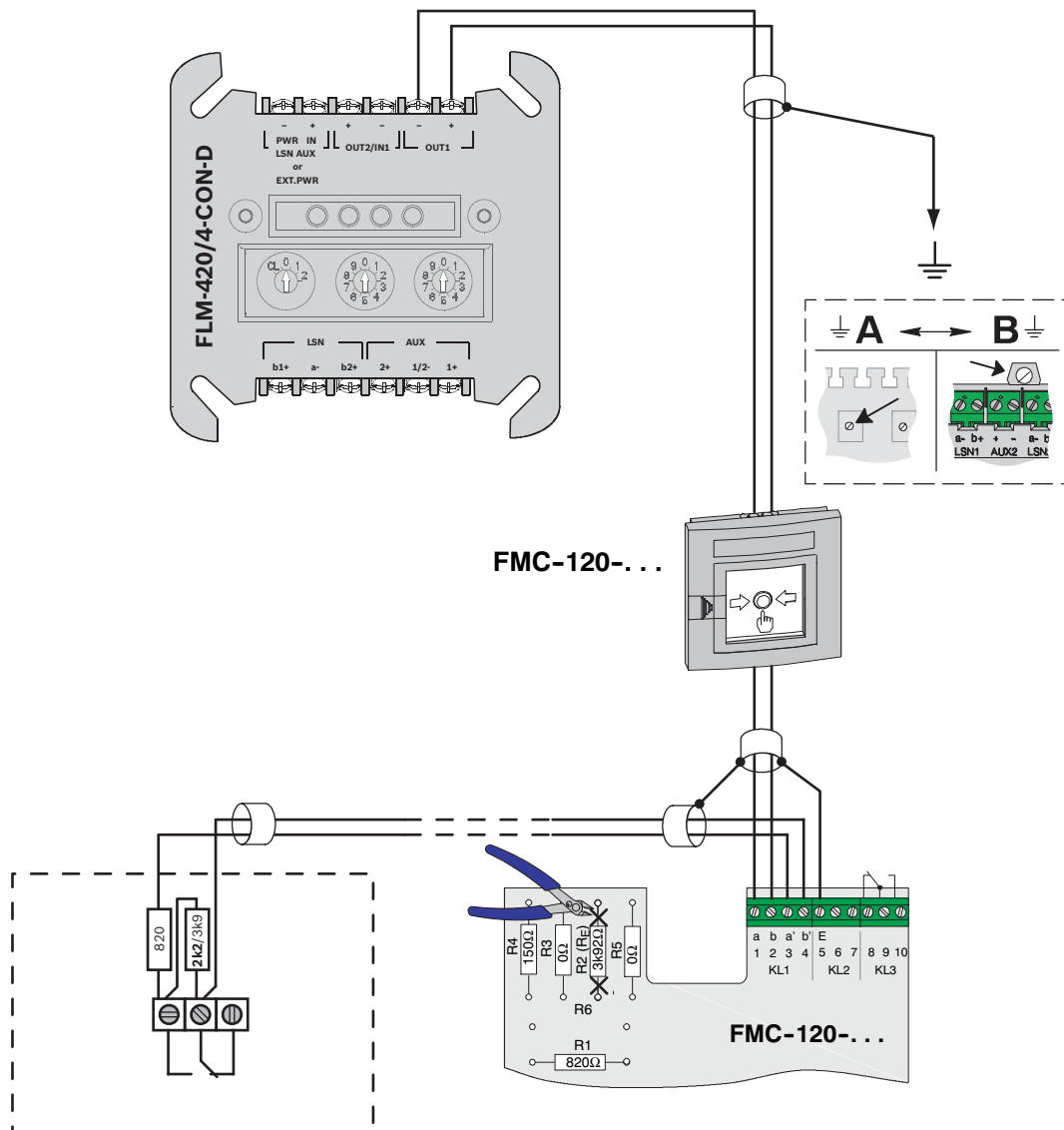
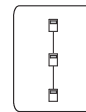


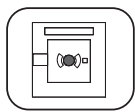
FMC-120-DKM-G-R FMC-120-DKM-G-Y
FMC-120-DKM-H-R FMC-120-EST-G-B
FMC-120-DKM-G-B FMC-120-DKM-H-B



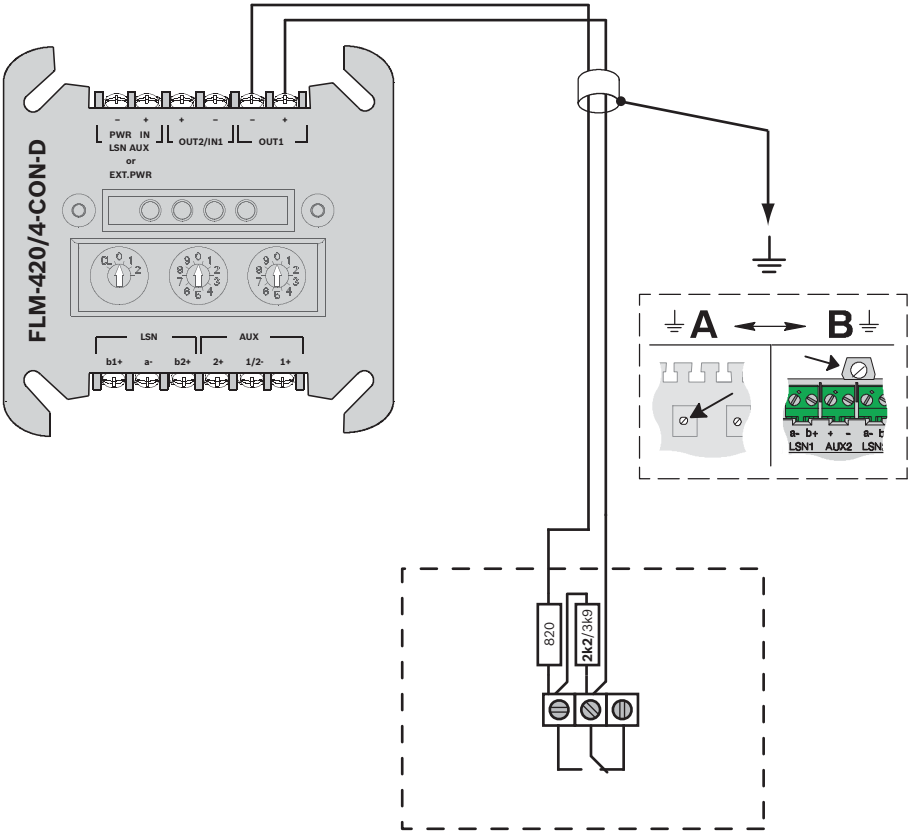
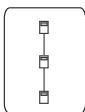


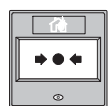
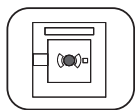
FMC-120-DKM-G-R FMC-120-DKM-G-Y
FMC-120-DKM-H-R FMC-120-EST-G-B
FMC-120-DKM-G-B
FMC-120-DKM-H-B



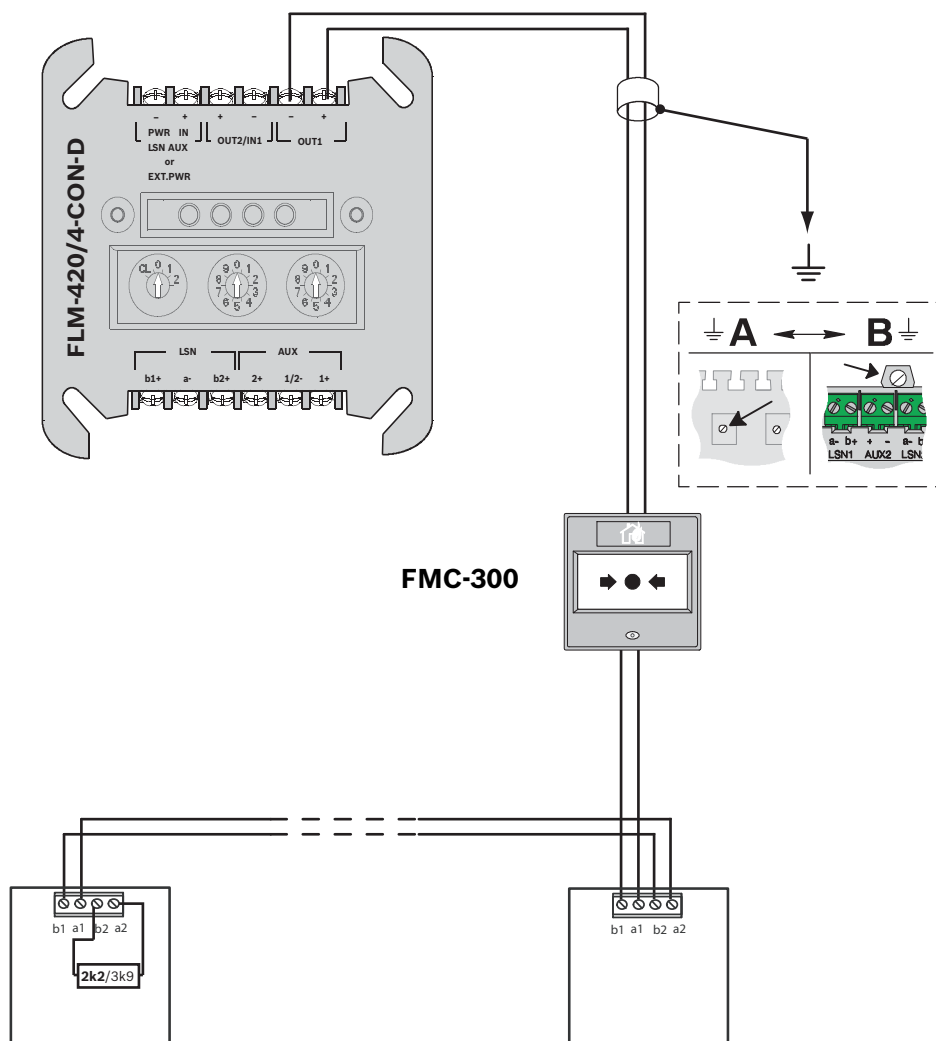
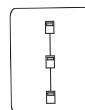


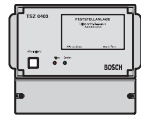
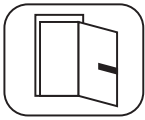
NO





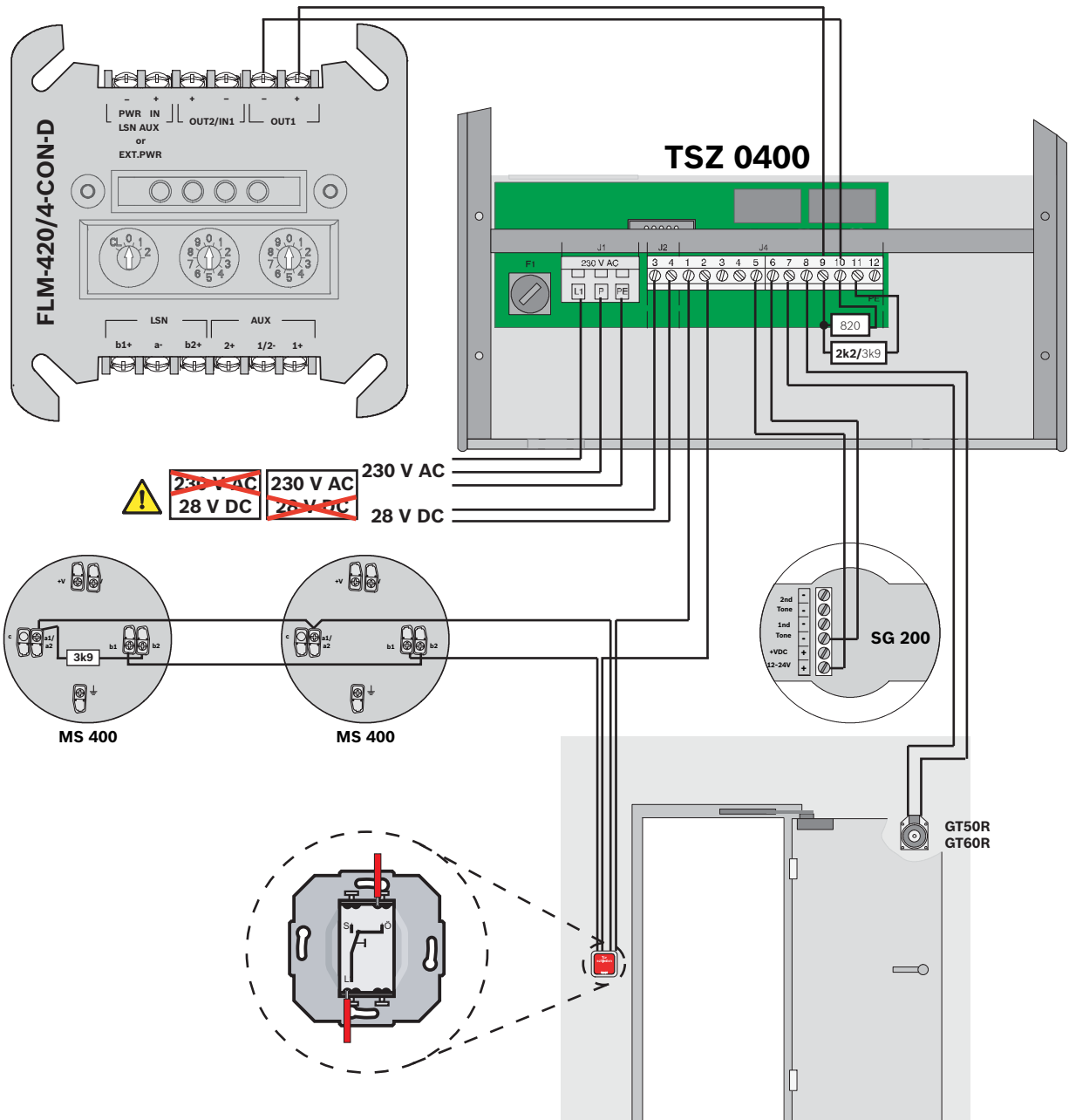
FMC-300

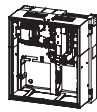
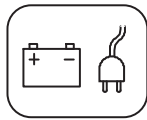
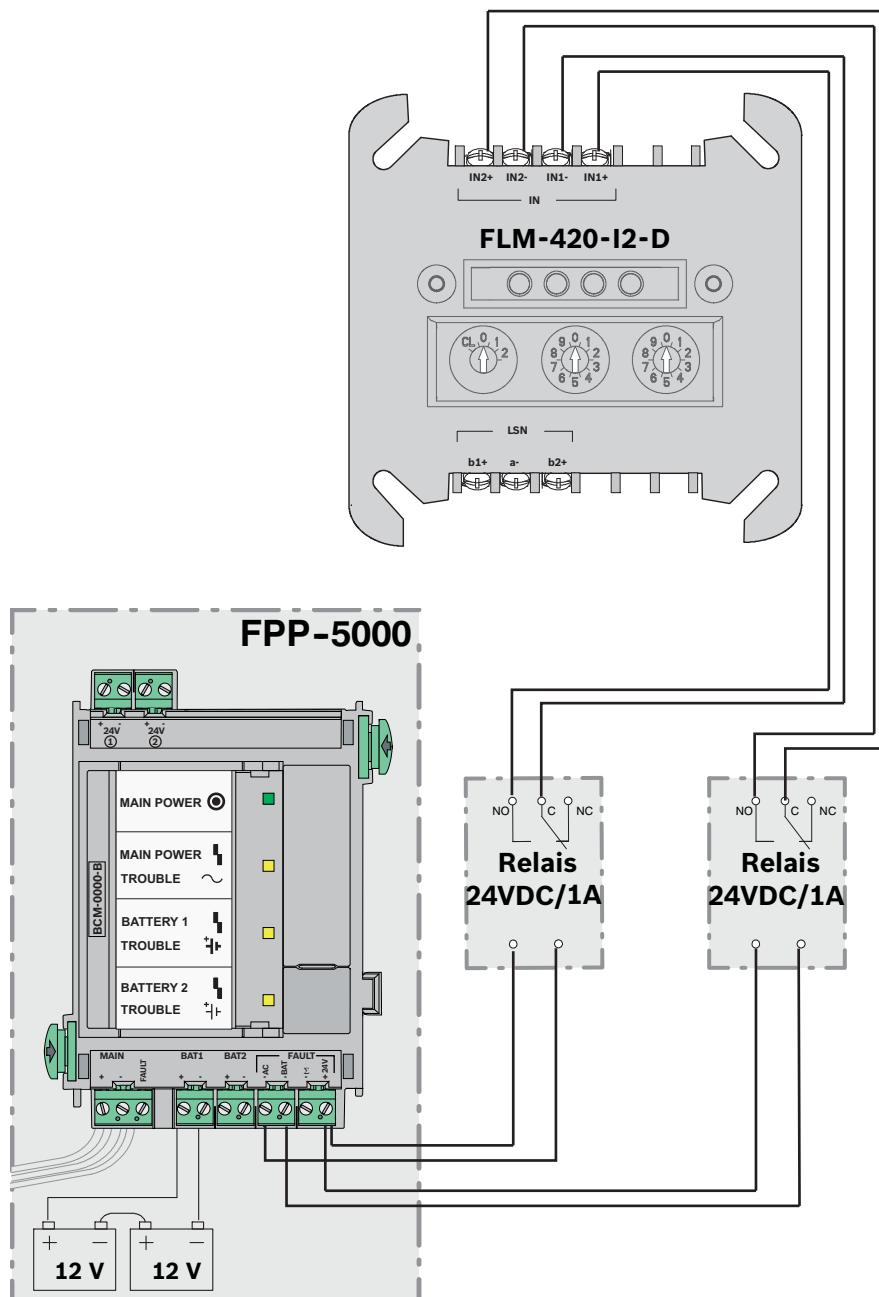


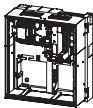
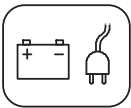


TSZ 0400

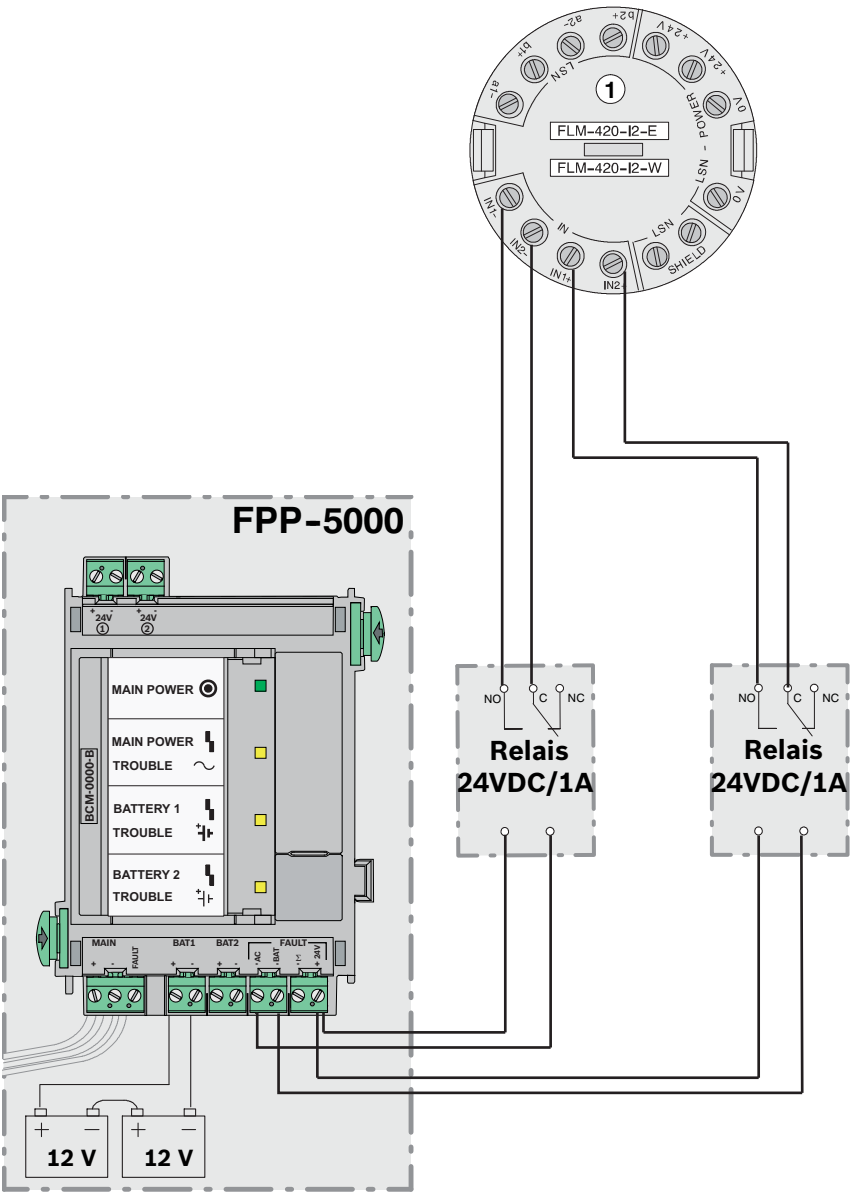
DIBT

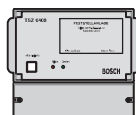
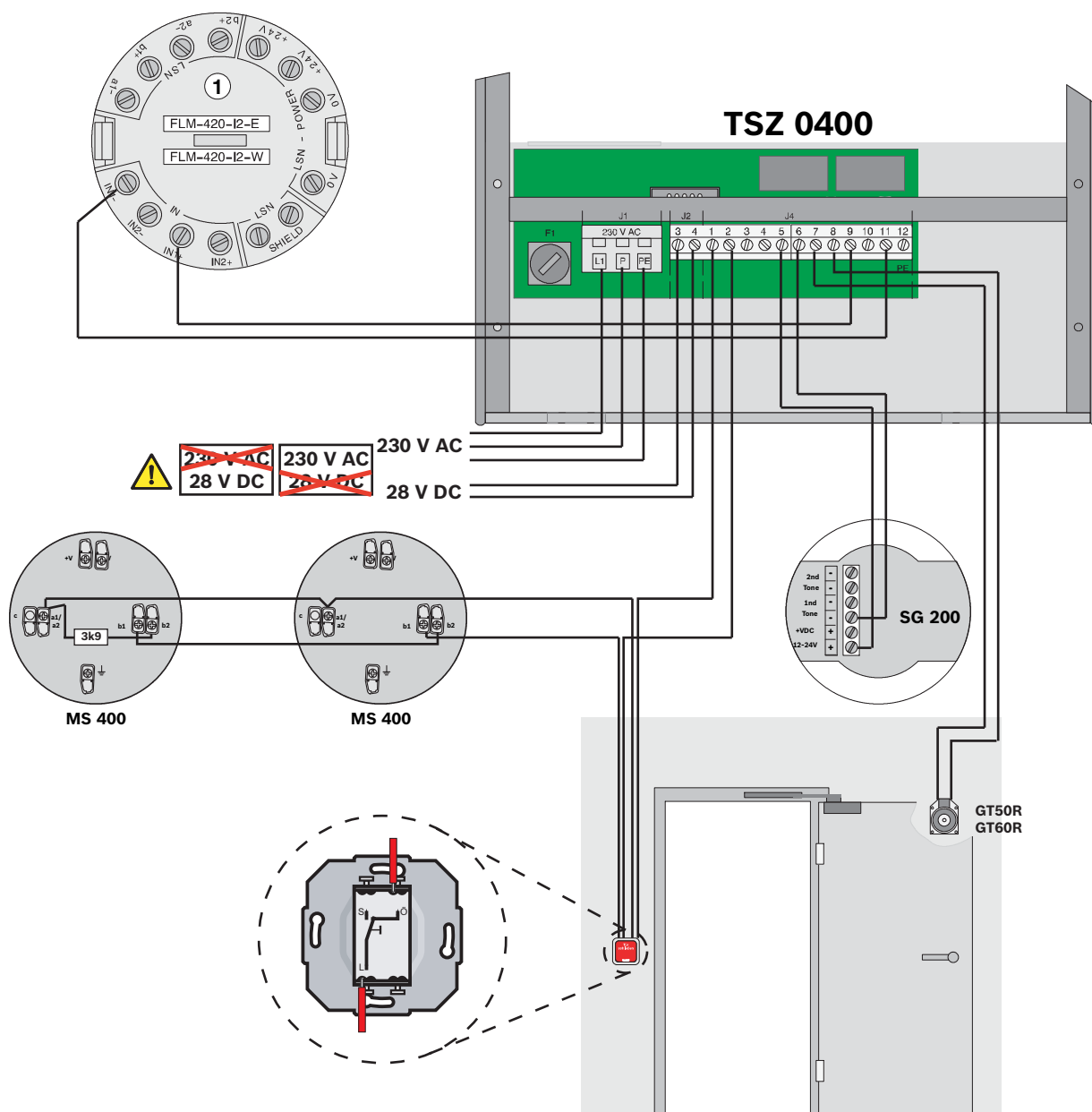


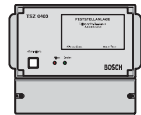
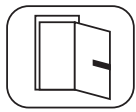
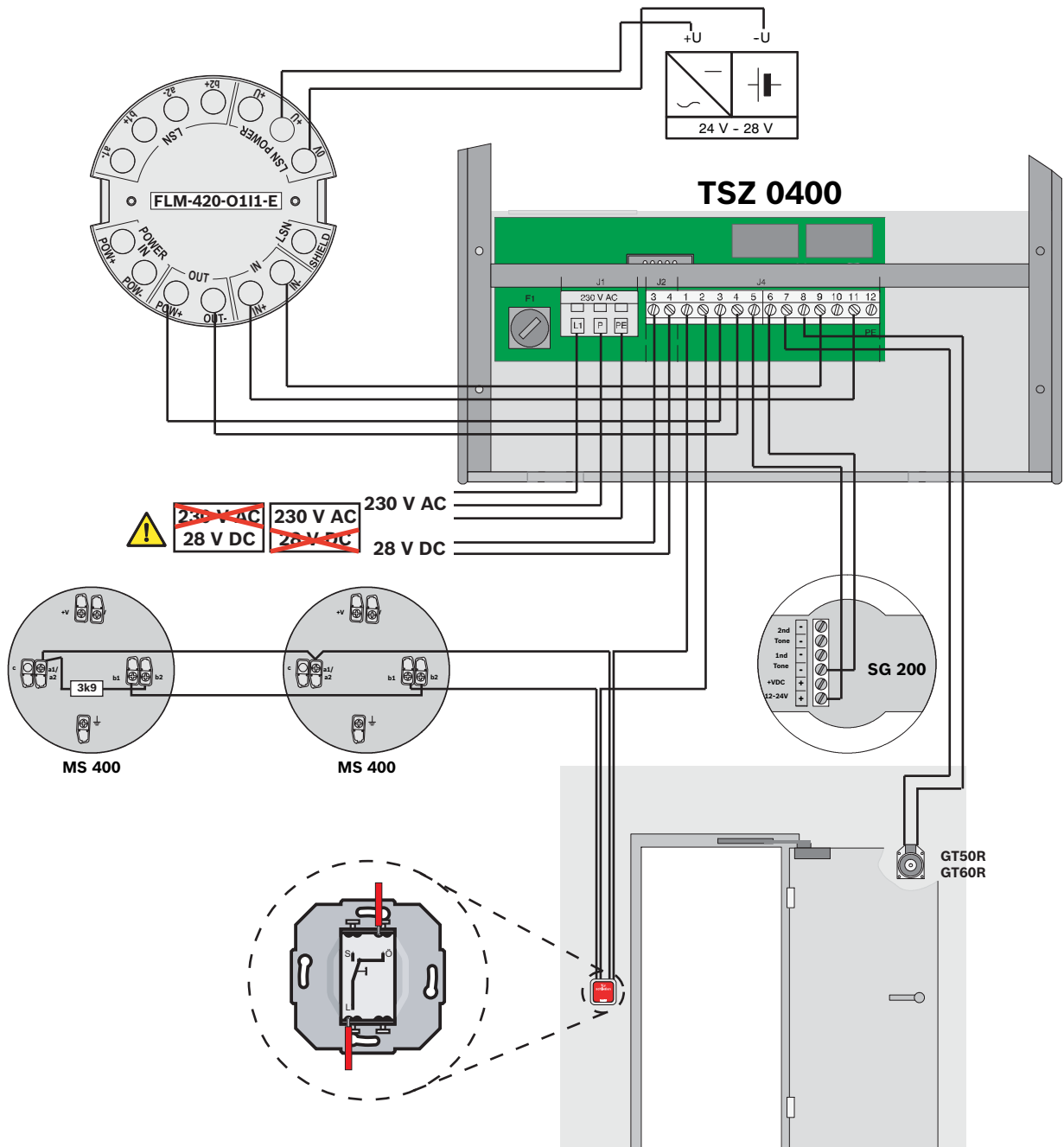
**FPP-5000**

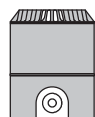
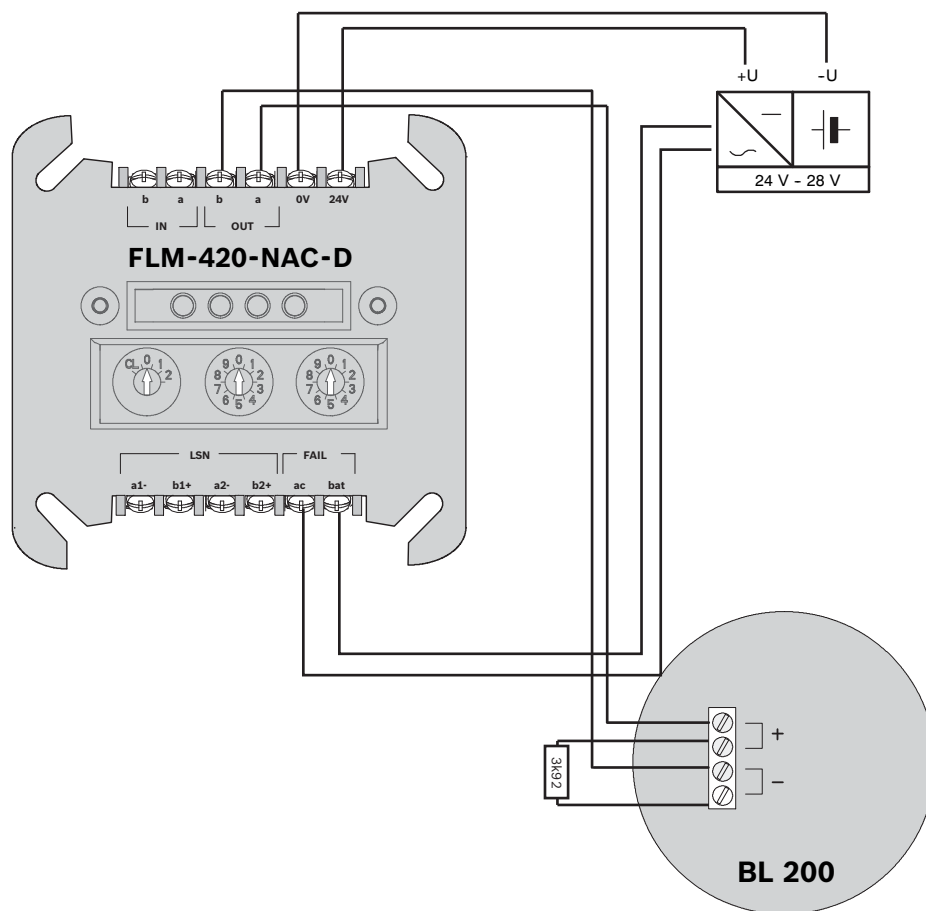
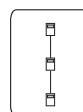


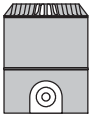
FPP-5000



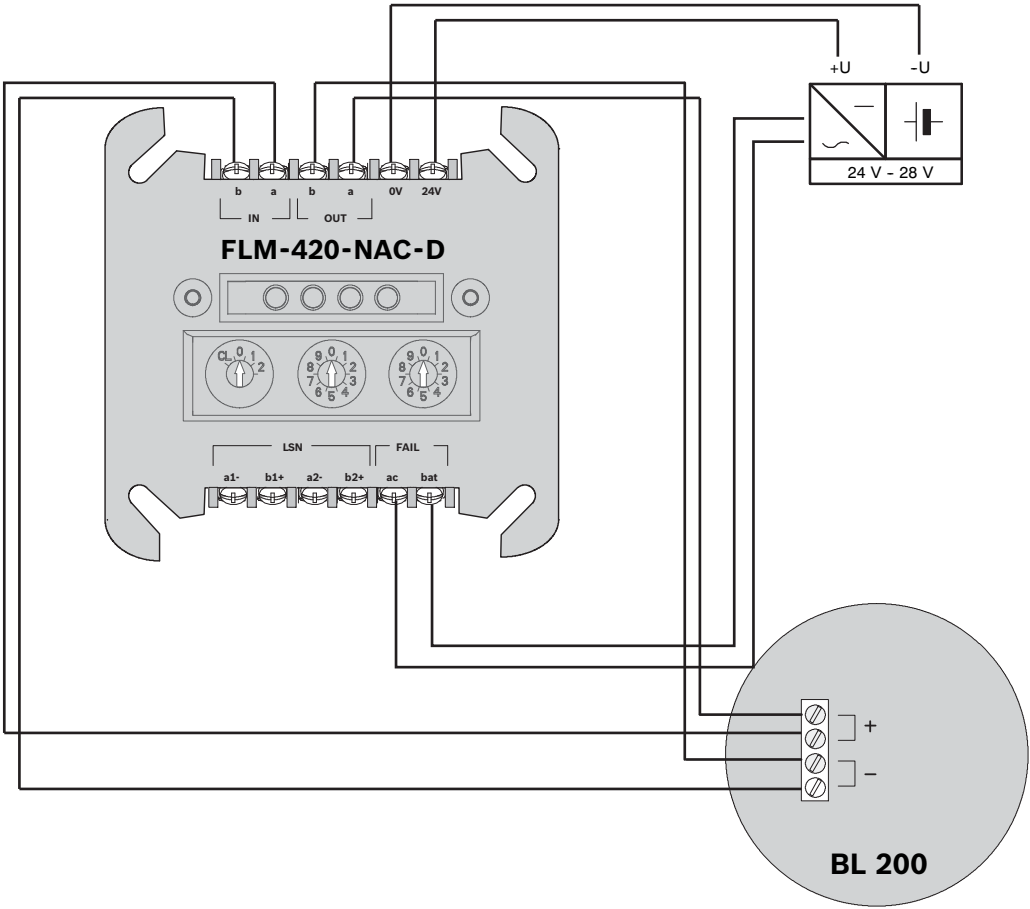
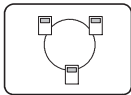
**TSZ 0400****DIBT**

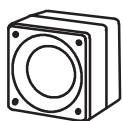
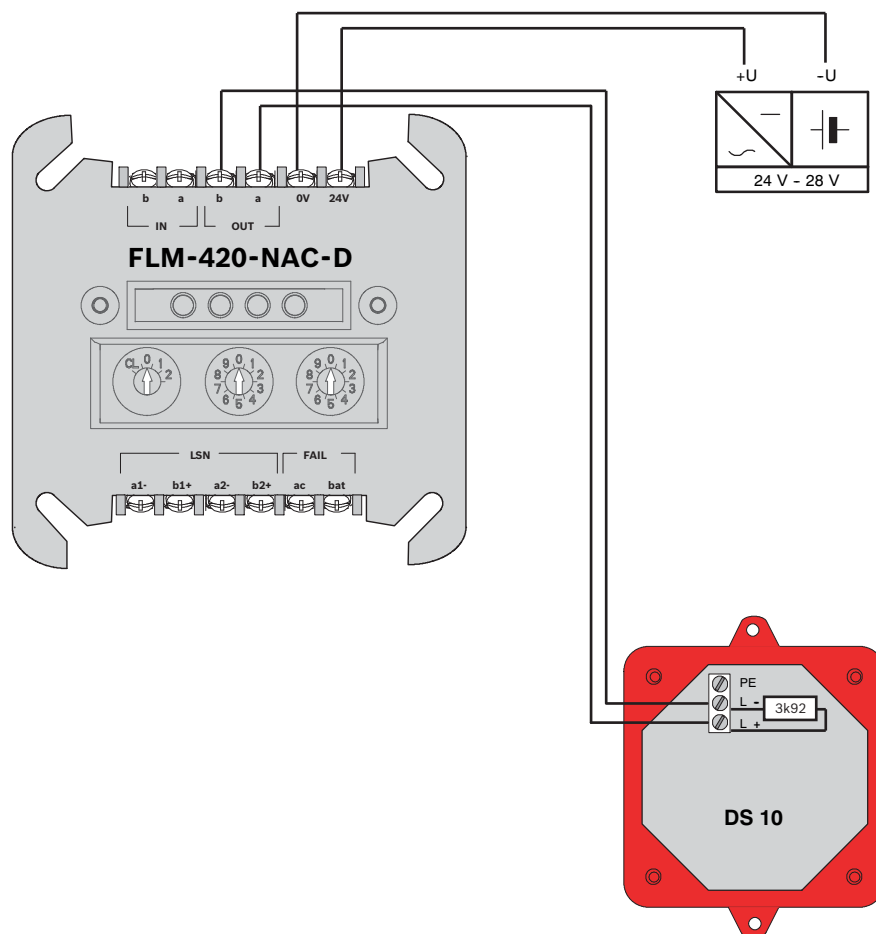
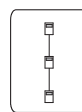
**TSZ 0400****DIBT**

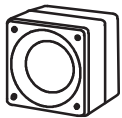
**BL 200**



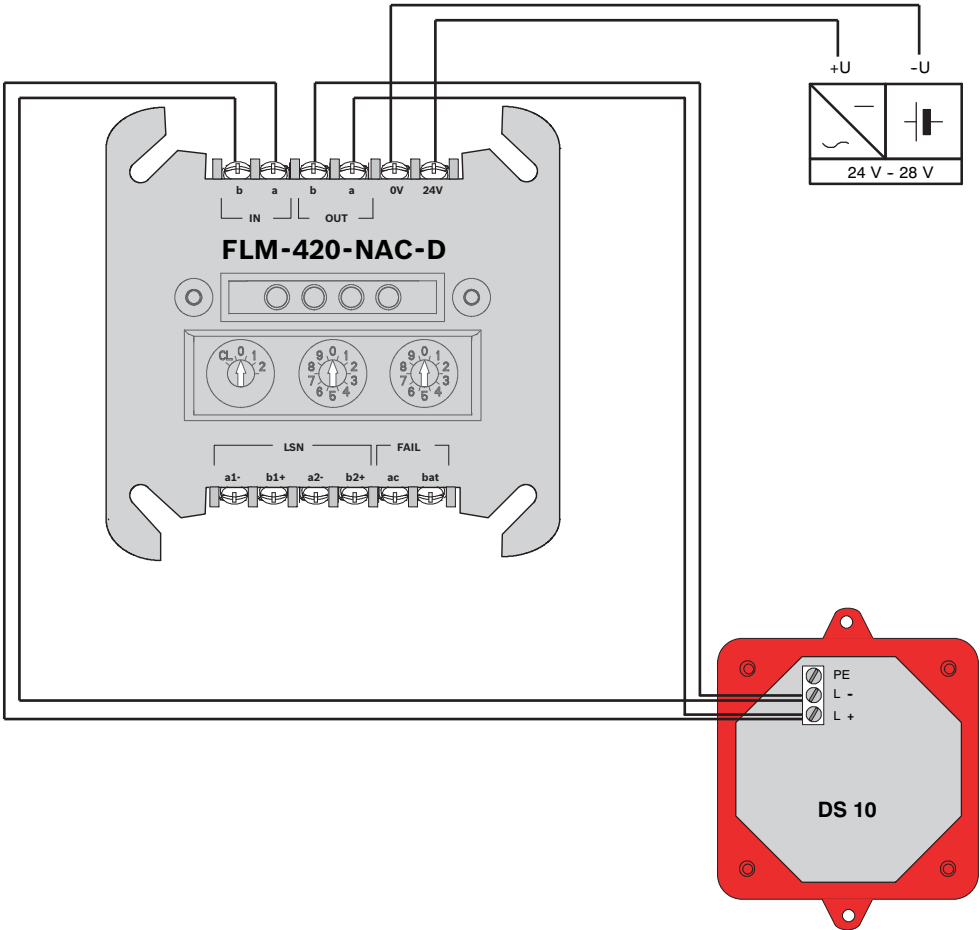
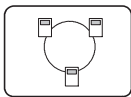
BL 200

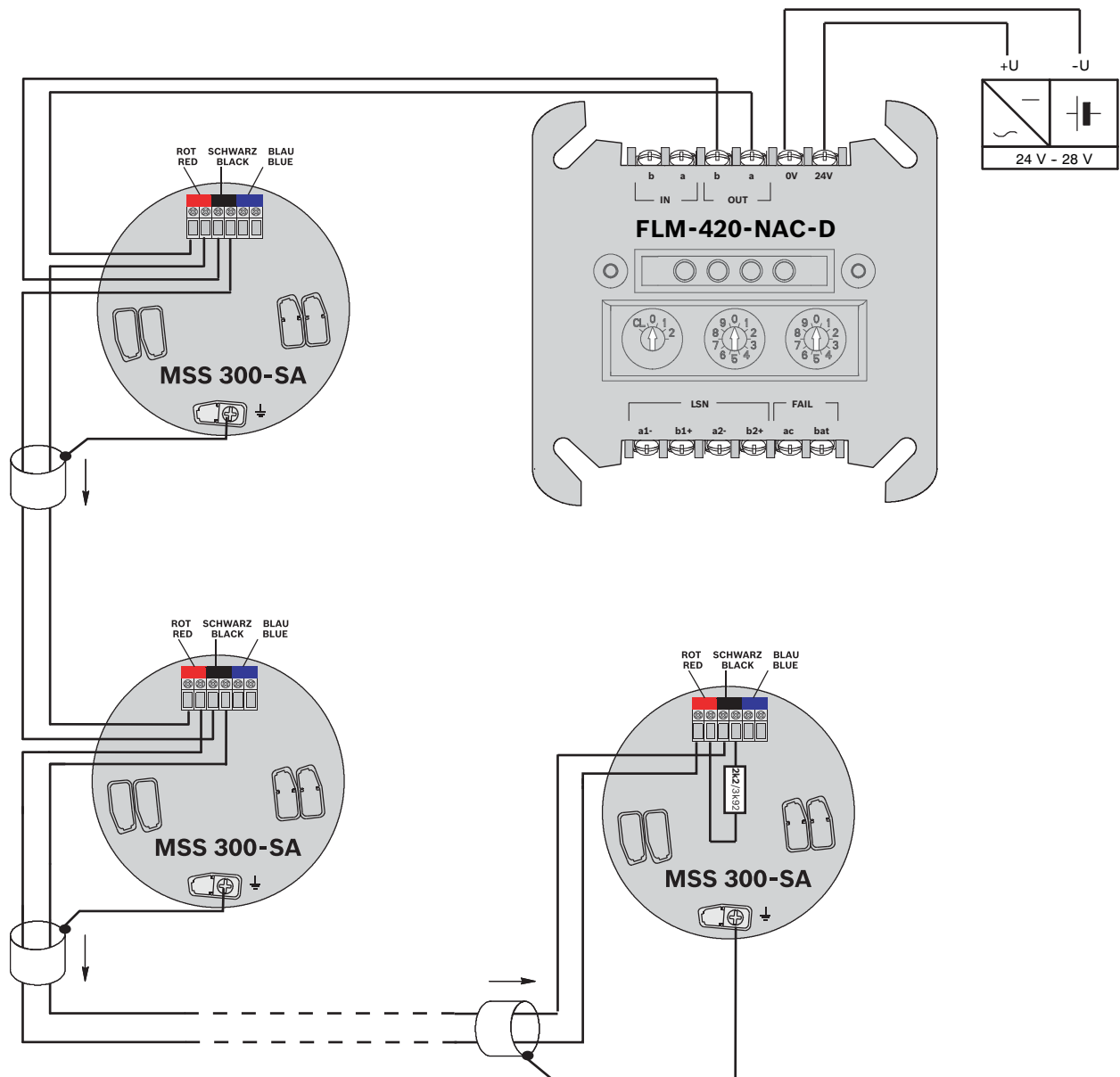
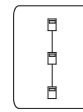


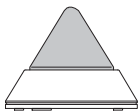
**DS 10**



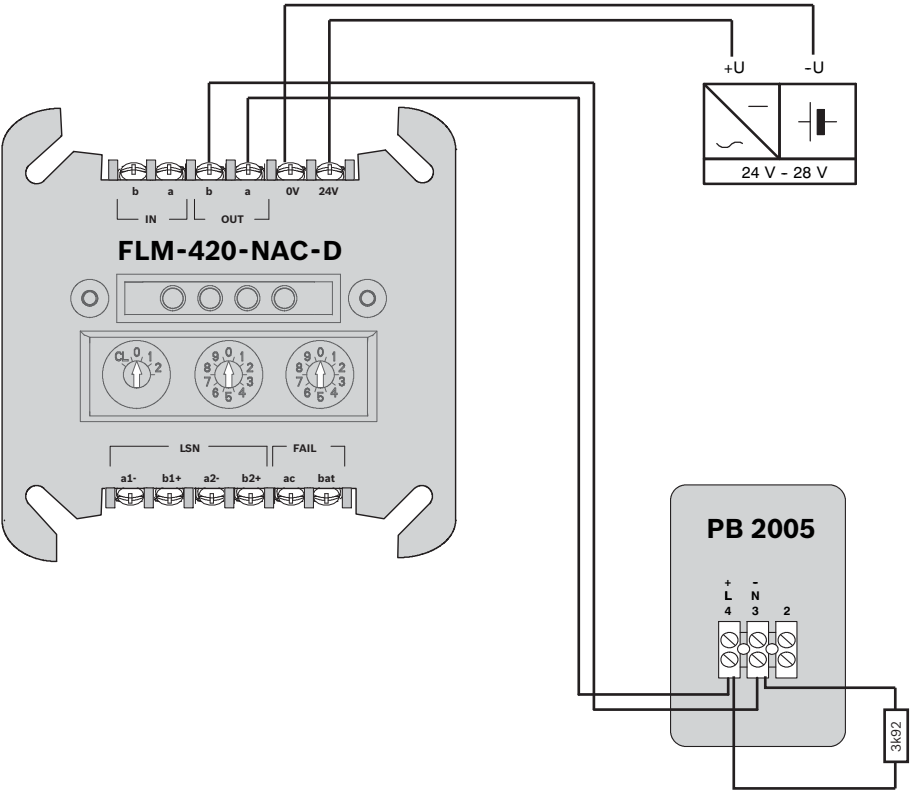
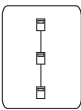
DS 10

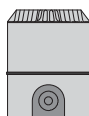
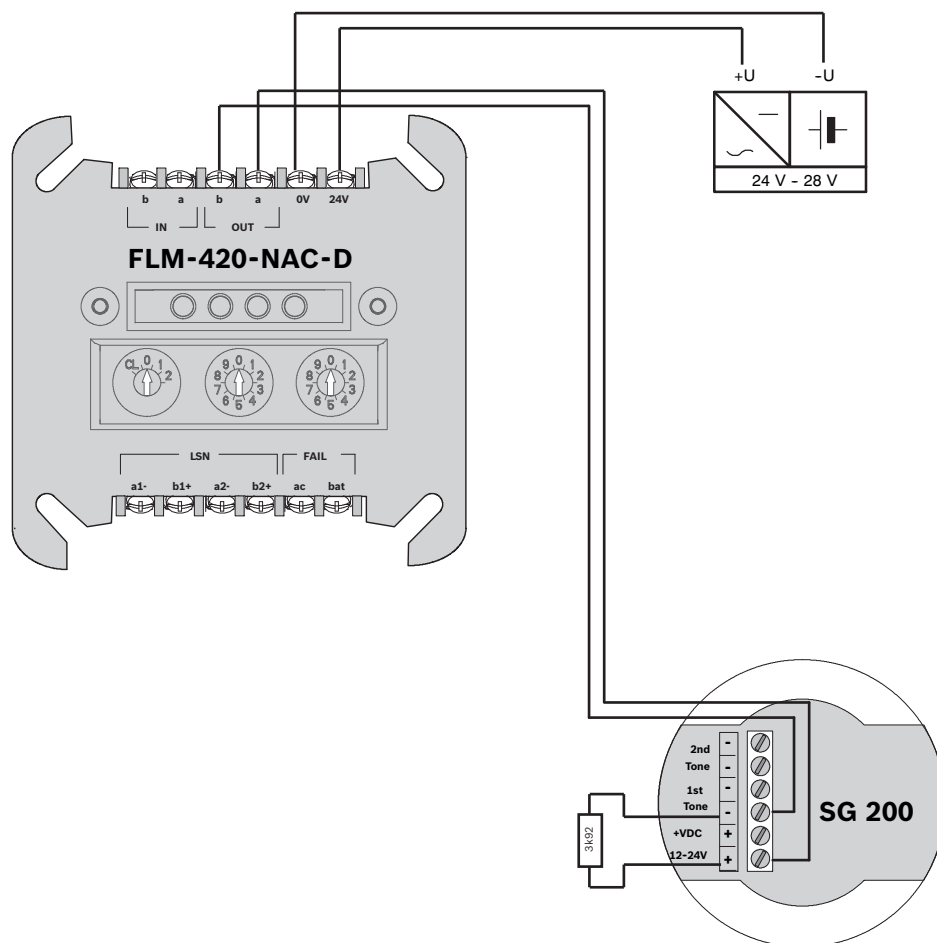
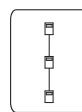


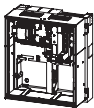
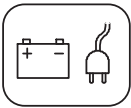
**MSS 300-SA**



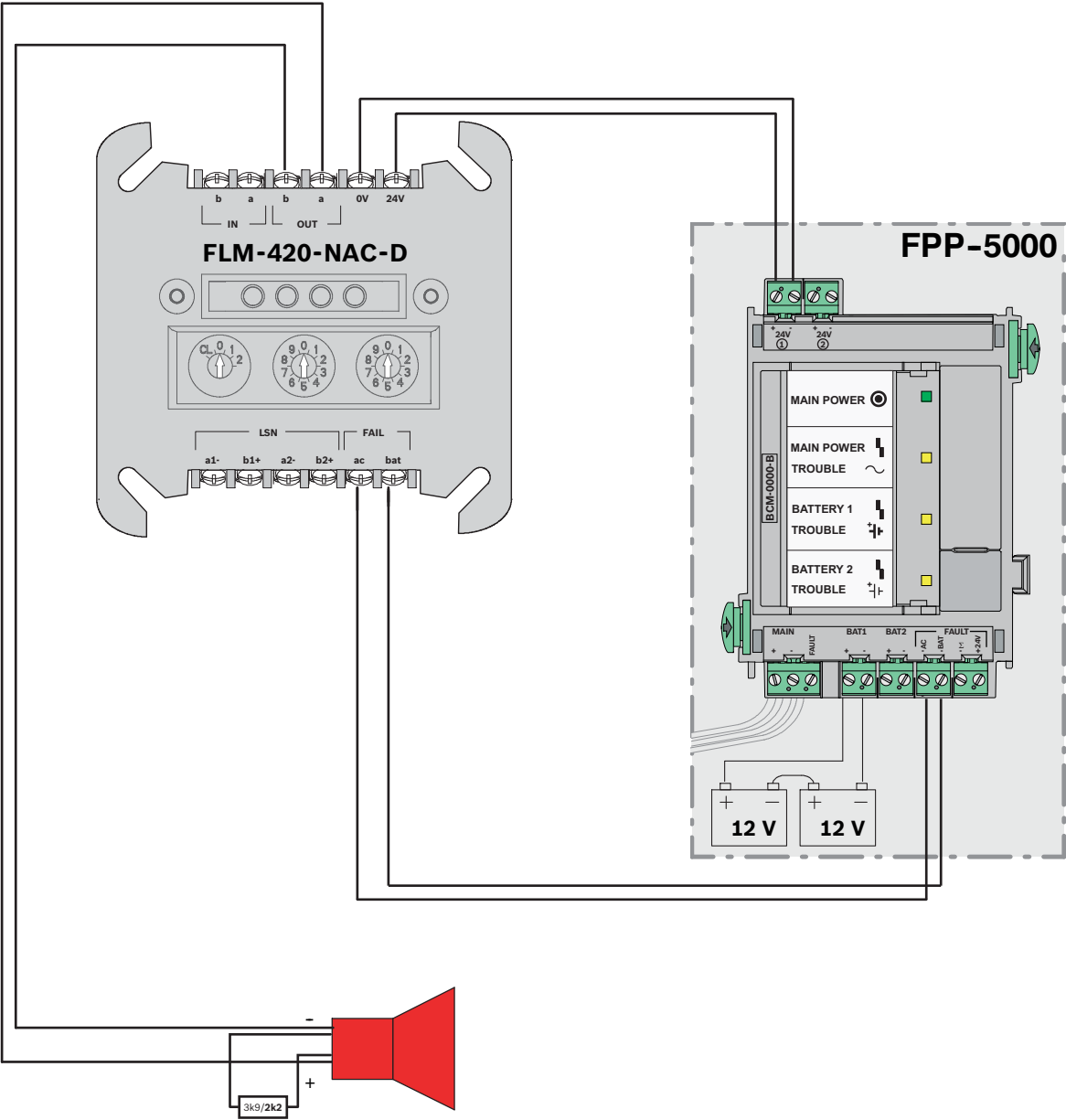
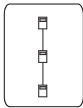
PB 2005



**SG 200**

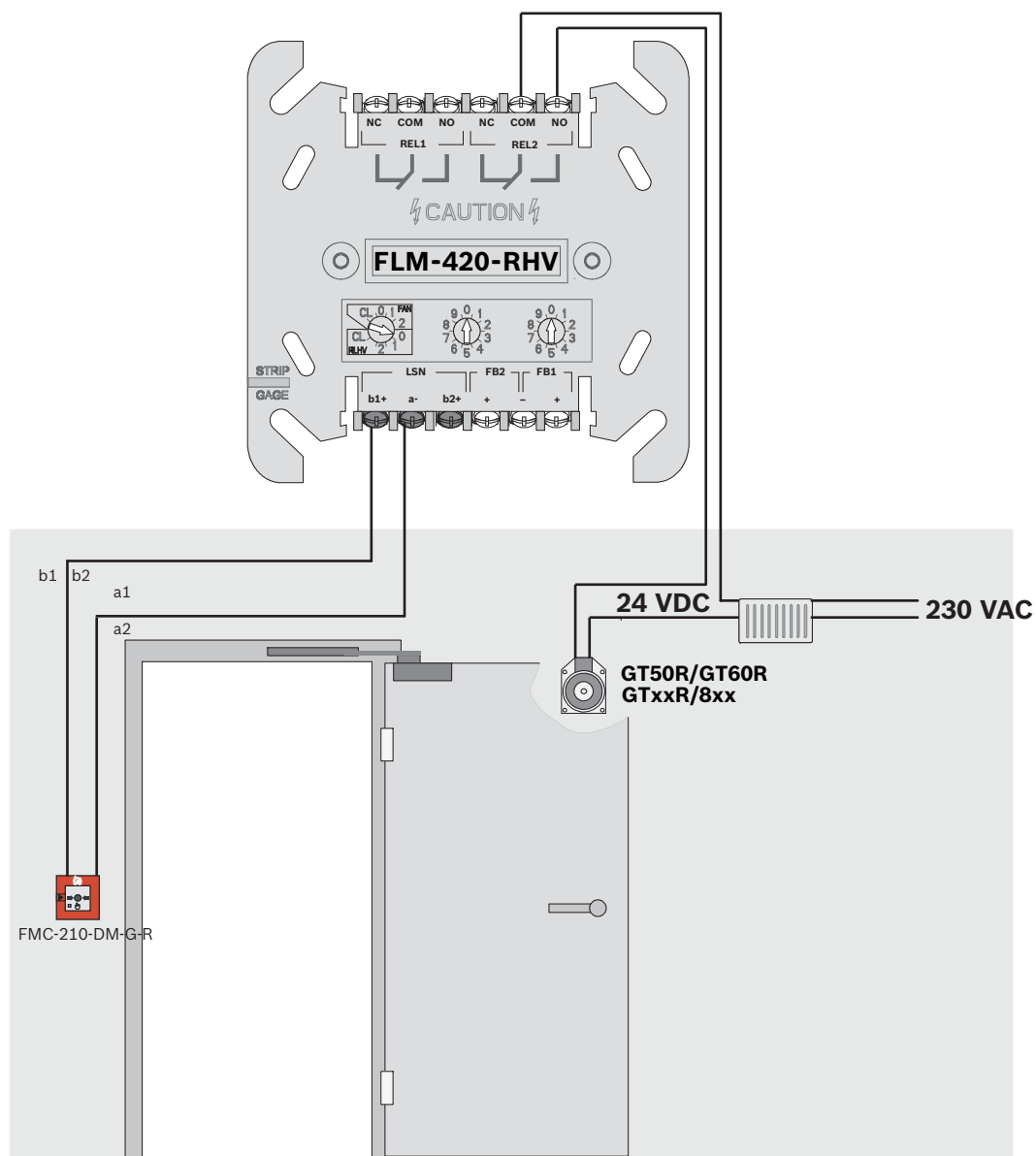


FPP-5000



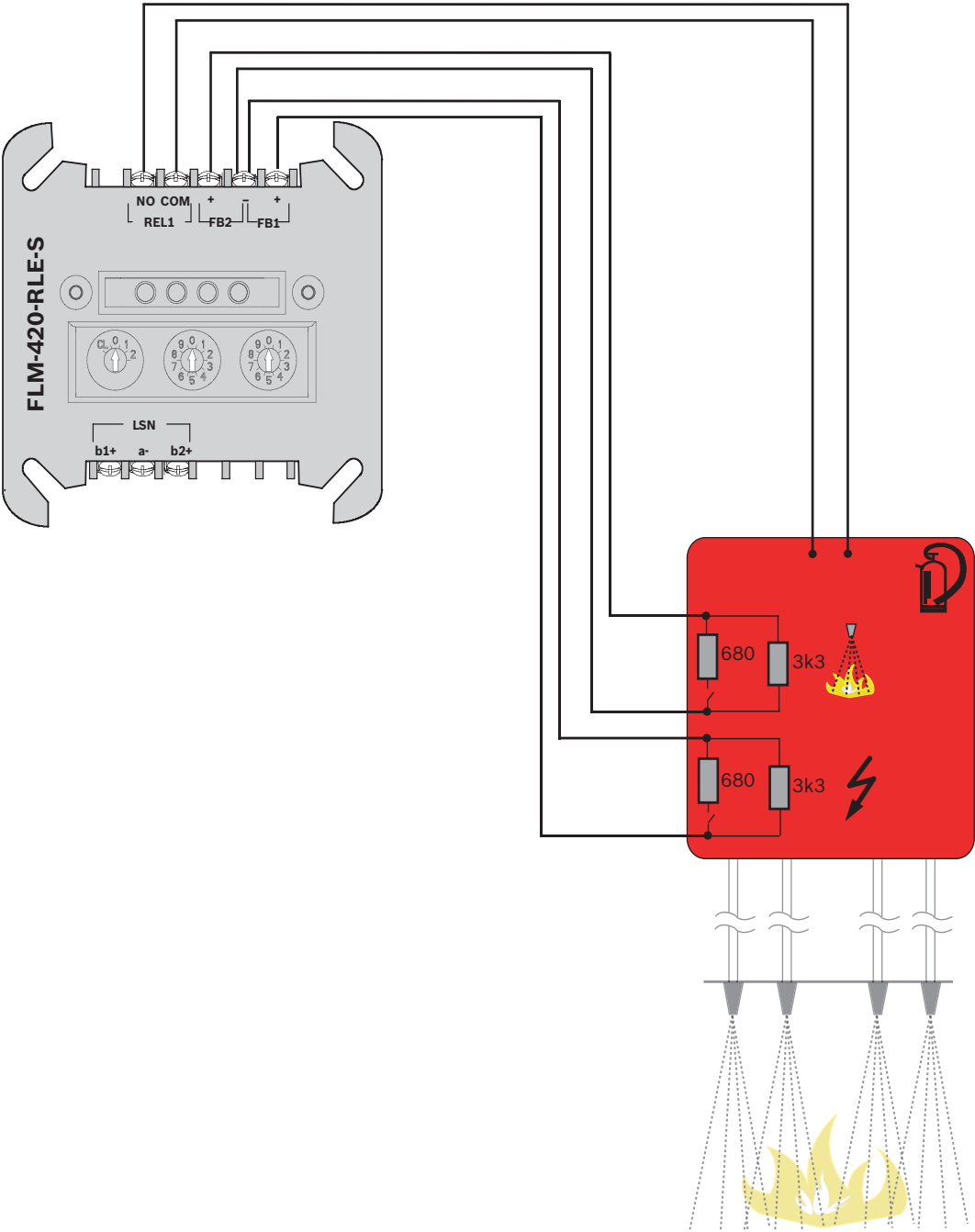


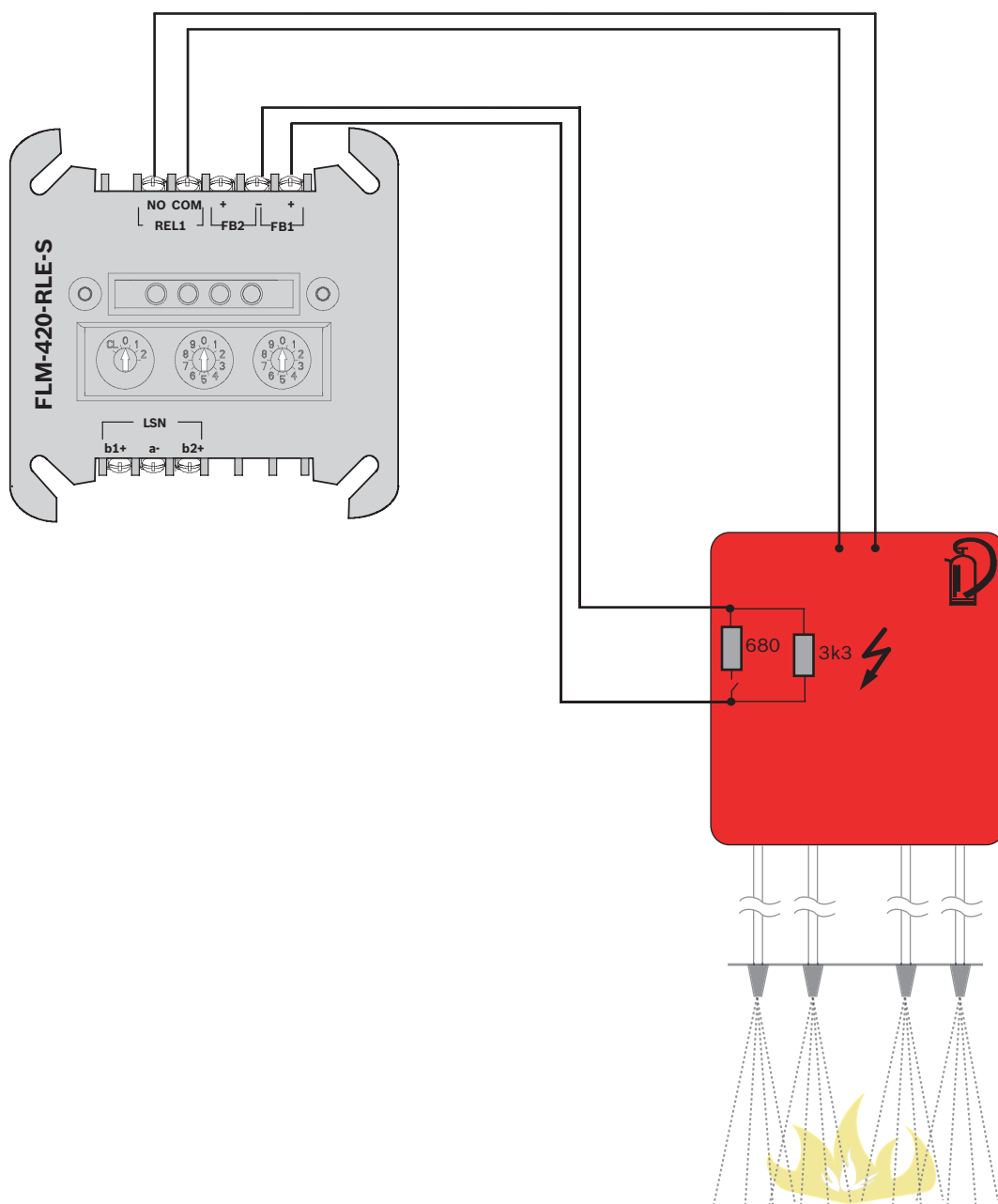
GT 50 R
GT 60 R
GT xx R
8 xx

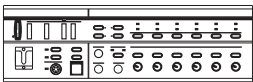
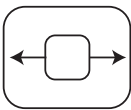




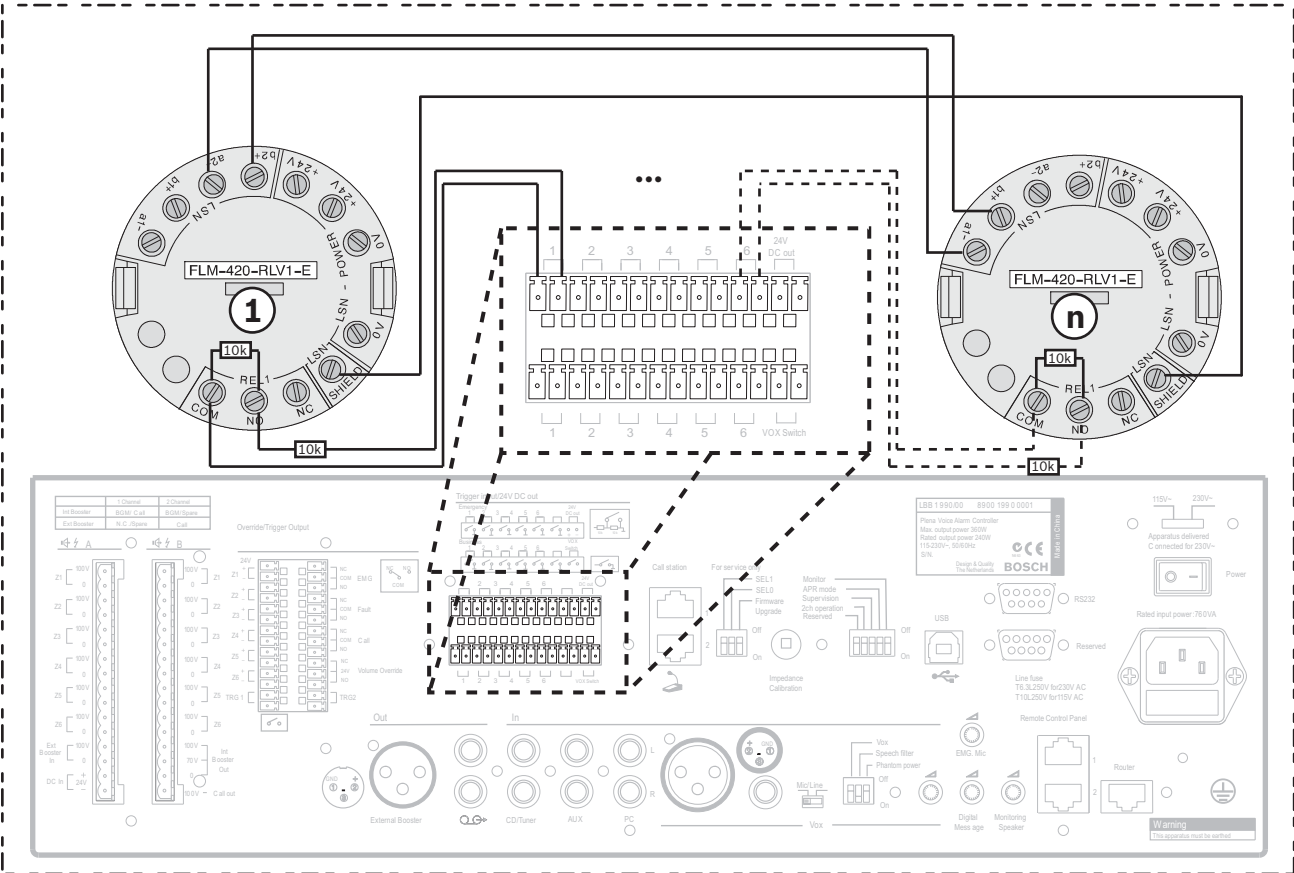
VdS 2496/2005

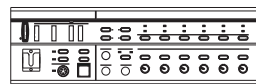
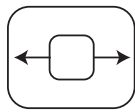


**VdS 1996**

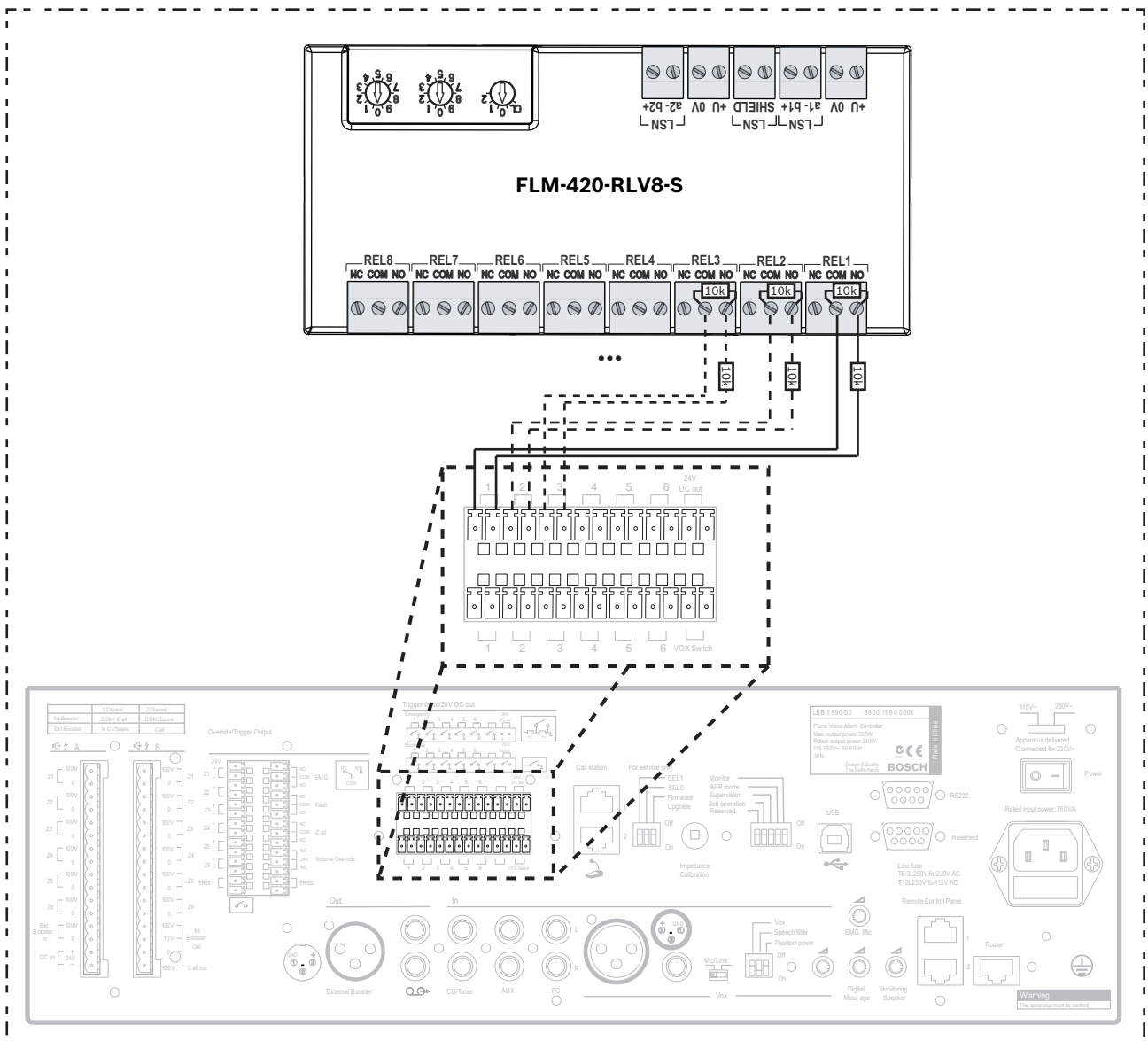
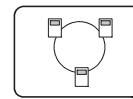


Plena





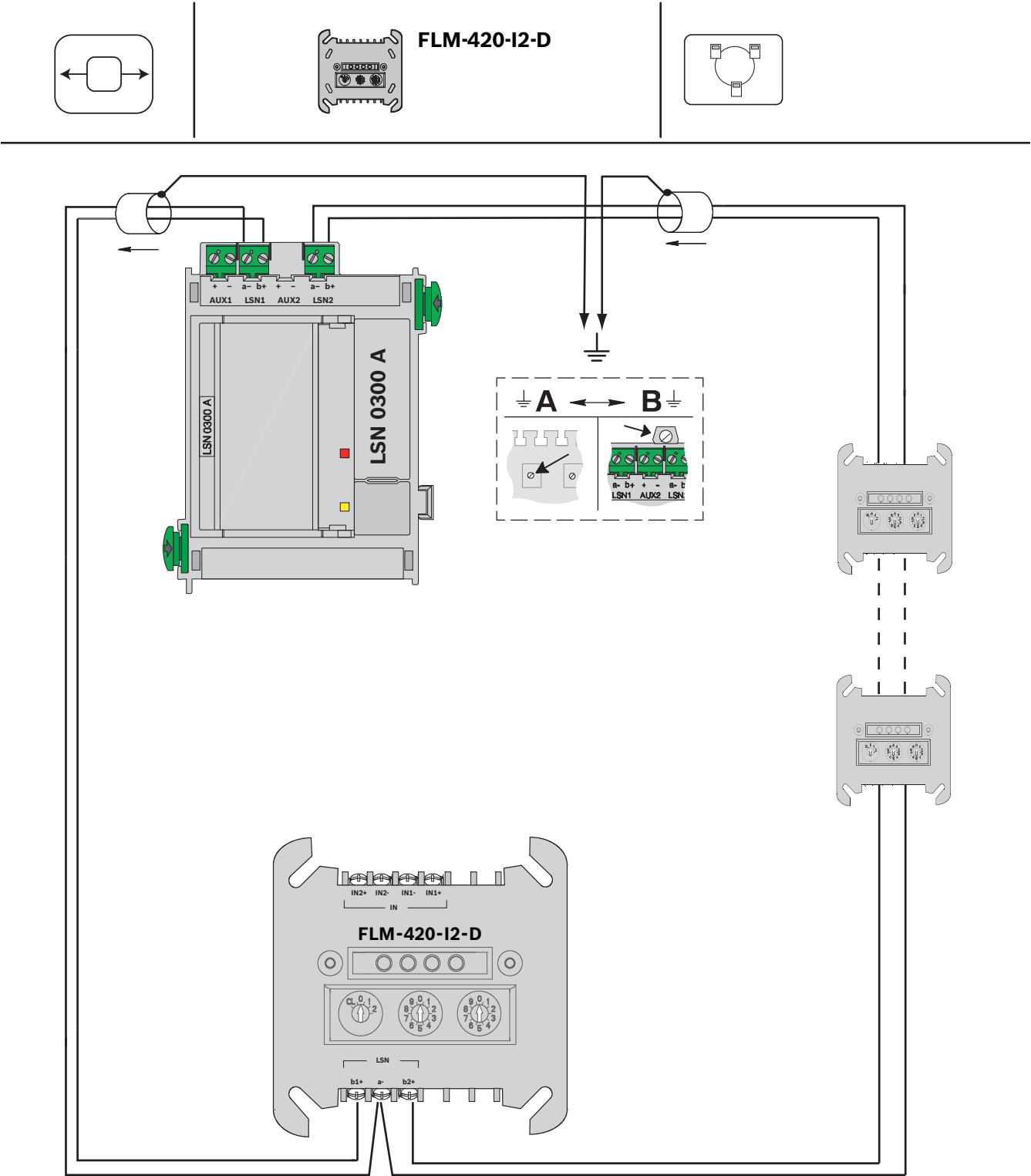
Plena

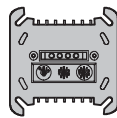
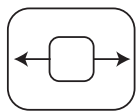
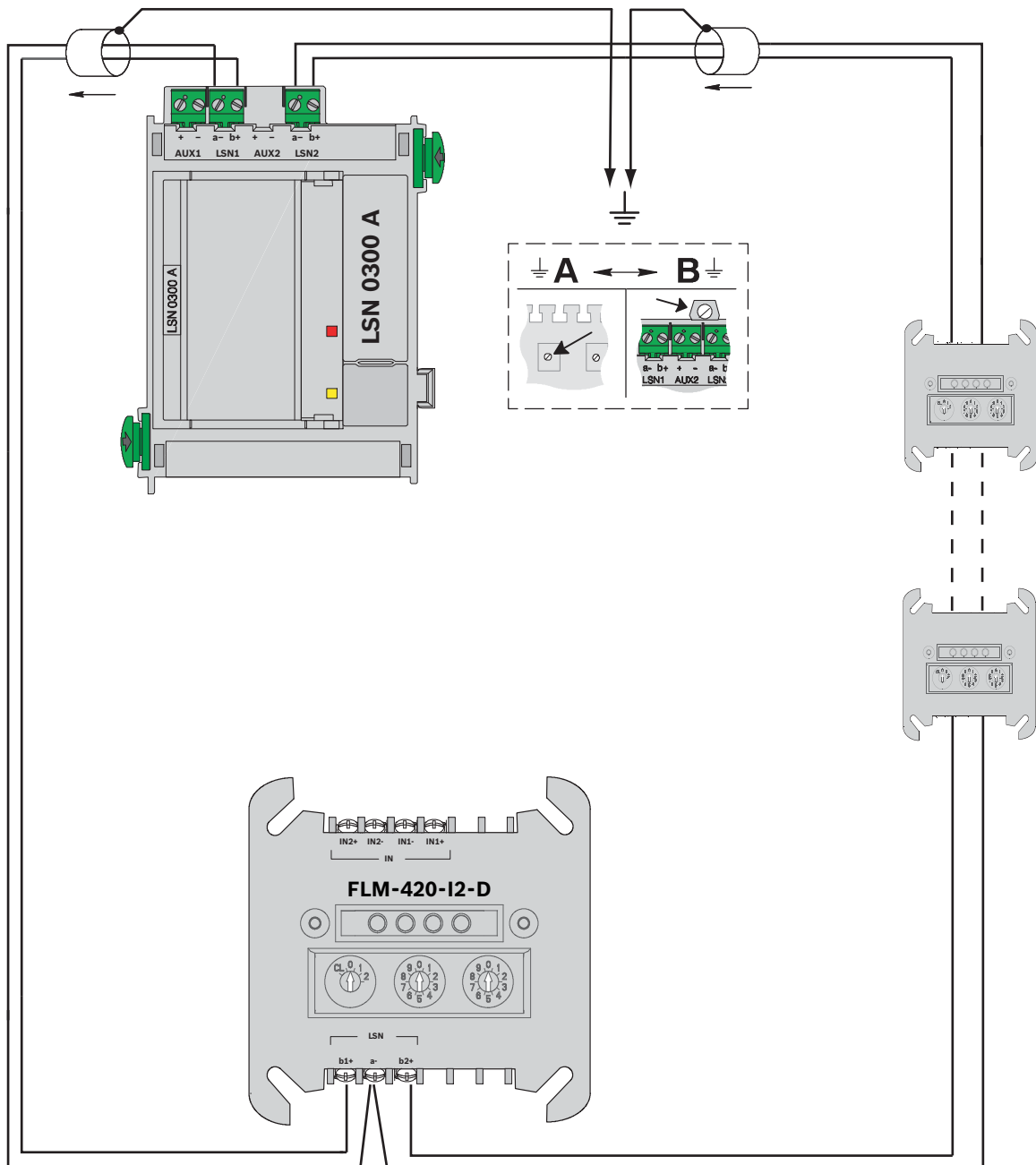
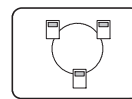


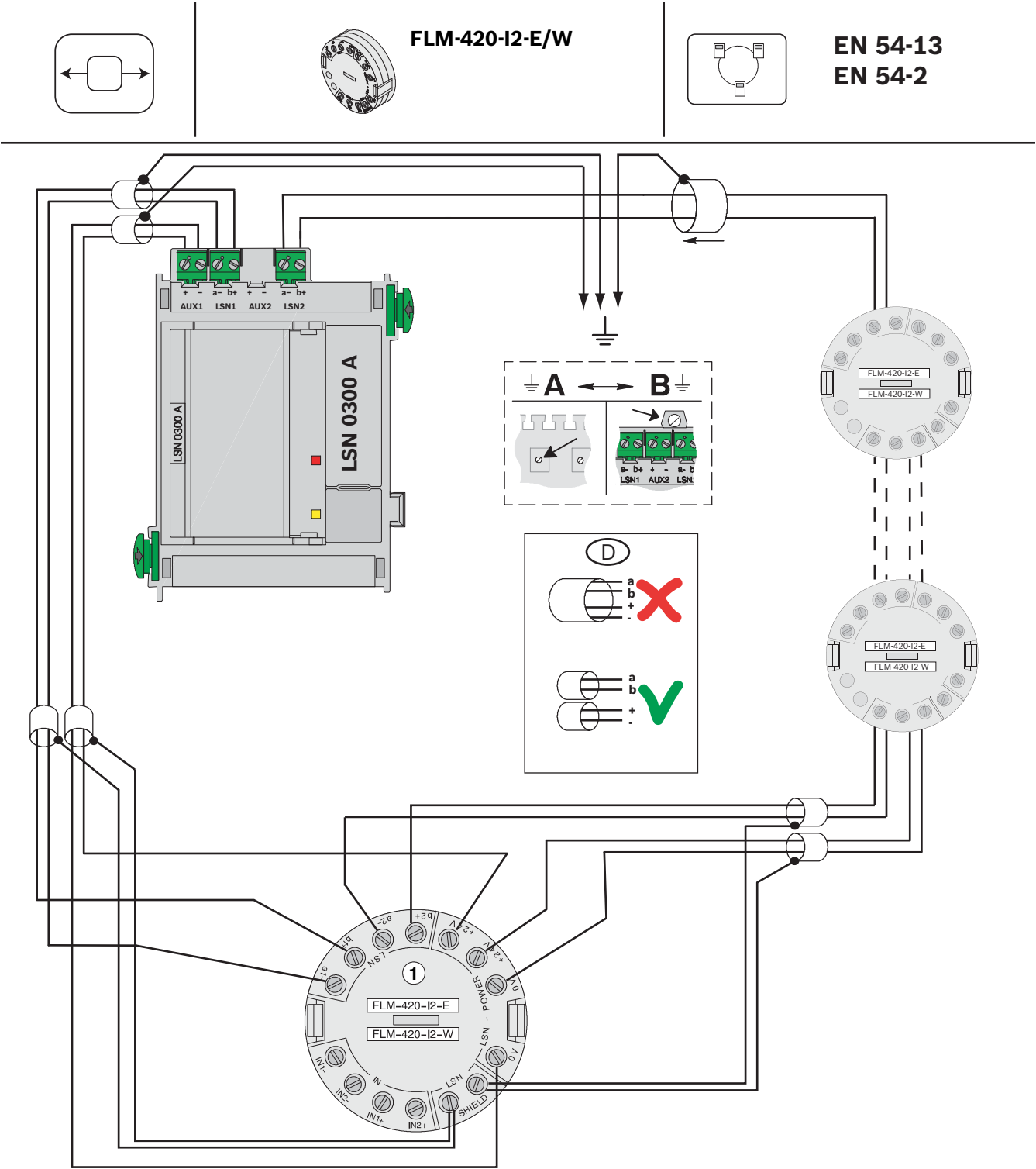
EN 54-13

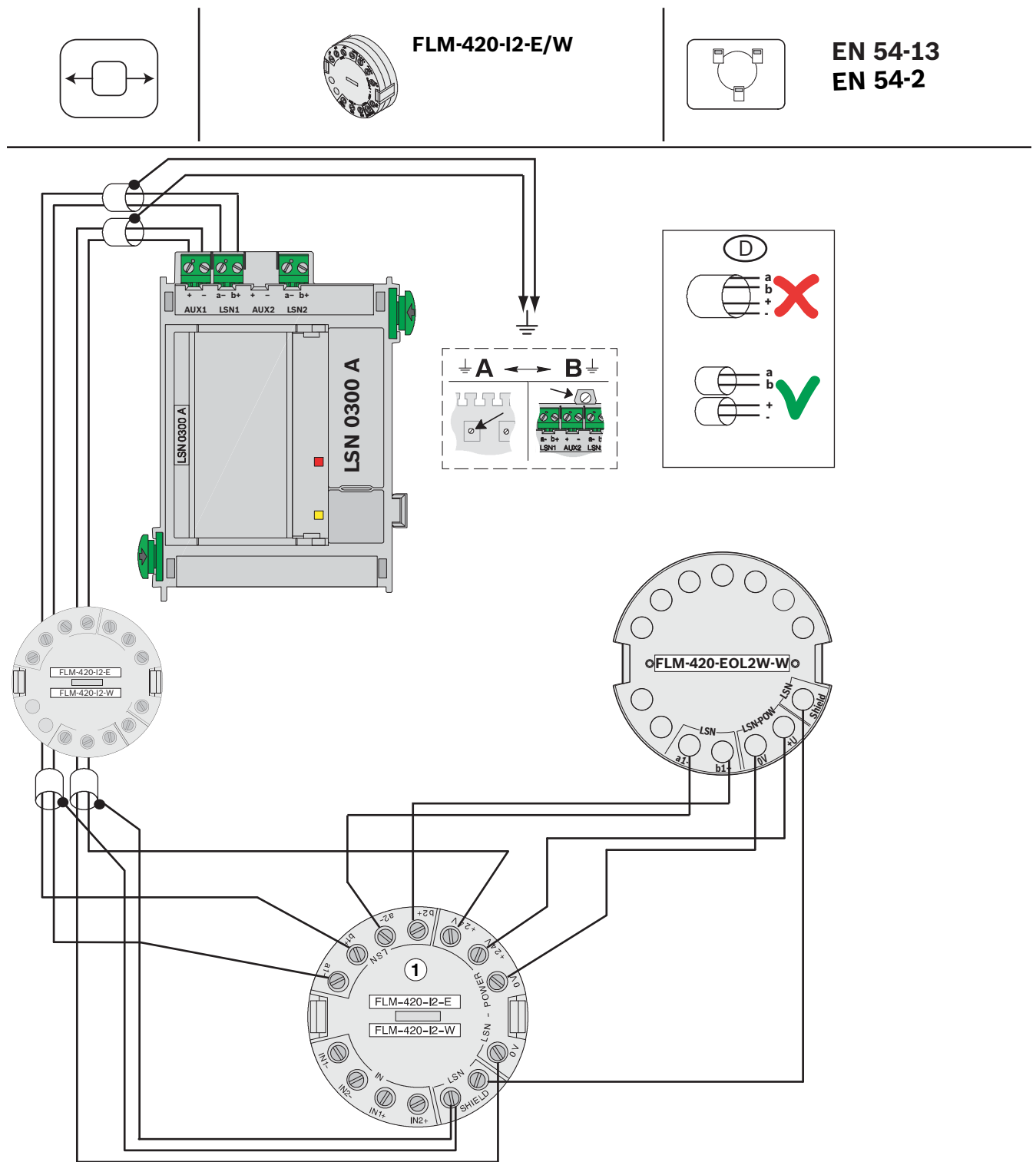


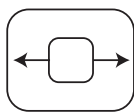
LSN 0300 A	266
CZM 0004 A	308
FLM-420/4-CON-S/D	311



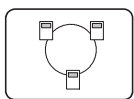
**FLM-420-I2-D**



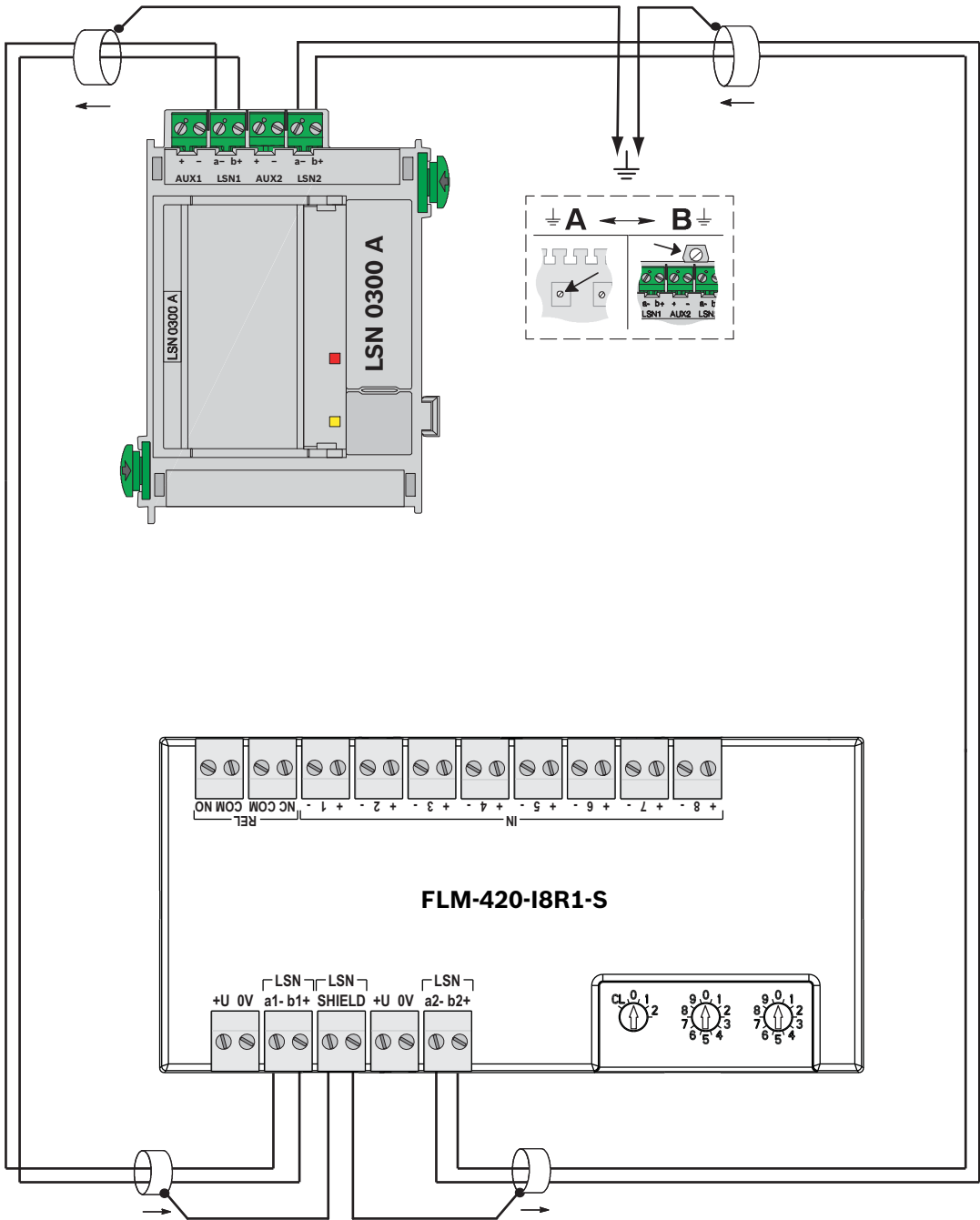


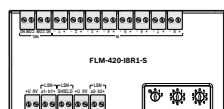
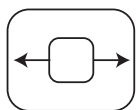


FLM-420-I8R1-S

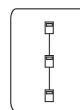


EN54-13

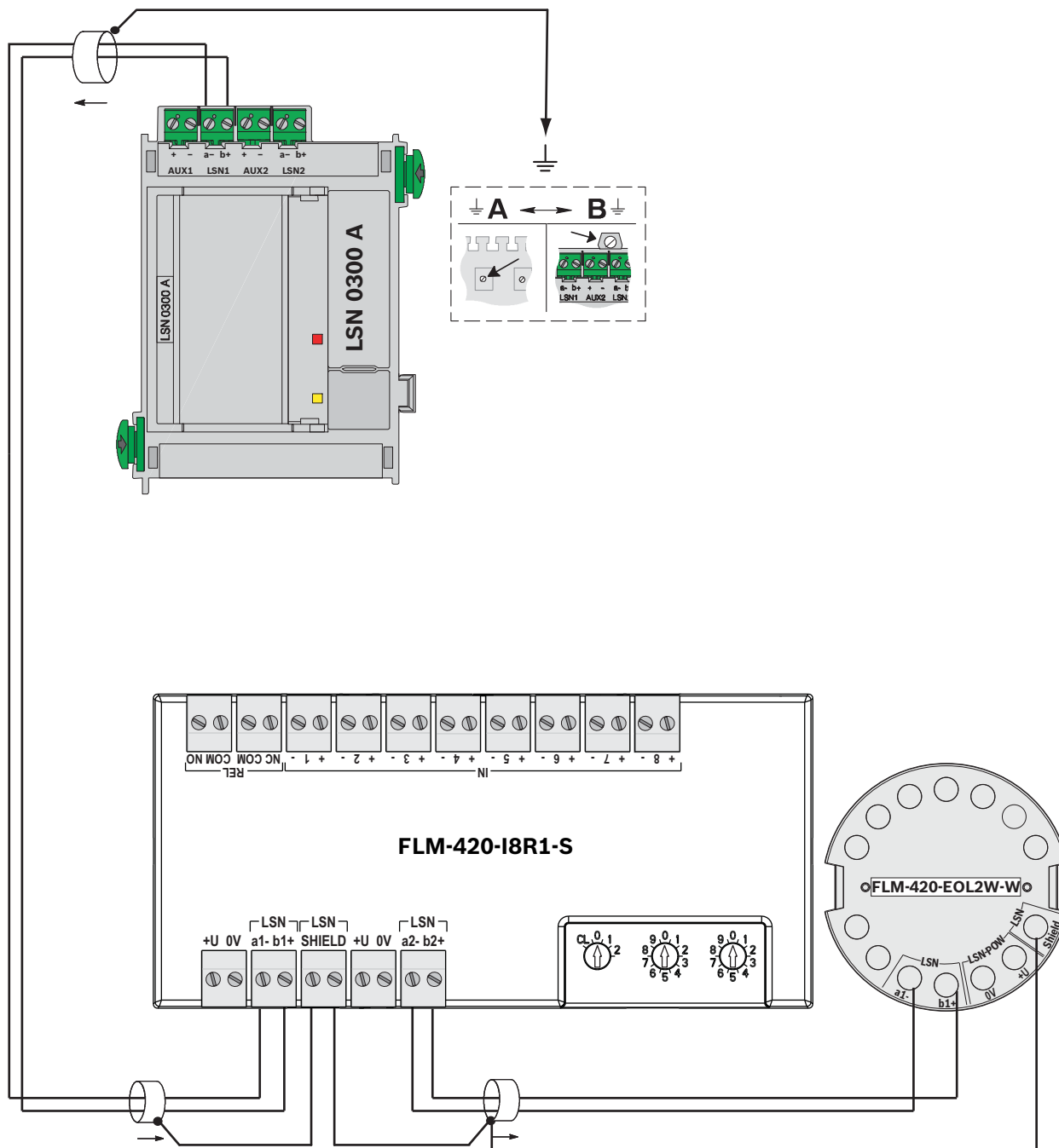


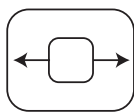


FLM-420-I8R1-S

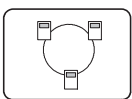


EN54-13

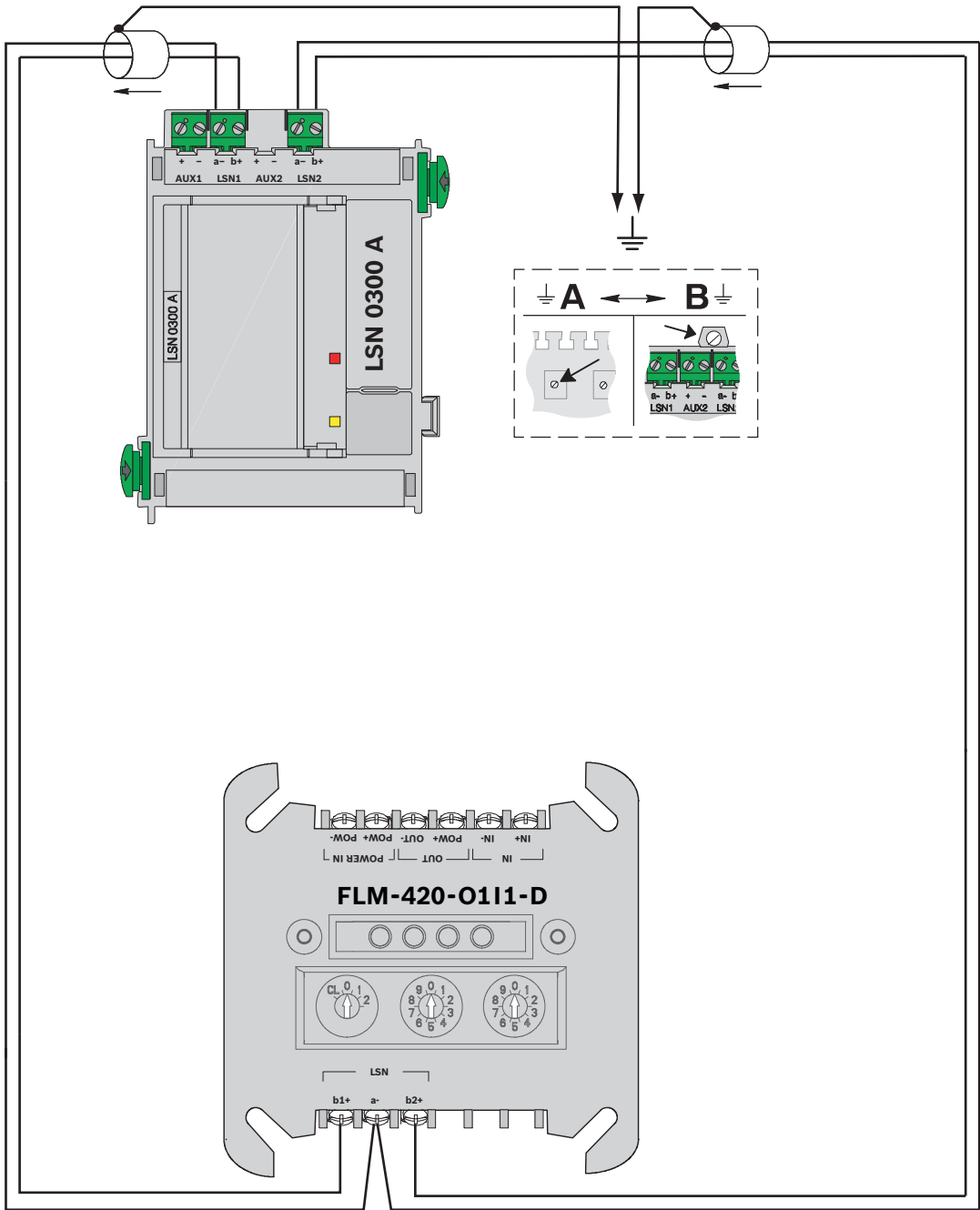


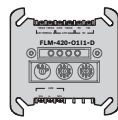
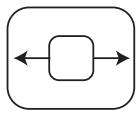


FLM-420-O111-D

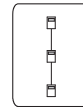
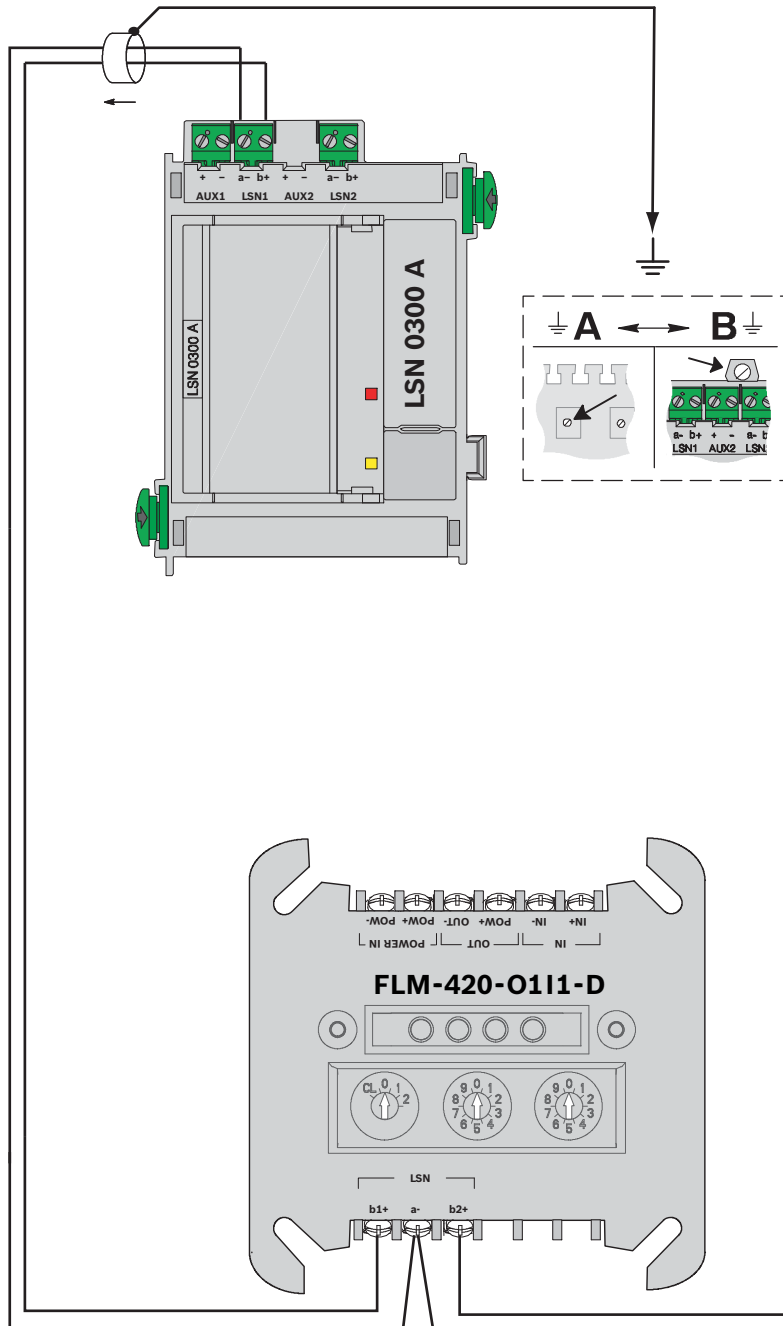


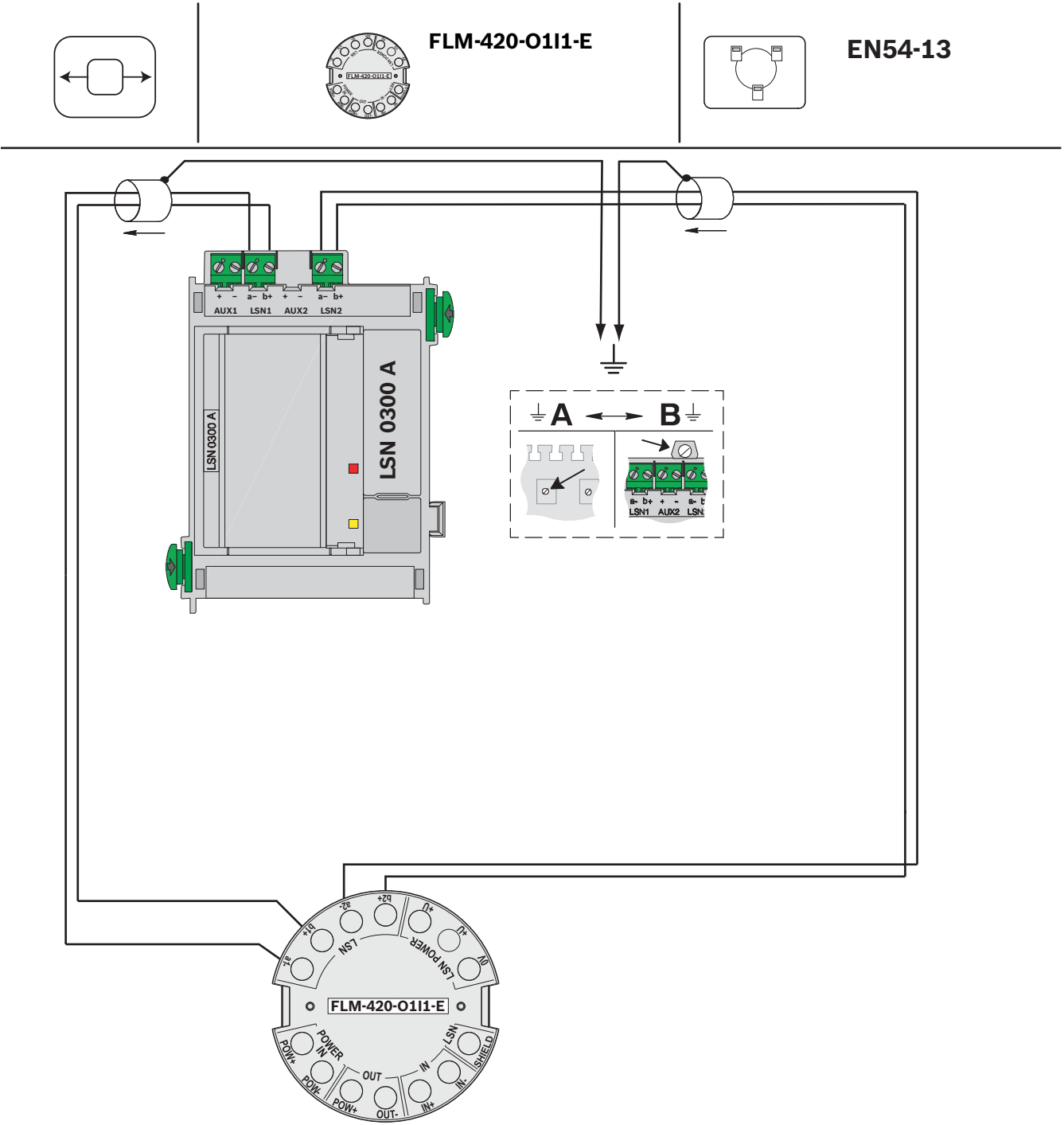
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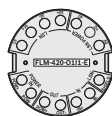
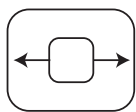




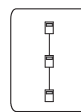
FLM-420-O1I1-D

**EN54-13**

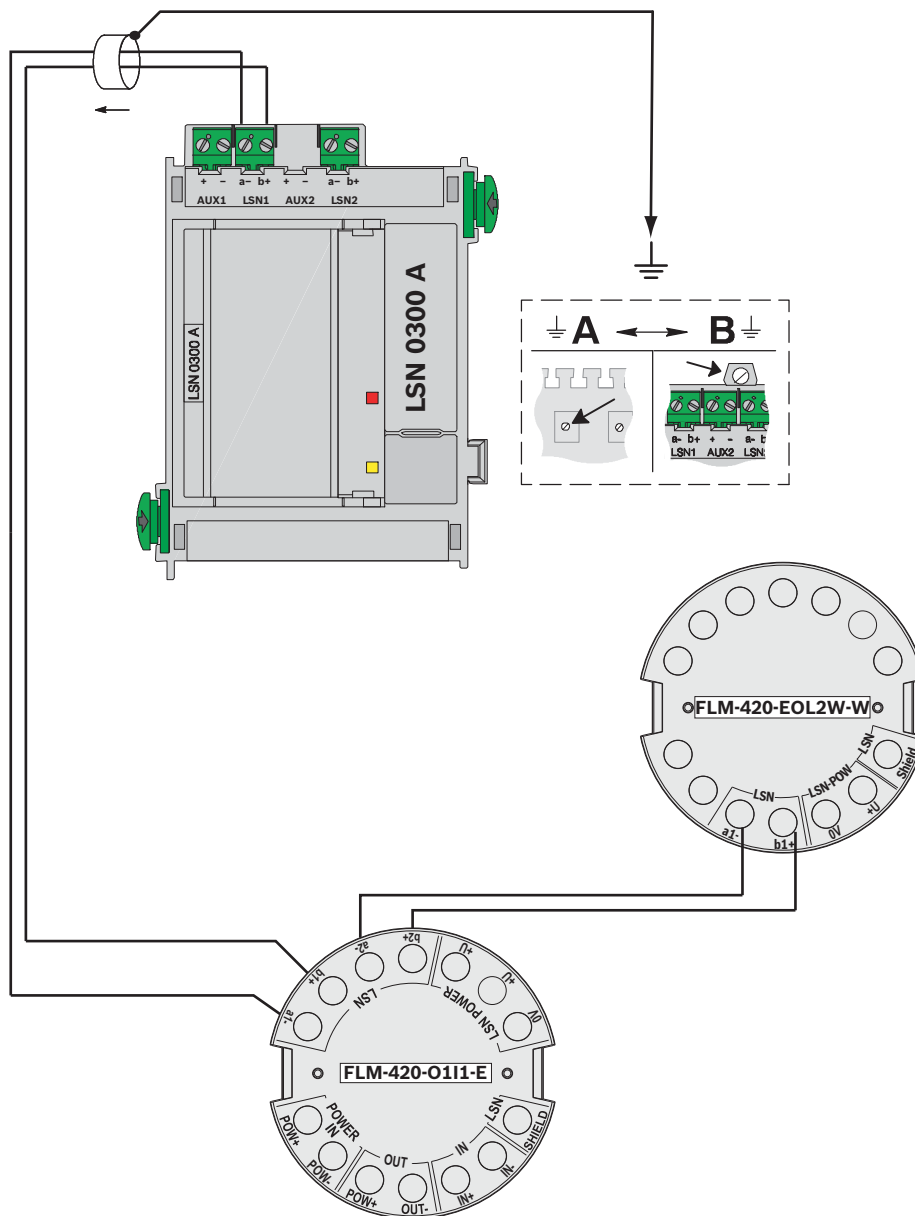


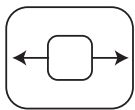


FLM-420-O1I1-E

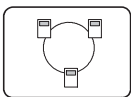


EN54-13

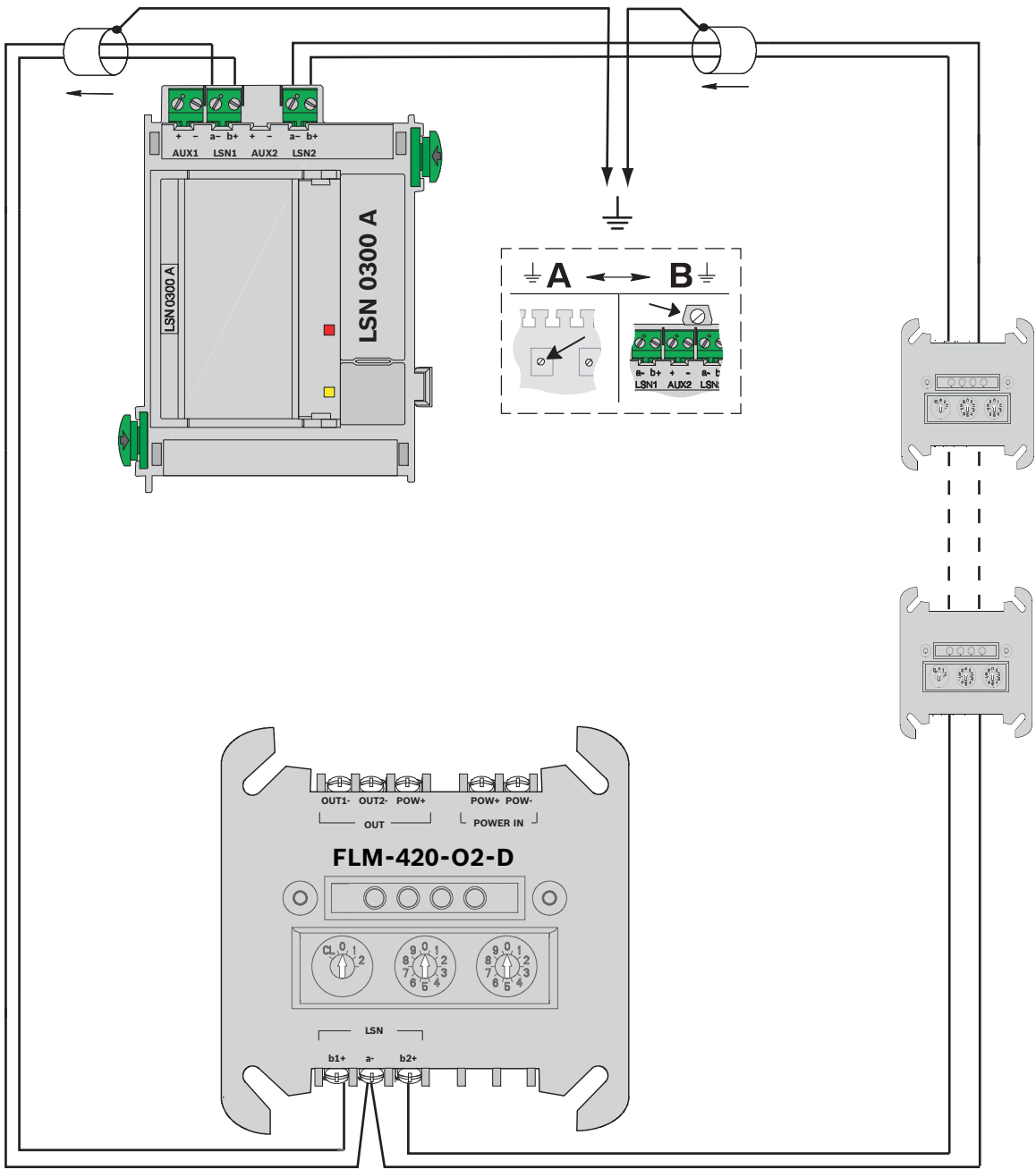


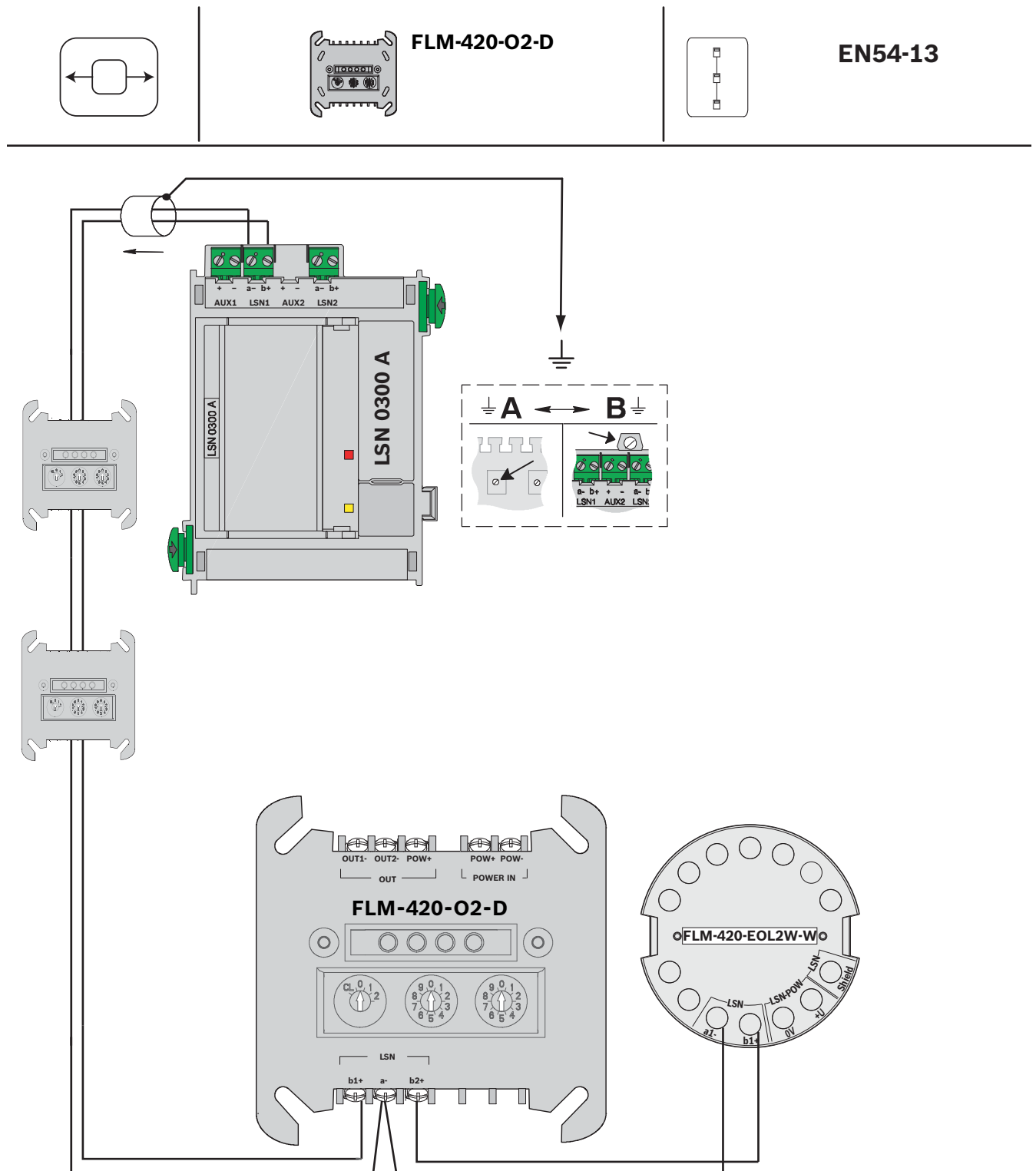


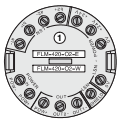
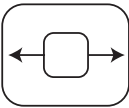
FLM-420-O2-D



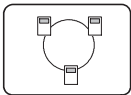
EN54-13



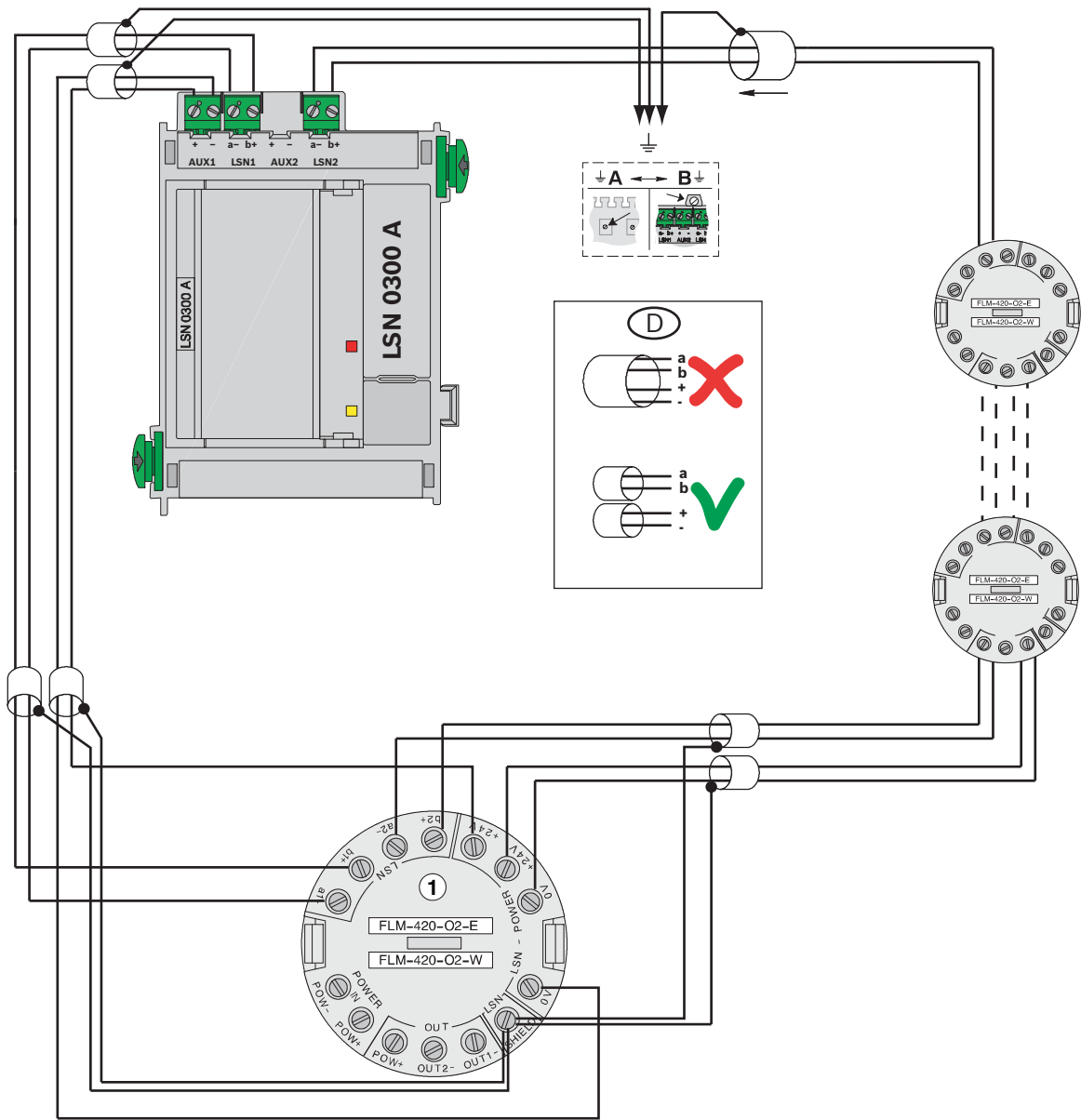


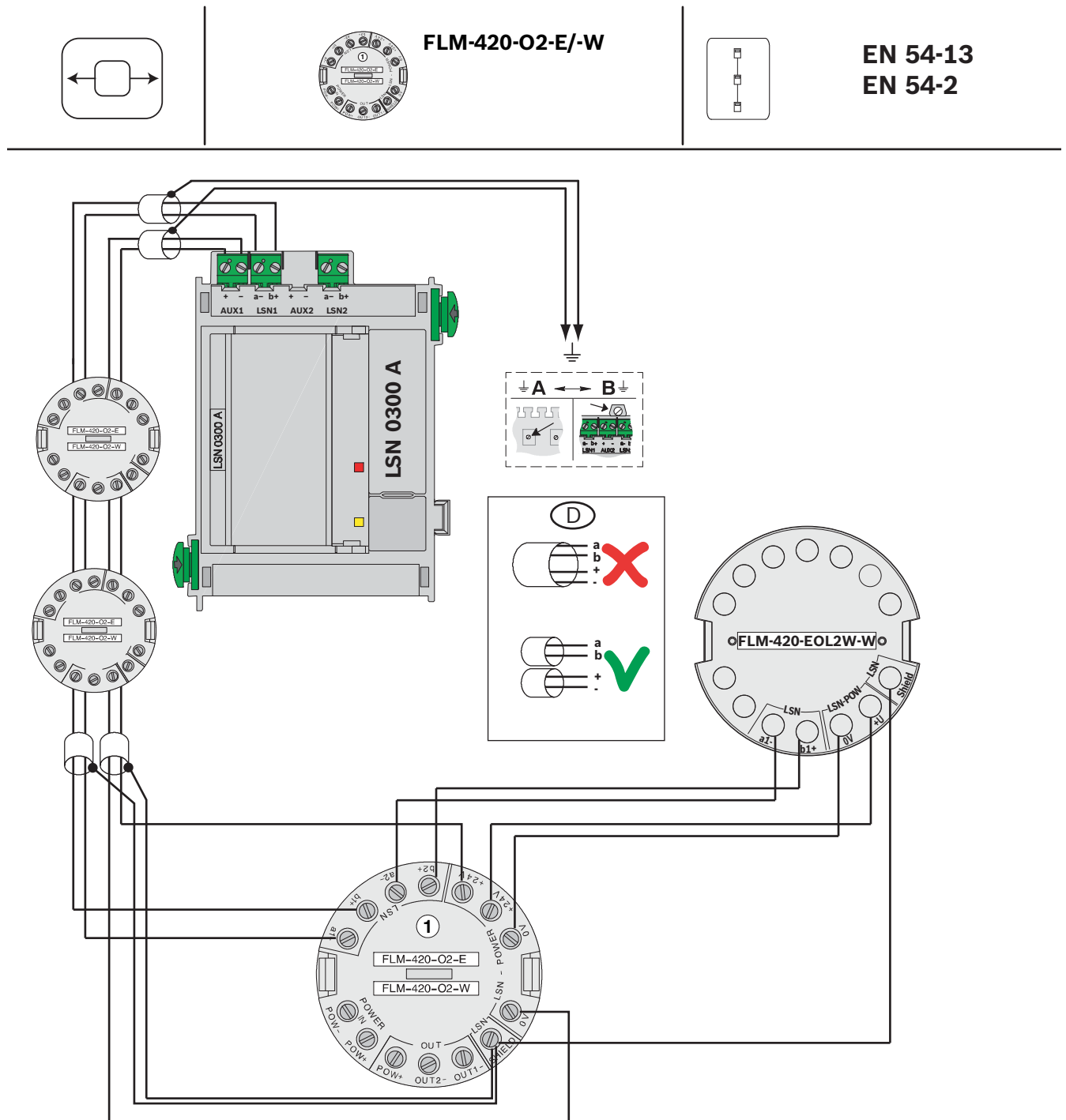


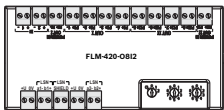
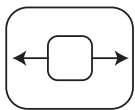
FLM-420-O2-E/-W



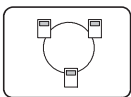
EN 54-13
EN 54-2



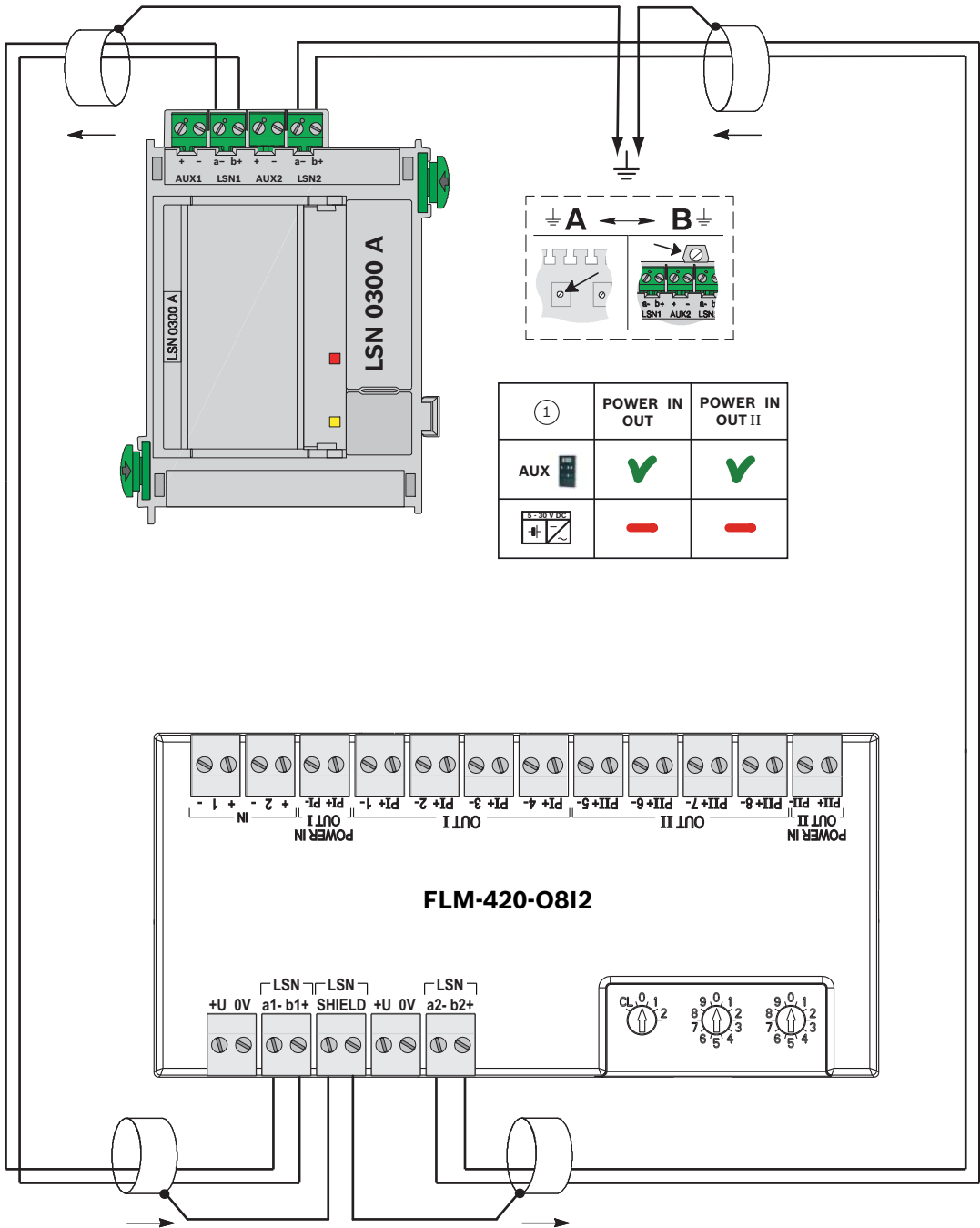


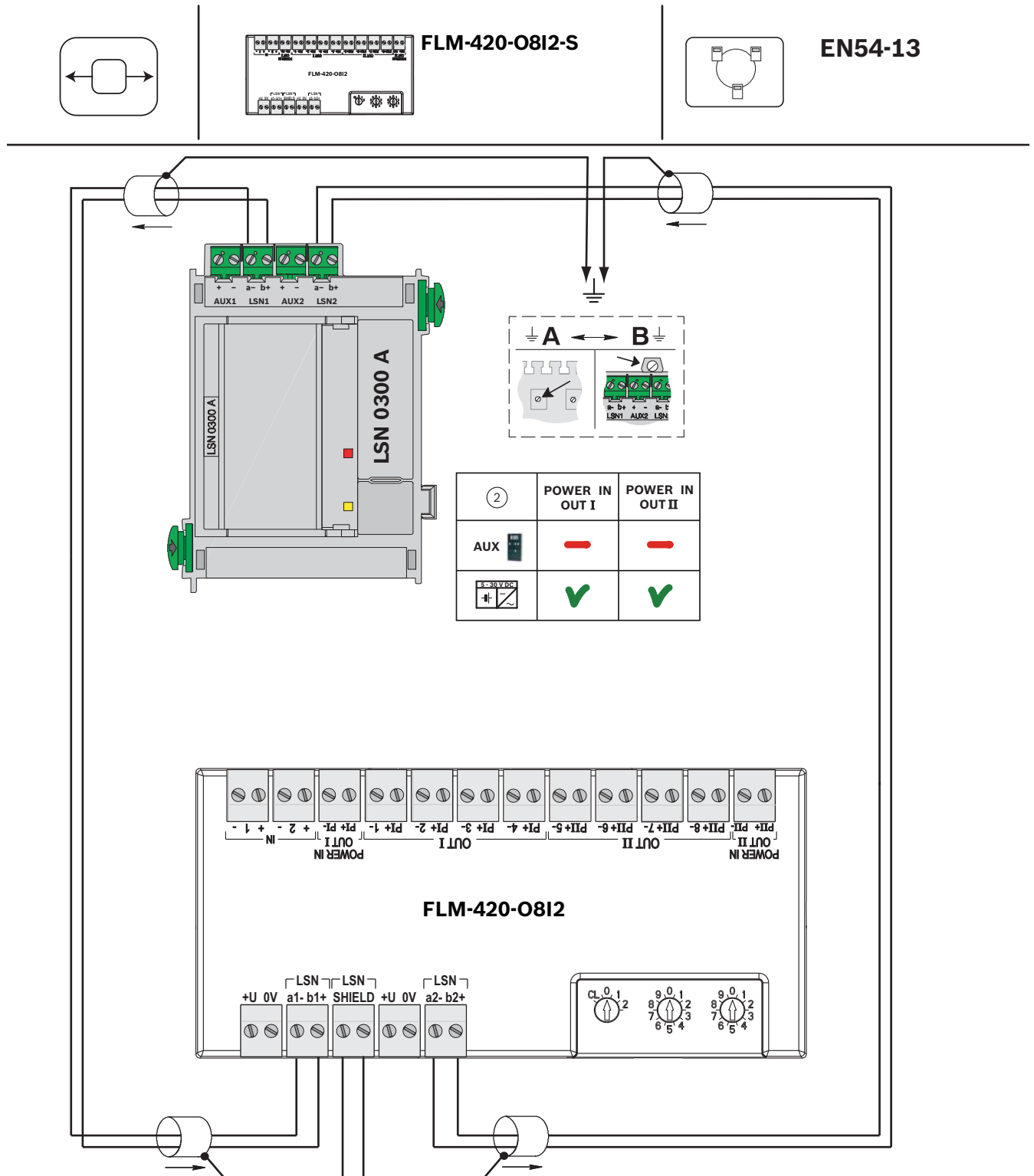


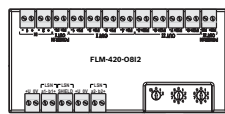
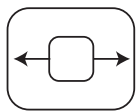
FLM-420-08I2-S



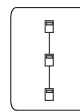
EN54-13



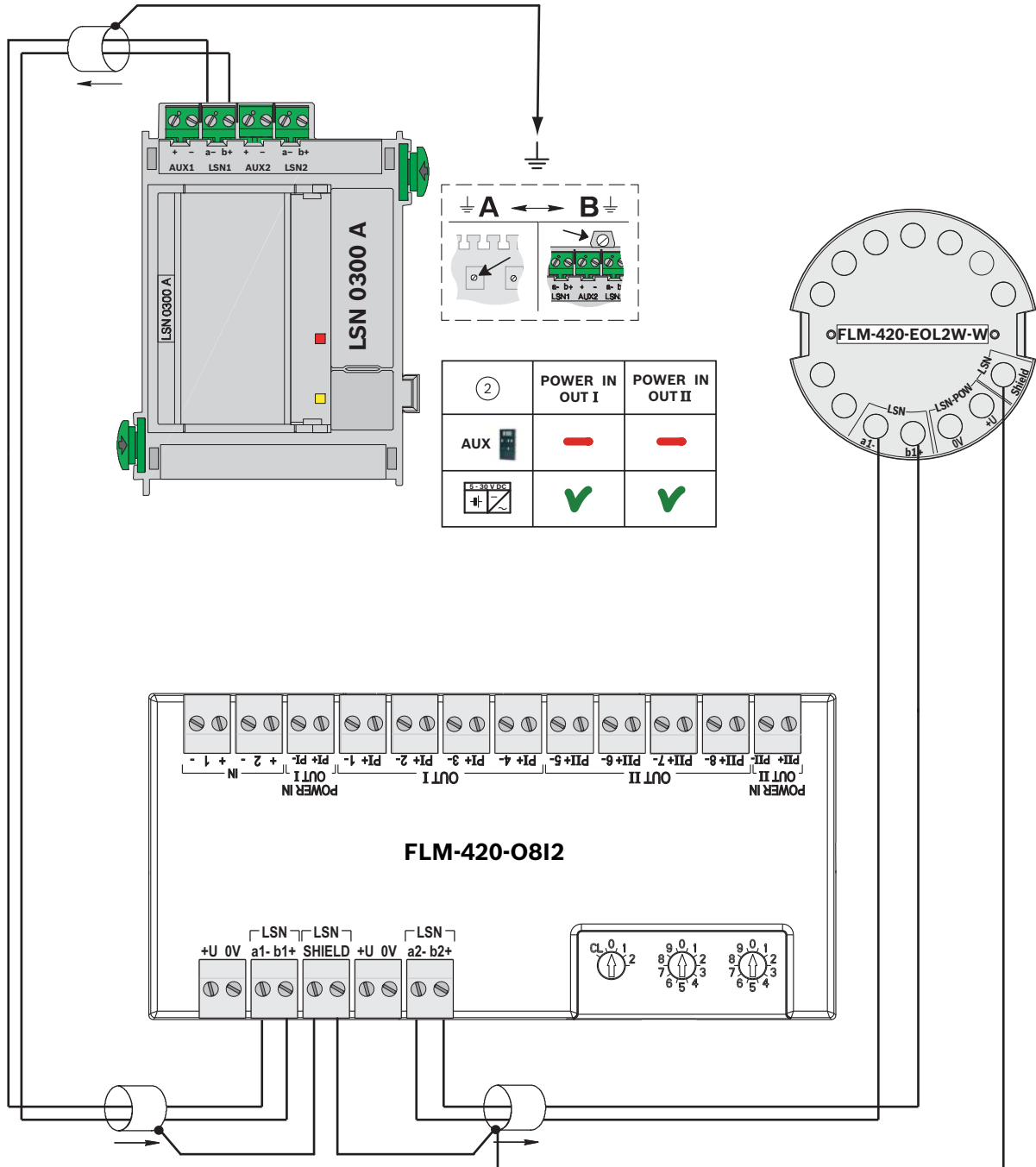


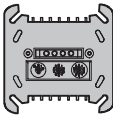
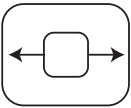


FLM-420-08I2-S

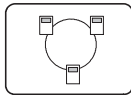


EN54-13

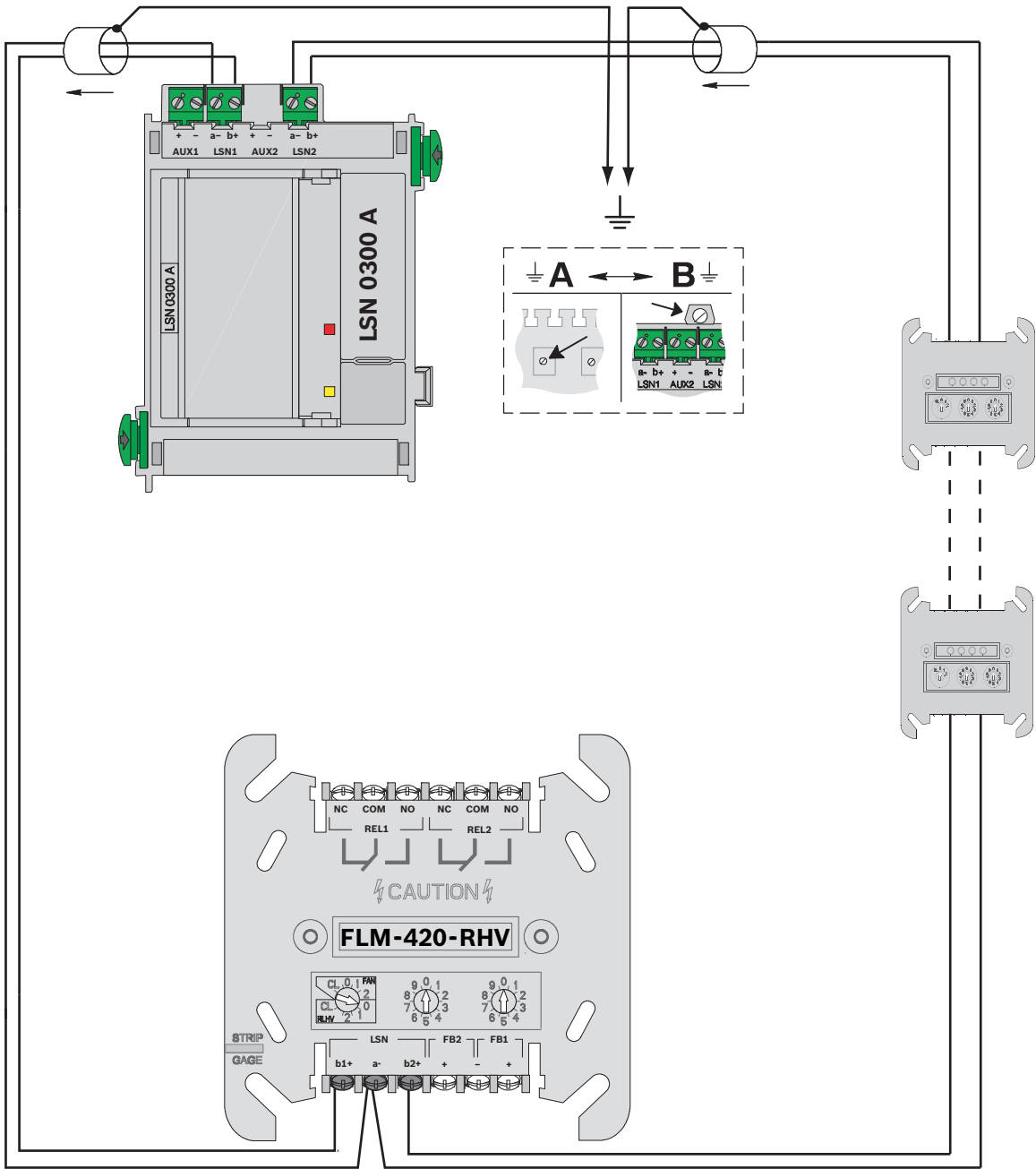


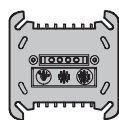
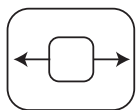
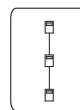
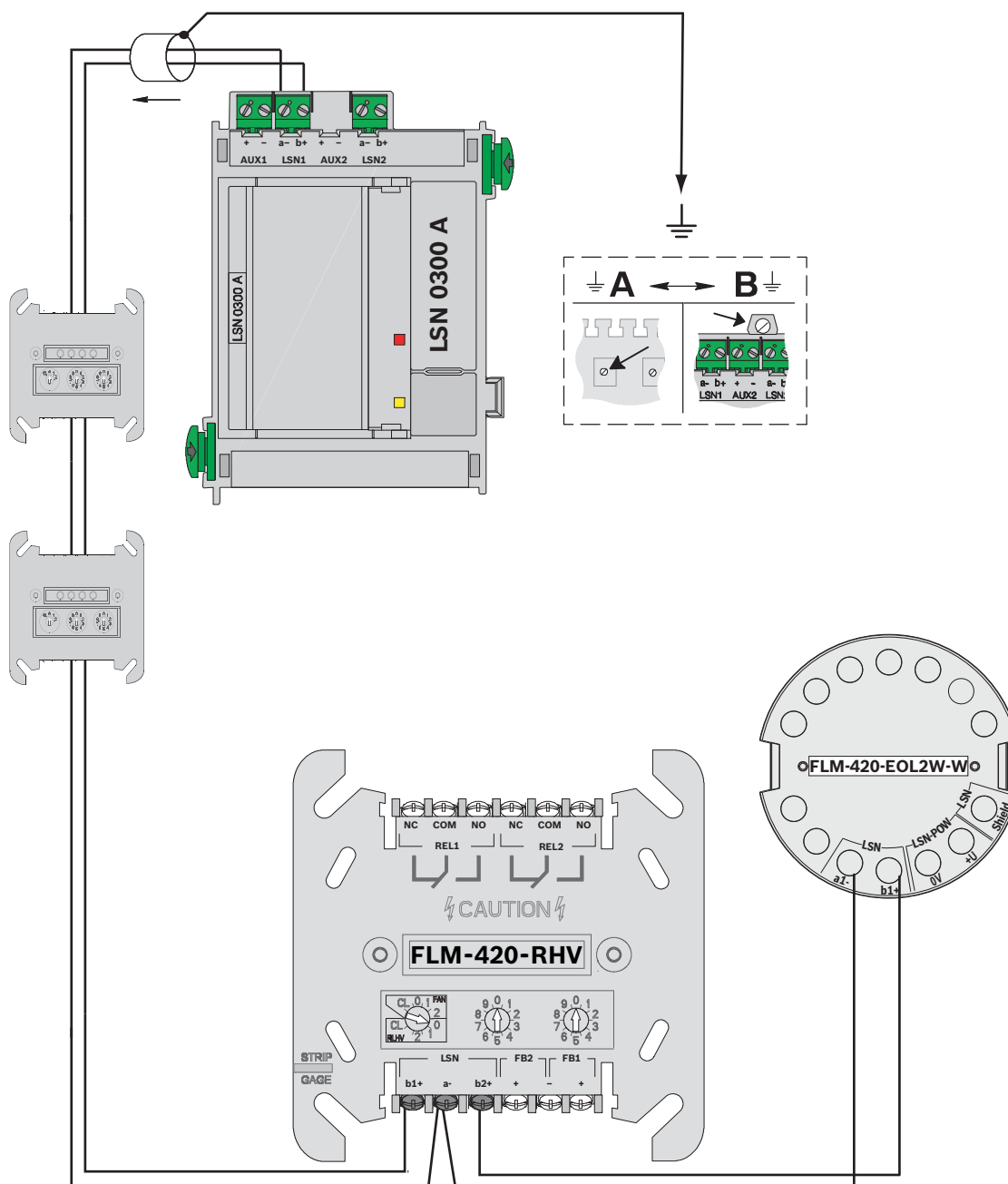


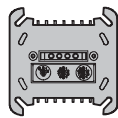
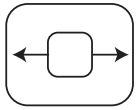
FLM-420-RHV-D/S



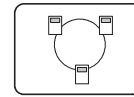
EN54-13



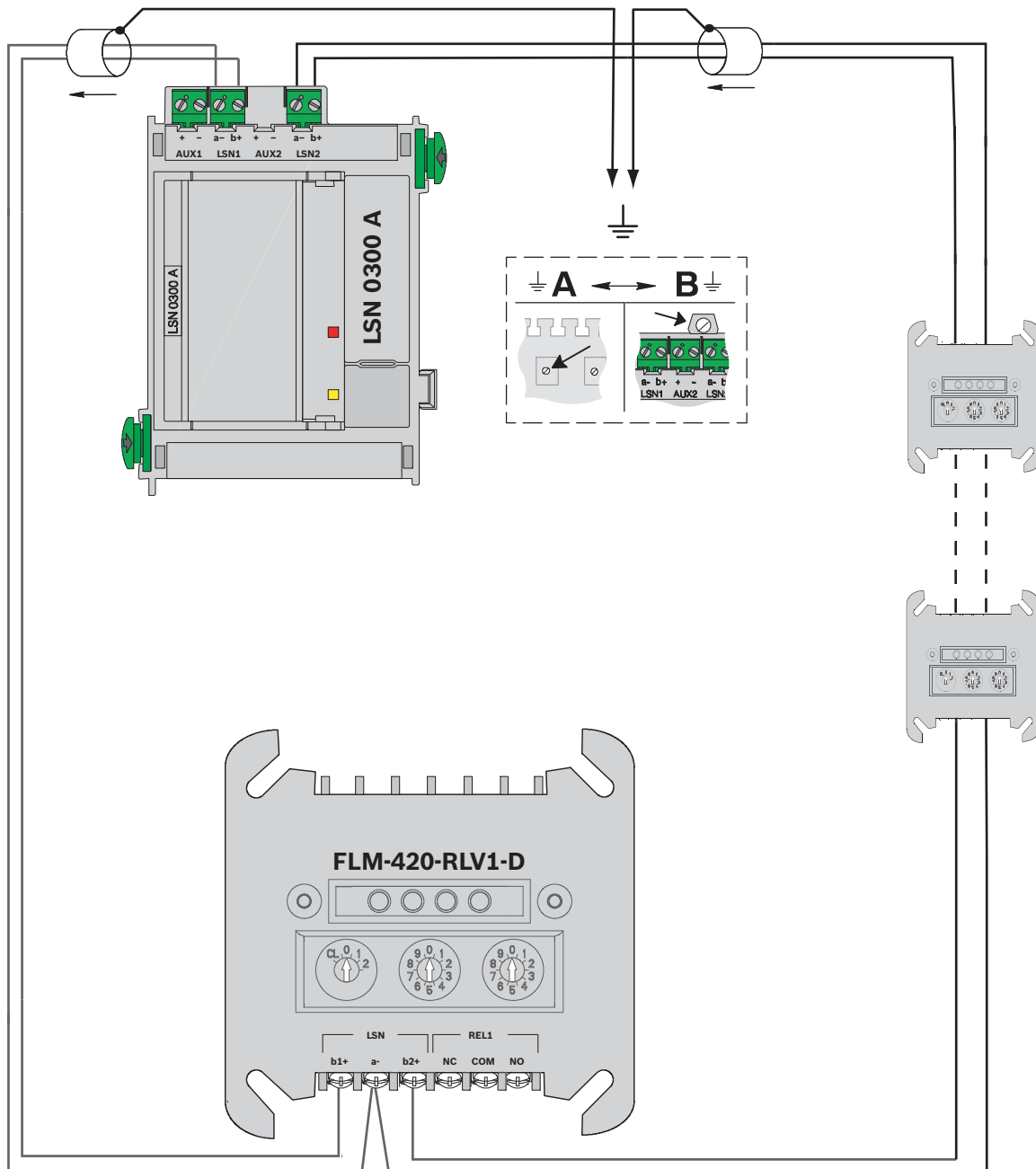
**FLM-420-RHV-D/S****EN54-13**

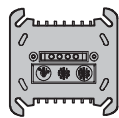
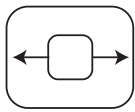
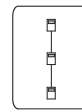
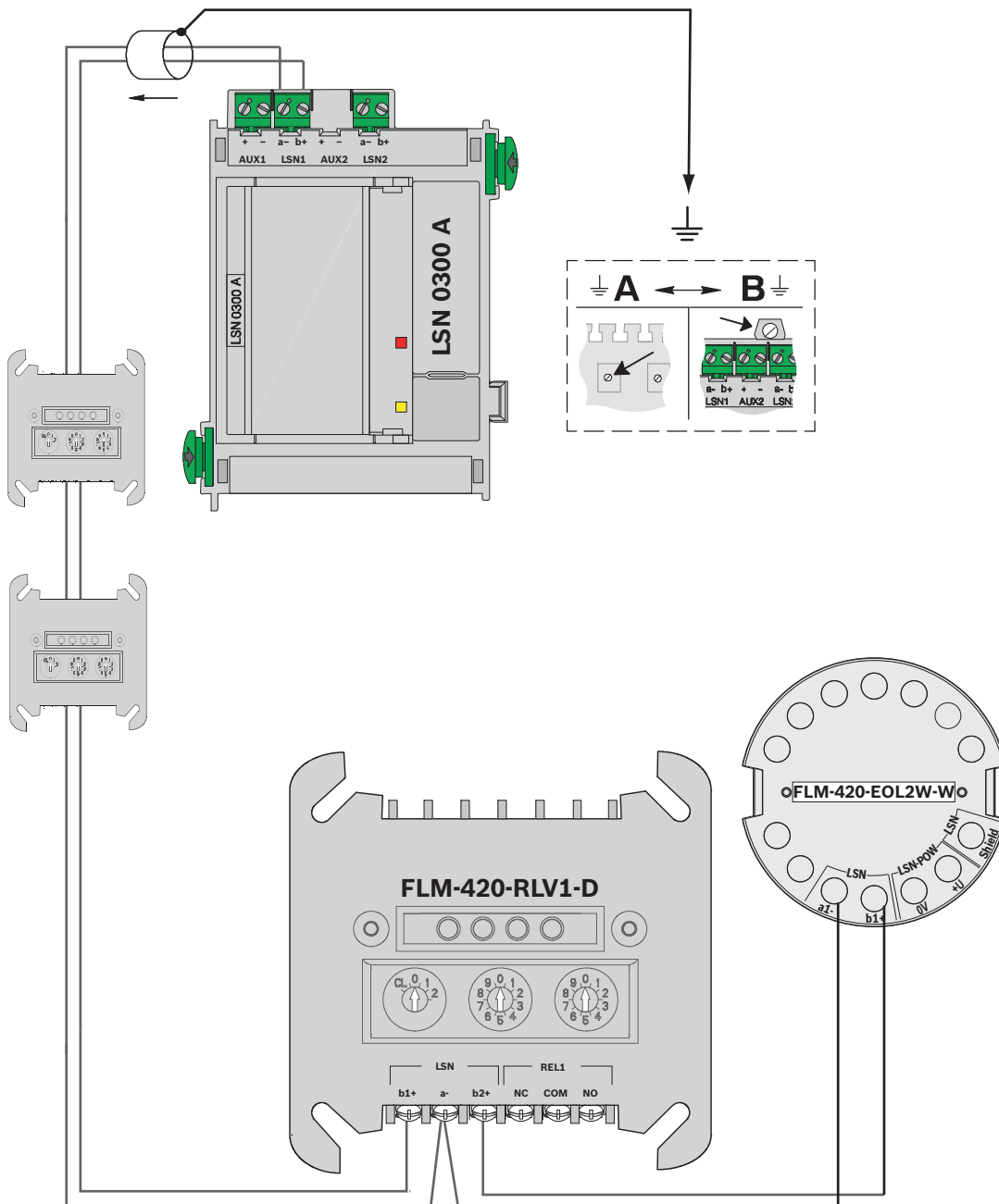


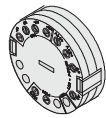
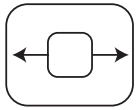
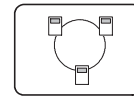
FLM-420-RLV1-D



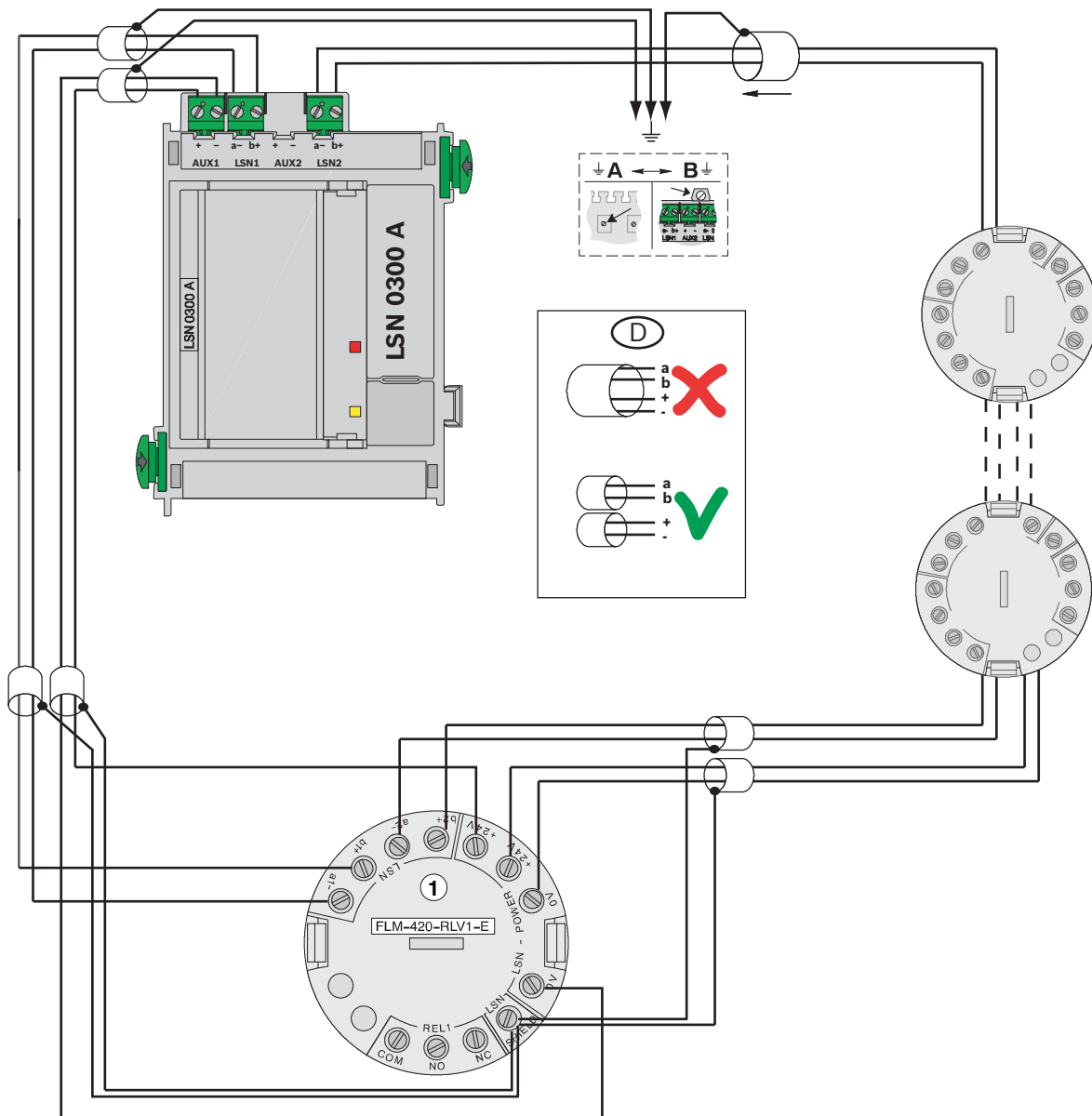
EN54-13

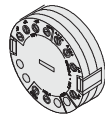
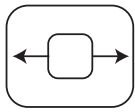
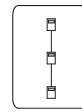
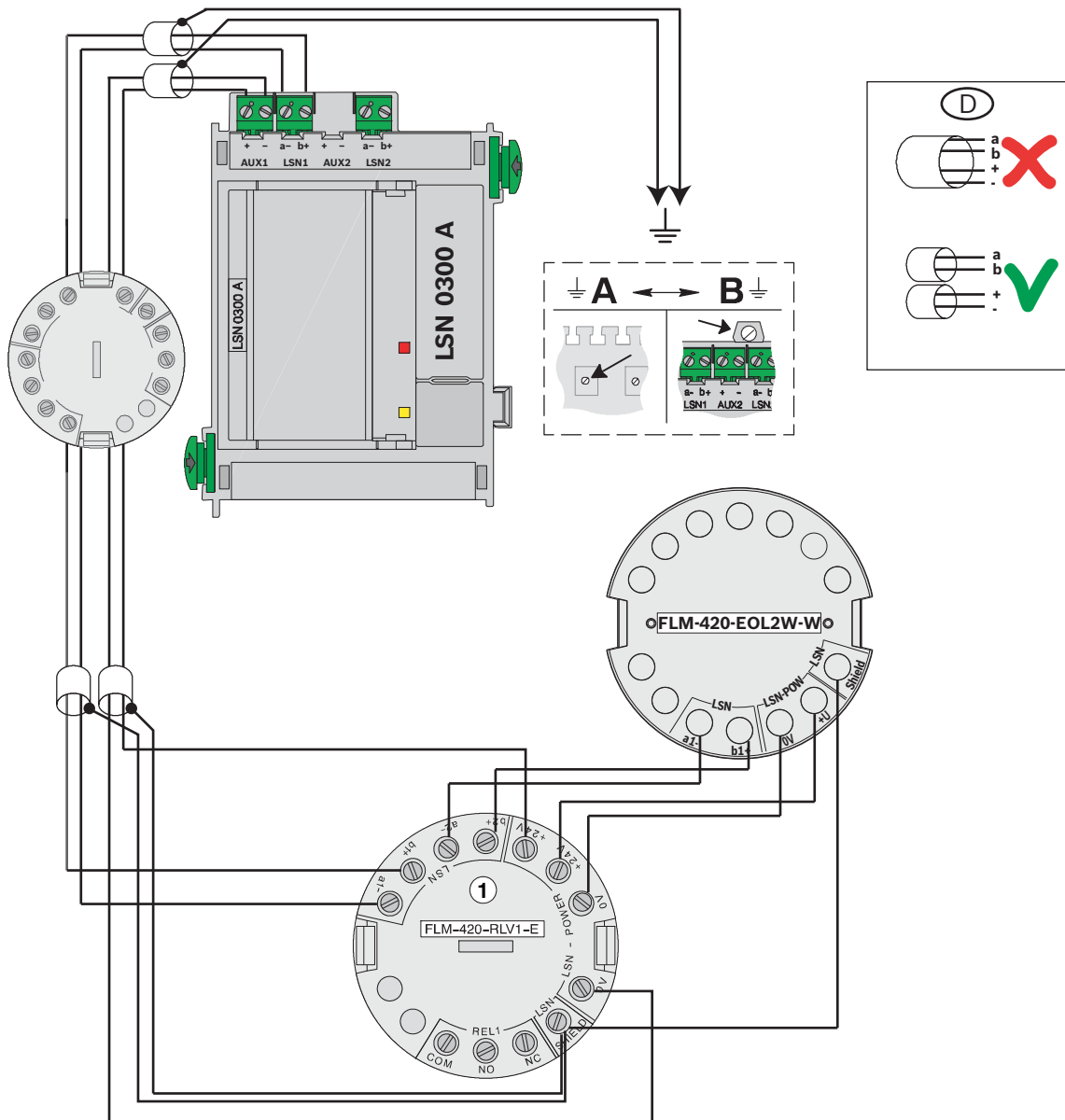


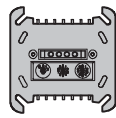
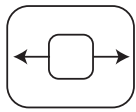
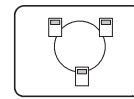
**FLM-420-RLV1-D****EN54-13**

**FLM-420-RLV1-E**

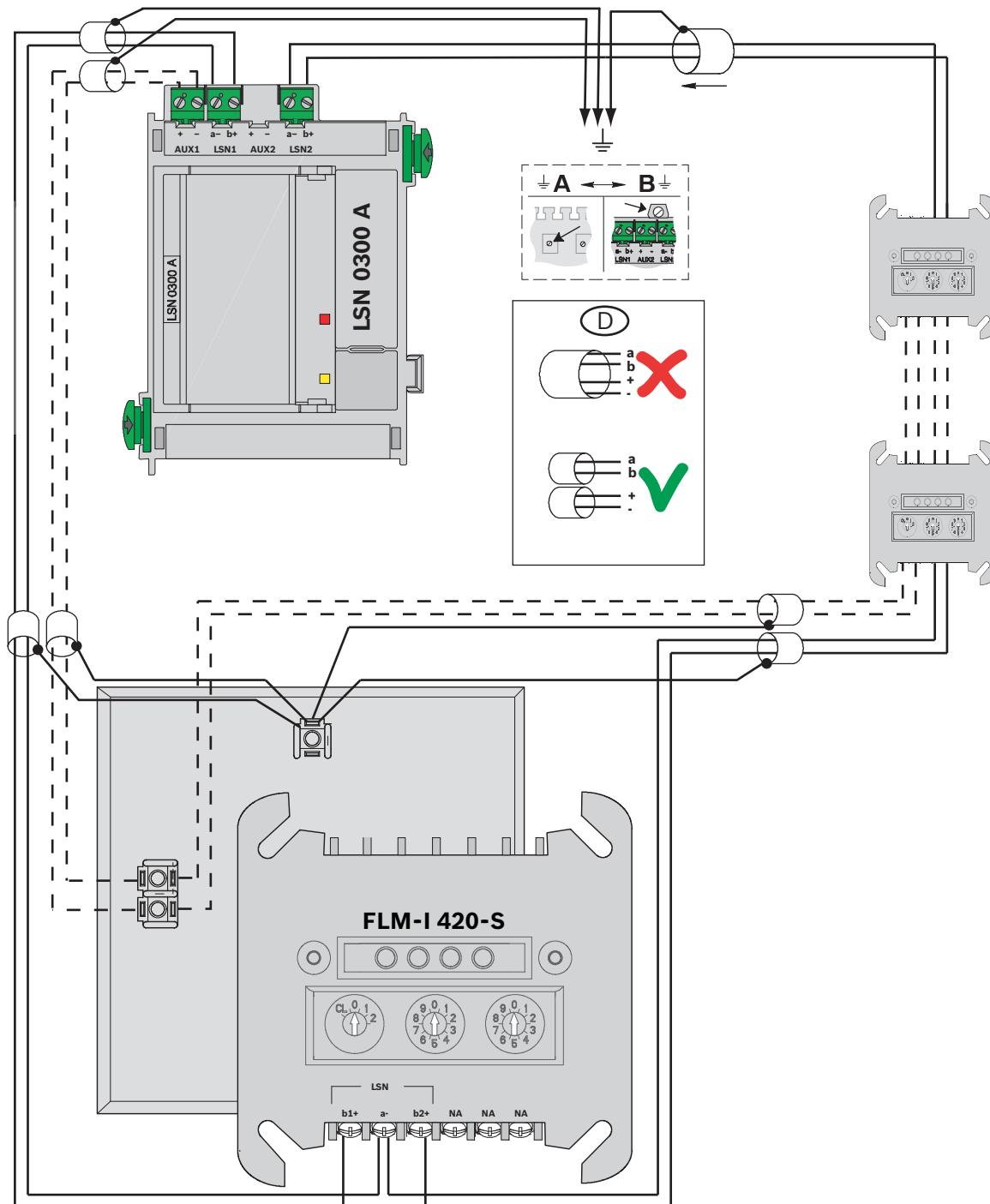
EN 54-13
EN 54-2

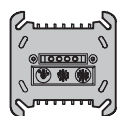
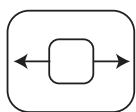
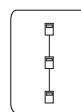


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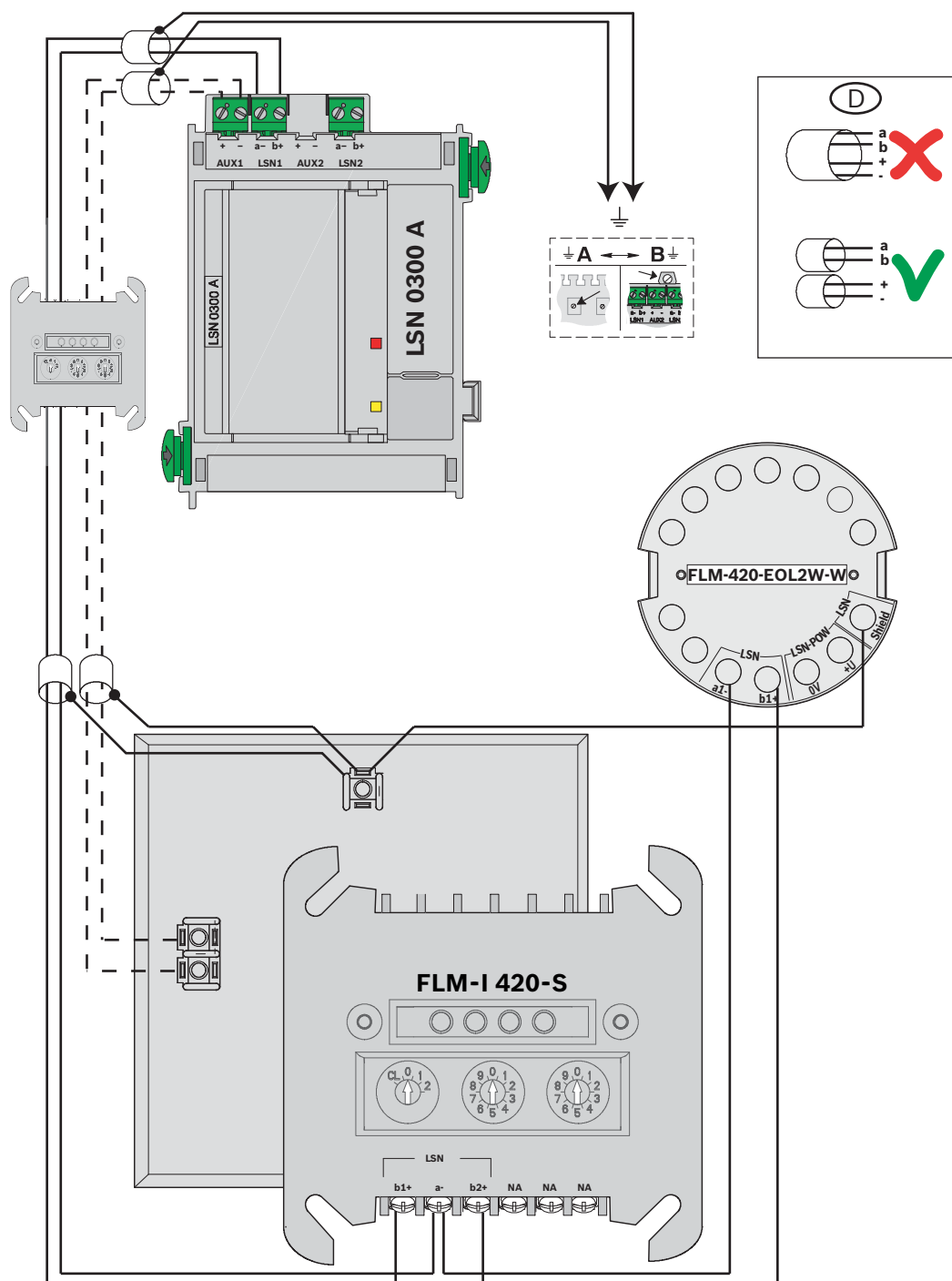
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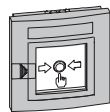
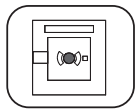
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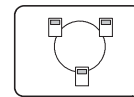
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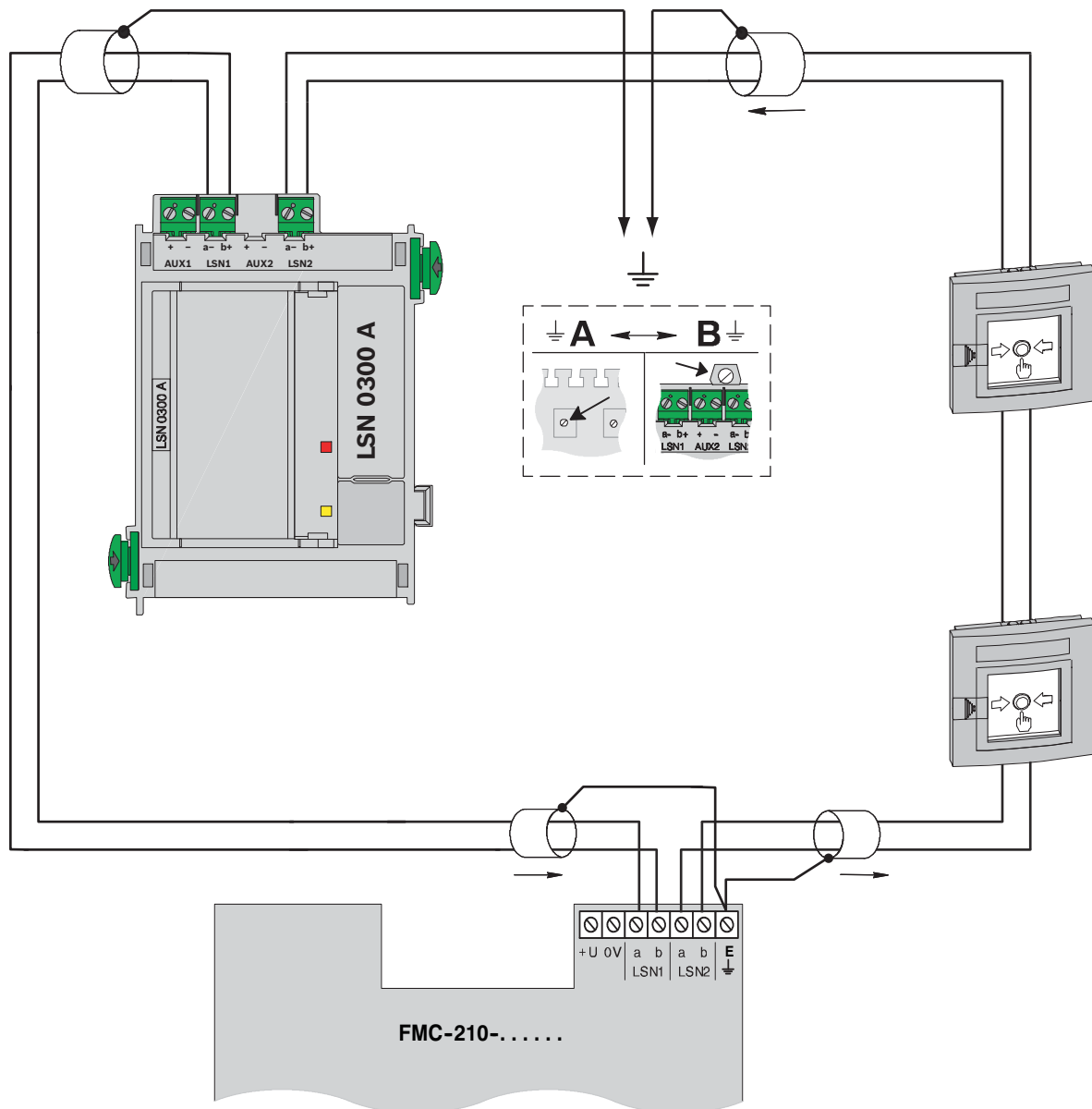


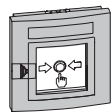
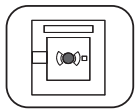


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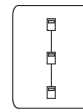


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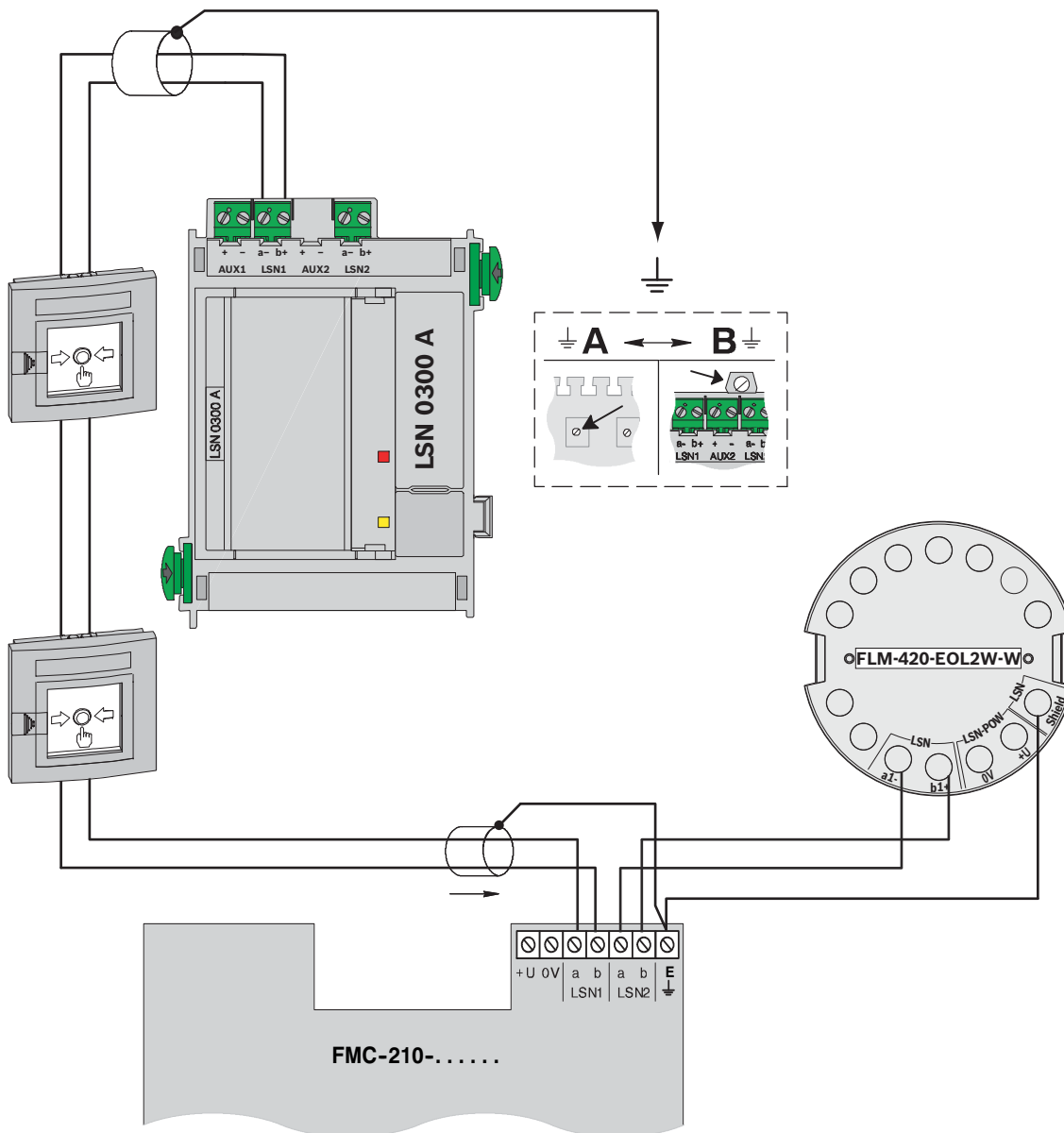




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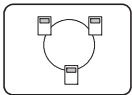


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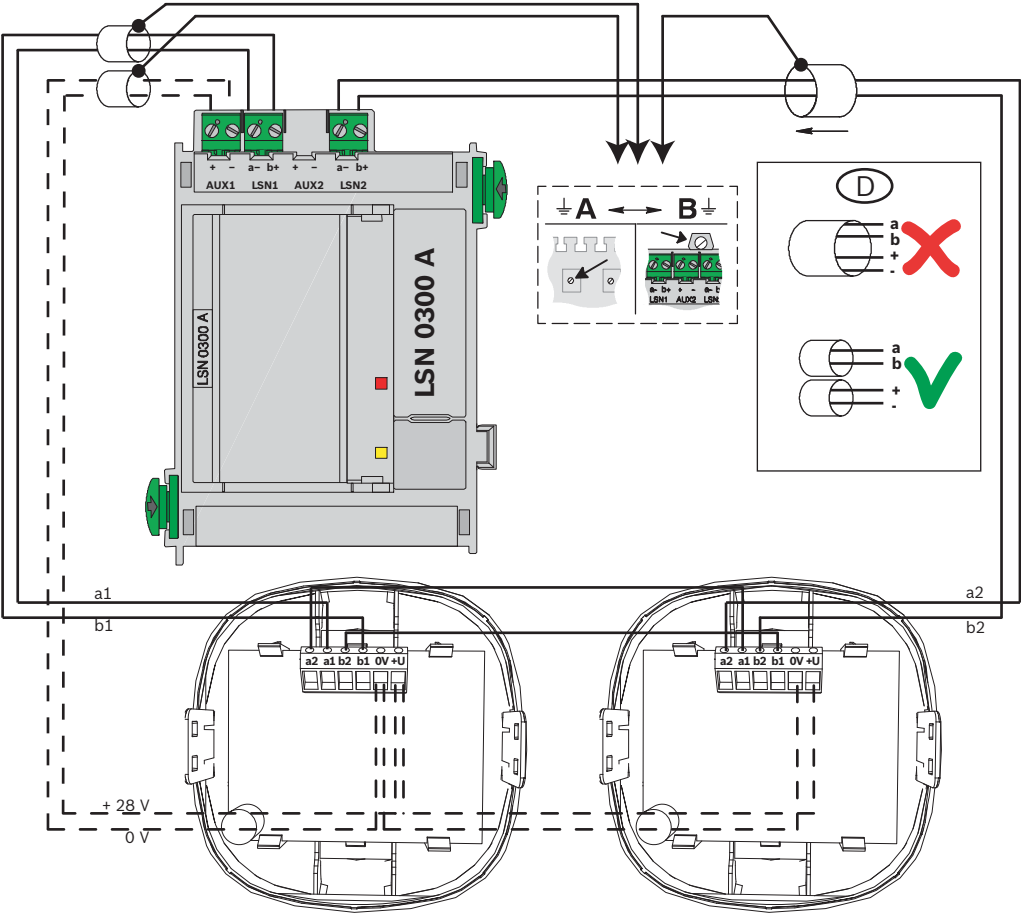




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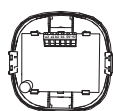


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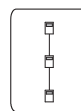


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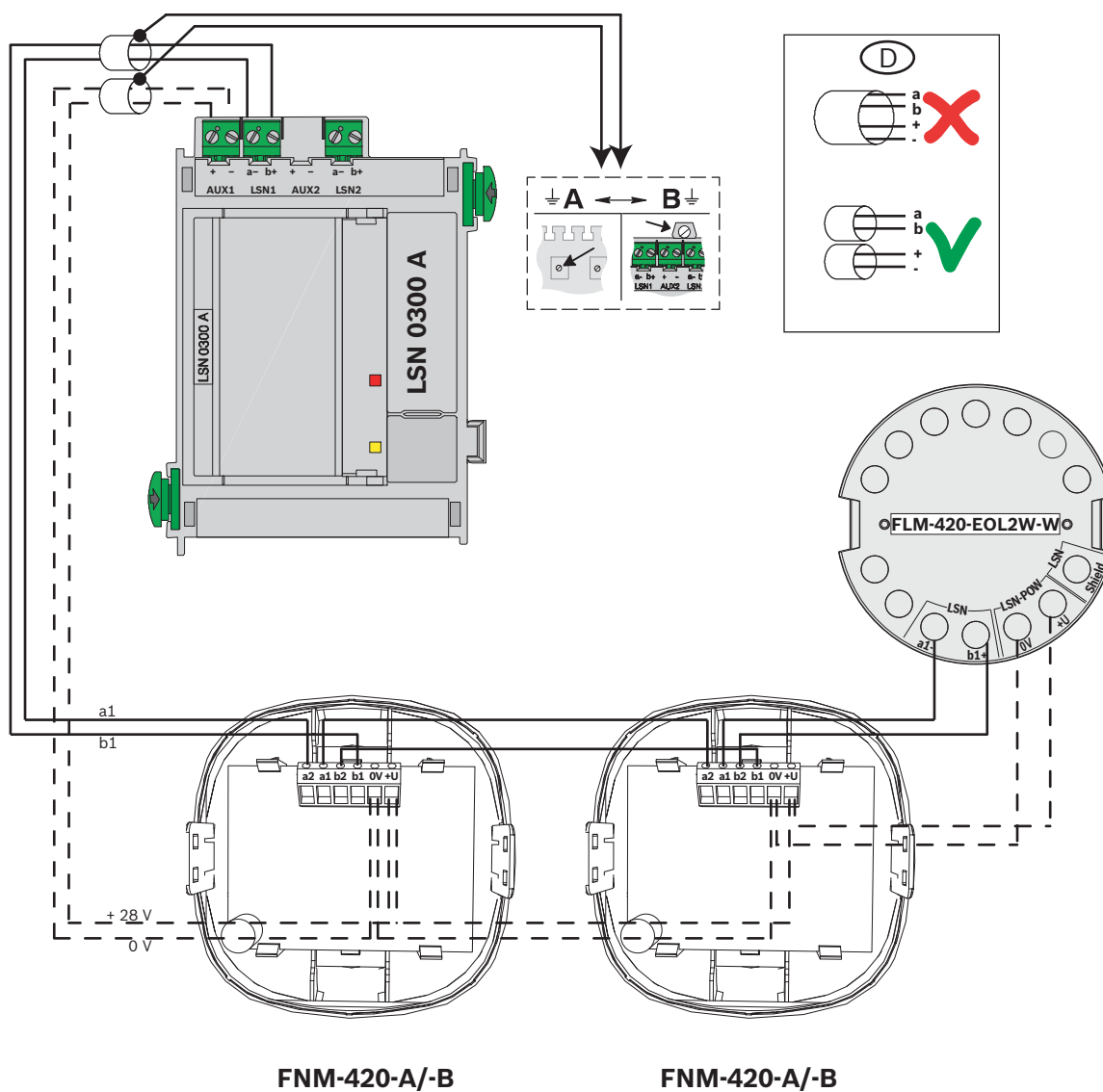
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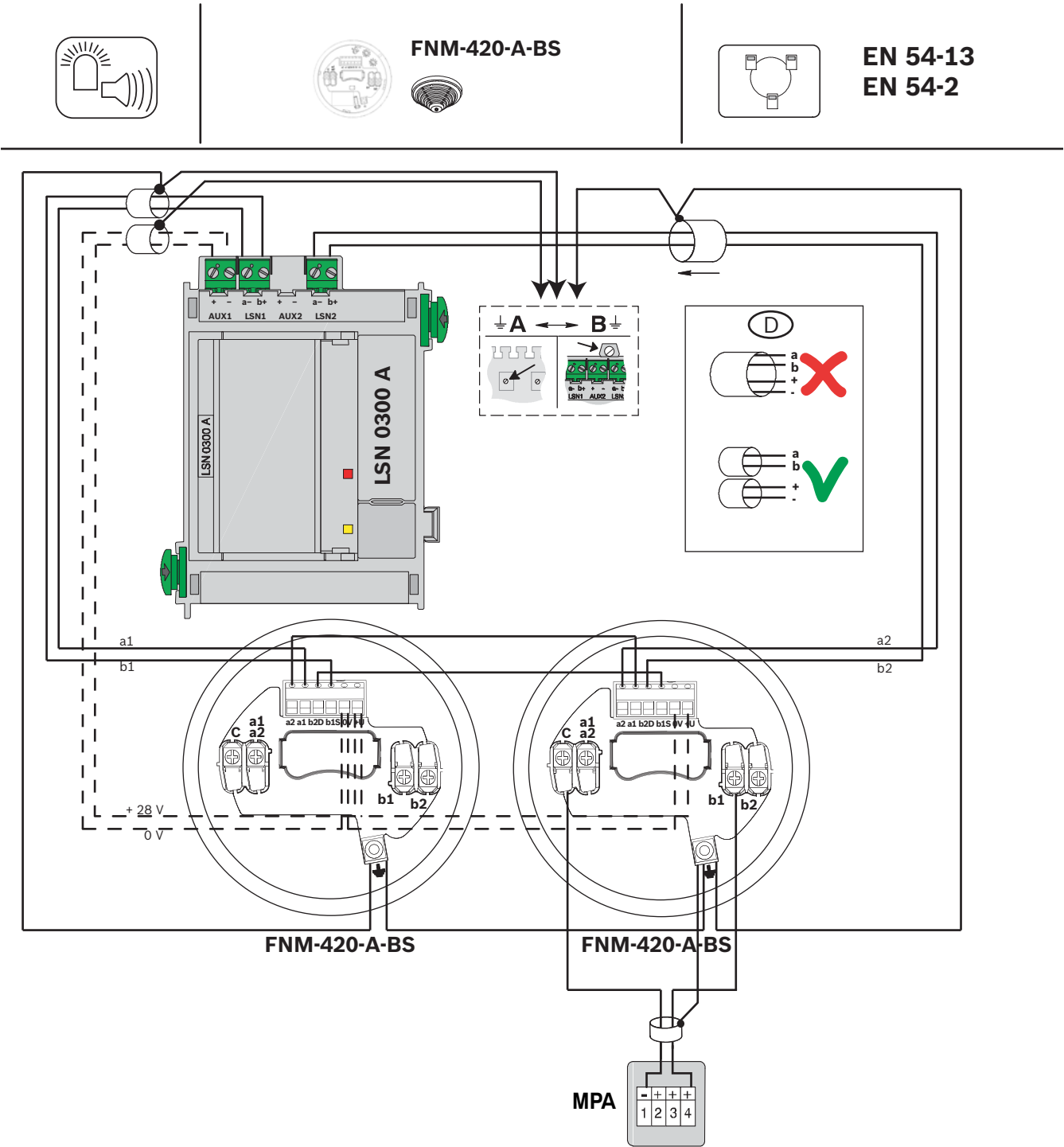


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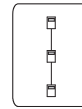
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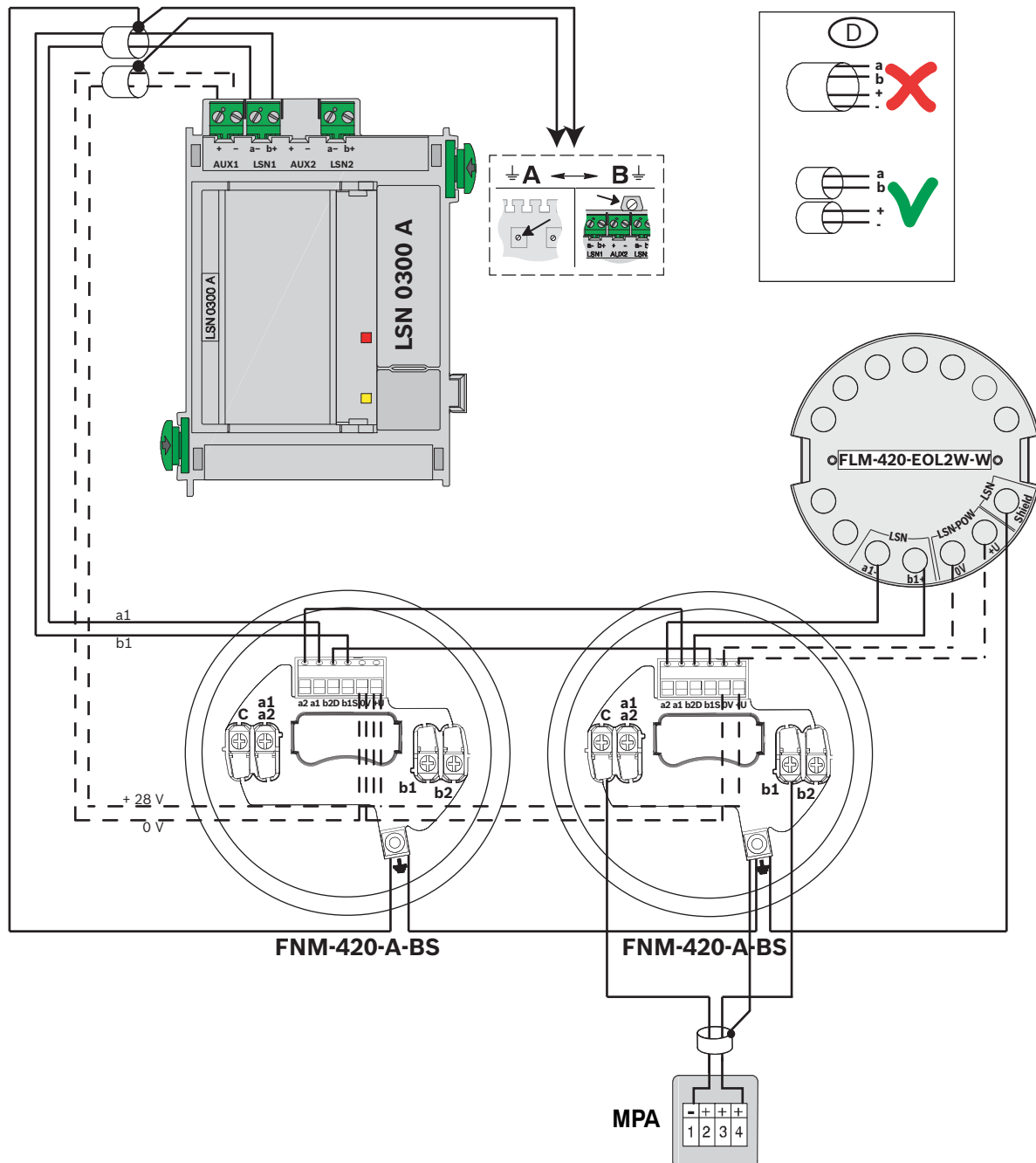




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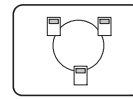


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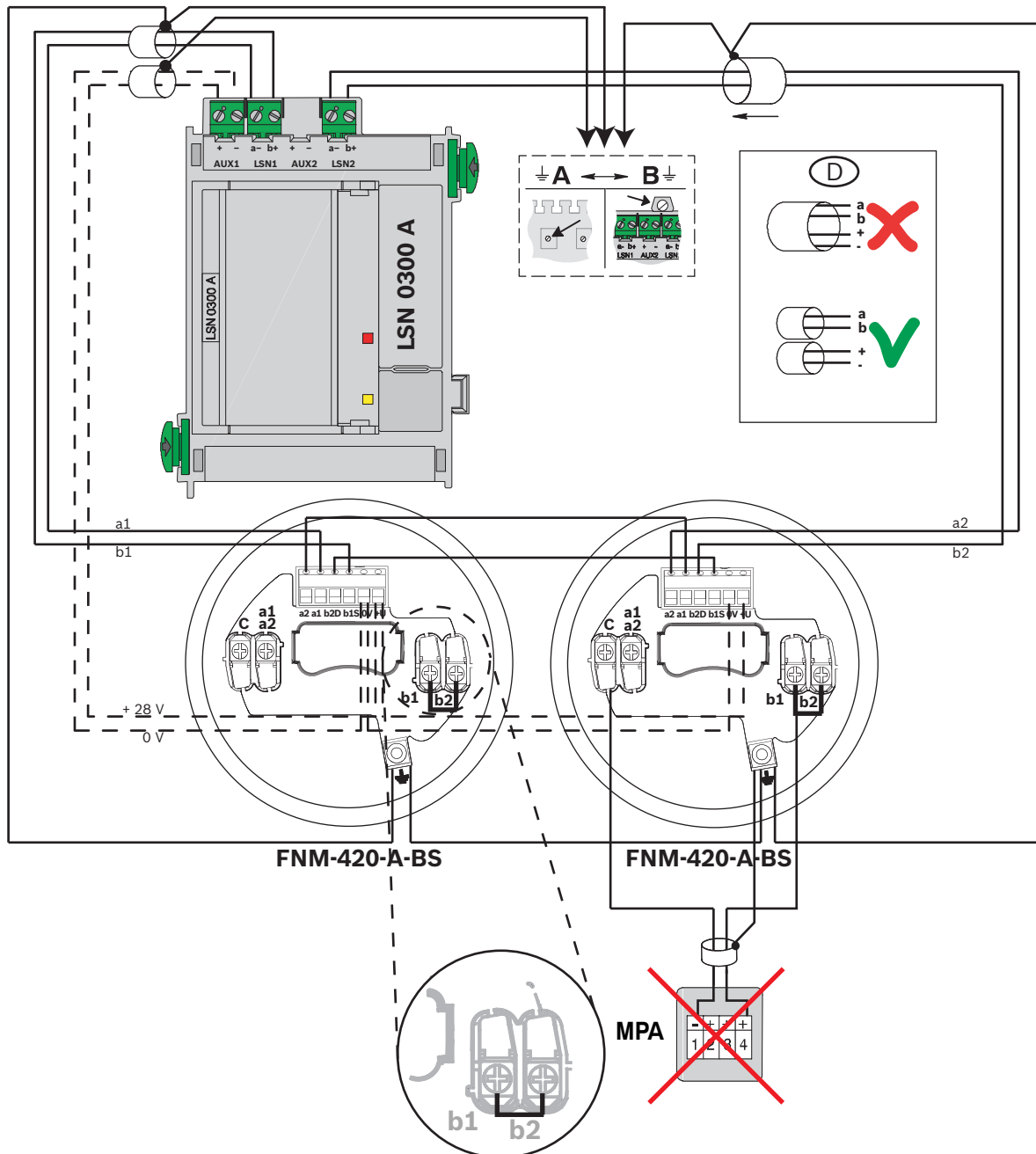




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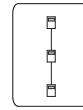


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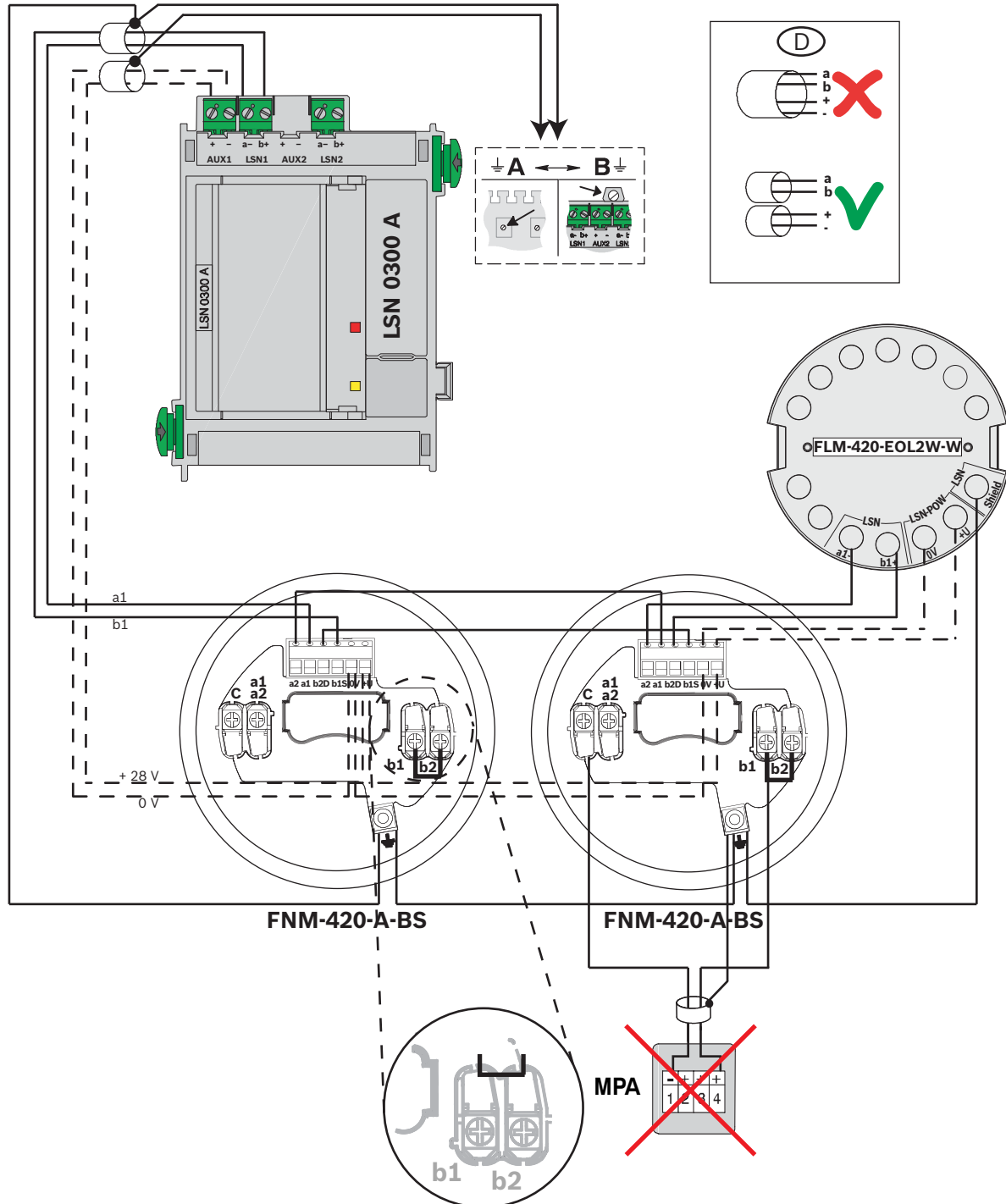


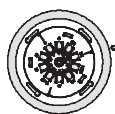


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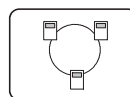


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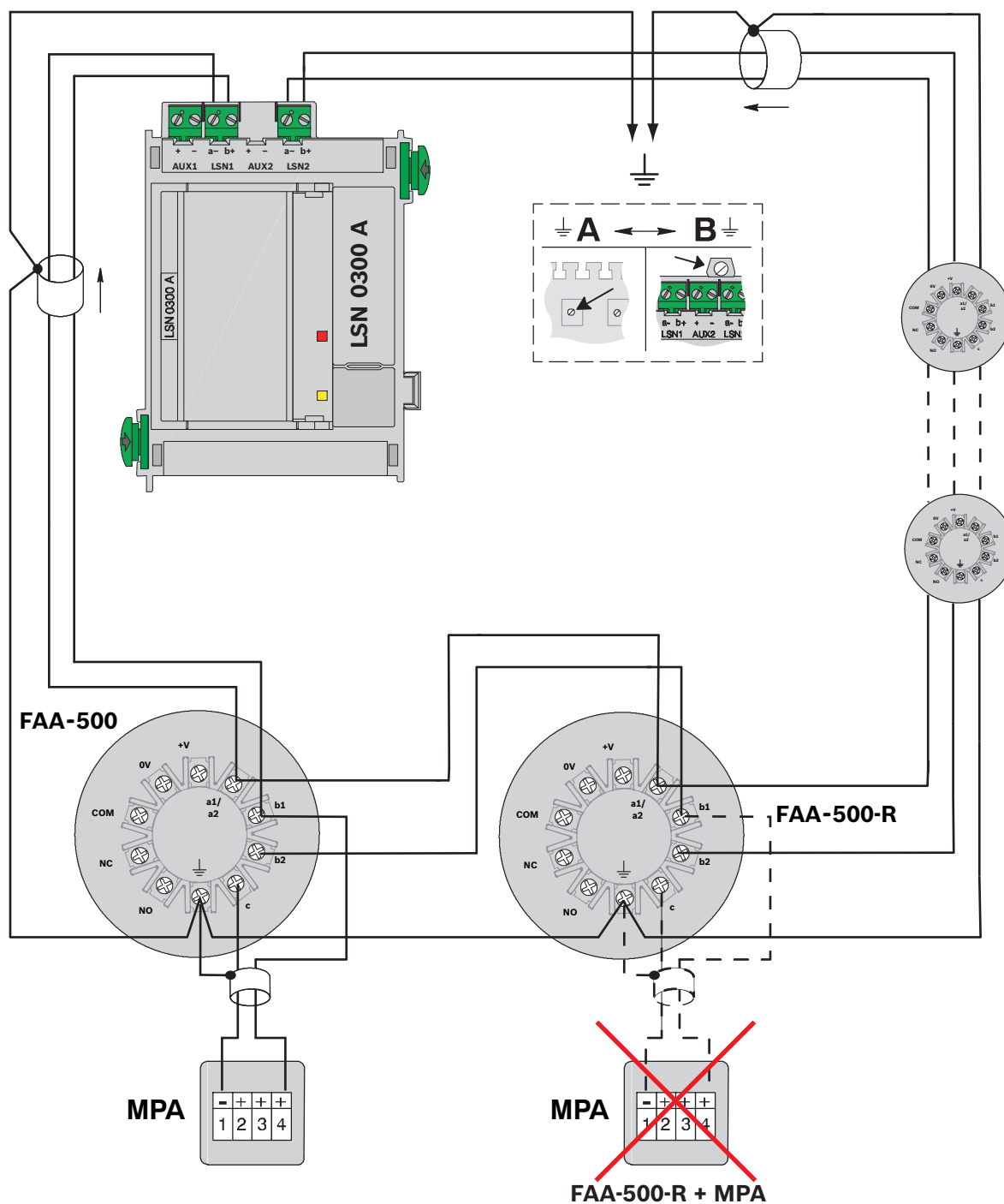




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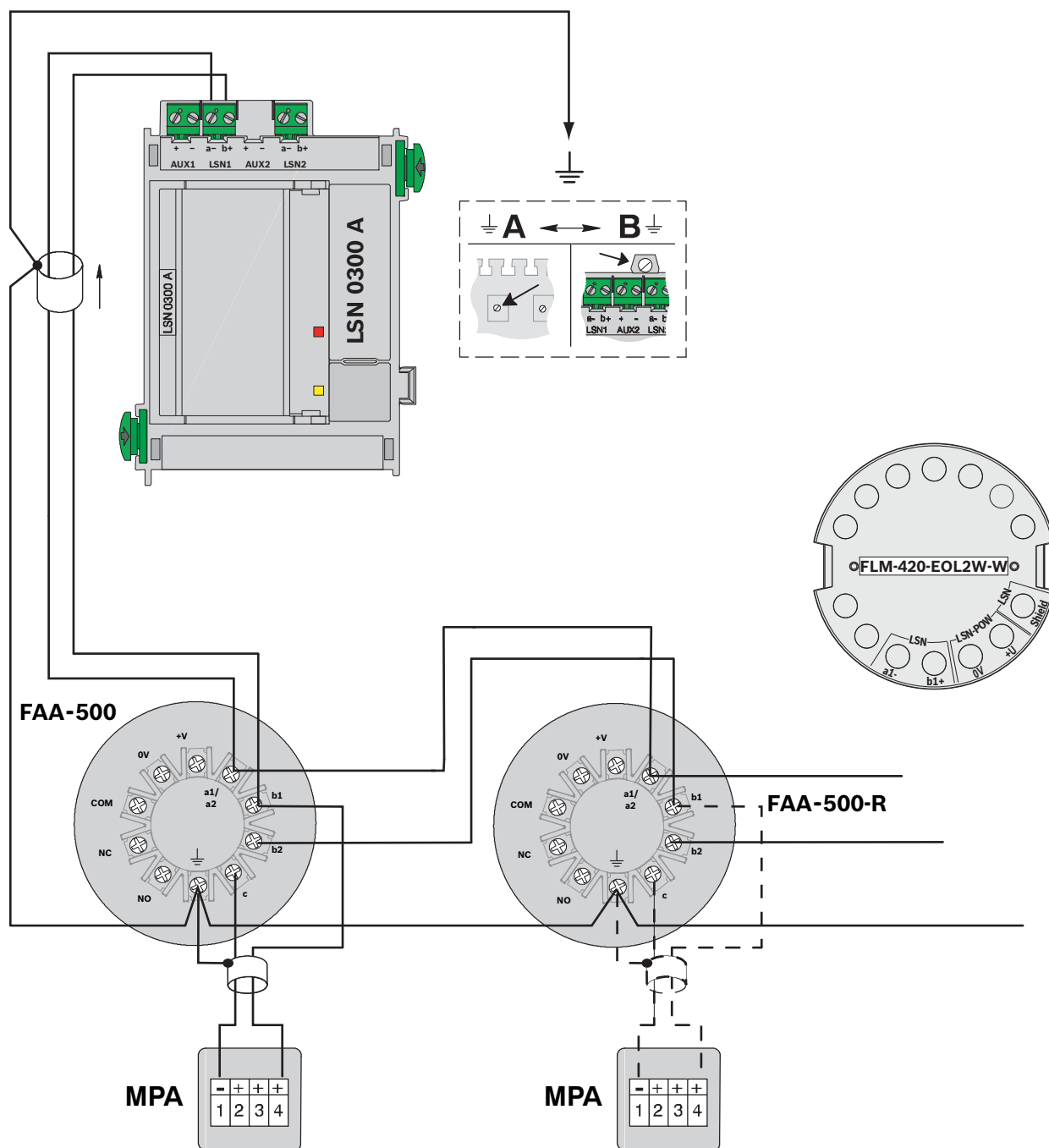


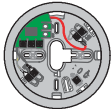
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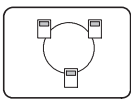


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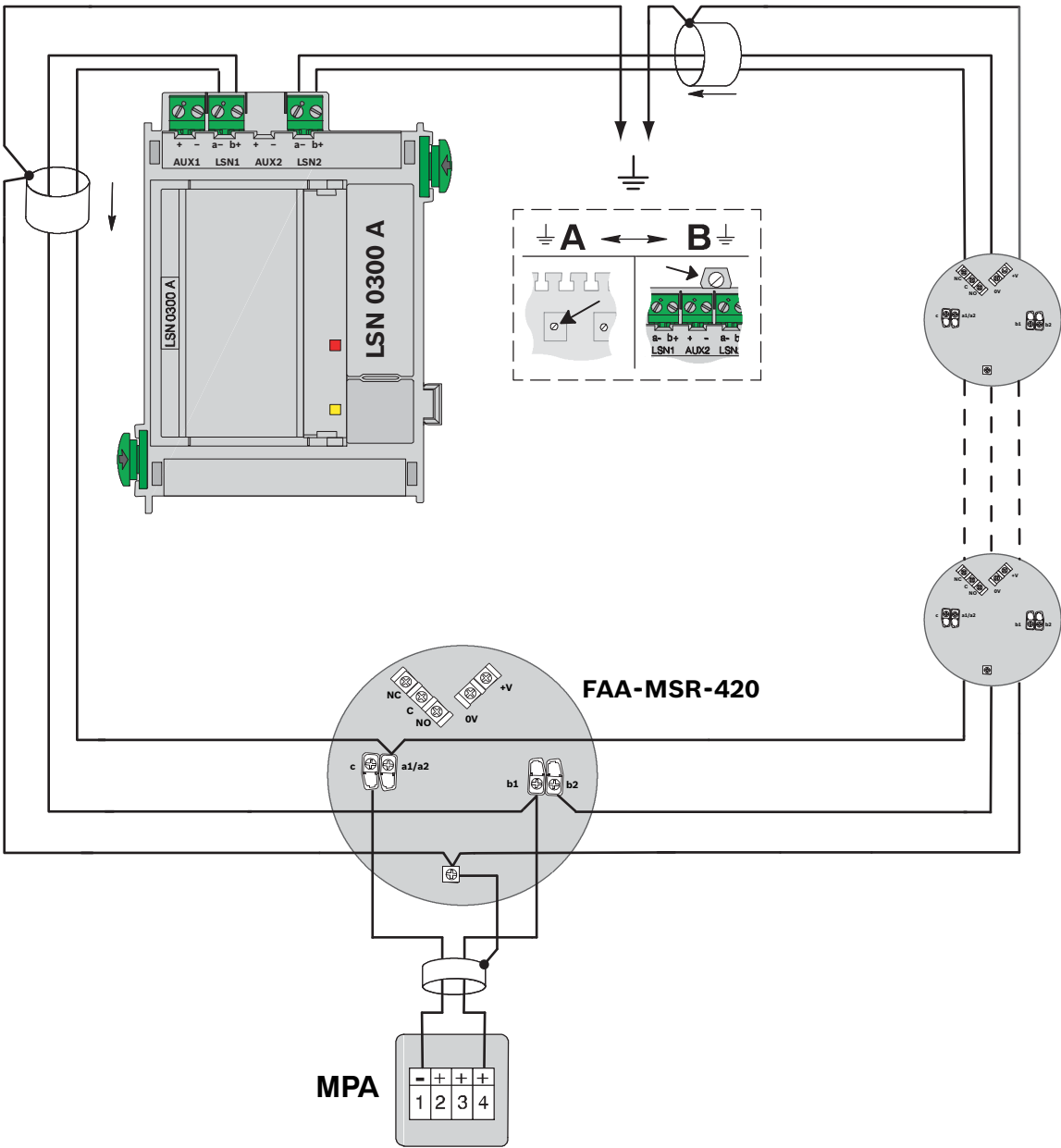


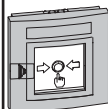
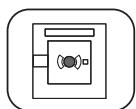


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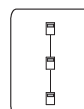


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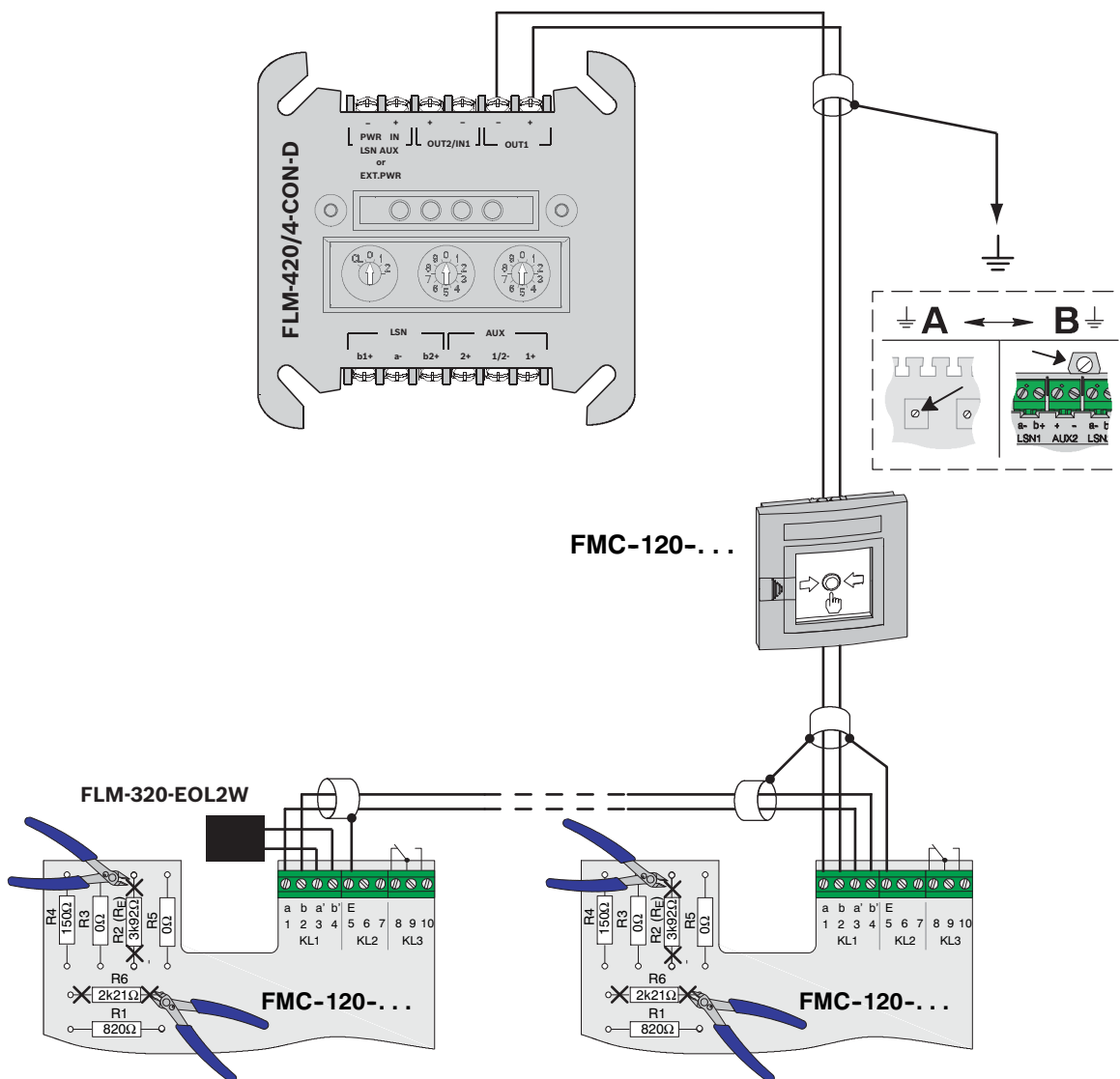


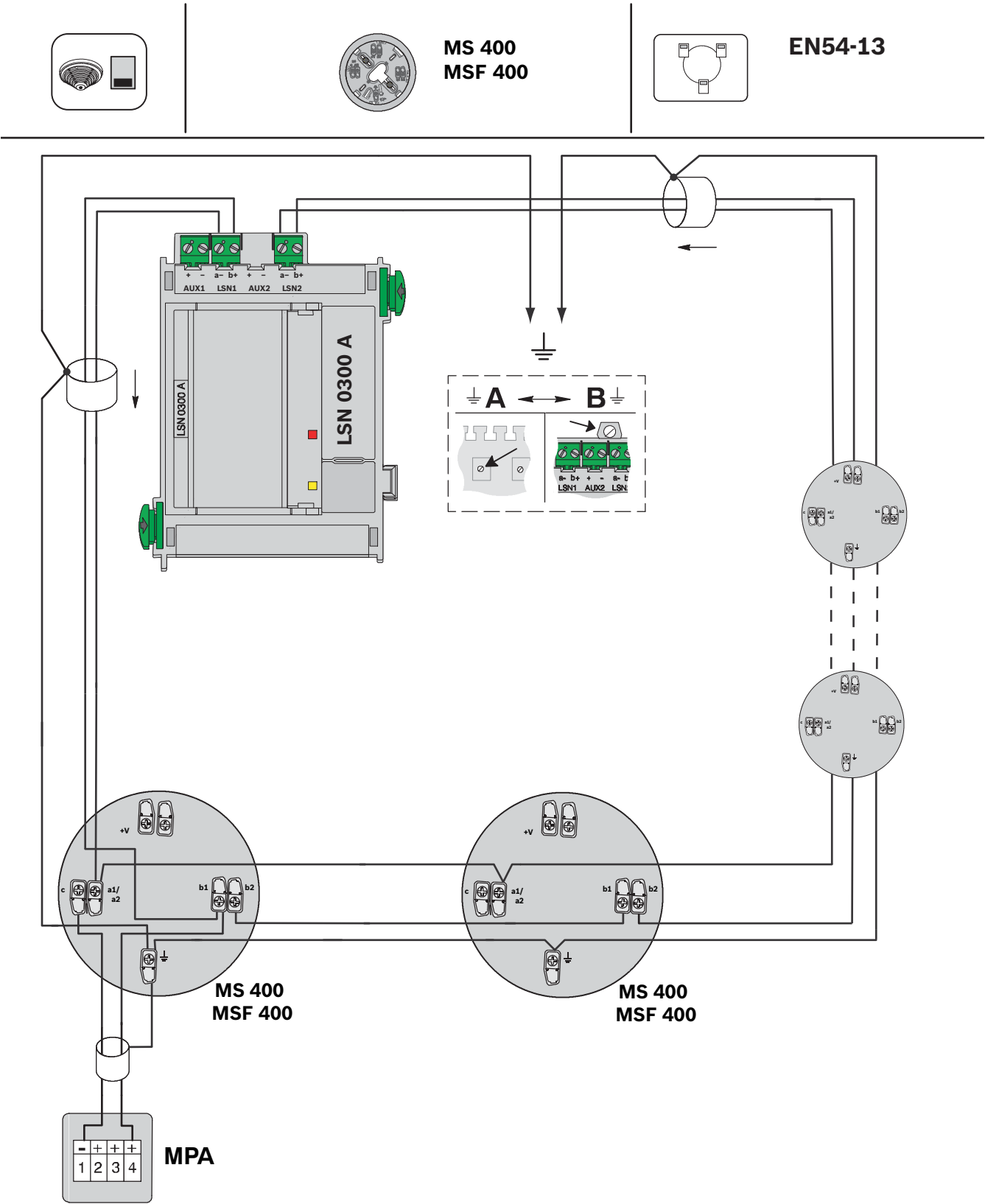


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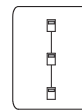
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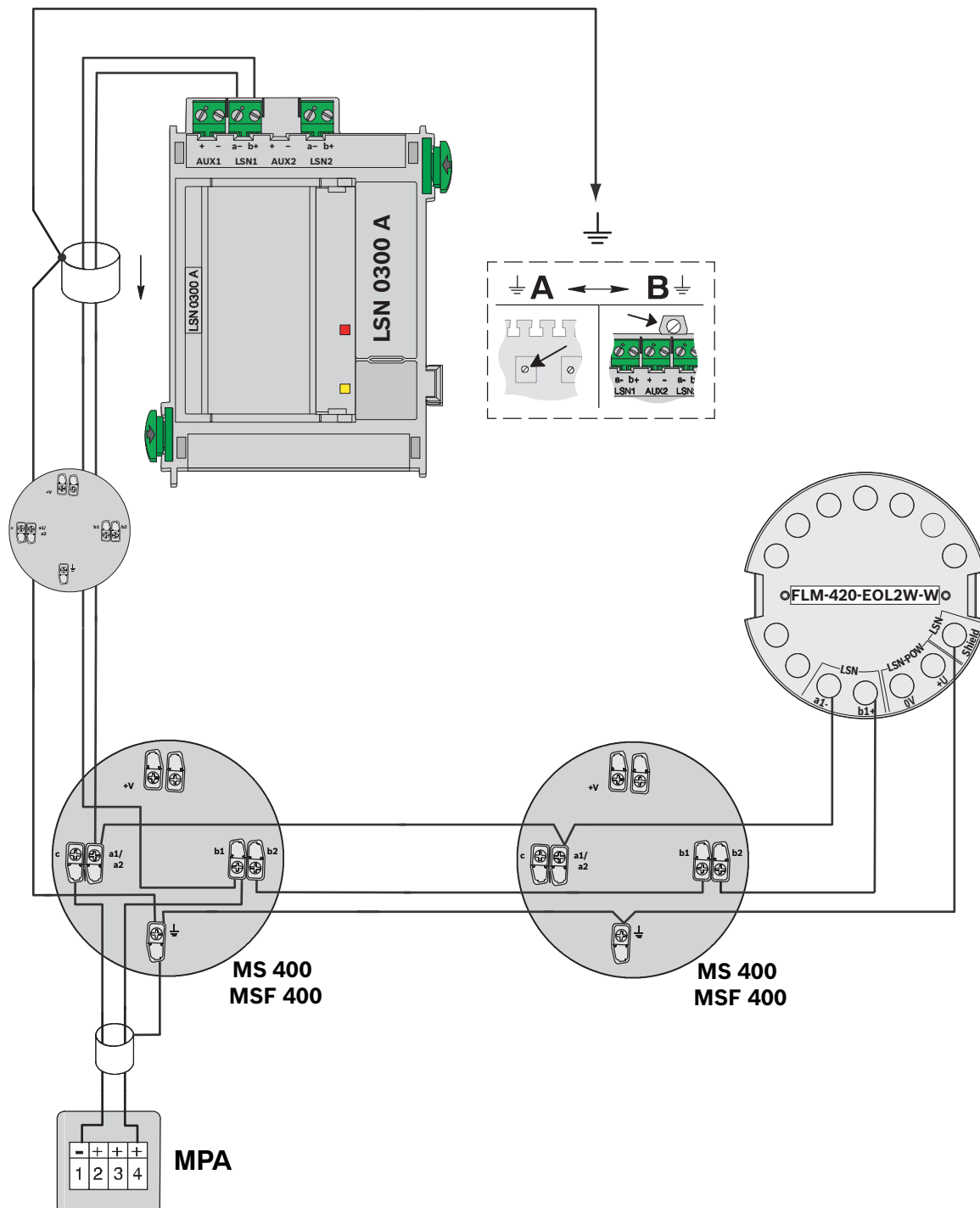


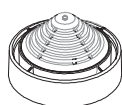


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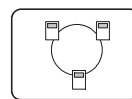
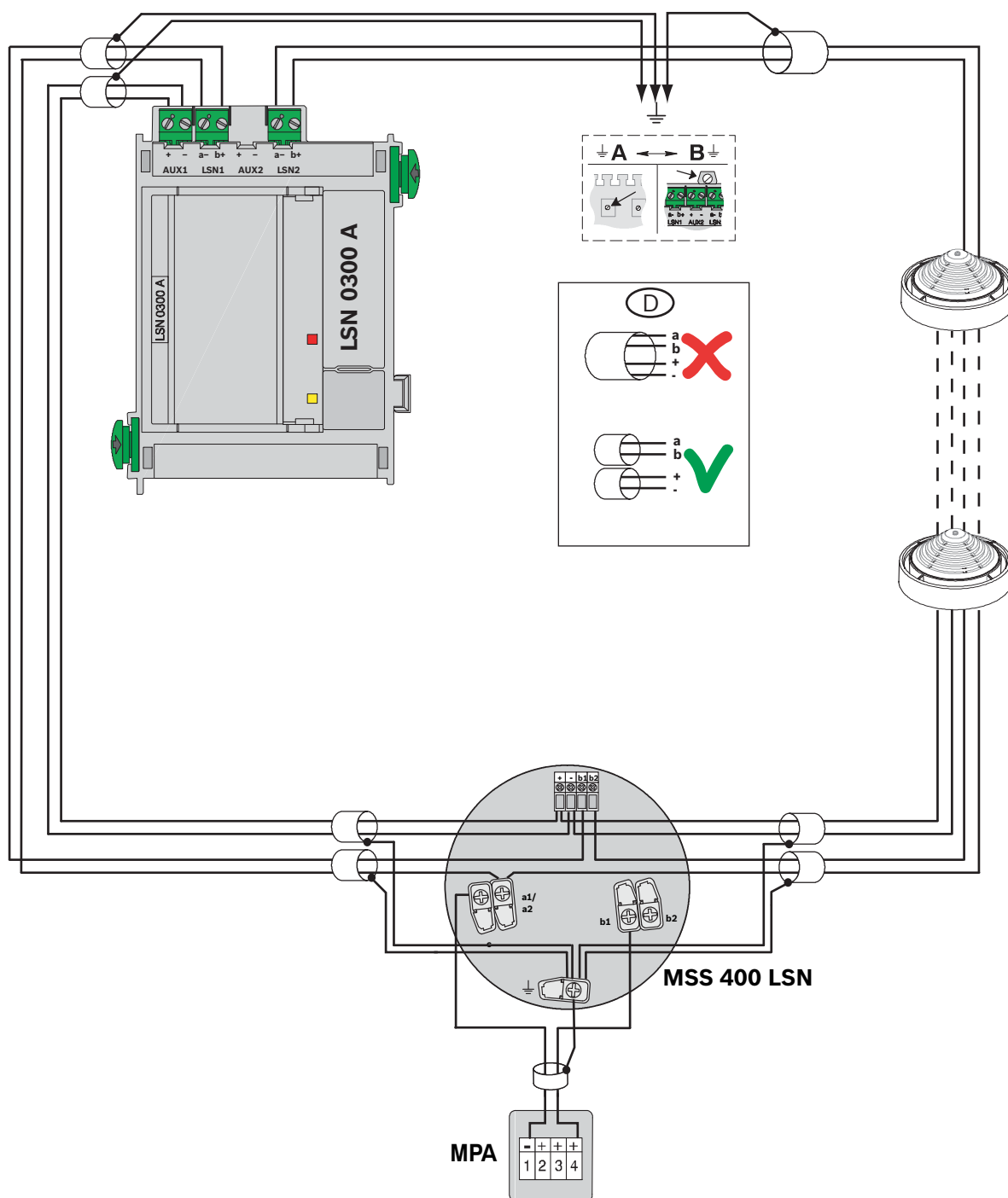


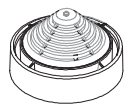
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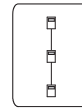


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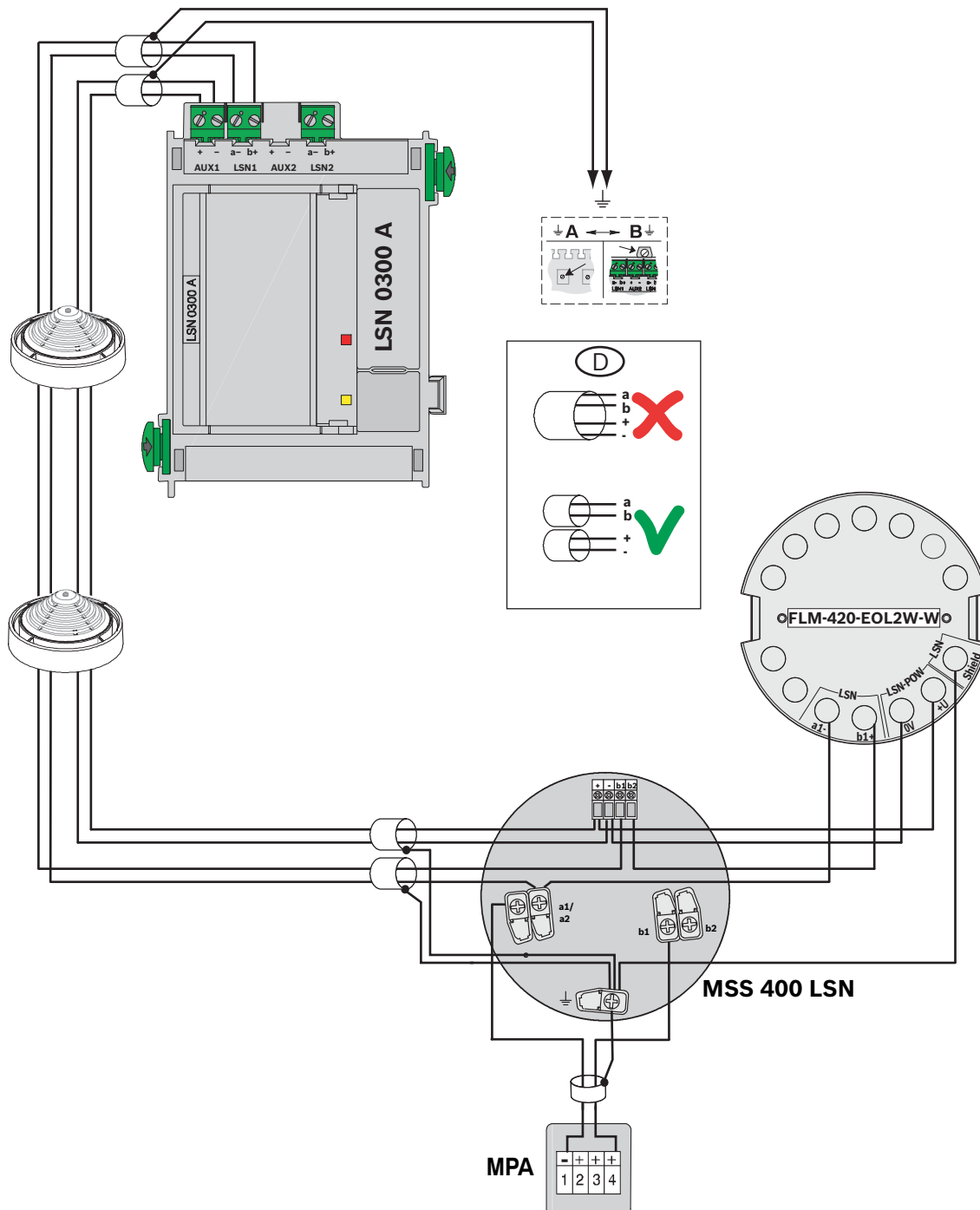
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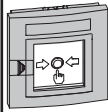
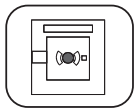


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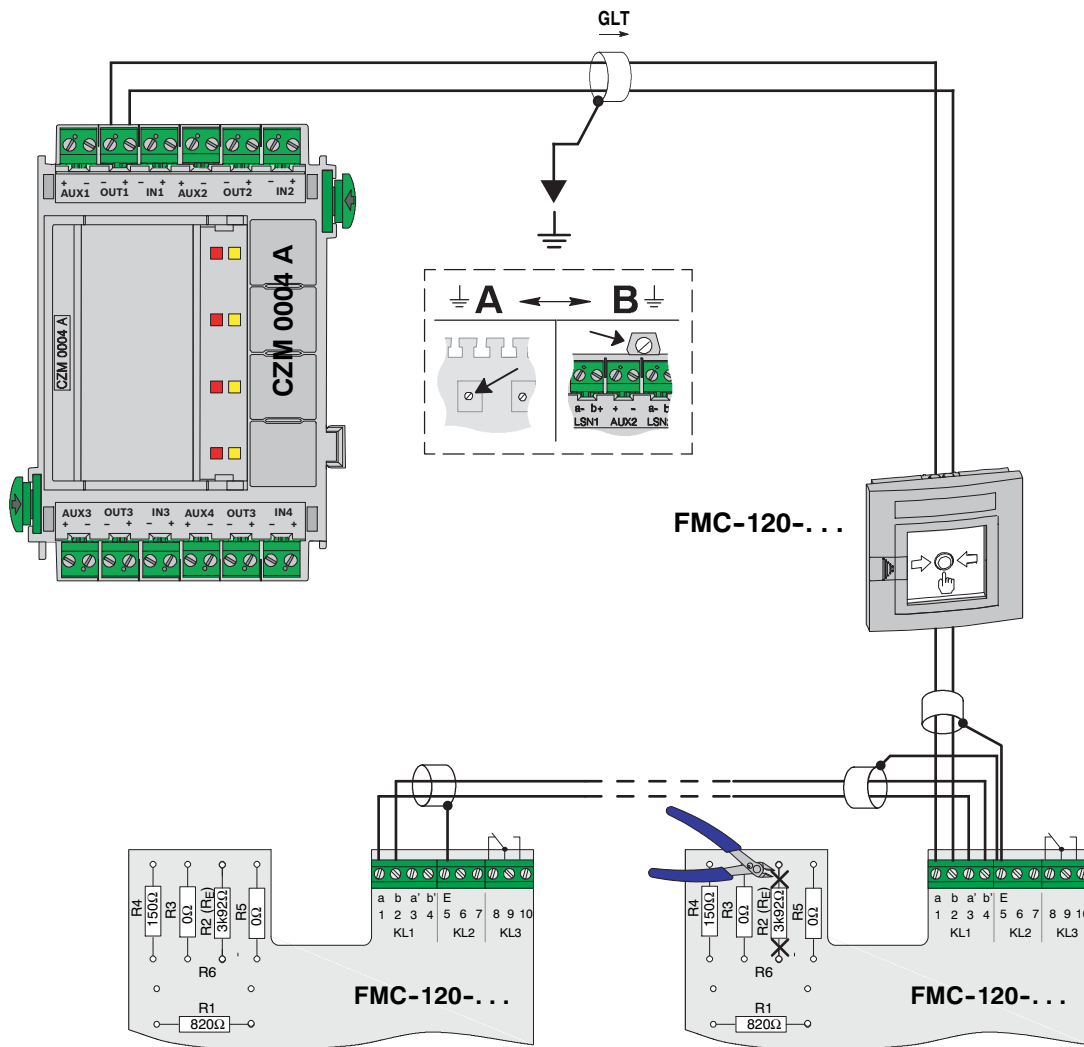
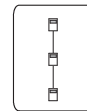


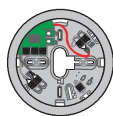
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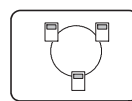


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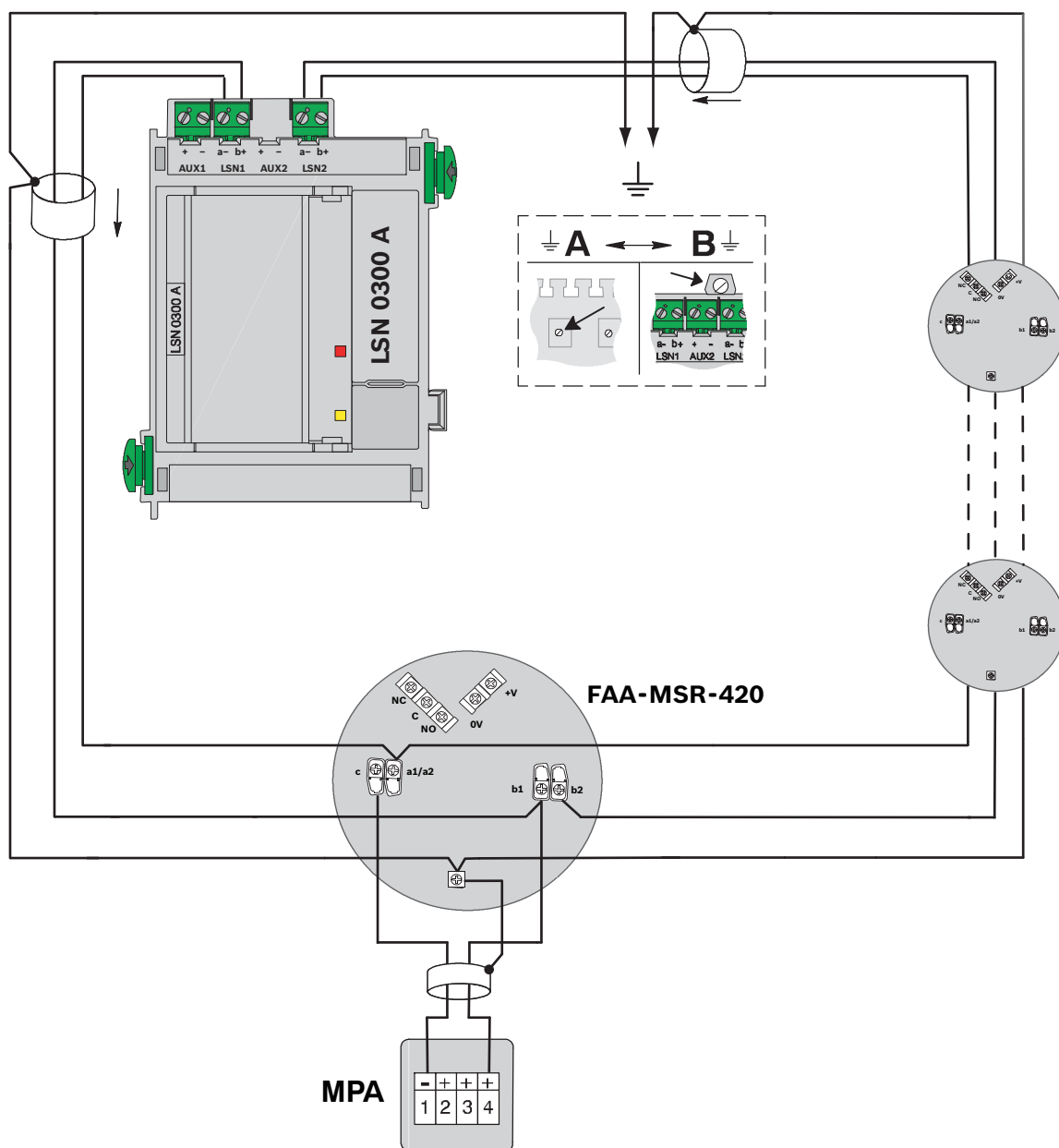




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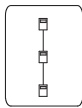


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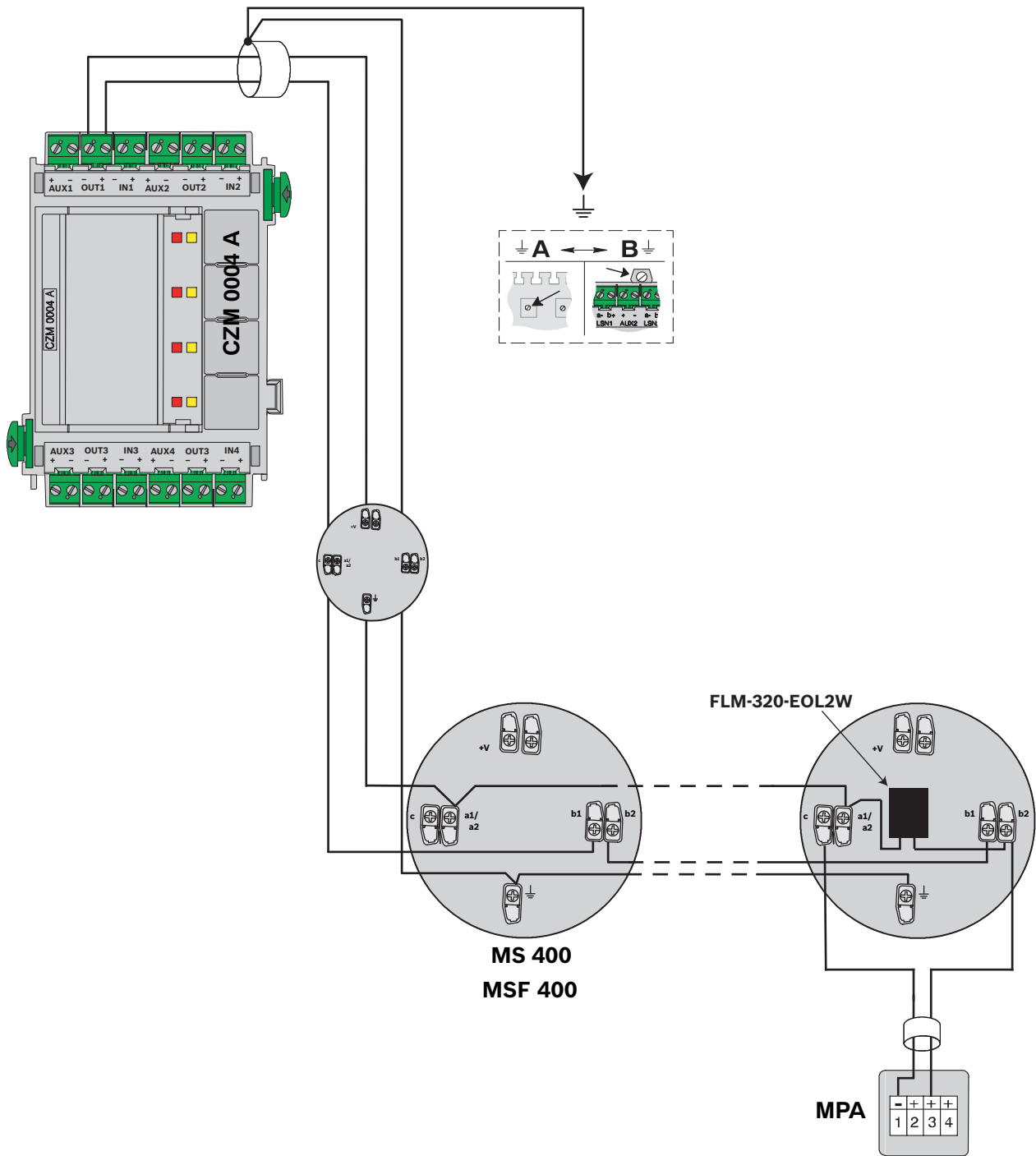


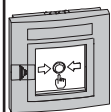
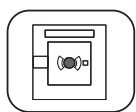


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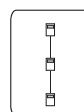


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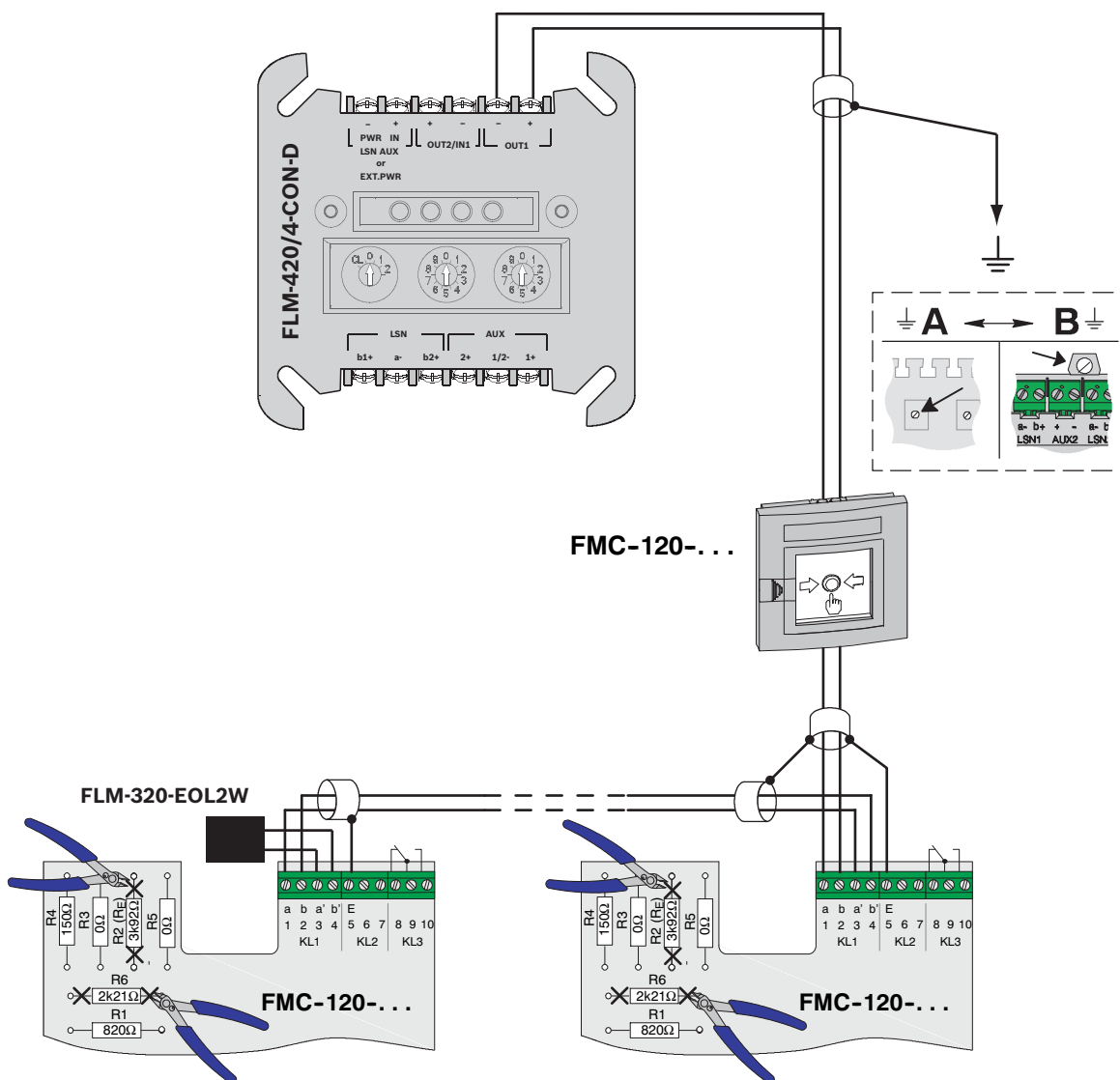


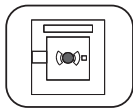


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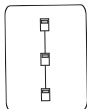


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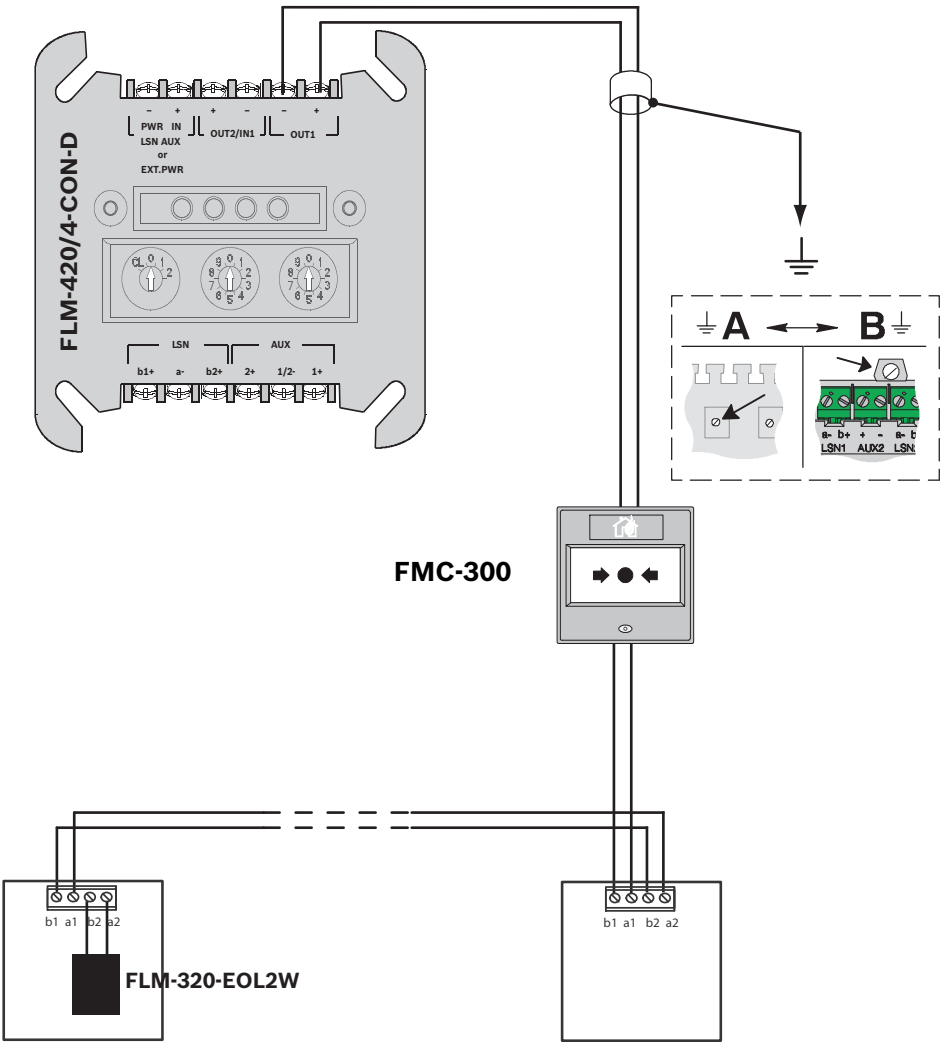




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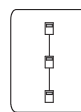


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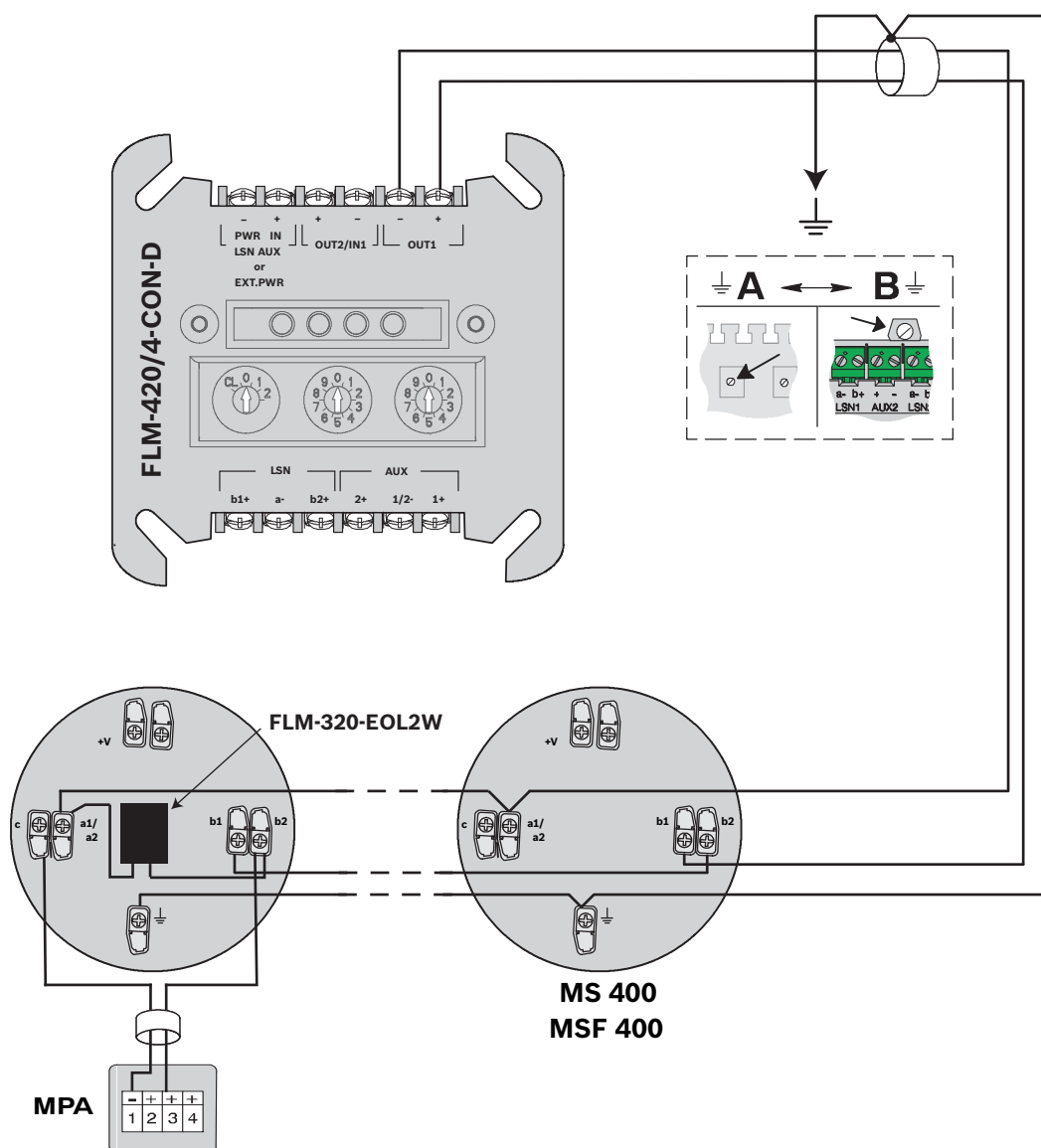




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