

WIRING DIAGRAMS

High **PROTEC** | PROTECTION TECHNOLOGY
MADE SIMPLE

MRU4 | Voltage Relay

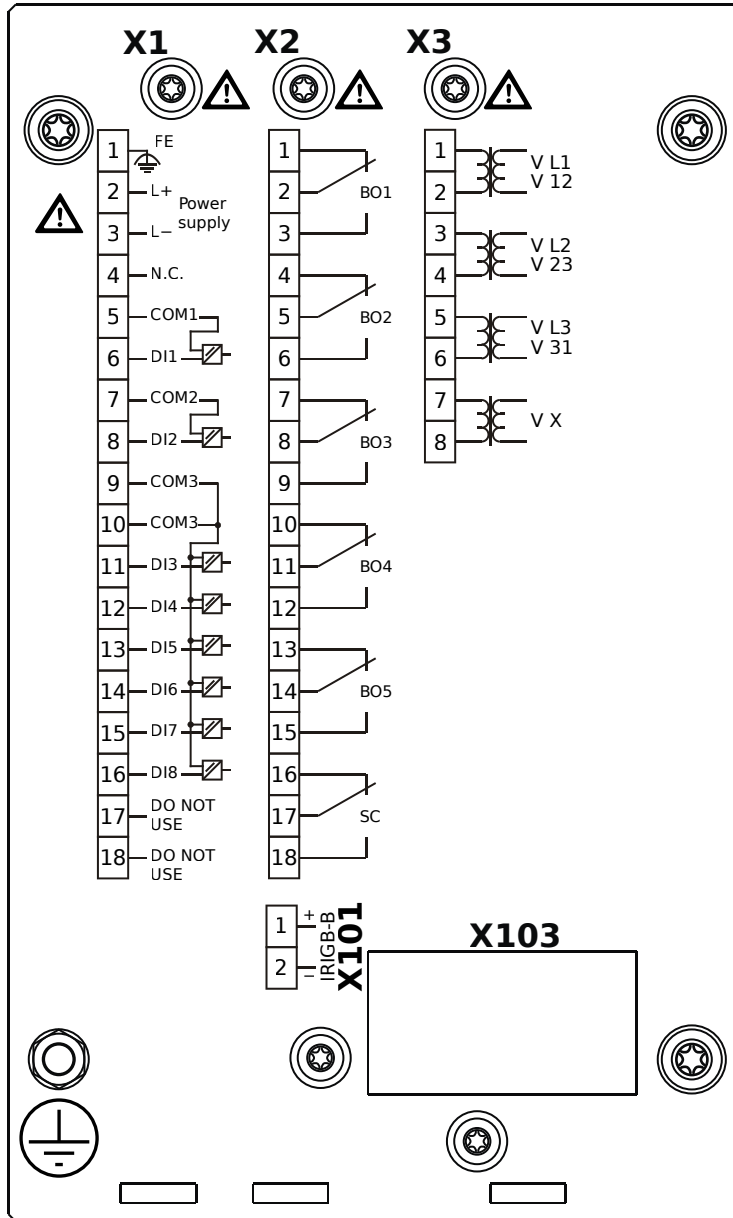
Version: 3.10

Original document

English

This document does not replace the Technical Manual.

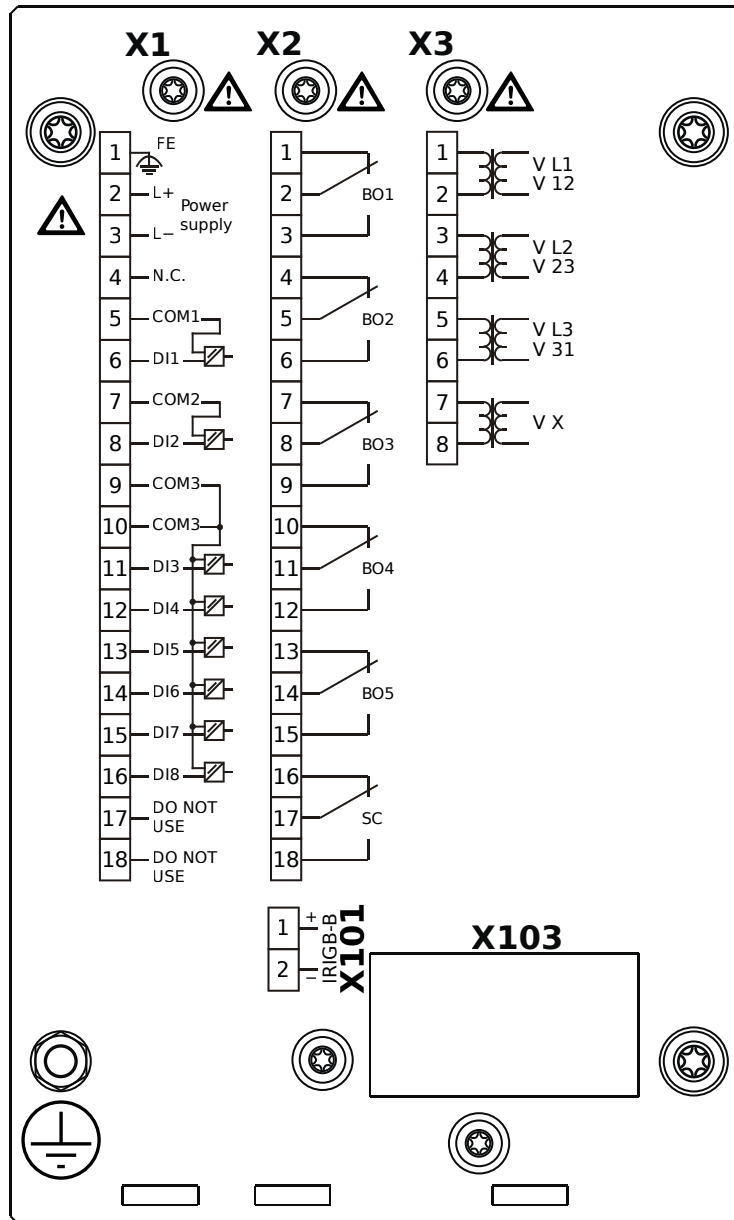
MRU4-2A0AAA



Housing B1, small display, door mounting

- X1** – DI8-X1: Wide-range power supply unit, incl. 2 non-grouped digital inputs and 6 grouped digital inputs
- X2** – OR5: Assembly Group with 5 Output Relays (Changeover / Form C) + 1 Supervision Contact
- X3** – TU: Card with 4 voltage transformer measuring inputs (0 ... 800 VAC, under UL: 0 ... 600 VAC)
- X101** – IRIG-B00X

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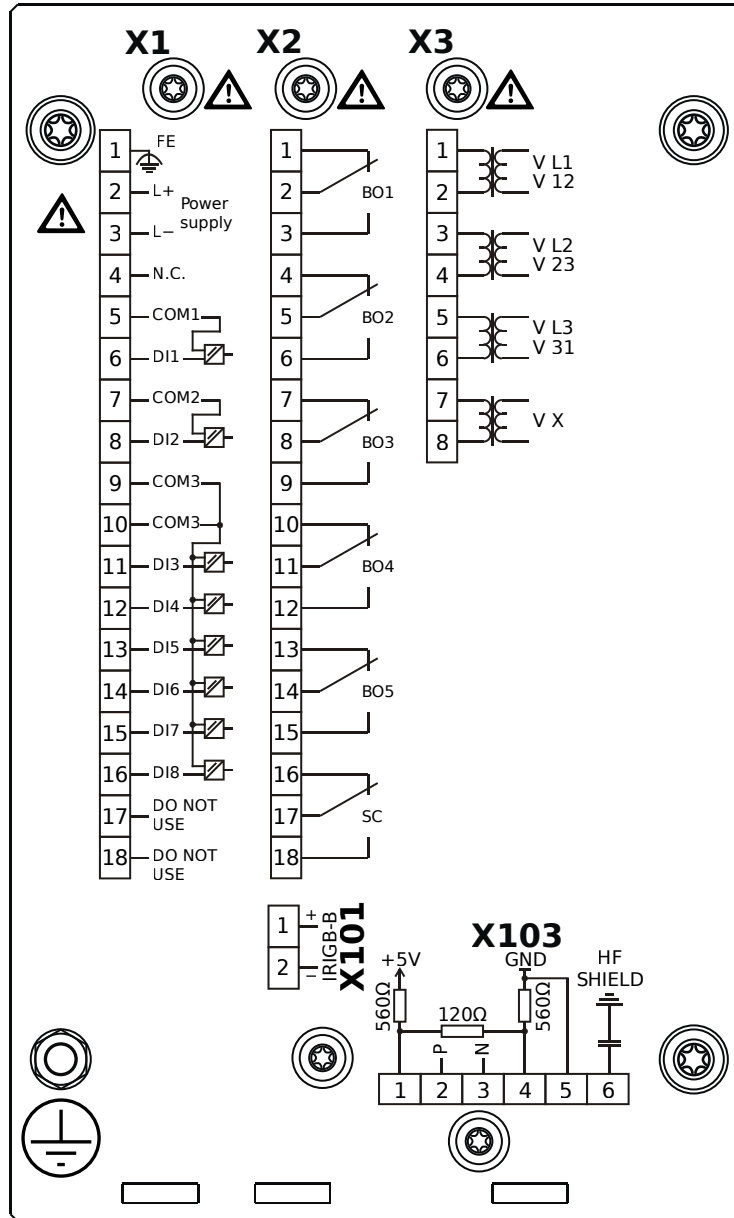


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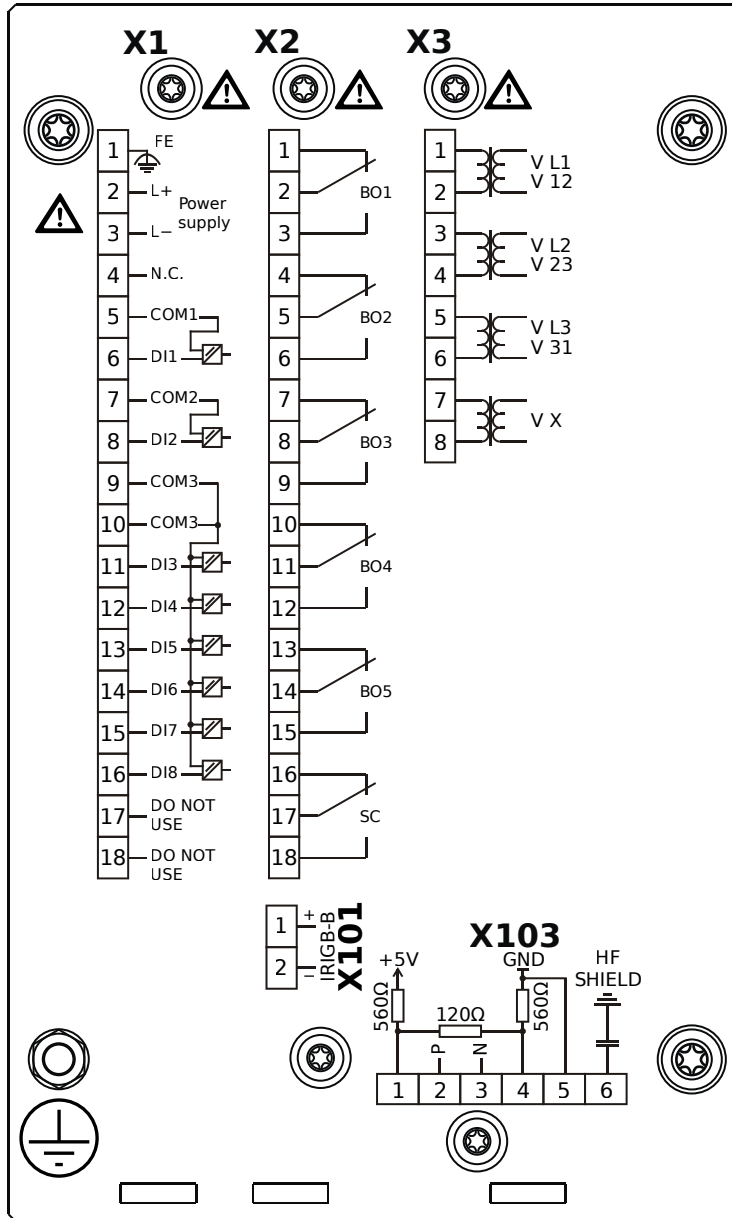
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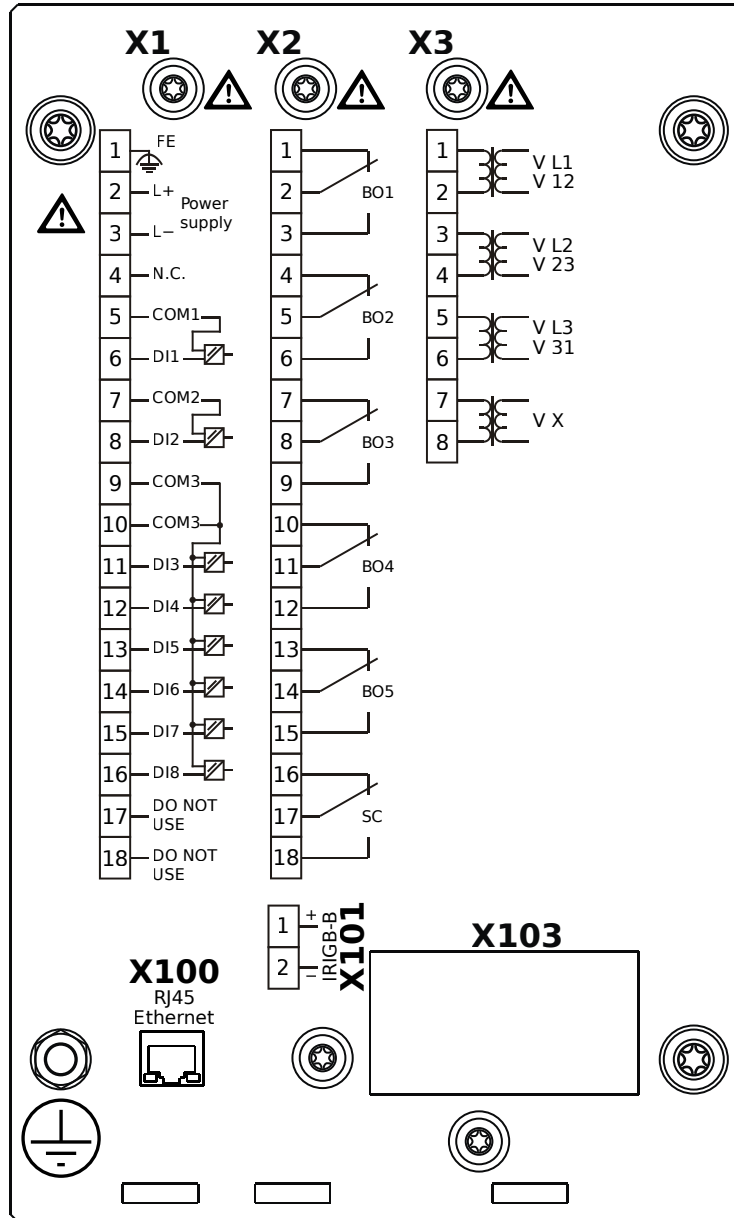
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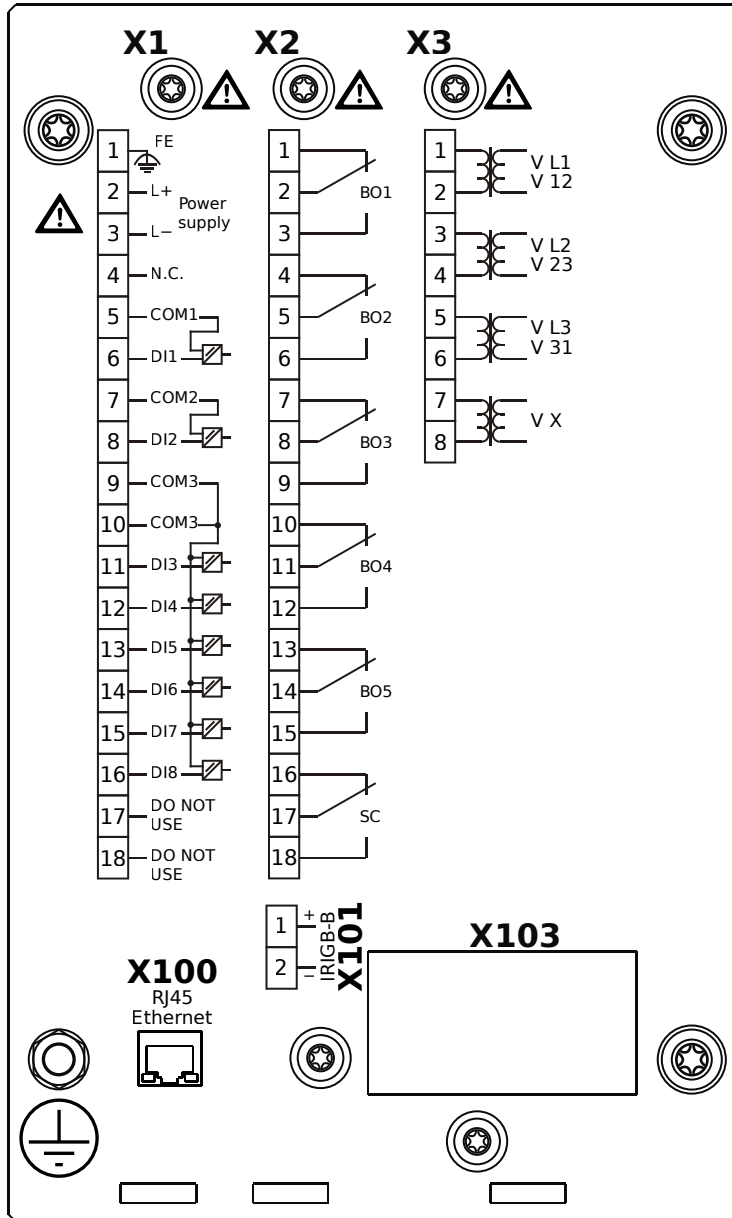
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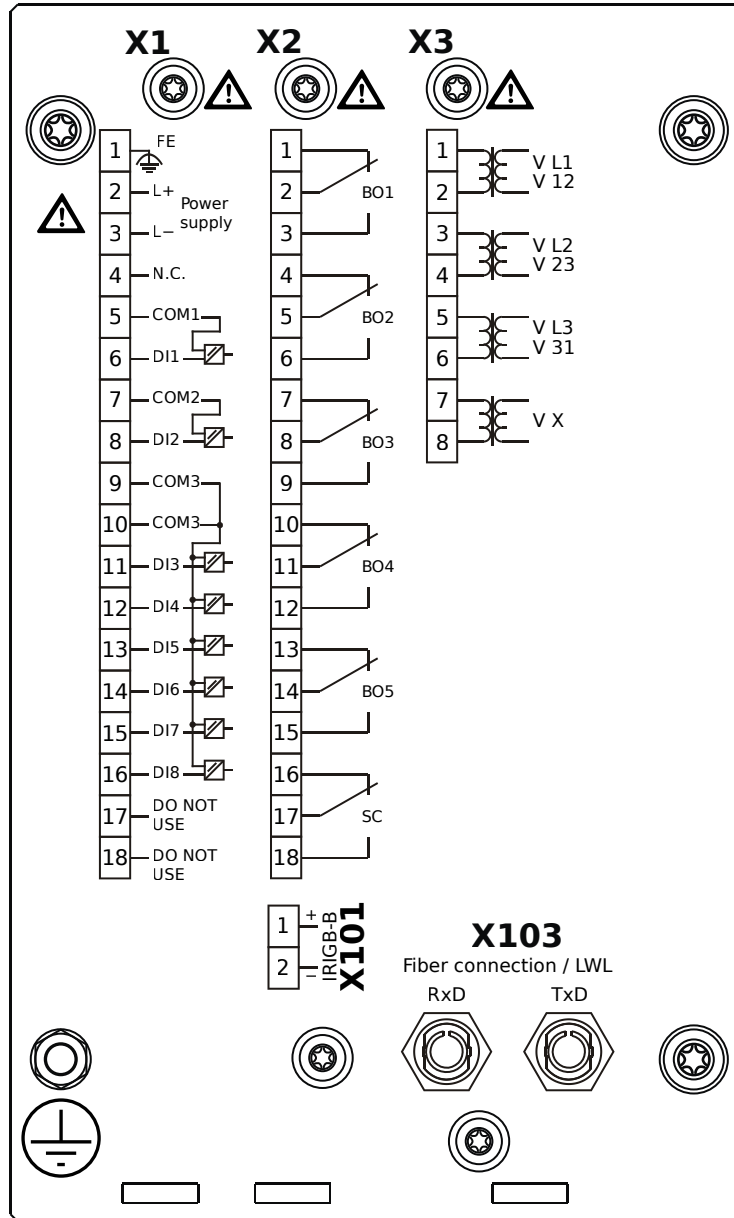


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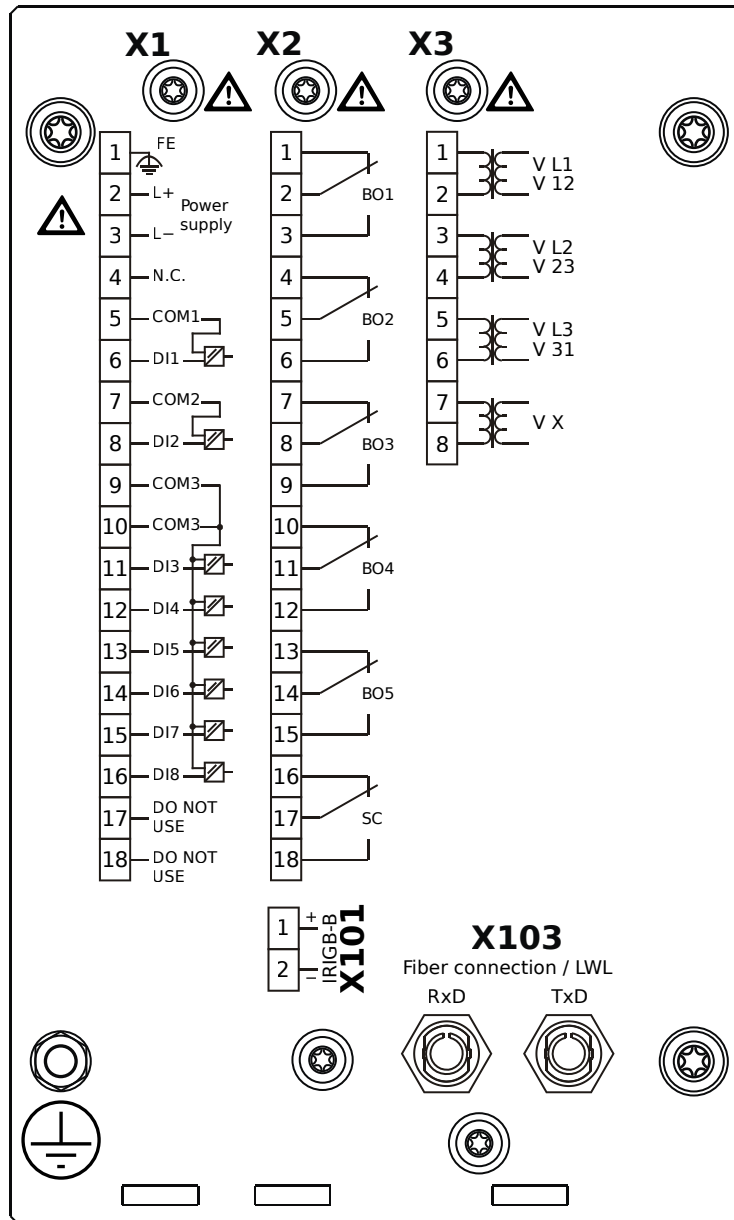
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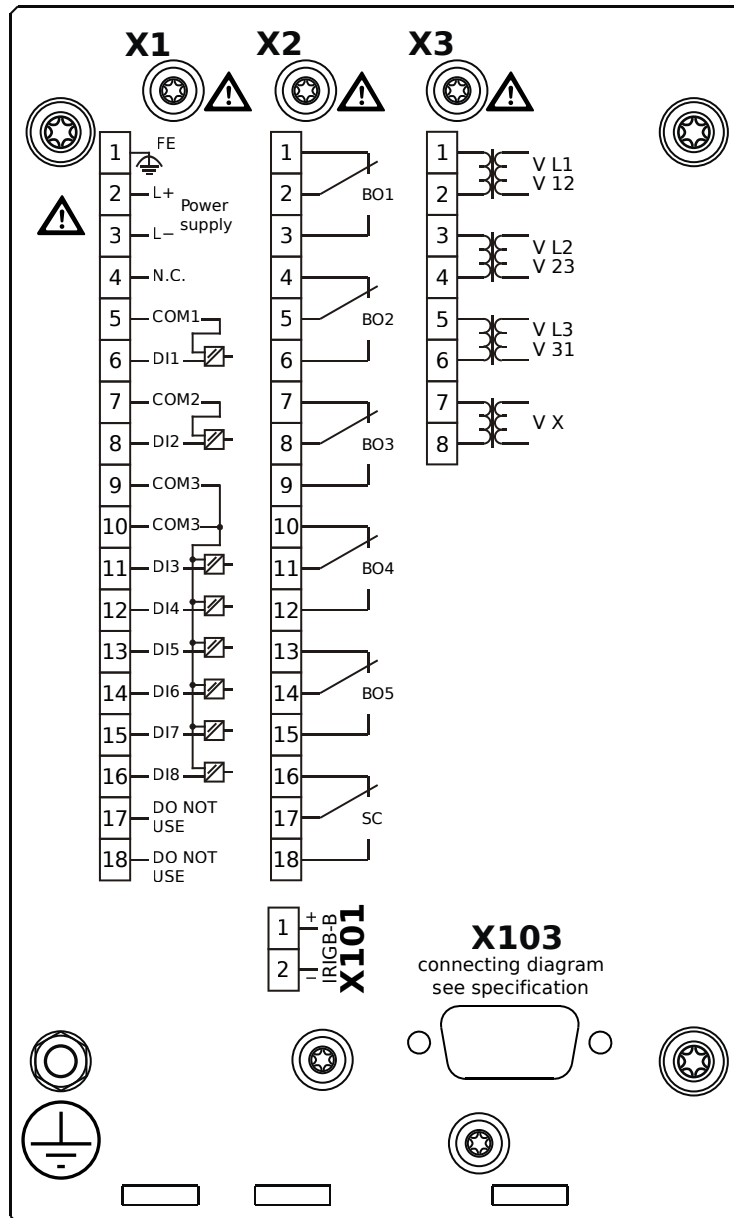


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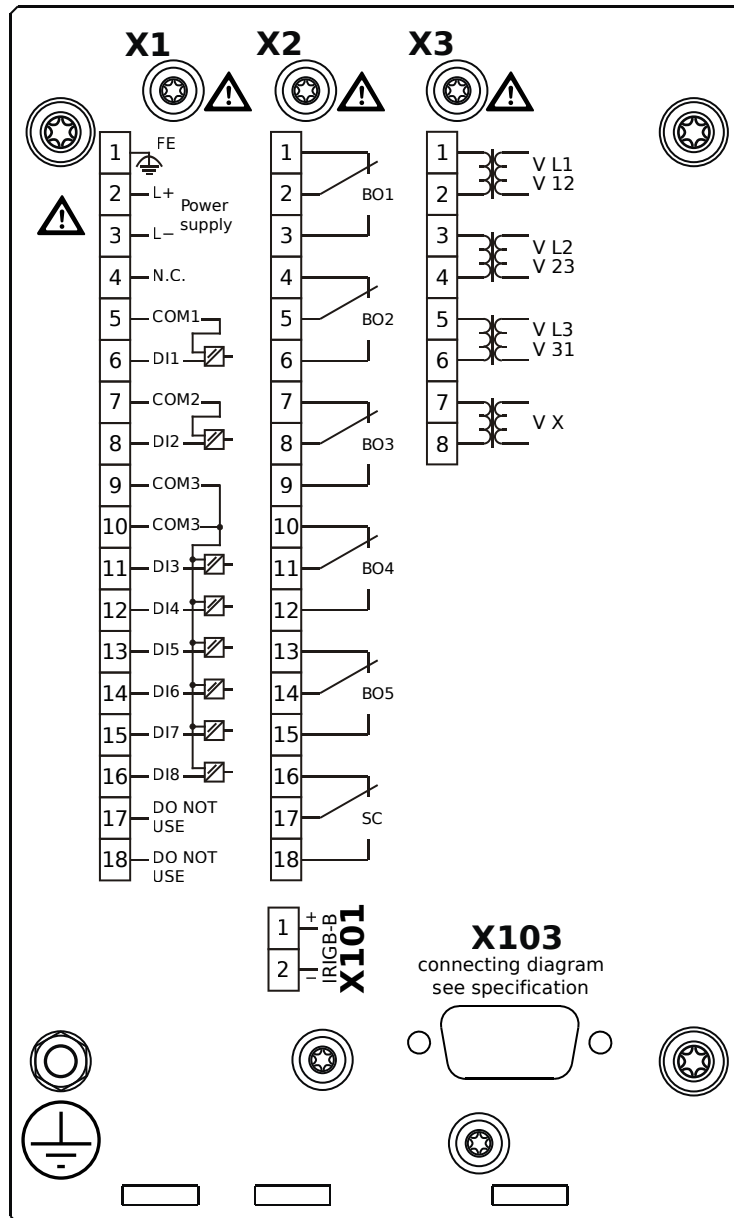
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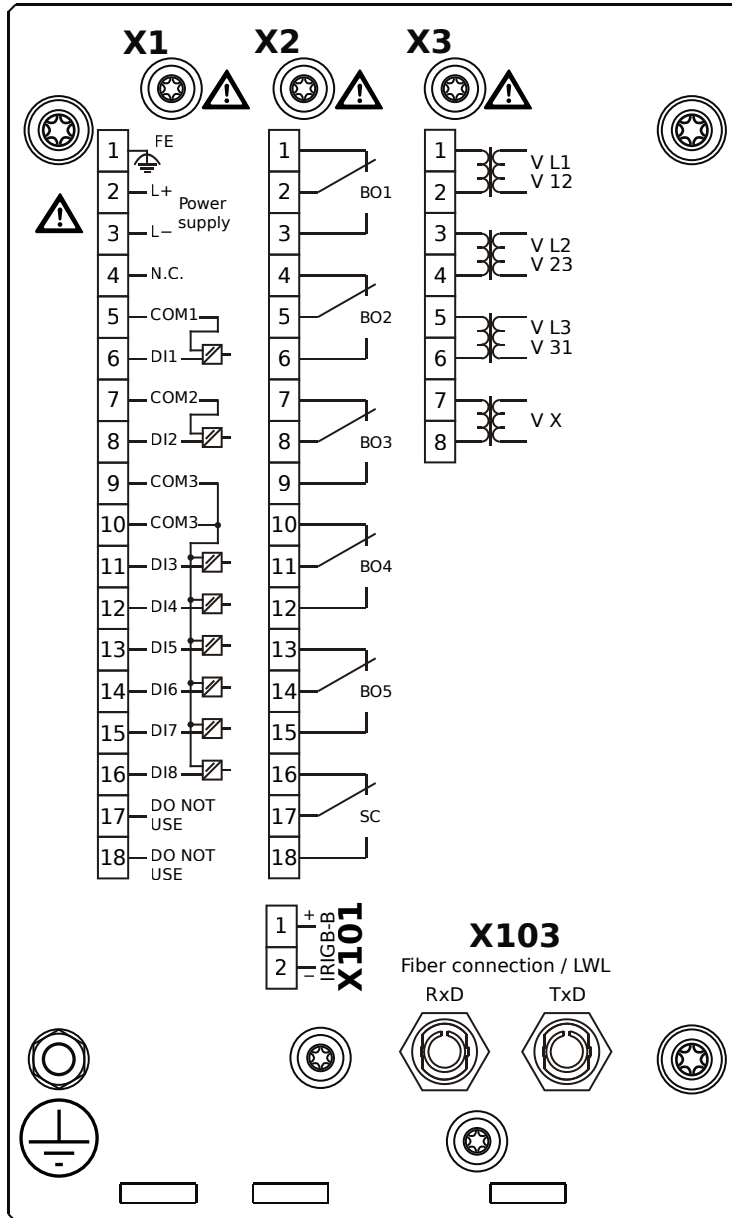


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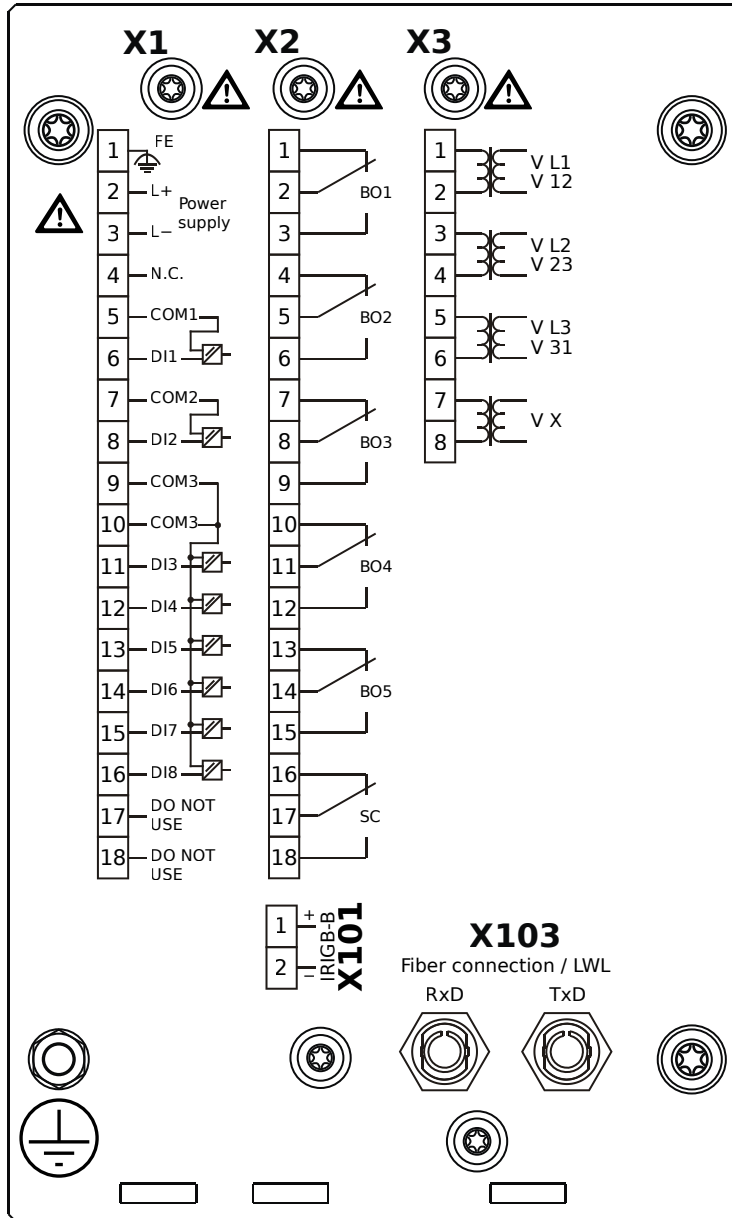
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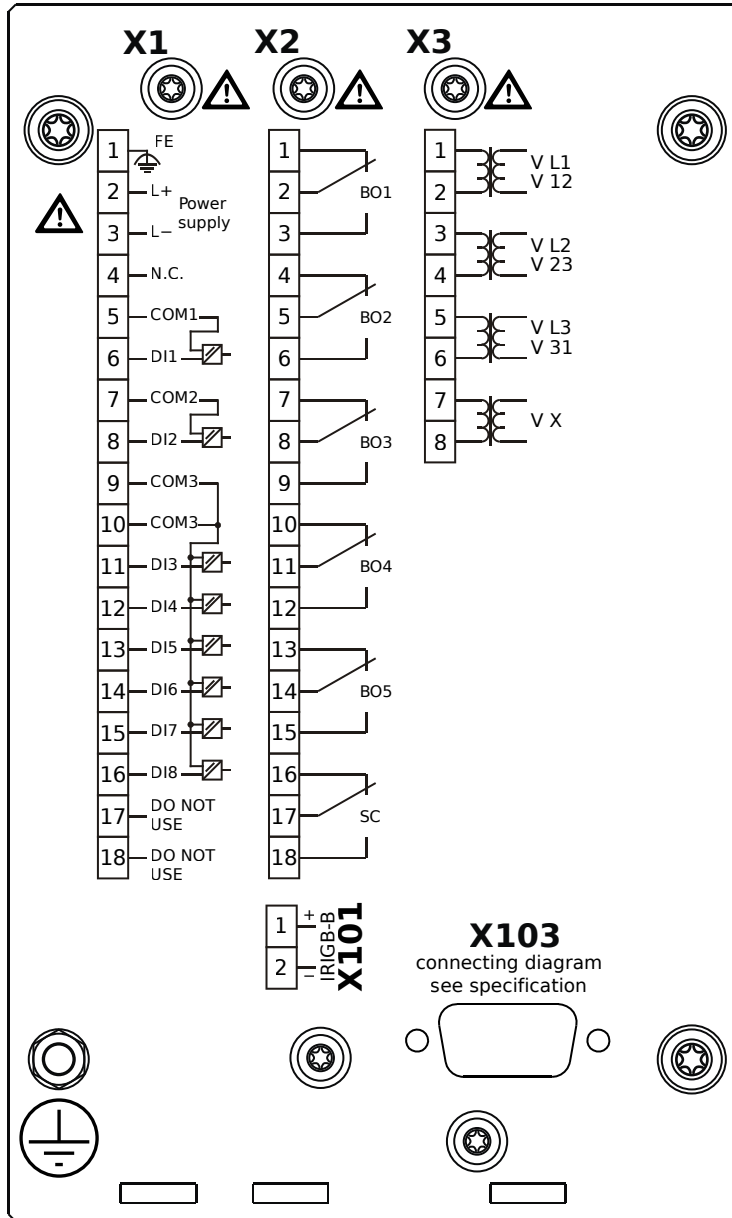


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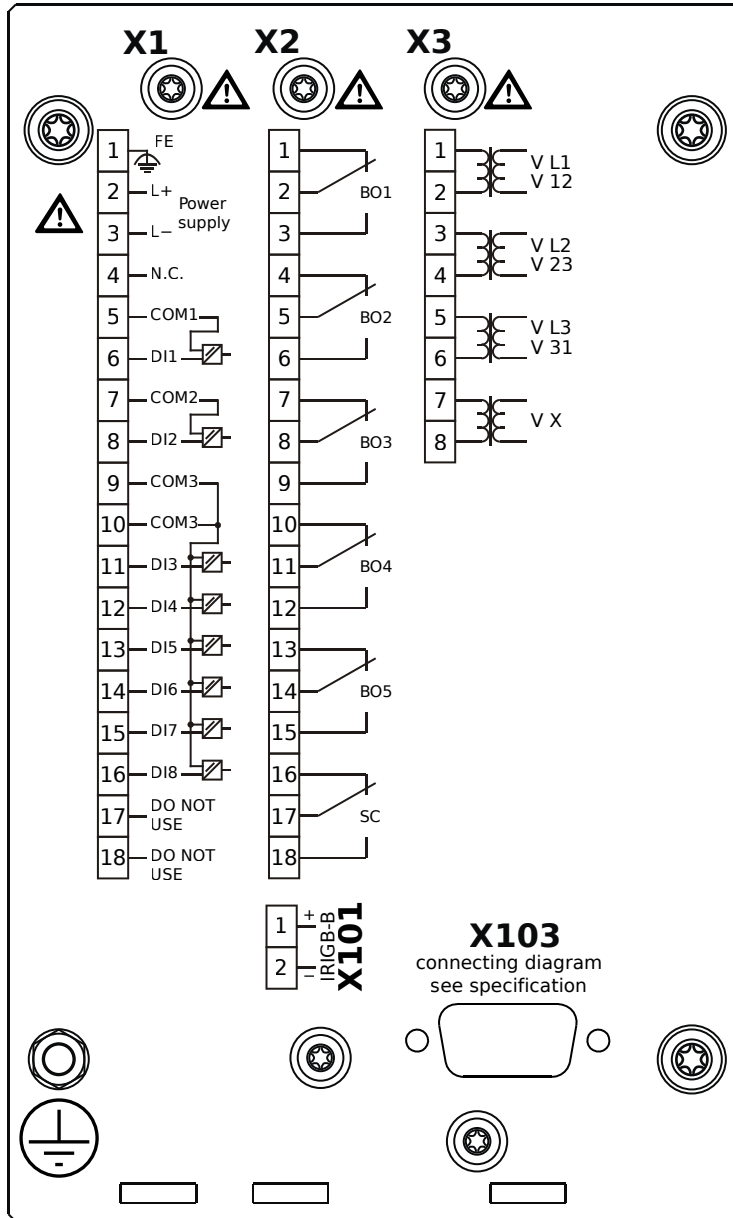
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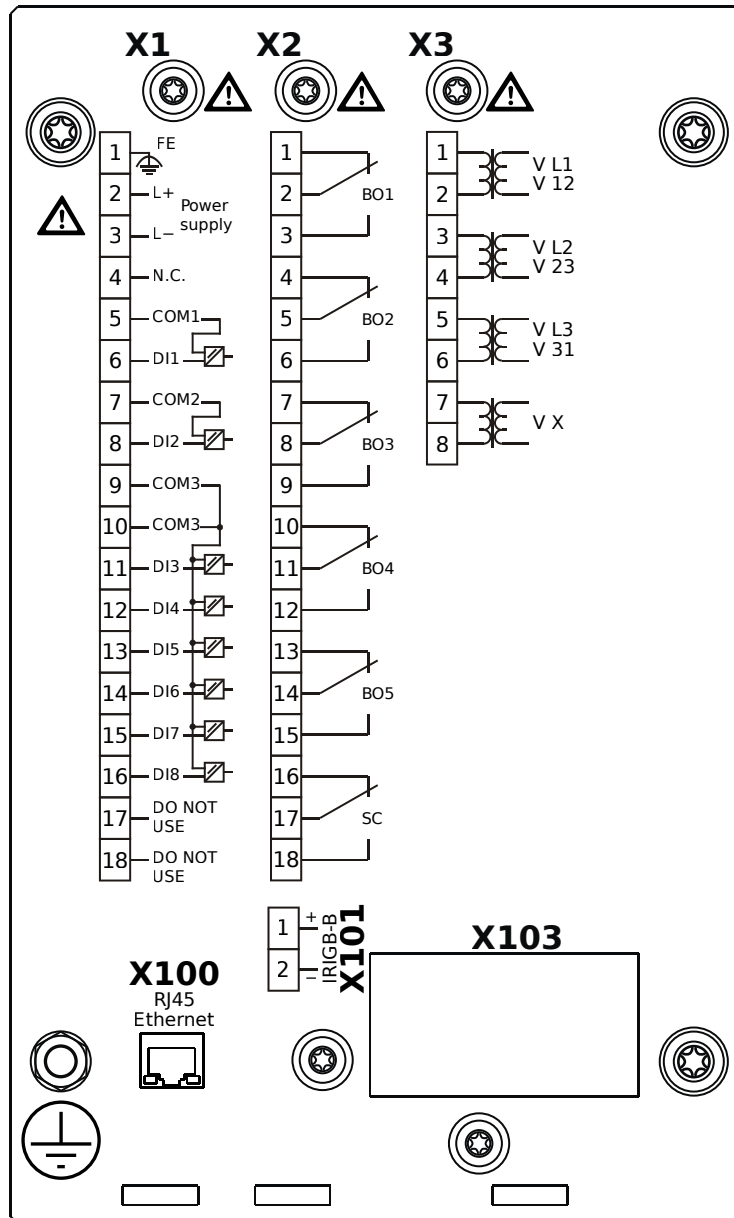


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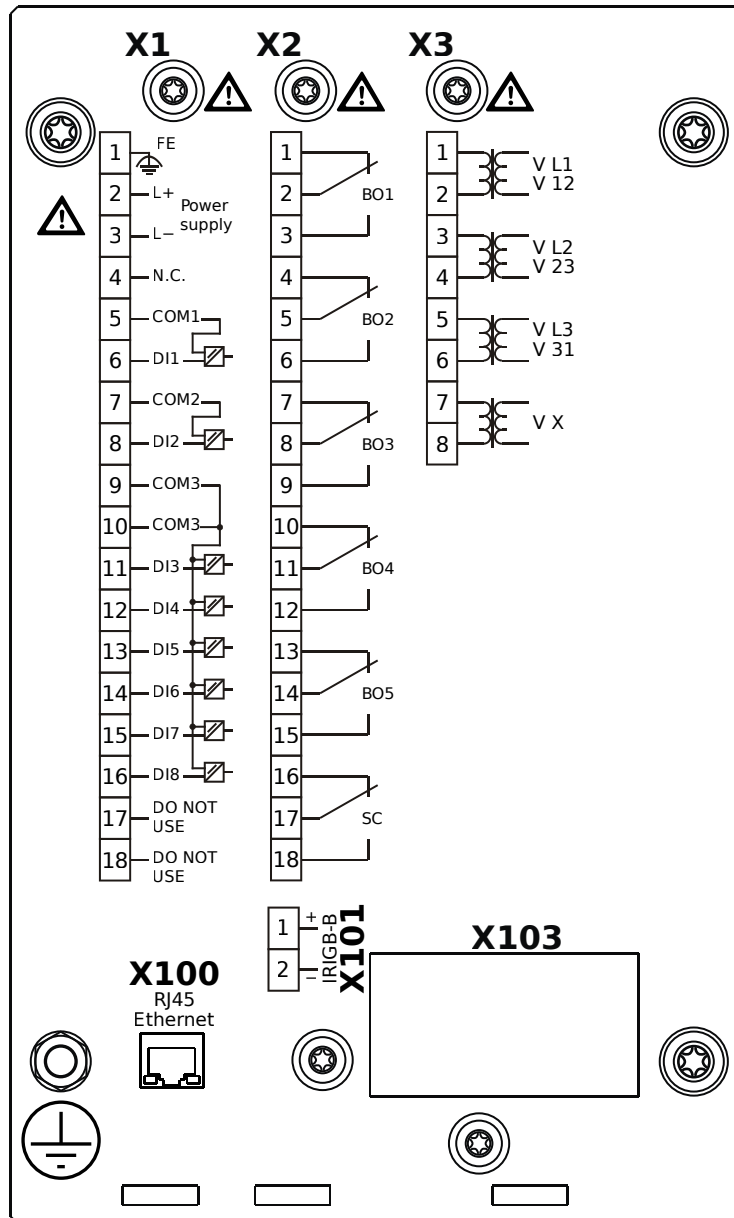
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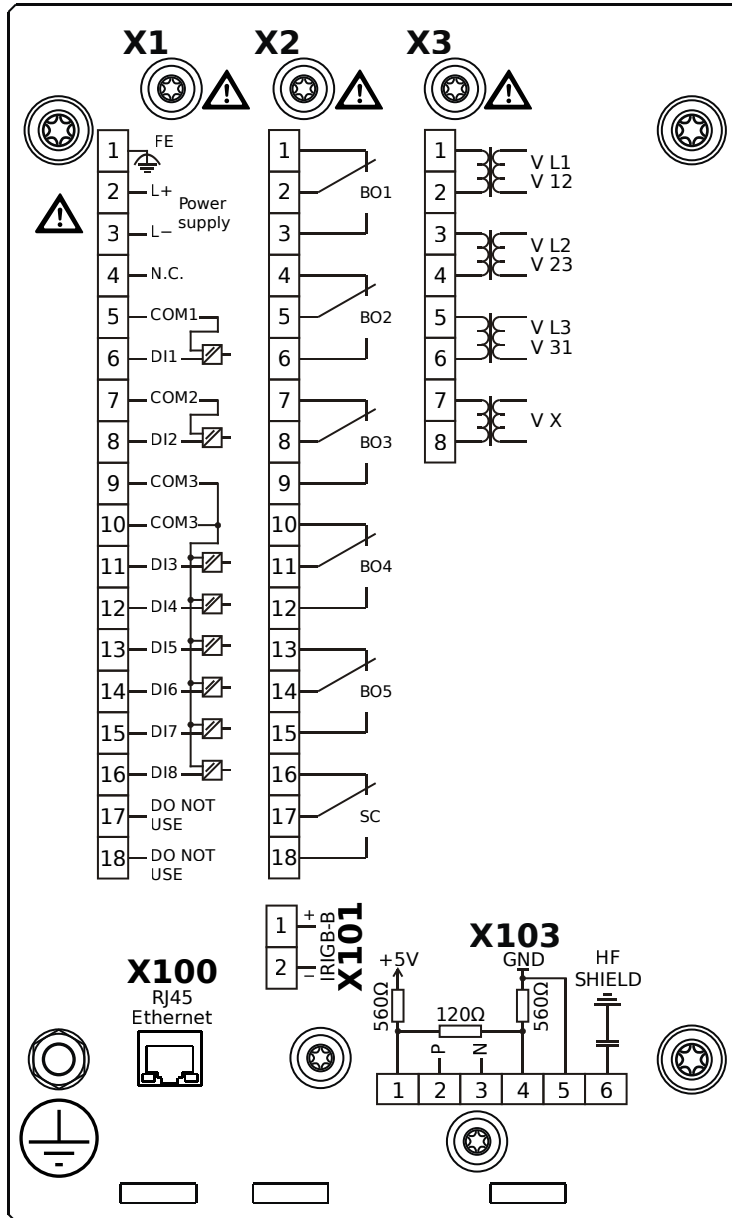


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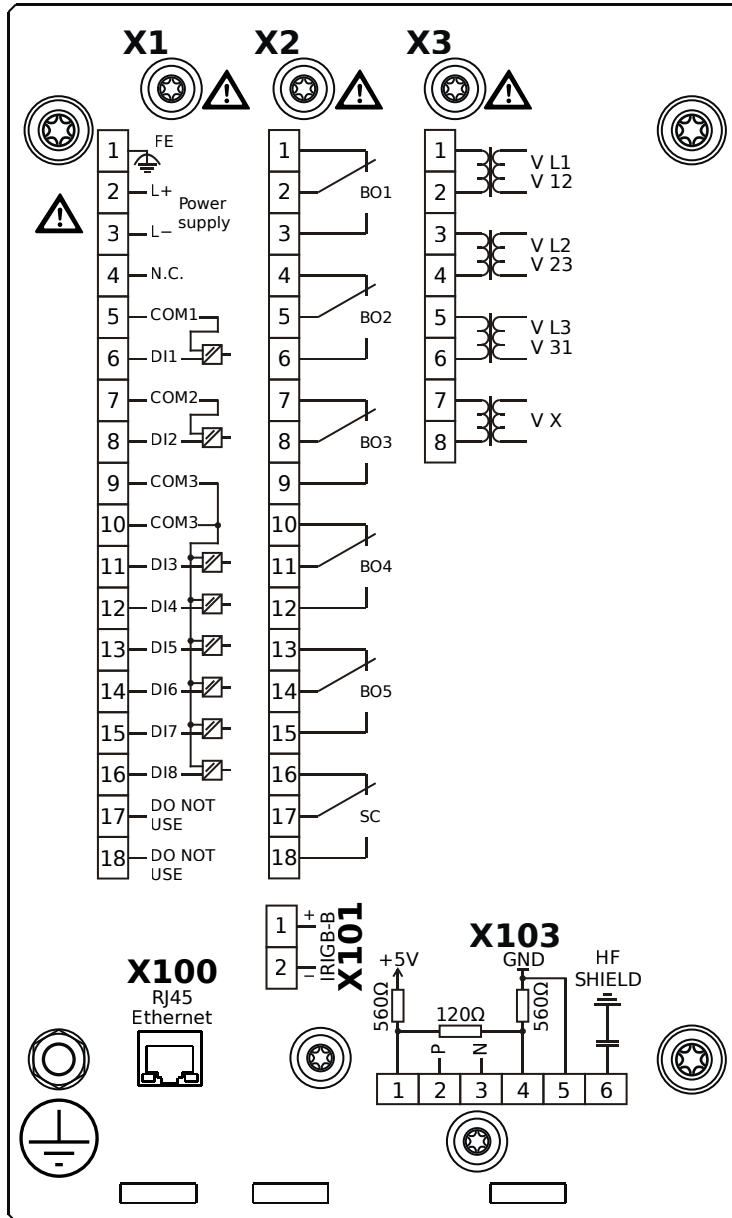
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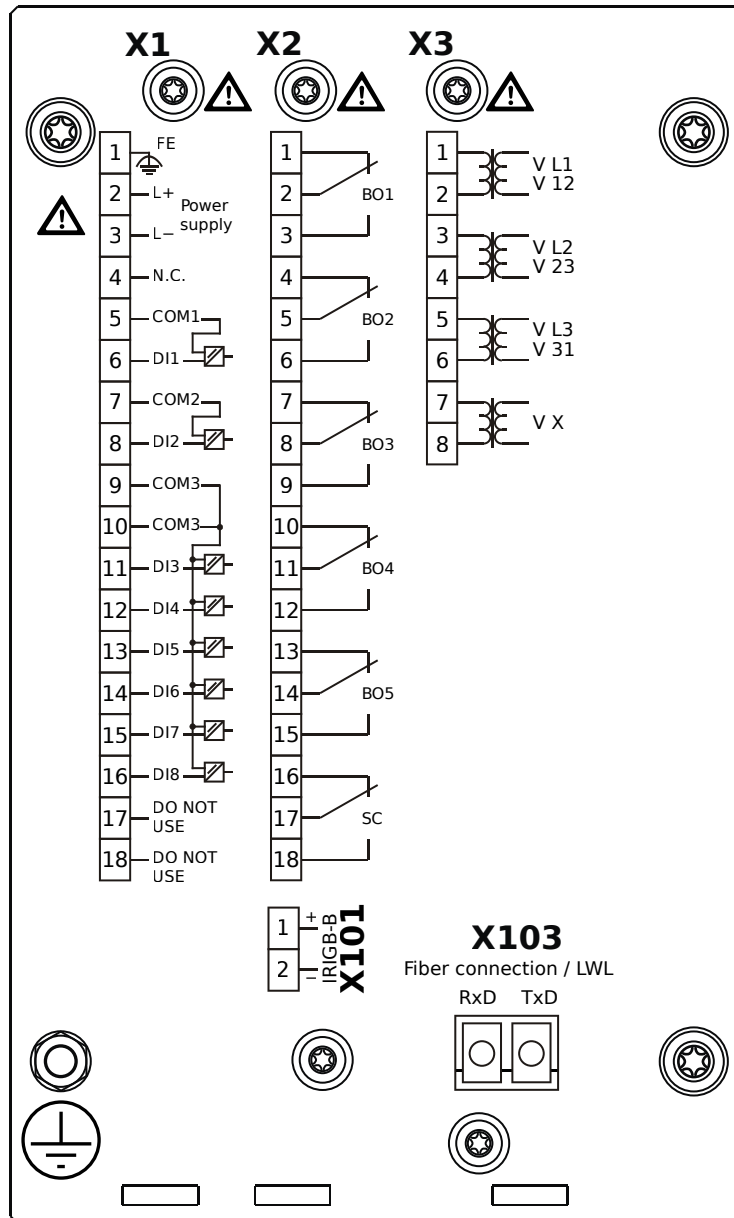


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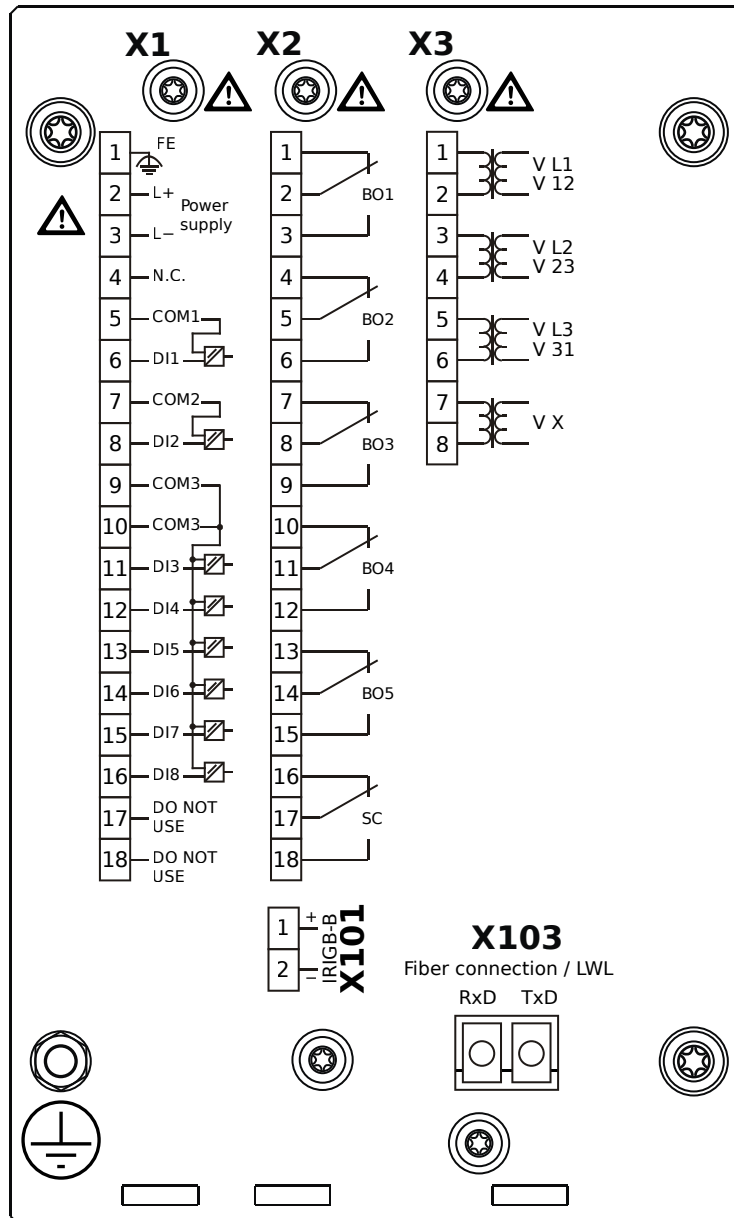
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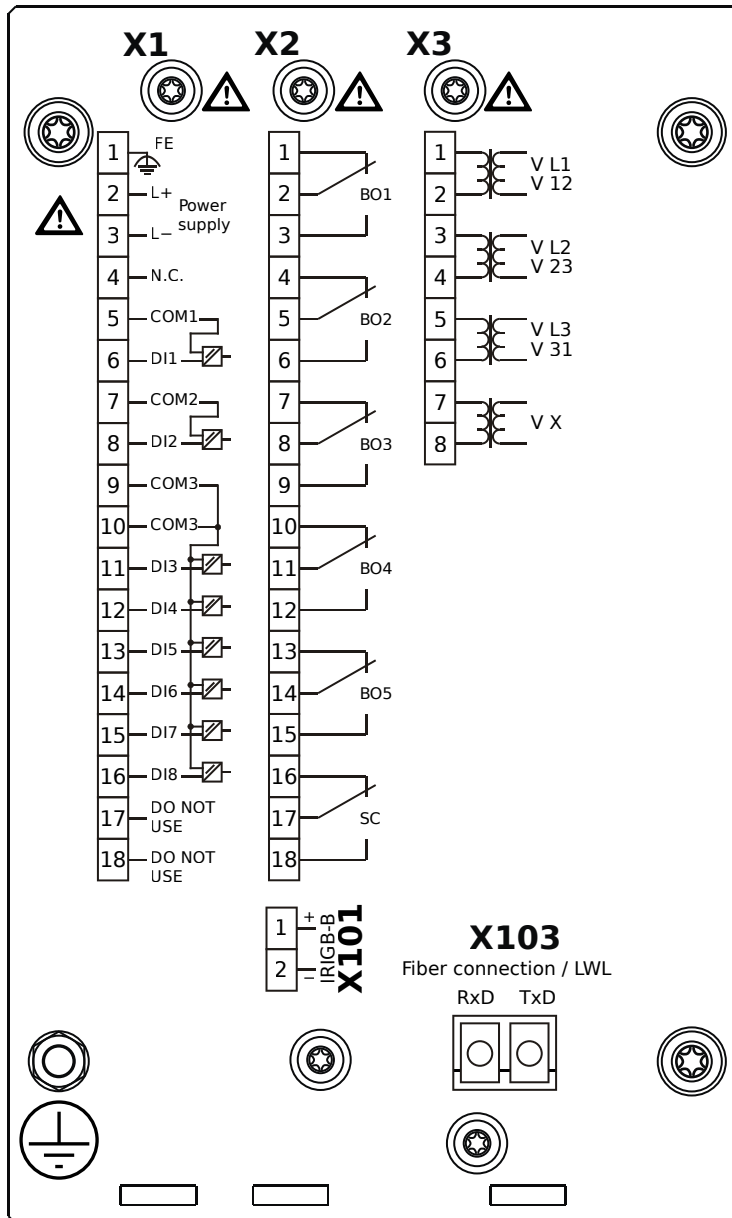


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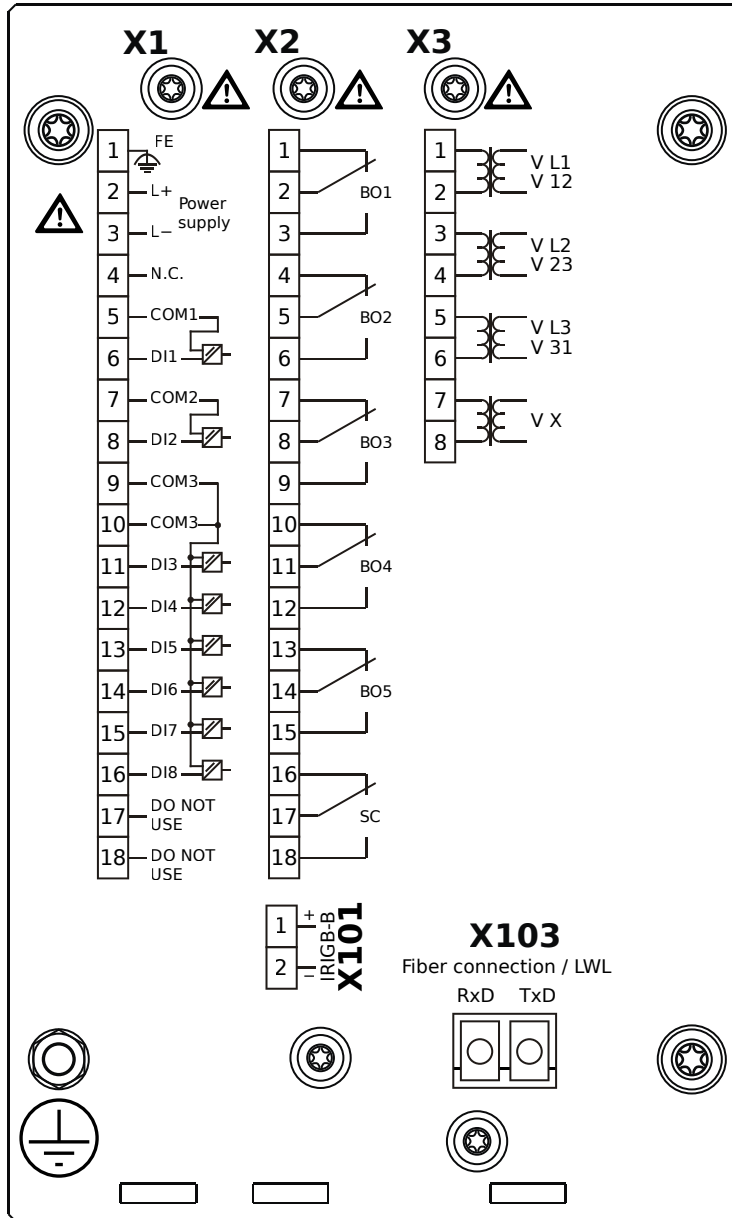
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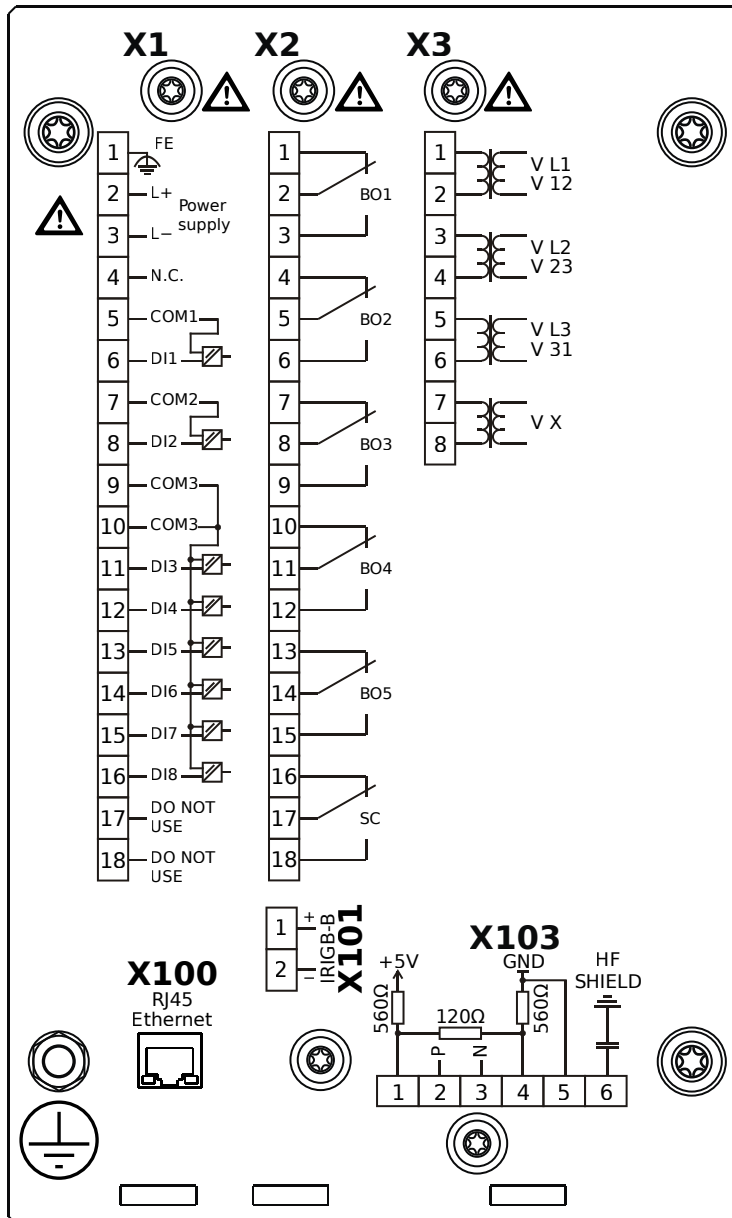


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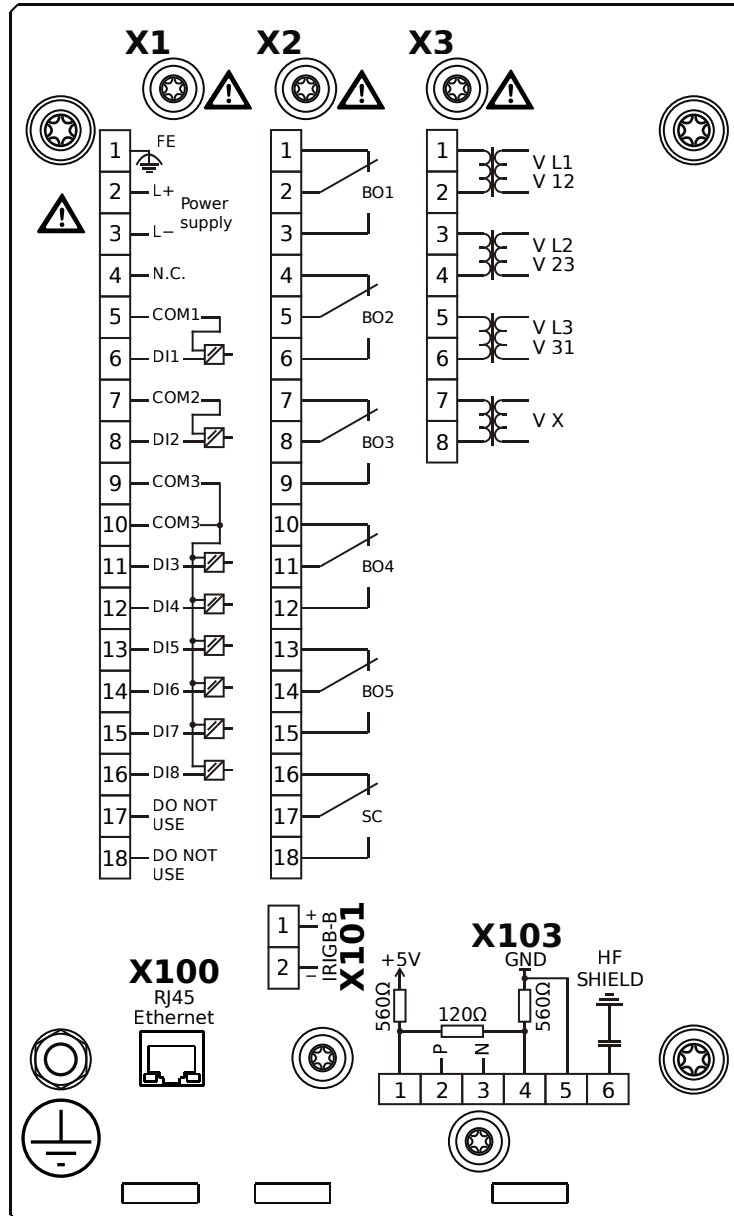
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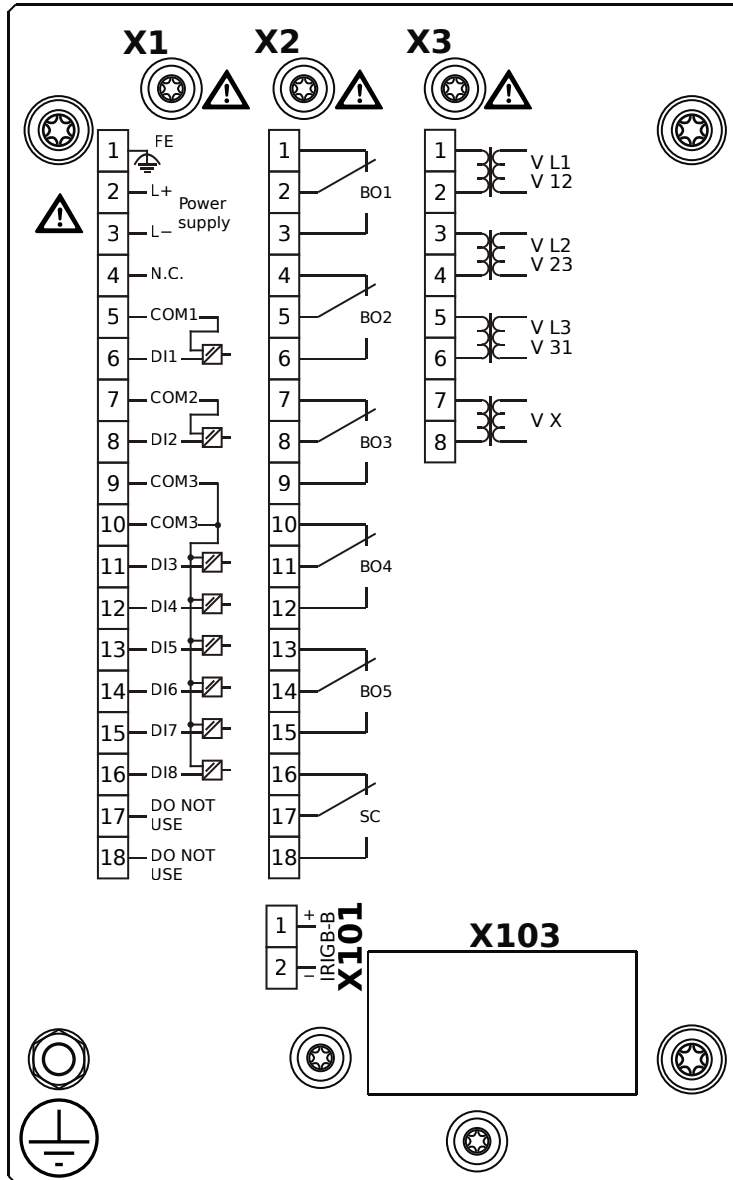


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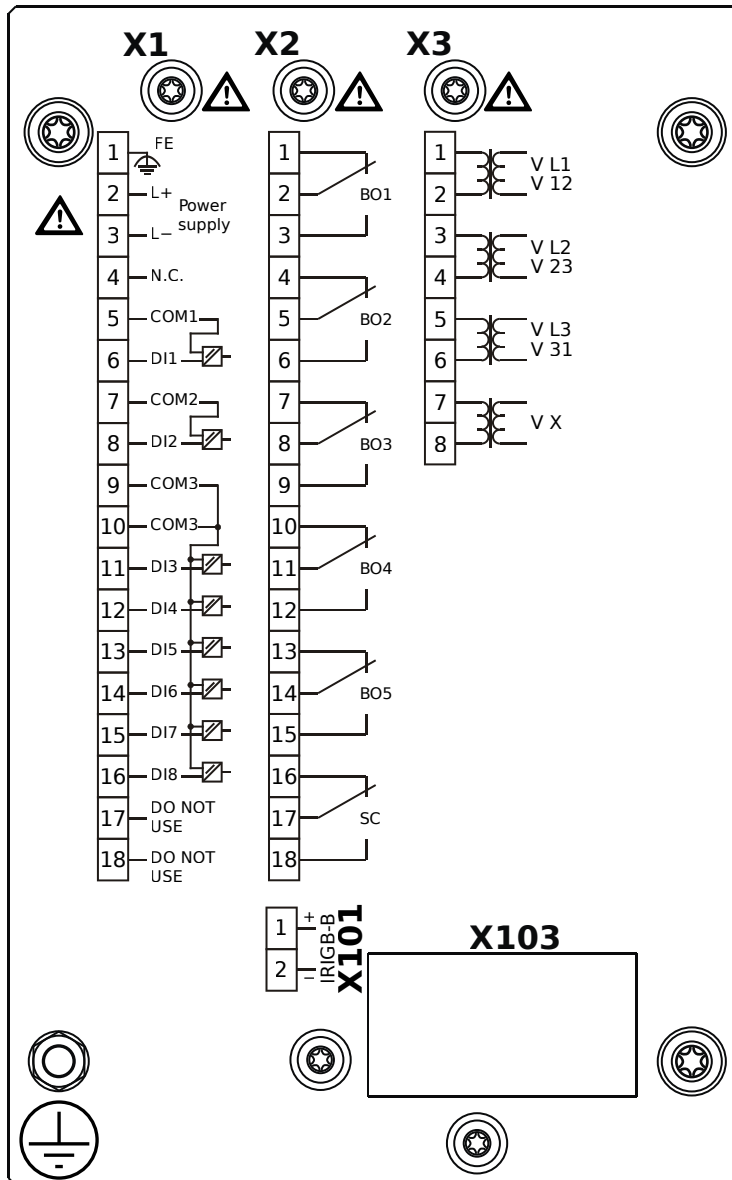
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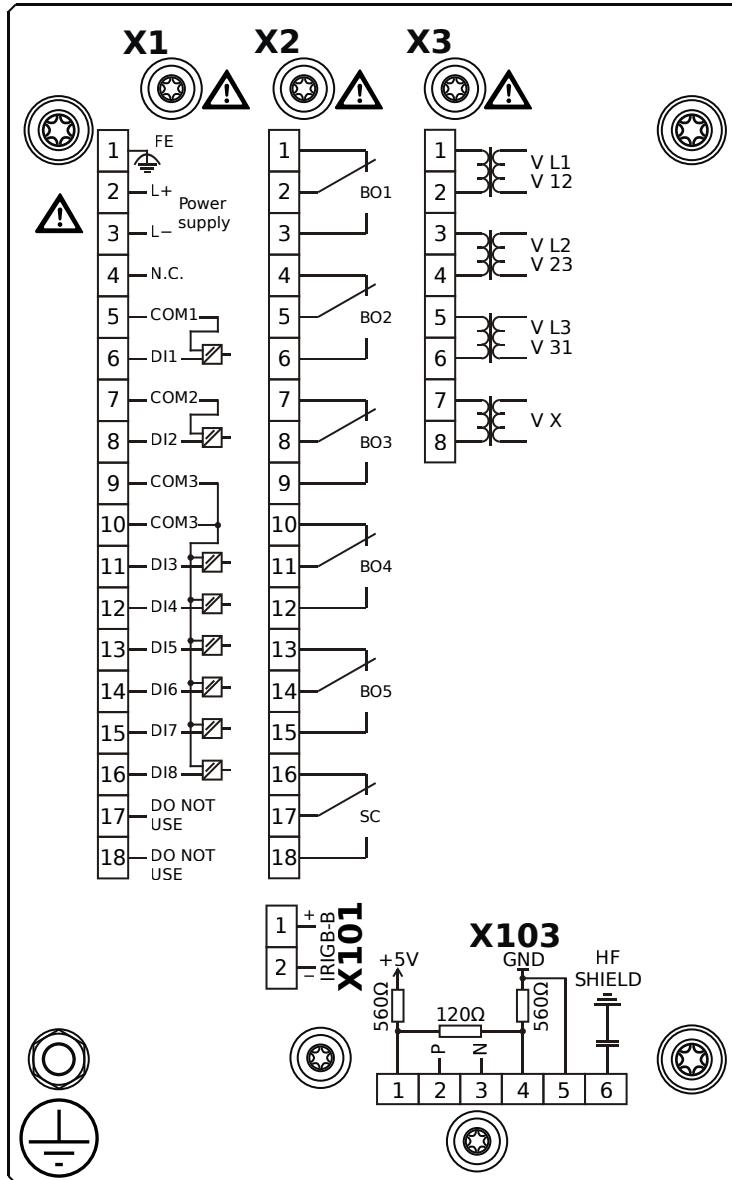


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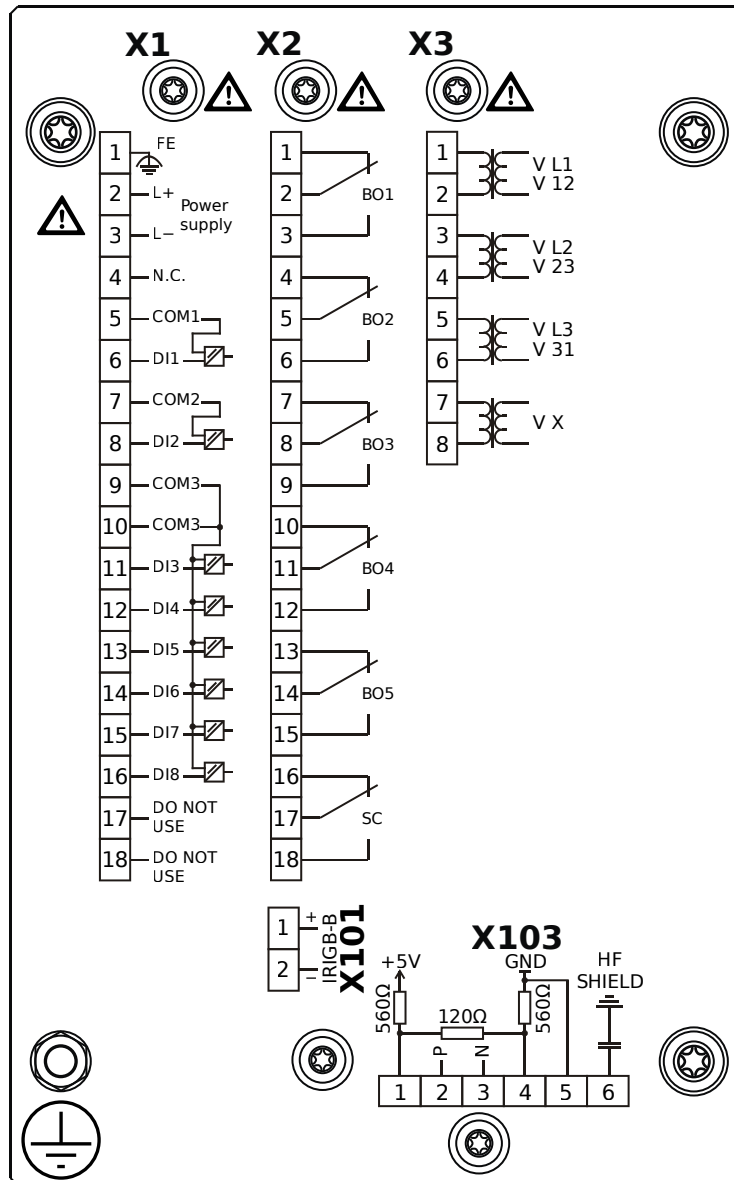
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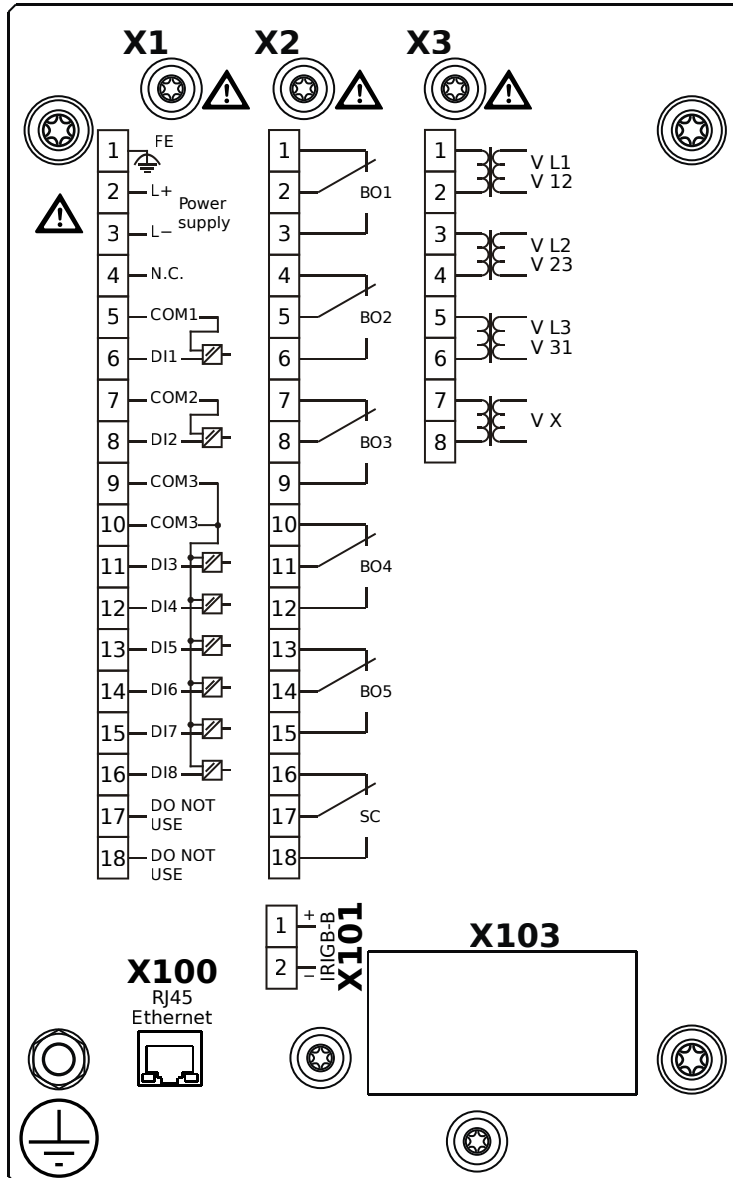


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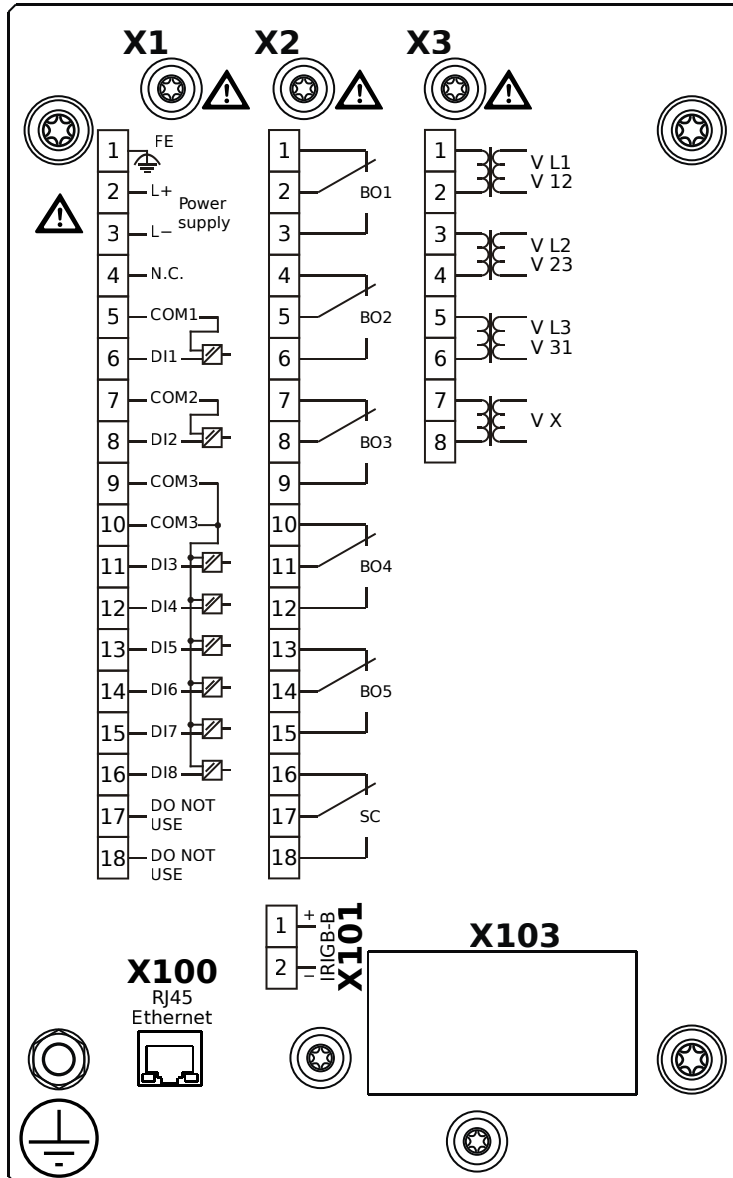
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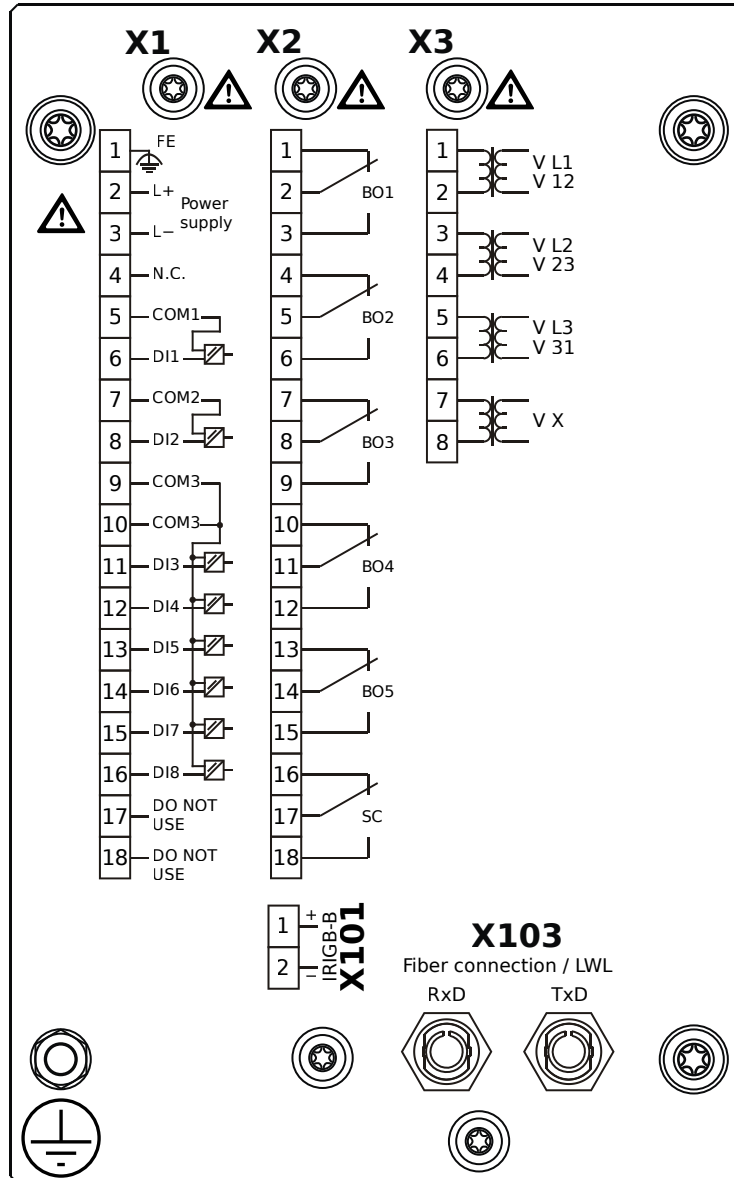


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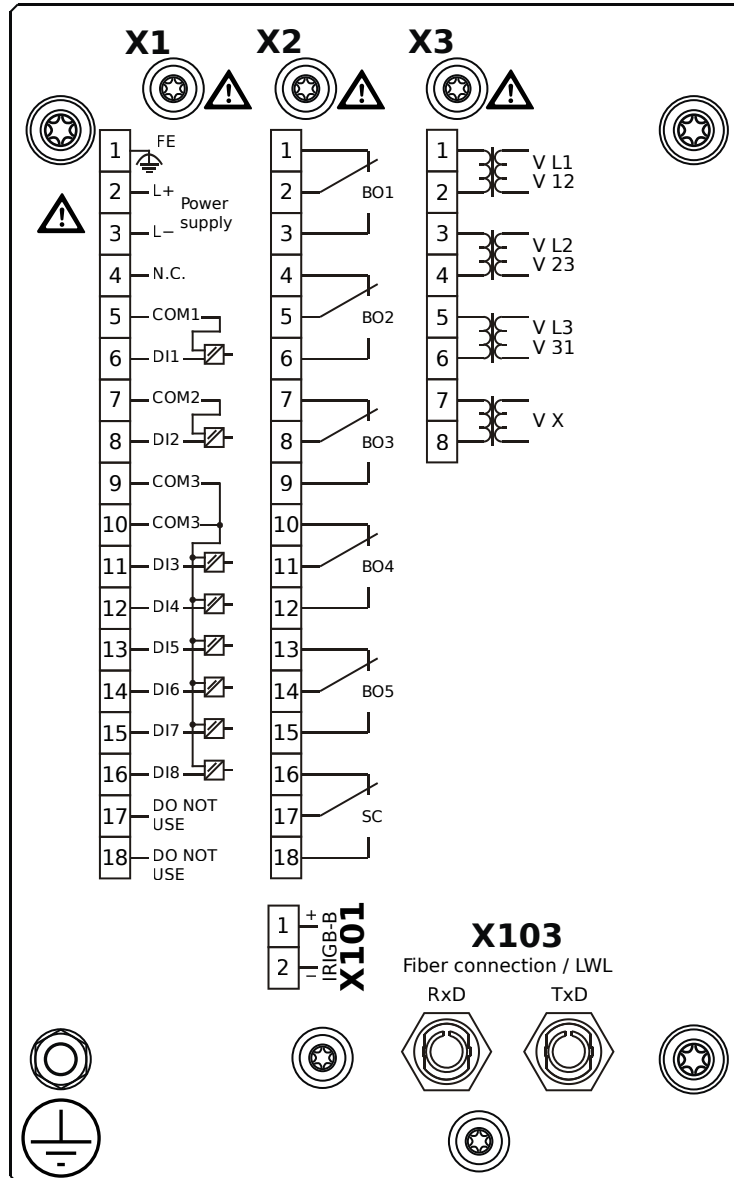
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MRU4-2A0BDB

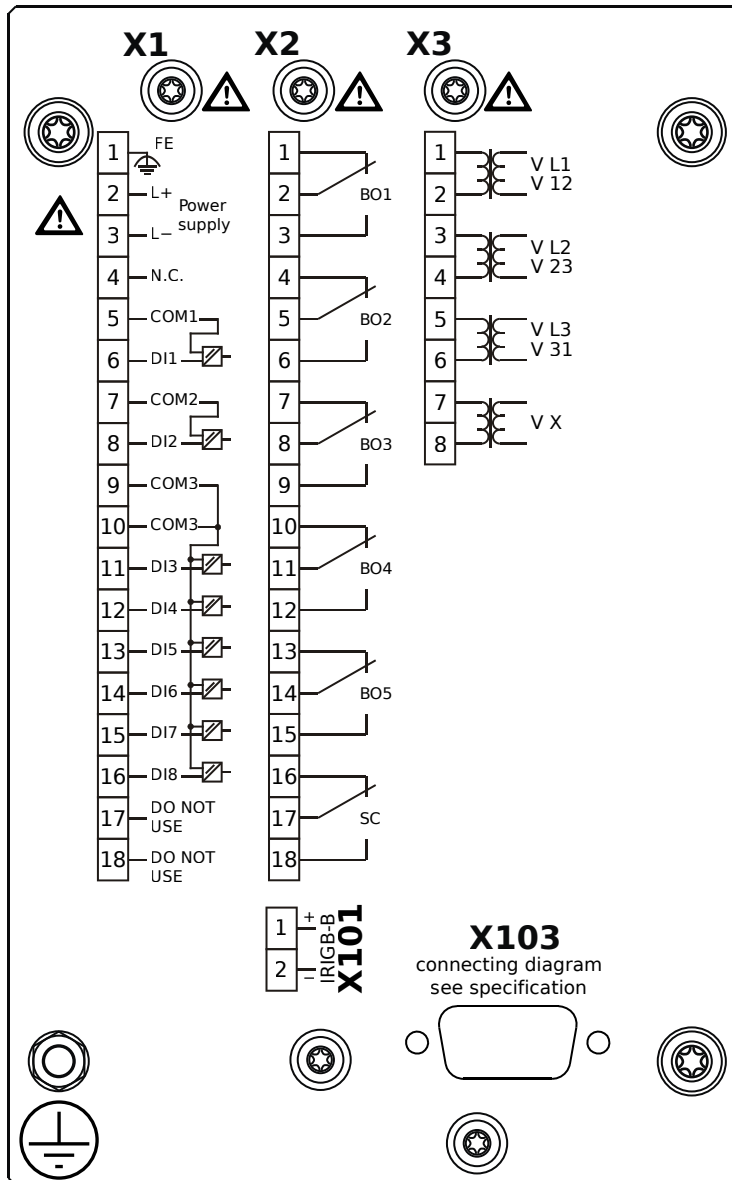


Housing B1, small display, 19" rack mounting

+ Conformal Coating (for installations in harsh environment)

- X1** – DI8-X1: Wide-range power supply unit, incl. 2 non-grouped digital inputs and 6 grouped digital inputs
- X2** – OR5: Assembly Group with 5 Output Relays (Changeover / Form C) + 1 Supervision Contact
- X3** – TU: Card with 4 voltage transformer measuring inputs (0 ... 800 VAC, under UL: 0 ... 600 VAC)
- X101** – IRIG-B00X
- X103** – Profibus-DP, Fiber optics interface, ST Connector

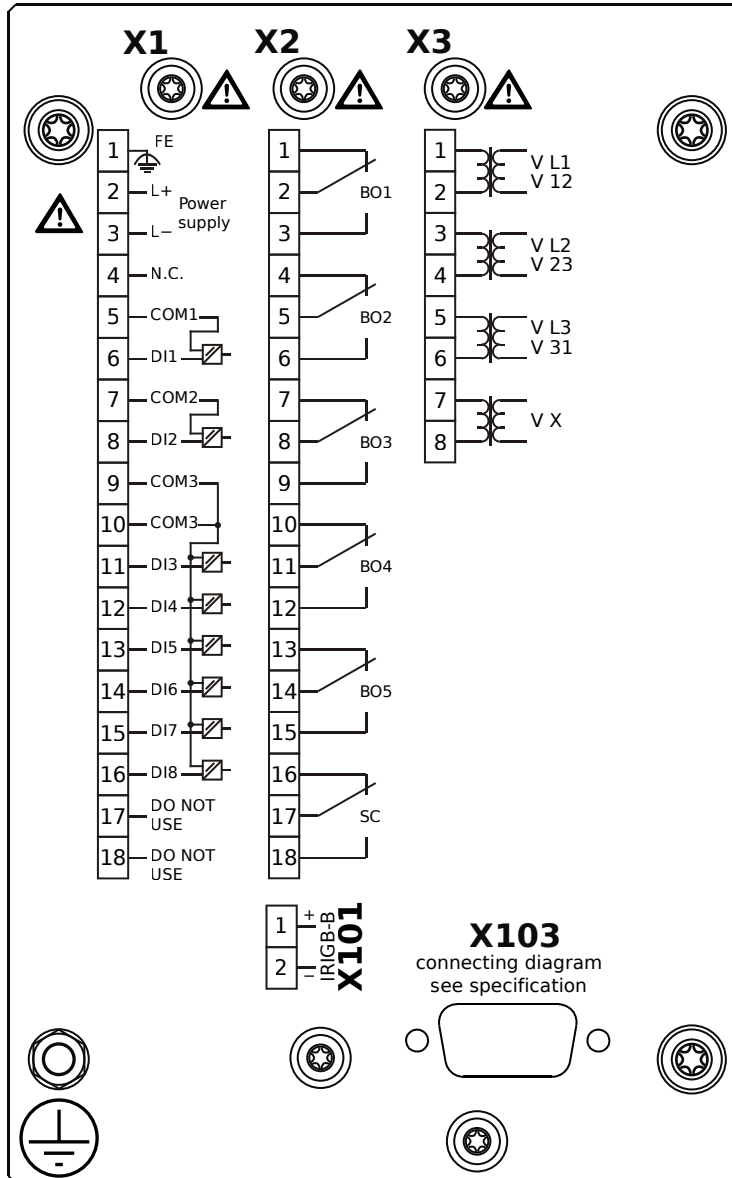
MRU4-2A0BEA



Housing B1, small display, 19" rack mounting

- X1** – DI8-X1: Wide-range power supply unit, incl. 2 non-grouped digital inputs and 6 grouped digital inputs
- X2** – OR5: Assembly Group with 5 Output Relays (Changeover / Form C) + 1 Supervision Contact
- X3** – TU: Card with 4 voltage transformer measuring inputs (0 ... 800 VAC, under UL: 0 ... 600 VAC)
- X101** – IRIG-B00X
- X103** – Profibus-DP, RS485, D-SUB

MRU4-2A0BEB

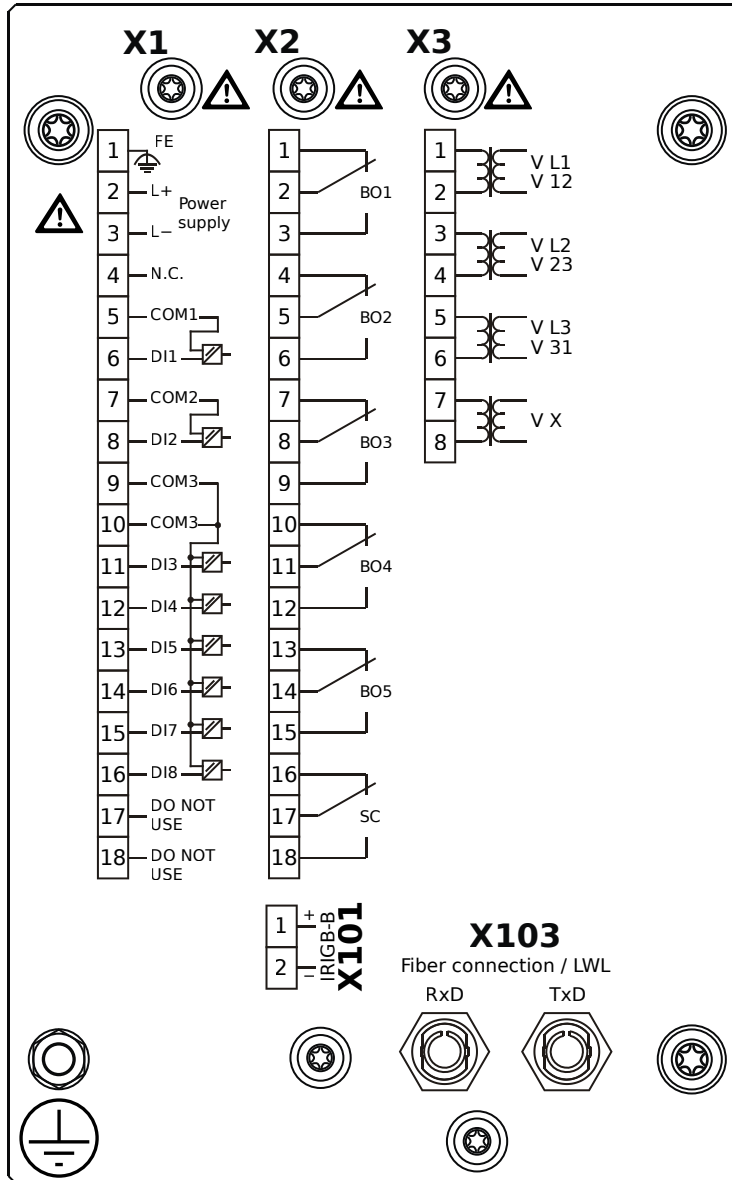


Housing B1, small display, 19" rack mounting

+ Conformal Coating (for installations in harsh environment)

- X1** – DI8-X1: Wide-range power supply unit, incl. 2 non-grouped digital inputs and 6 grouped digital inputs
- X2** – OR5: Assembly Group with 5 Output Relays (Changeover / Form C) + 1 Supervision Contact
- X3** – TU: Card with 4 voltage transformer measuring inputs (0 ... 800 VAC, under UL: 0 ... 600 VAC)
- X101** – IRIG-B00X
- X103** – Profibus-DP, RS485, D-SUB

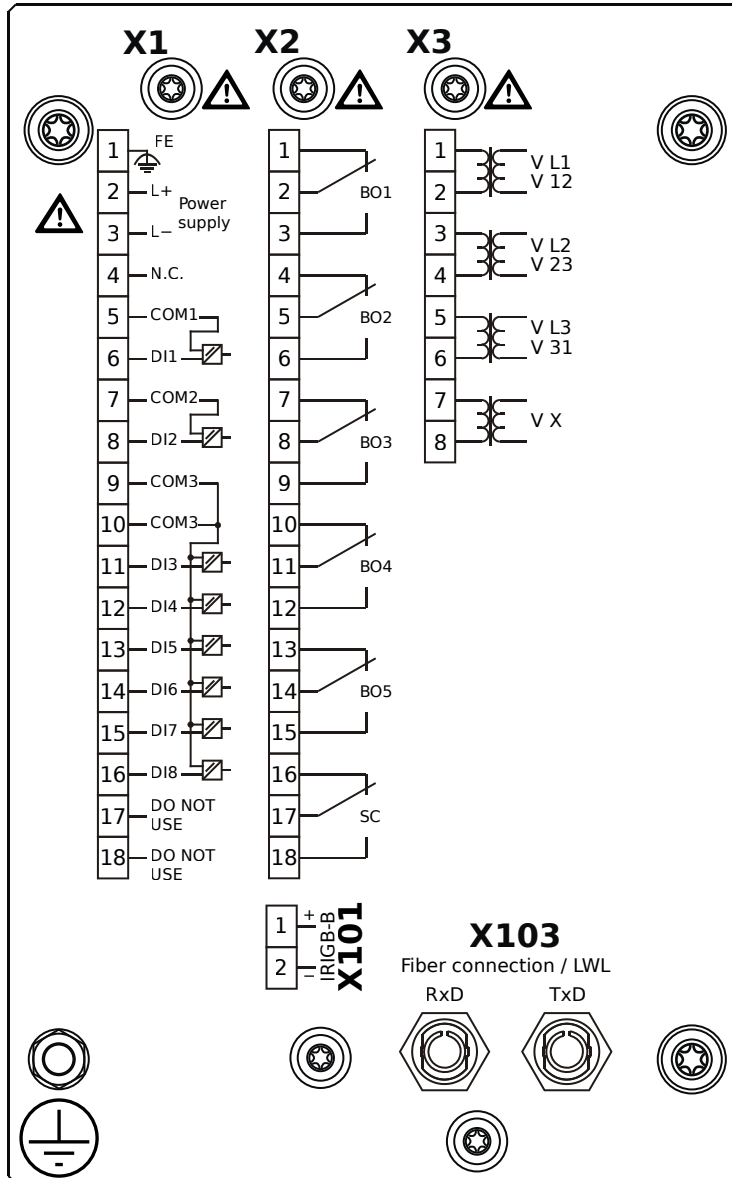
MRU4-2A0BFA



Housing B1, small display, 19" rack mounting

- X1** – DI8-X1: Wide-range power supply unit, incl. 2 non-grouped digital inputs and 6 grouped digital inputs
- X2** – OR5: Assembly Group with 5 Output Relays (Changeover / Form C) + 1 Supervision Contact
- X3** – TU: Card with 4 voltage transformer measuring inputs (0 ... 800 VAC, under UL: 0 ... 600 VAC)
- X101** – IRIG-B00X
- X103** – Modbus RTU / IEC 60870-5-103 / DNP3.0 RTU, Fiber optics interface, ST Connector

MRU4-2A0BFB

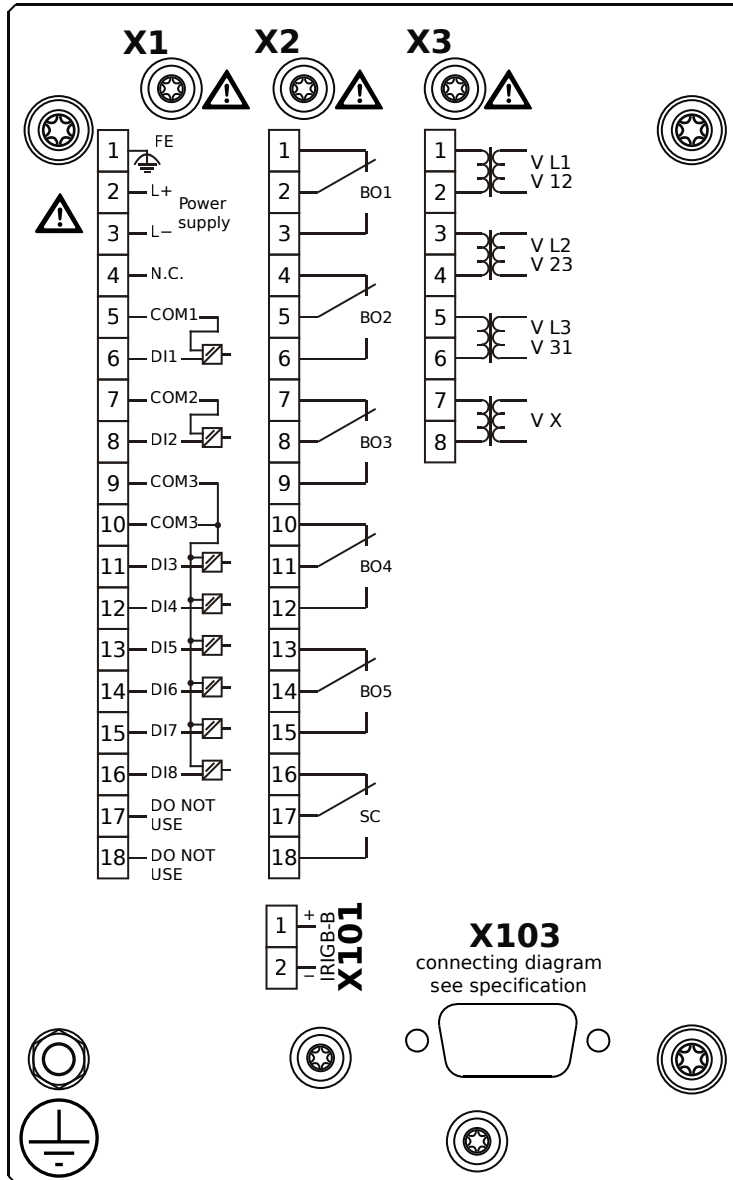


Housing B1, small display, 19" rack mounting

- + Conformal Coating (for installations in harsh environment)

- X1** – DI8-X1: Wide-range power supply unit, incl. 2 non-grouped digital inputs and 6 grouped digital inputs
- X2** – OR5: Assembly Group with 5 Output Relays (Changeover / Form C) + 1 Supervision Contact
- X3** – TU: Card with 4 voltage transformer measuring inputs (0 ... 800 VAC, under UL: 0 ... 600 VAC)
- X101** – IRIG-B00X
- X103** – Modbus RTU / IEC 60870-5-103 / DNP3.0 RTU, Fiber optics interface, ST Connector

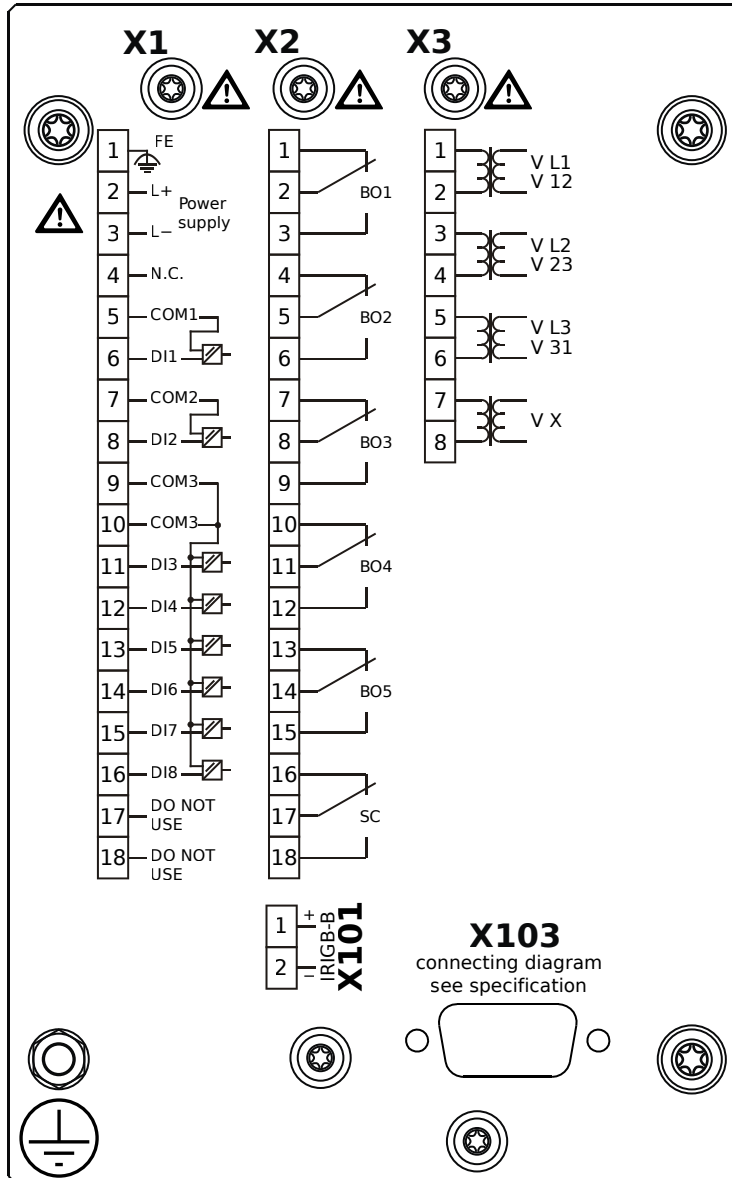
MRU4-2A0BGA



Housing B1, small display, 19" rack mounting

- X1** – DI8-X1: Wide-range power supply unit, incl. 2 non-grouped digital inputs and 6 grouped digital inputs
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- X3** – TU: Card with 4 voltage transformer measuring inputs (0 ... 800 VAC, under UL: 0 ... 600 VAC)
- X101** – IRIG-B00X
- X103** – Modbus RTU / IEC 60870-5-103 / DNP3.0 RTU, RS485, D-SUB

MRU4-2A0BGB

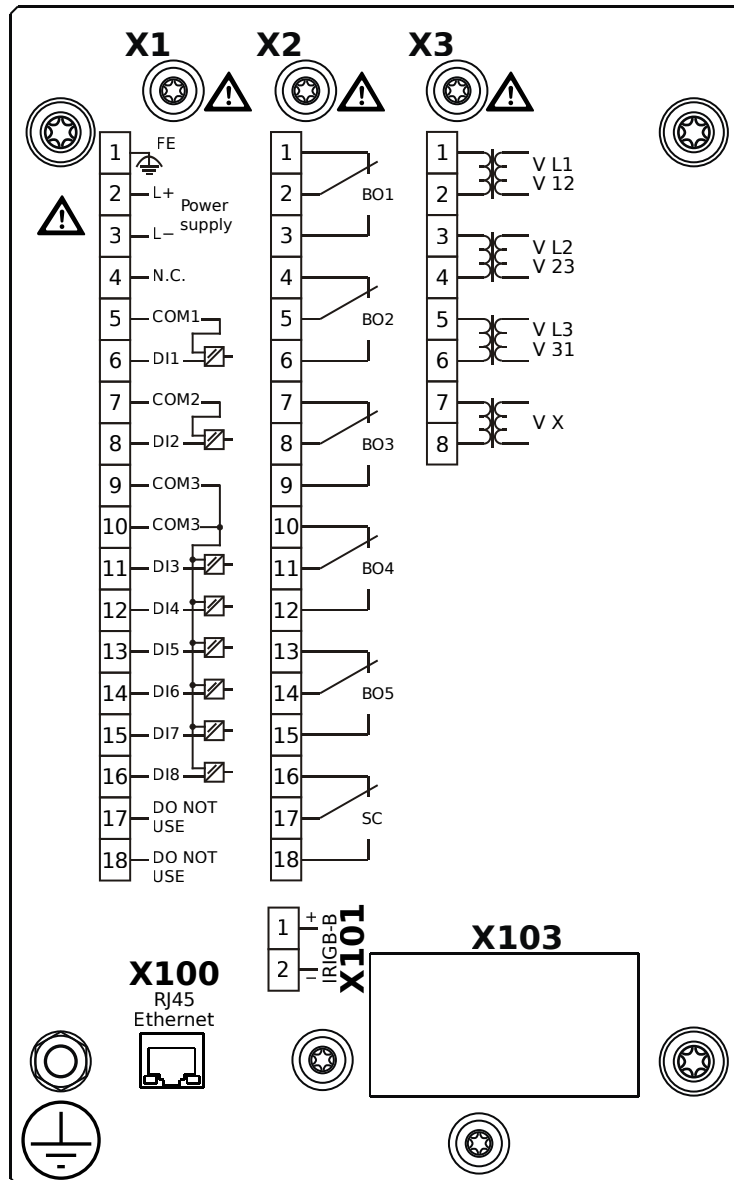


Housing B1, small display, 19" rack mounting

+ Conformal Coating (for installations in harsh environment)

- X1** – DI8-X1: Wide-range power supply unit, incl. 2 non-grouped digital inputs and 6 grouped digital inputs
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- X3** – TU: Card with 4 voltage transformer measuring inputs (0 ... 800 VAC, under UL: 0 ... 600 VAC)
- X101** – IRIG-B00X
- X103** – Modbus RTU / IEC 60870-5-103 / DNP3.0 RTU, RS485, D-SUB

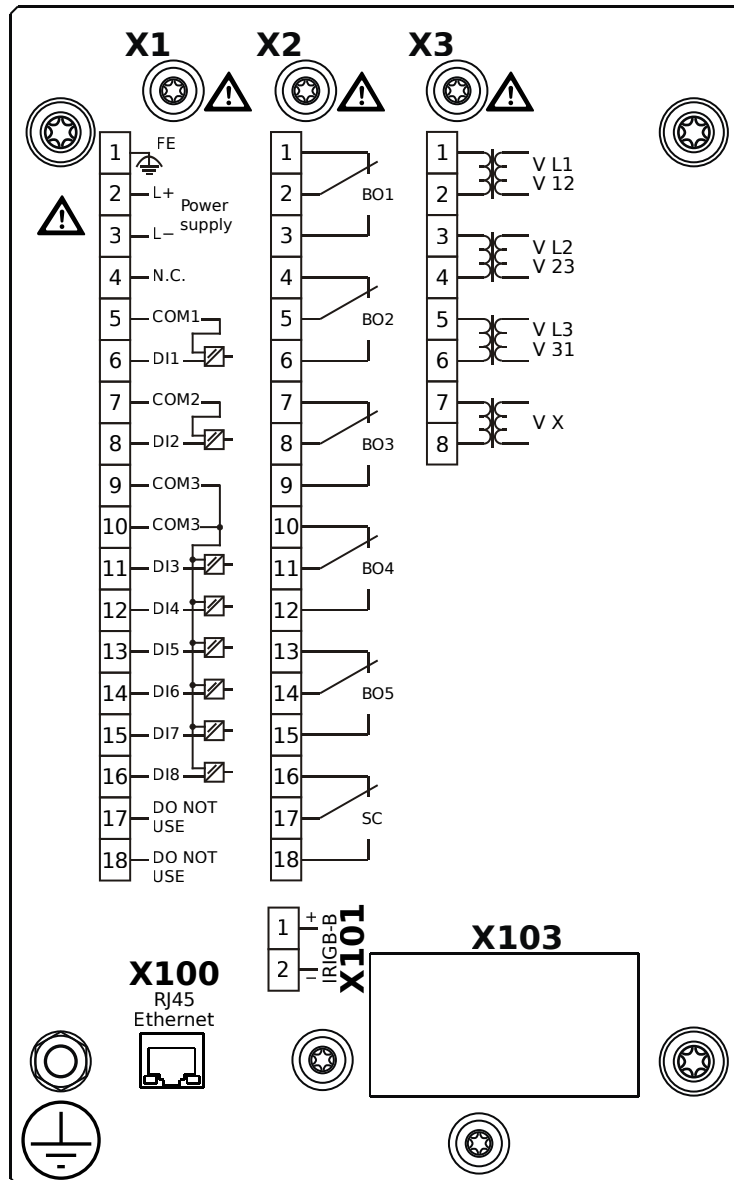
MRU4-2A0BHA



Housing B1, small display, 19" rack mounting

- X1** – DI8-X1: Wide-range power supply unit, incl. 2 non-grouped digital inputs and 6 grouped digital inputs
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- X3** – TU: Card with 4 voltage transformer measuring inputs (0 ... 800 VAC, under UL: 0 ... 600 VAC)
- X100** – IEC 61850 / Modbus TCP / DNP3.0 TCP/UDP, Ethernet interface, 100 Mbit/s, RJ45 (BASE100-FX)
- X101** – IRIG-B00X

MRU4-2A0BHB

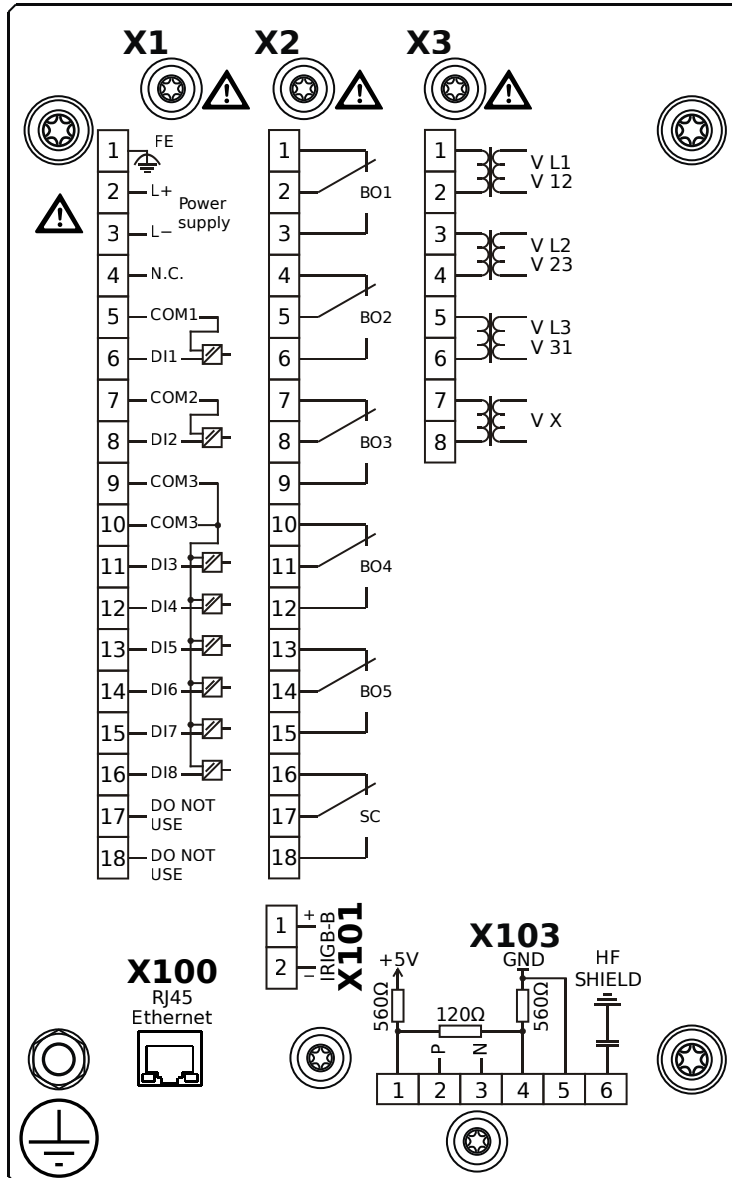


Housing B1, small display, 19" rack mounting

+ Conformal Coating (for installations in harsh environment)

- X1** – DI8-X1: Wide-range power supply unit, incl. 2 non-grouped digital inputs and 6 grouped digital inputs
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- X3** – TU: Card with 4 voltage transformer measuring inputs (0 ... 800 VAC, under UL: 0 ... 600 VAC)
- X100** – IEC 61850 / Modbus TCP / DNP3.0 TCP/UDP, Ethernet interface, 100 Mbit/s, RJ45 (BASE100-FX)
- X101** – IRIG-B00X

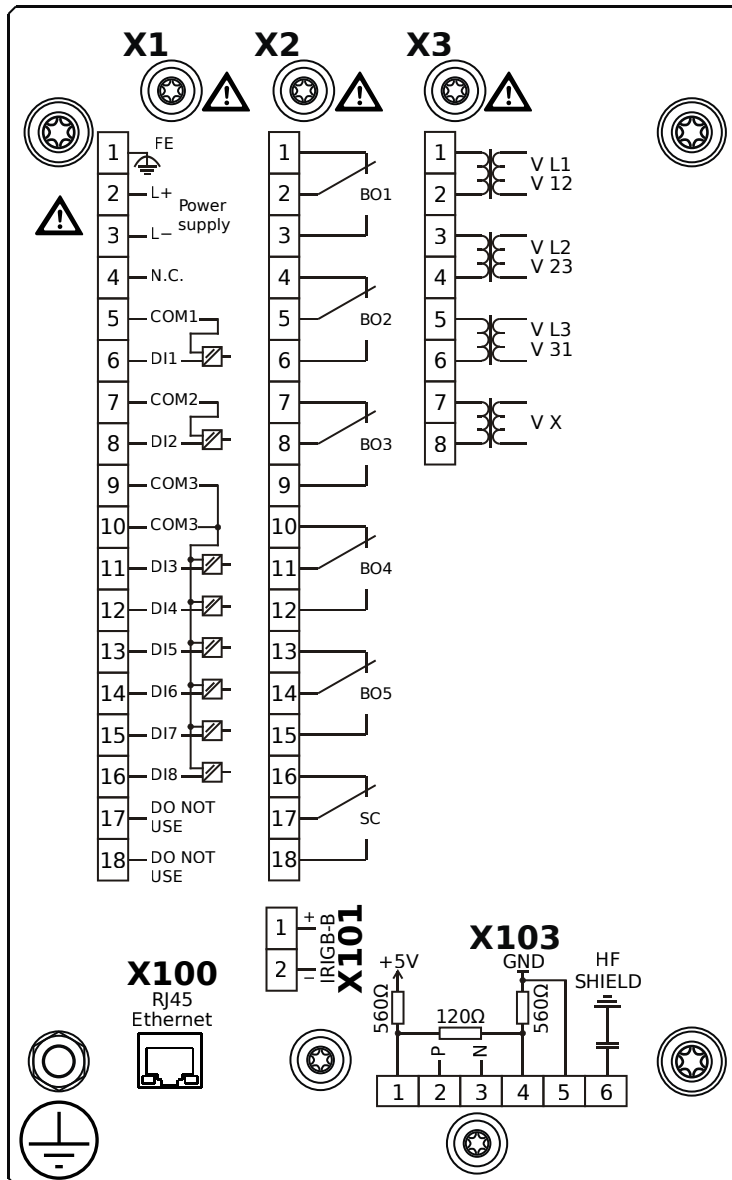
MRU4-2A0BIA



Housing B1, small display, 19" rack mounting

- X1** – DI8-X1: Wide-range power supply unit, incl. 2 non-grouped digital inputs and 6 grouped digital inputs
- X2** – OR5: Assembly Group with 5 Output Relays (Changeover / Form C) + 1 Supervision Contact
- X3** – TU: Card with 4 voltage transformer measuring inputs (0 ... 800 VAC, under UL: 0 ... 600 VAC)
- X100** – Modbus TCP / DNP3.0 TCP/UDP, Ethernet interface, 100 Mbit/s, RJ45 (BASE100-FX)
- X101** – IRIG-B00X
- X103** – IEC 60870-5-103 / Modbus RTU / DNP3.0 RTU, RS485, Terminals

MRU4-2A0BIB

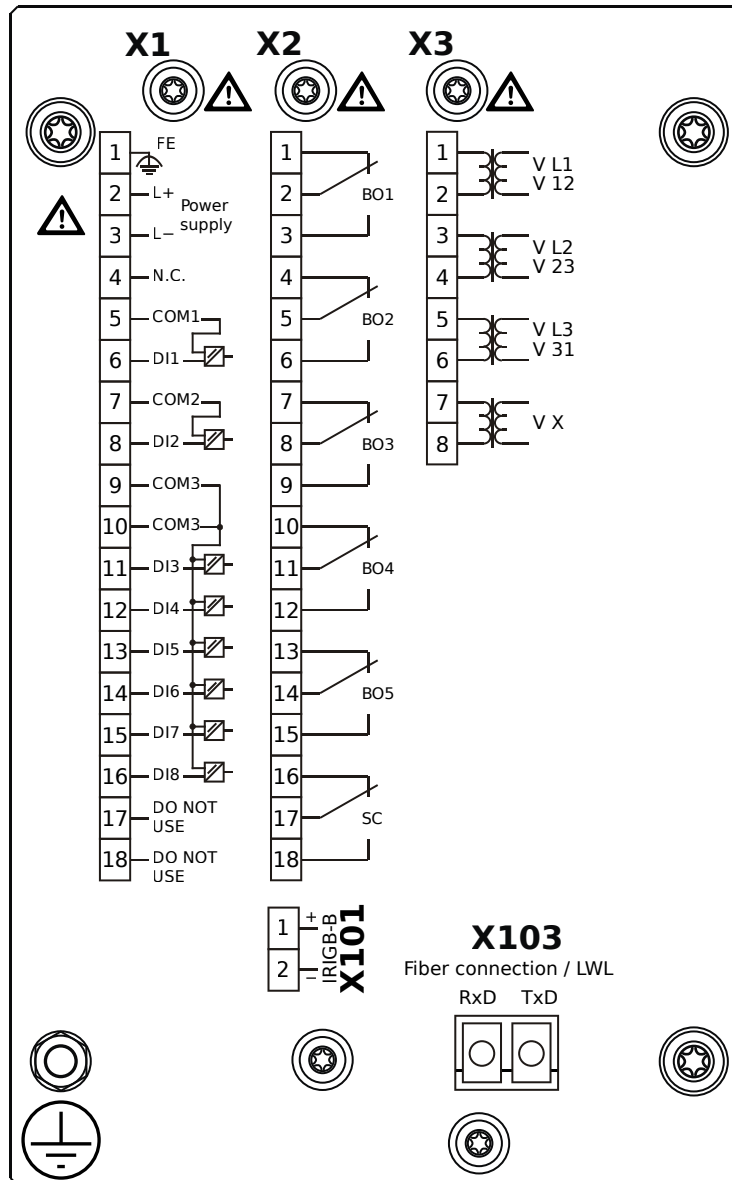


Housing B1, small display, 19" rack mounting

+ Conformal Coating (for installations in harsh environment)

- X1** – DI8-X1: Wide-range power supply unit, incl. 2 non-grouped digital inputs and 6 grouped digital inputs
- X2** – OR5: Assembly Group with 5 Output Relays (Changeover / Form C) + 1 Supervision Contact
- X3** – TU: Card with 4 voltage transformer measuring inputs (0 ... 800 VAC, under UL: 0 ... 600 VAC)
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- X101** – IRIG-B00X
- X103** – IEC 60870-5-103 / Modbus RTU / DNP3.0 RTU, RS485, Terminals

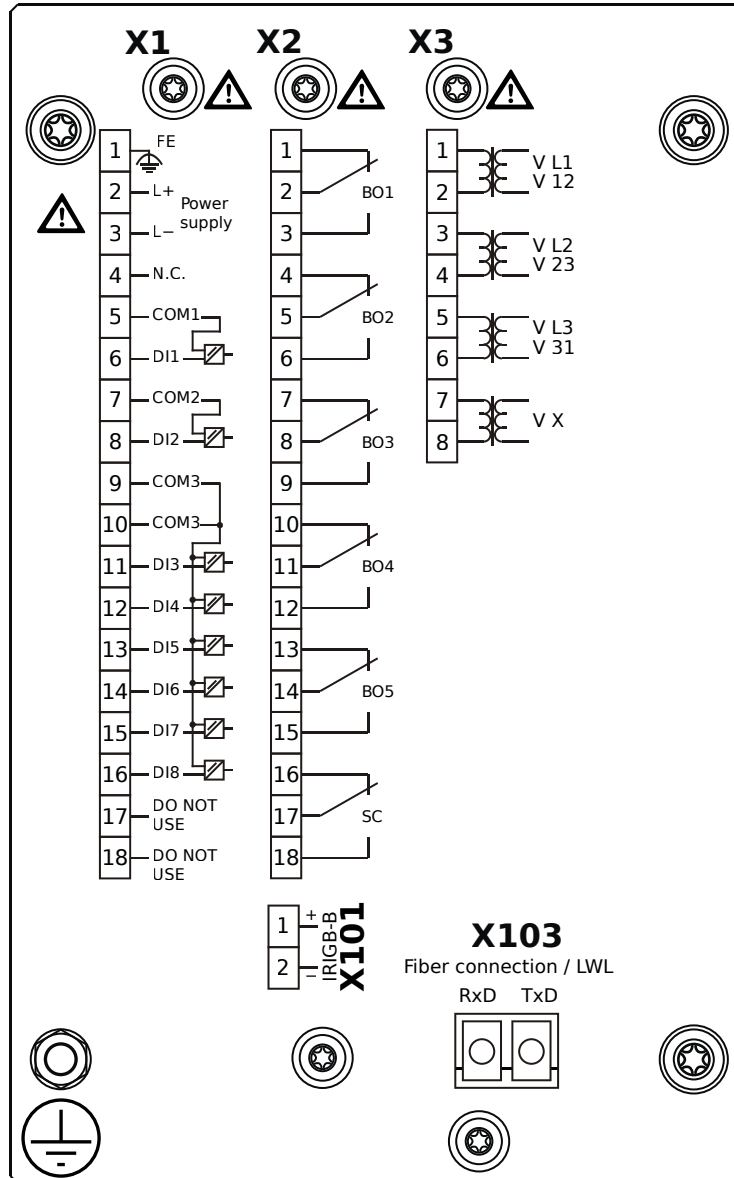
MRU4-2A0BKA



Housing B1, small display, 19" rack mounting

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MRU4-2A0BKB

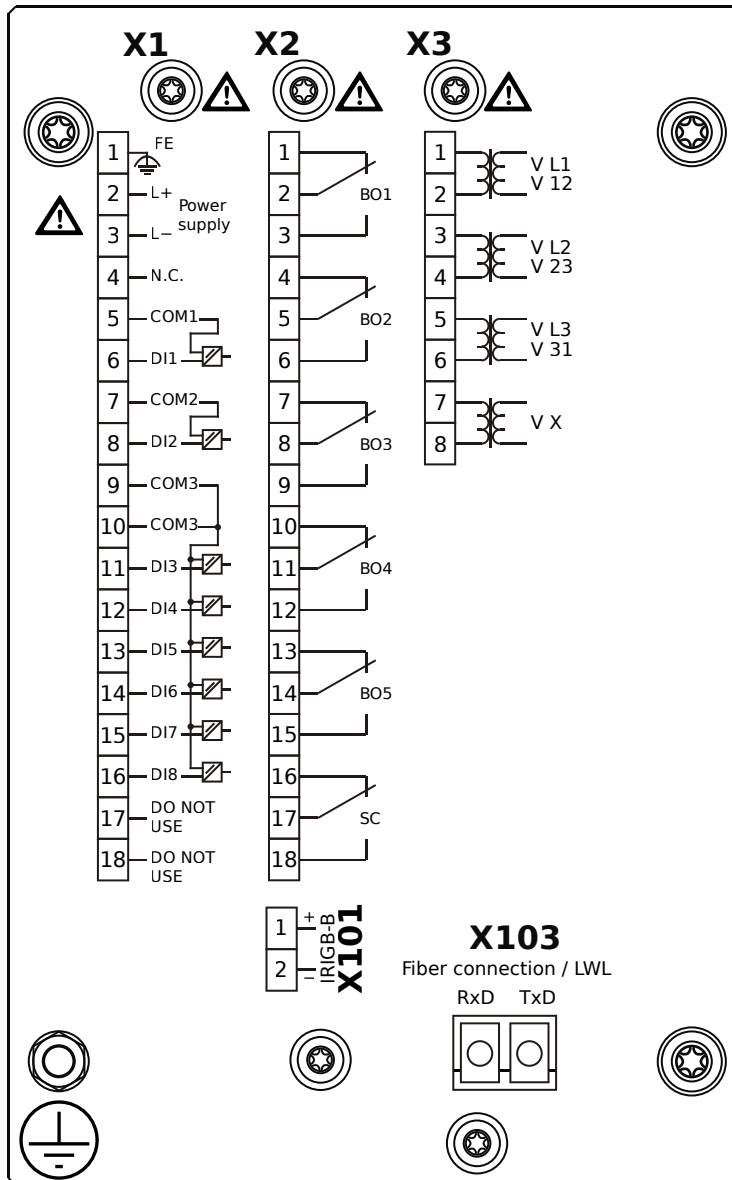


Housing B1, small display, 19" rack mounting

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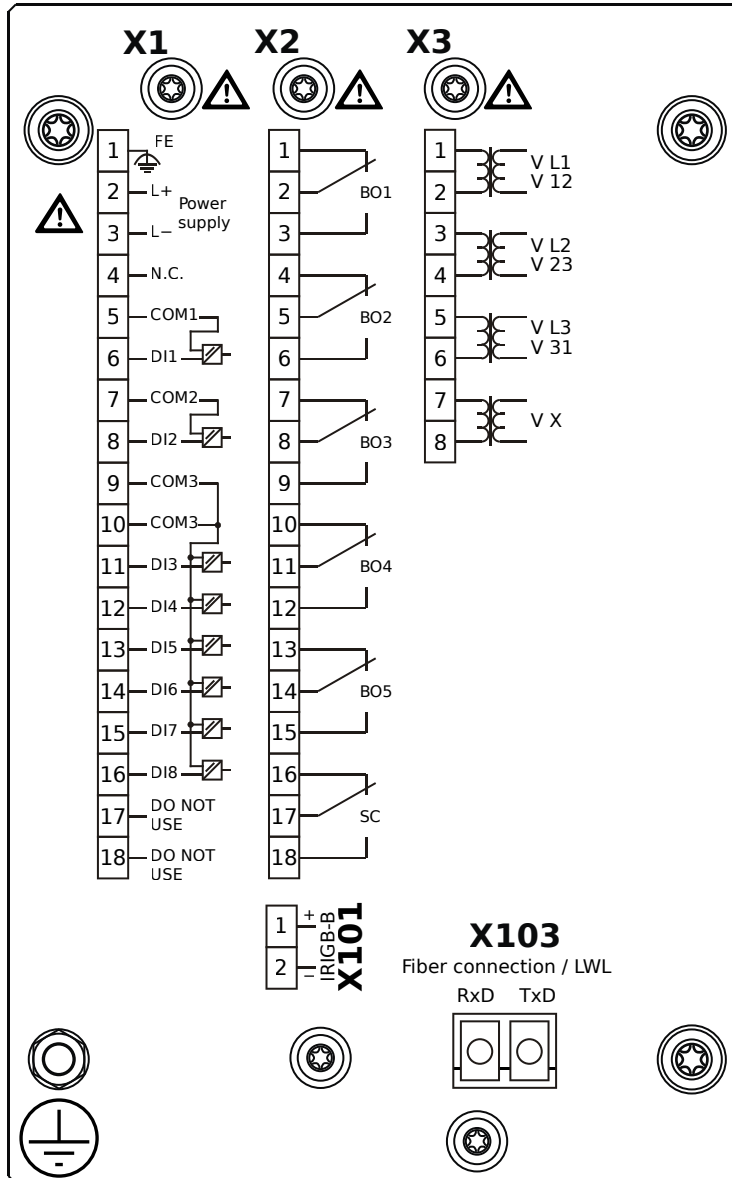
MRU4-2A0BLA



Housing B1, small display, 19" rack mounting

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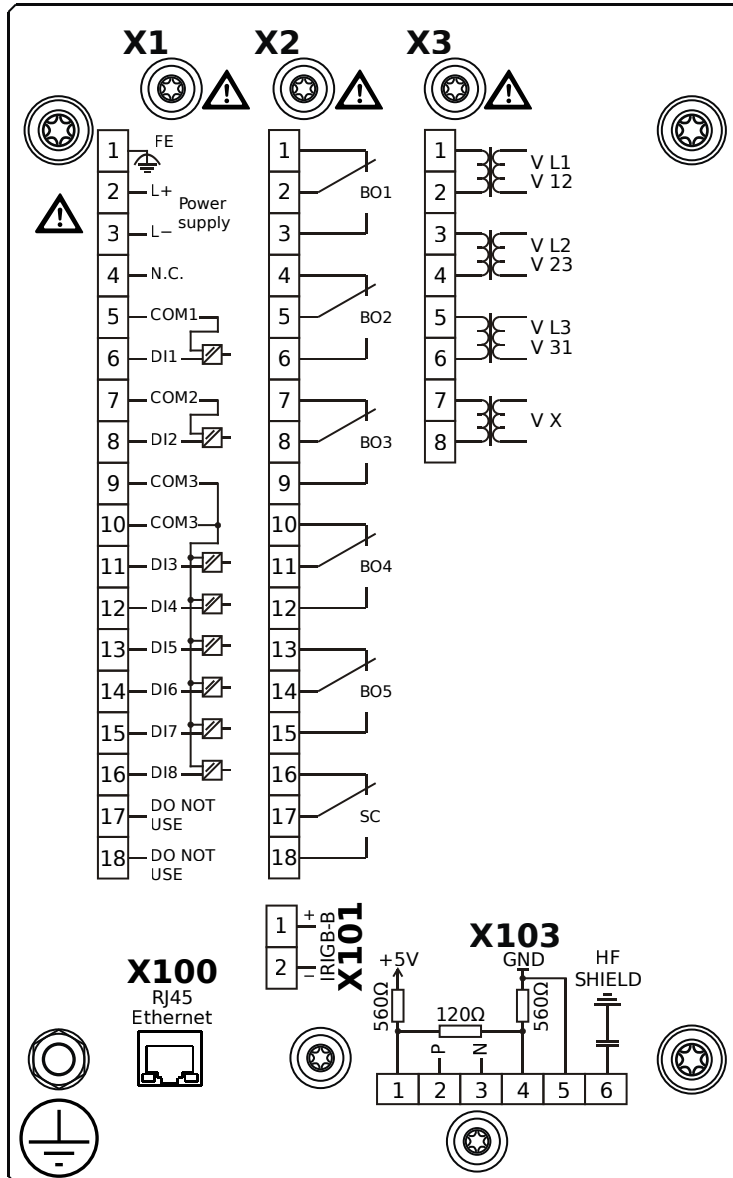


Housing B1, small display, 19" rack mounting

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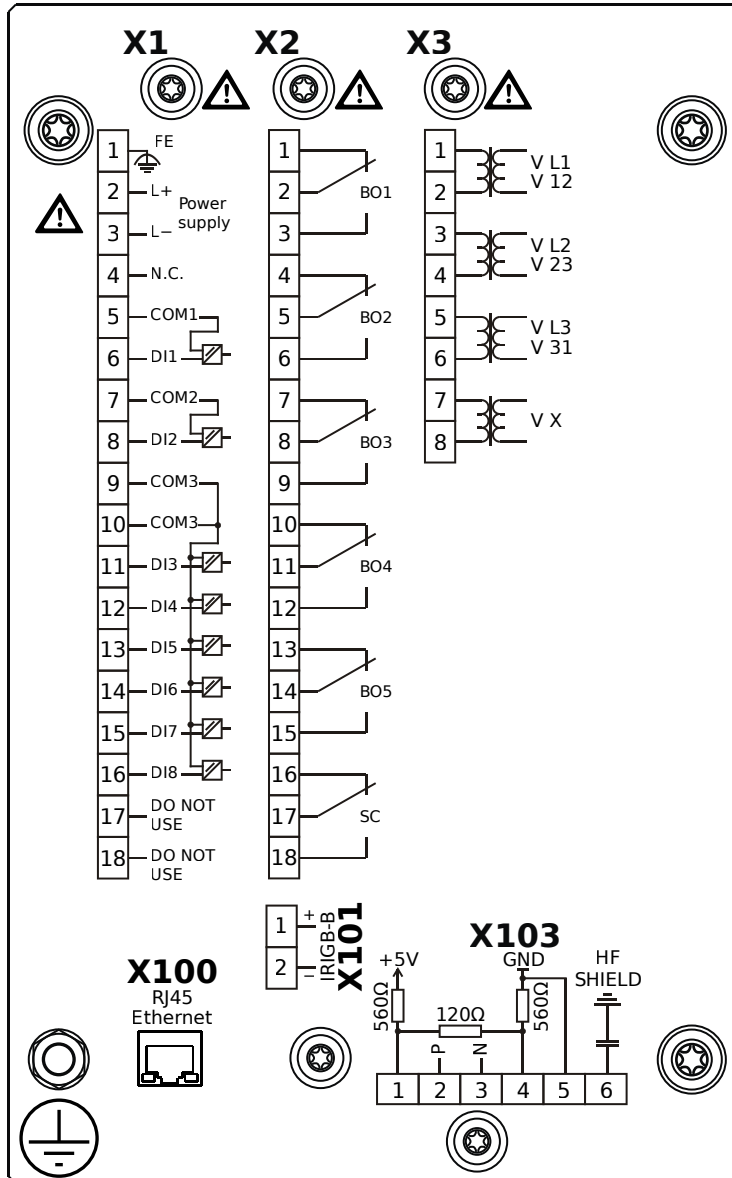
MRU4-2A0BTA



Housing B1, small display, 19" rack mounting

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MRU4-2A0BTB



Housing B1, small display, 19" rack mounting

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Appendix – Legend

In this legend designations of various device types are listed, e.g. transformer protection, motor protection, generator protection, etc. Therefore it can occur that not every designation actually appears on the wiring diagram of your device.

PE	– Connection of protective earth (see chapter Grounding in the Technical Manual).
FE	– Connection of functional earth (see chapter Grounding in the Technical Manual).
Power Supply	– Connection for auxiliary power supply.
IL1	– Phase current input L1 (in some countries designated as IA).
IL2	– Phase current input L2 (in some countries designated as IB).
IL3	– Phase current input L3 (in some countries designated as IC).
ILx C–D	– WIC1 Test windings.
ILx S1–S2	– WIC1 phase current inputs.
IL1 W1 ... IL3 W1	– Phase current input L1...L3, winding side 1.
IL1 W2 ... IL3 W2	– Phase current input L1...L3, winding side 2.
IG	– Ground (earth) current input.
IG W1, IG W2	– Ground (earth) current input, winding side 1 / 2.
VL1	– Phase-to-neutral voltage L1 (in some countries designated as VA).
VL2	– Phase-to-neutral voltage L2 (in some countries designated as VB).
VL3	– Phase-to-neutral voltage L3 (in some countries designated as VC).
VL12	– Phase-to-phase voltage V12 (in some countries designated as VAB).
VL23	– Phase-to-phase voltage V23 (in some countries designated as VBC).
VL31	– Phase-to-phase voltage V31 (in some countries designated as VCA).
VX	– 4th voltage measuring input for measuring residual voltage or synchro-check.
BO	– Binary output relay.
NO / NC	– Contact output, normally open (Form A) / closed (Form B).
DI	– Digital input.
COM	– Common connection of digital inputs.
Out+, AnOut	– Analog output + (0/4...20 mA or 0...10 V).
In–, AnIn	– Analog input + (0/4...20 mA or 0...10 V).
n.c.	– Not connected.
DO NOT USE	– Do not use. (Caution: Non-usable internal wiring may exist.)
SC	– Self-supervision contact.
HF SHIELD	– Connection cable shield.
Fiber Optics / LWL	– Fiber optic connection.

High **PROTEC**

MRU4

WIRING DIAGRAMS

