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Warning! Installation by person with electrotechnical expertise only.
警告! 只能由具有电气技术专业知识的专家安装。



QR Code for online User Manual.
扫二维码获取在线用户手册。

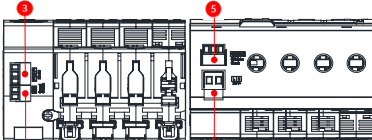
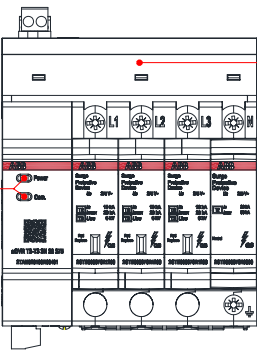
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1. Package Content

- Digital SPD eOVR
- Installation Manual
- Installation accessories (removable terminals)

2. Product overview

2.1 Port and component description

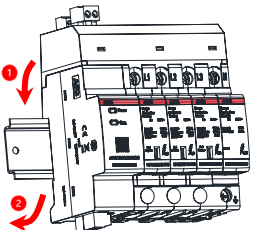


Description	
1	Digital SPD eOVR / 智能电涌保护器
2	LED indicators / LED 指示灯
3	RS-485 port / RS-485 端口
4	Ground Check port / 接地检测端口
5	SSD Status Check port / 后备保护器状态监测端口
6	Power supply port / 电源端口

2.2 LED instruction

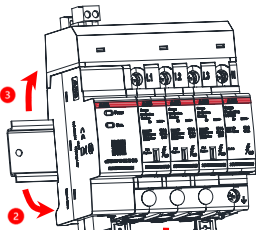
Power on 上电时	COM		On for 0.1s and then off 点亮 0.1s 后熄灭
	Power		On after the COM is off and remains on 在 COM 灯熄灭后点亮, 并保持
Communication 通信	COM		Cycle, on 0.2s, off 0.2s, on 0.2s, off 0.2s 亮 0.2s, 灭 0.2s, 亮 0.2s, 灭 0.2s, 循环
PE failure 接地故障	Power		Cycle, on 1.0s, off 1.0s, on 1.0s, off 1.0s 亮 1.0s, 灭 1.0s, 亮 1.0s, 灭 1.0s, 循环
SSD TS SSD 脱扣	Power		Cycle, on 0.1s, off 0.1s, on 0.1s, off 0.1s 亮 0.1s, 灭 0.1s, 亮 0.1s, 灭 0.1s, 循环
SPD TS / Life ≤ 1% SPD 通信 / 寿命 ≤ 1%	Power		Cycle, on 0.1s, off 0.1s, on 0.1s, off 0.1s 亮 0.1s, 灭 0.1s, 亮 0.1s, 灭 0.1s, 循环

3. Assembly and disassembly



安装/Assembly

3. 安装与拆卸



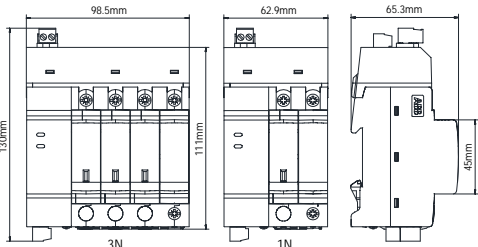
拆卸/Disassembly



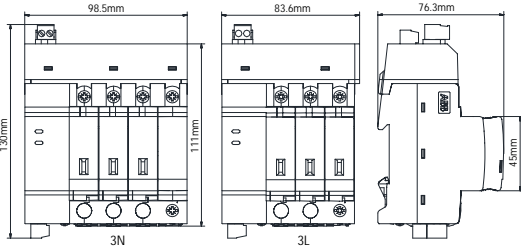
4. Size and wiring

4.1 Product Size

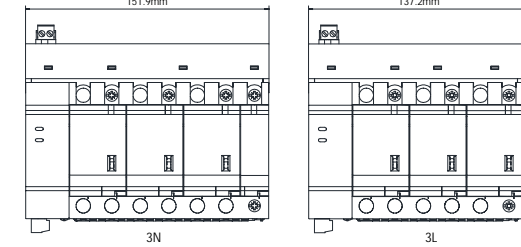
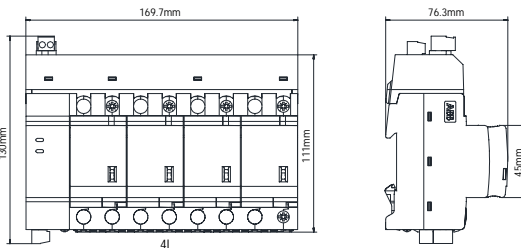
eOVR T2-T3 1N 20-275
eOVR T2 1N 40-350
eOVR T2-T3 3N 20-275
eOVR T2 3N 40-350



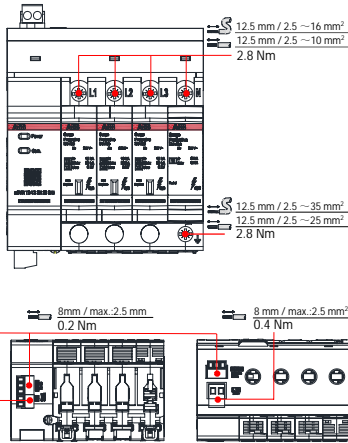
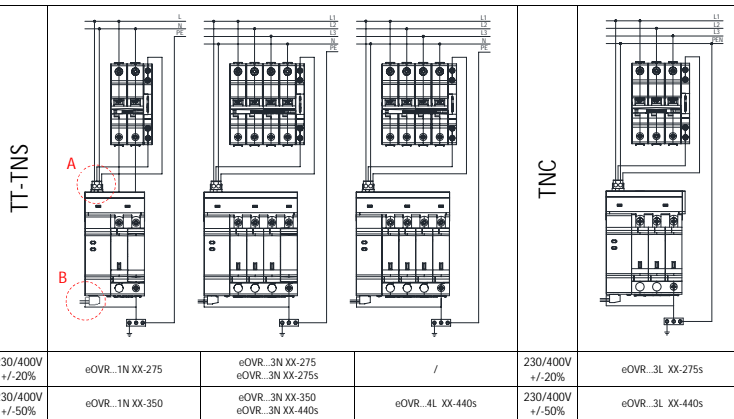
eOVR T2 3L 40-275s
eOVR T2 3N 80-440s
eOVR T1-T2 3N 12.5-275s



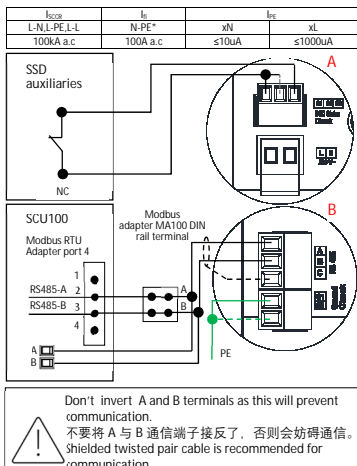
eOVR T1-T2 3L 12.5-440s
eOVR T1-T2 3N 12.5-440s
eOVR T1-T2 4L 12.5-440s



4.2 Wiring diagram

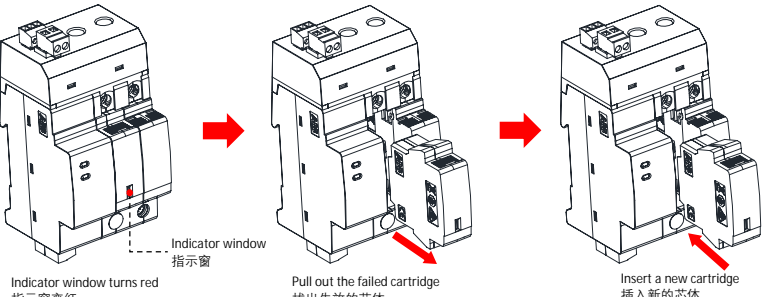


4.2 接线



Don't invert A and B terminals as this will prevent communication.
不要将 A 与 B 通信端子接反了, 否则会妨碍通信。
Shielded twisted pair cable is recommended for communication.
通信线建议使用屏蔽双绞线。

5. Replace the cartridge



Indicator window turns red
指示窗变红

Pull out the failed cartridge
拔出失效的芯体

Insert a new cartridge
插入新的芯体

- When the life of SPD is 1%, it is recommended to pull out the seriously degraded cartridge and replace it with a new one of the same model.
- When SPD remote signal is 1 / life =0% / pluggable cartridge indicator window turns red, the failed cartridge must be removed and replaced with a new one of the same model.
- 当 SPD 剩余寿命为 1%时，建议拔出劣化严重的芯体更换同型号的新芯体。
- 当 SPD 通信为 1 / 剩余寿命=0% / 可插拔芯体指示窗变红时，必须拔出失效的芯体更换同型号的新芯体。

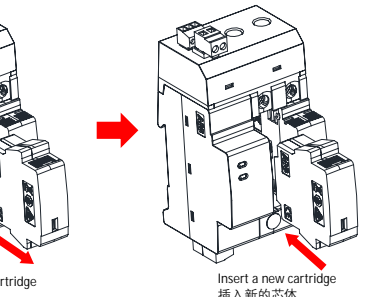
6.Communication commissioning

Modbus communication parameters /通信参数:

- Default ID /默认地址: 1
- ID range / 地址范围: 1 ~ 247
- Baud rate /波特率: 9600
- Byte format / : 8N1

Scan the QR code on the right for more support.
扫描右侧二维码获取更多支持。

5.更换芯体



Indicator window turns red
指示窗变红

Pull out the failed cartridge
拔出失效的芯体

Insert a new cartridge
插入新的芯体

- When the life of SPD is 1%, it is recommended to pull out the seriously degraded cartridge and replace it with a new one of the same model.
- When SPD remote signal is 1 / life =0% / pluggable cartridge indicator window turns red, the failed cartridge must be removed and replaced with a new one of the same model.
- 当 SPD 剩余寿命为 1%时，建议拔出劣化严重的芯体更换同型号的新芯体。
- 当 SPD 通信为 1 / 剩余寿命=0% / 可插拔芯体指示窗变红时，必须拔出失效的芯体更换同型号的新芯体。

6.通信配置



QR Code for Modbus
Communication instruction.
Modbus 通信说明的二维码。



If the Digital SPD eOVR is connected to the InSite, the device ID range 1 ~ 16 could be set.
如果 Digital SPD eOVR 与 InSite 连接，则可设置的地址范围为 1 ~ 16。

7. Technical data

	Power Supply /供电电源
Voltage /电压	230VAC
Frequency /频率	50/60Hz
Power consumption /功耗	5W max
	Surge current detection /浪涌电流测量
Surge current range /浪涌电流峰值范围	1kA ~ 100kA
Deviation /误差	≤ ± (Standard value *15%+1kA)
Surge level to trigger event counter /浪涌事件记录触发值	1kA
	Leakage current measurement /泄漏电流测量
Resitive leakage current range /泄漏电流范围	10μA ~ 500μA
Deviation /误差	≤ ± (Standard value *10%+1μA)
	Mechanical properties /机械特性
IP degree /IP 防护等级	IP 20
	Climate condition /环境
Installation position /安装位置	Indoor /户内
Operating temperature /工作温度	-25℃ ~ 70℃
Storage temperature /贮藏温度	-40℃ ~ 85℃
Humidity /湿度	5% ~ 95%
Maximal altitude /海拔	2000m
	Communication /通信
Protocol /通信协议	Modbus RTU
Hardware port /硬件接口	RS485
	Standard /标准
Product standard /产品标准	NB/T 10284-2019 GB/T 18802-2020
EMC /电磁兼容性	IEC 61000-6-2 IEC 61000-6-3

8. CyberSecurity Disclaimer

Digital SPD eOVR's communication interface is designed to transmit information and data. The communication interface should be connected to a secured communication network. It is your sole responsibility to provide and continuously ensure a secured connection between the product and your network or any other network (as it may be) and establish and maintain appropriate measures (such but not limited to the installation of firewalls, application of authentication measures, encryption of data, installation of antivirus programs, etc.) to protect the Digital SPD eOVR product, the network, its system and interfaces against any kind of security breaches, unauthorized access, interference, intrusion leakage and/or theft of data or information. ABB LV Installation Materials CO., Ltd. Beijing and its affiliates are not liable for damages and/or losses related to such security breaches, unauthorized access, interference, intrusion, leakage and/or theft of data or information.

Although ABB LV Installation Materials CO., Ltd. Beijing provides functionality testing on the products and updates that we release, you should institute your own testing program for any product updates or other major system updates (to include but not limited to code changes, configuration file changes, third party software updates or patches, hardware change out, etc.) to ensure that the security measures that you have implemented have not been compromised and system functionality in your environment is as expected.

Service and Maintenance
The digital SPD eOVR contains no parts that can be repaired or exchanged except the pluggable cartridge. A broken eOVR must be replaced.
Caution – Be careful that no liquid gets into the digital SPD eOVR since it may damage the equipment.

8. 网络安全免责声明

Digital SPD eOVR 的设计的通信接口用于传递信息和数据，该通信接口应连接到安全的通信网络。您有责任提供并持续确保产品与您的通信网络或任何其他网络（视情况而定）之间的安全连接，并建立和维护适当的措施（例如但不限于安装防火墙、应用认证措施、数据加密、安装防病毒程序等），以保护 Digital SPD eOVR 产品、网络、系统和接口免受任何类型的安全漏洞、未经授权访问、干扰、入侵、泄漏和/或数据或信息被盗。对由上述安全漏洞、未经授权访问、干扰、入侵、泄漏和/或数据或信息被盗引起的损坏和/或损失，北京 ABB 低压电器有限公司及其附属公司概不负责。

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此智能电涌保护器除电涌保护器可插拔的芯体外的其他部件均无法修理或更换。一经损坏，必须更换。

小心 – 注意不要让任何液体进入智能电涌保护器，因为这会使电涌保护器遭到损坏。

(EN)English

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⚠ Warning – Working with high voltage is potentially lethal. Persons subjected to high voltage may suffer cardiac arrest, burn injuries, or other severe injuries. To avoid such injuries, make sure to disconnect the power supply before you start the installation. Electrical equipment should only be installed, accessed, serviced and maintained by qualified electrical personnel.

⚠ Warning – For safety reasons it is recommended that the equipment is installed in a way that makes it impossible to reach or touch the terminal blocks by accident. The best way to make a safe installation is to install the unit in an enclosure. Further, access to the equipment should be limited through use of lock and key, controlled by qualified electrical personnel.

⚠ Warning – The digital SPD eOVR must always be protected by fuses or breakers on the incoming side. It is recommended that there should be a short circuit breaker installed near the digital SPD eOVR. Do not operate the equipment outside the specified technical data.

Service and Maintenance
The digital SPD eOVR contains no parts that can be repaired or exchanged except the pluggable cartridge. A broken eOVR must be replaced.

Caution – Be careful that no liquid gets into the digital SPD eOVR since it may damage the equipment.

(ZH) 简体中文

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⚠ 警告 – 在高压条件下作业时可能会导致生命危险。高压触电可能导致心跳停止、烧伤或其他严重伤害。为避免此类伤害，请确保在安装前切断电源。电气设备只能由合格的电气人员进行安装、接触、维修和维护。

⚠ 警告 – 为安全起见，建议采用如下安装方式，即端子不会被无意中碰到或接触到。最安全的安装方式是将该装置安装在配电箱中，此外只有通过使用由合格电气人员掌握的锁和钥匙才能接触到智能电涌保护器。

⚠ 警告 – 必须始终在输入端连接保险丝或断路器来为智能电涌保护器提供保护。建议在智能电涌保护器旁安装一个断路器，禁止在超出规定的技术数据范围的情况下使用智能电涌保护器。

维修与维护
此智能电涌保护器除电涌保护器可插拔的芯体外的其他部件均无法修理或更换。一经损坏，必须更换。

小心 – 注意不要让任何液体进入智能电涌保护器，因为这会使电涌保护器遭到损坏。

(ES) Español

Limitación de responsabilidad
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⚠ Advertencia – Trabajar con alto voltaje es potencialmente letal. Las personas expuestas a alto voltaje pueden sufrir un paro cardíaco, quemaduras u otras lesiones graves. Para evitar tales lesiones, asegúrese de desconectar la fuente de alimentación antes de comenzar la instalación. El equipo eléctrico solo debe ser instalado, accedido, reparado y mantenido por personal eléctrico calificado.

⚠ Advertencia – Por motivos de seguridad, se recomienda que el equipo se instale de manera que sea imposible alcanzar o tocar los bloques de terminales por accidente. La mejor forma de realizar una instalación segura es instalar la unidad en un recinto. Además, el acceso al equipo debe limitarse mediante el uso de candado y llave, controlado por personal eléctrico calificado.

⚠ Advertencia – El SPD digital eOVR siempre debe estar protegido por fusibles o disyuntores en el lado de entrada. Se recomienda instalar un disyuntor de cortocircuito cerca del SPD eOVR digital. No opere el equipo fuera de los datos técnicos especificados.

Servicio y mantenimiento

El SPD eOVR digital no contiene piezas que puedan repararse o cambiarse excepto el cartucho enchufable. Un eOVR roto debe ser reemplazado.

Precaución – Tenga cuidado de que no entre líquido en el SPD eOVR digital, ya que puede dañar el equipo.

(PT) Português

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⚠ Aviso – Trabalhar com alta tensão é potencialmente letal. Pessoas sujeitas a alta tensão podem sofrer parada cardíaca, queimaduras ou outras lesões graves. Para evitar tais lesões, certifique-se de desconectar a fonte de alimentação antes de iniciar a instalação. Equipamentos elétricos só devem ser instalados, acessados, reparados e mantidos por eletricitistas qualificados.

⚠ Aviso – Por razões de segurança, recomenda-se que o equipamento seja instalado de forma que seja impossível alcançar ou tocar acidentalmente nos blocos de terminais. A melhor maneira de fazer uma instalação segura é instalar a unidade em um gabinete. Além disso, o acesso ao equipamento deve ser limitado pelo uso de cadeado e chave, controlado por eletricitista qualificado.

⚠ Aviso – O SPD eOVR digital deve sempre ser protegido por fusíveis ou disjuntores no lado de entrada. Recomendase que haja um disjuntor de curto-circuito instalado próximo ao SPD eOVR digital. Não opere o equipamento fora dos dados técnicos especificados.

Assistência e Manutenção

O SPD eOVR digital não contém peças que possam ser reparadas ou trocadas, exceto o cartucho conectável. Um eOVR quebrado deve ser substituído.

Atenção – Tenha cuidado para que nenhum líquido entre no SPD eOVR digital, pois isso pode danificar o equipamento.

(FR) Français

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⚠ Avertissement – Travailler à haute tension est potentiellement mortel. Les personnes soumises à une haute tension peuvent subir un arrêt cardiaque, des brûlures ou d'autres blessures graves. Pour éviter de telles blessures, assurez-vous de débrancher l'alimentation électrique avant de commencer l'installation. L'équipement électrique ne doit être installé, accessible, entretenu et entretenu que par du personnel électrique qualifié.

⚠ Avertissement – Pour des raisons de sécurité, il est recommandé d'installer l'équipement de manière à ce qu'il soit impossible d'atteindre ou de toucher accidentellement les borniers. La meilleure façon de réaliser une installation sûre est d'installer l'unité dans un boîtier. De plus, l'accès à l'équipement doit être limité par l'utilisation d'une serrure et d'une clé, contrôlées par du personnel électrique qualifié.

⚠ Avertissement – Le SPD numérique eOVR doit toujours être protégé par des fusibles ou des disjoncteurs du côté entrant. Il est recommandé d'installer un disjoncteur de court-circuit à proximité du SPD eOVR numérique. N'utilisez pas l'équipement en dehors des données techniques spécifiées.

Entretien et maintenance

Le SPD eOVR numérique ne contient aucune pièce pouvant être réparée ou échangée, à l'exception de la cartouche enfichable. Un eOVR cassé doit être remplacé.

Attention – Veillez à ce qu'aucun liquide ne pénètre dans le SPD eOVR numérique car cela pourrait endommager l'équipement.

(DE) Deutsch

Haftungsausschluss
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⚠ Warnung – Aus Sicherheitsgründen wird empfohlen, das Gerät so zu installieren, dass es unmöglich ist, die Klemmenleisten versehentlich zu erreichen oder zu berühren. Die beste Methode für eine sichere Installation ist die Installation des Geräts in einem Gehäuse. Darüber hinaus sollte der Zugang zum Gerät durch die Verwendung von Schloss und Schlüssel beschränkt werden, die von qualifiziertem Elektropersonal kontrolliert werden.

⚠ Warnung – Das digitale SPD eOVR muss auf der Eingangsseite immer durch Sicherungen oder Unterbrecher geschützt werden. Es wird empfohlen, in der Nähe des digitalen SPD eOVR einen Kurzschlusschalter zu installieren. Betreiben Sie das Gerät nicht außerhalb der angegebenen technischen Daten.

Service und Wartung

Das digitale SPD eOVR enthält außer der steckbaren Kassette keine Teile, die repariert oder ausgetauscht werden können. Ein defekter eOVR muss ersetzt werden.

Vorsicht – Achten Sie darauf, dass keine Flüssigkeit in das digitale SPD eOVR gelangt, da dies das Gerät beschädigen kann.