SCC shield clamps

A new generation, simplifying shielding

SCC shield clamps
Optimum shielding – easy mounting

SCC shield clamps feature quick and easy handling, and an optimum shielding contact that reliably dissipates interferences. All shield clamps can be mounted with just one hand, without the need for tools. The force of the spring-cage connection technology is finely tuned so that the largest possible contact area is created without excessive deformation of the conductor. The large marking areas can be marked clearly to indicate which cables are to be connected, ensuring easy assignment.

Secure connection

The shield connection requires minimum effort. The contact spring, which is not compressed when installed, enables a secure and fast connection.
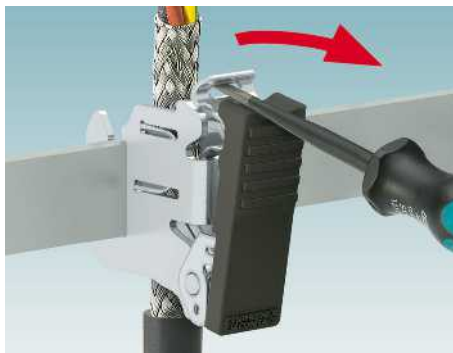
Easy to open

The terminals can be opened quickly without applying much force. To ensure that the terminal can only be opened intentionally, a bladed screwdriver with a maximum blade width of 3.5 mm is required.

High contact quality

The design of the contact spring guarantees a reproducible and long-term stable contact quality. The spring centers the conductor and compensates for conductor settling effects.

Low transfer impedance

The shield clamps have a direct, large-surface low-resistance contact with the neutral busbar (NLS) and therefore support a low transfer impedance.

Clear cabling

The clear marking on the terminal clamp ensures that the cables can be assigned in accordance with the circuit diagram.

Mounting types

The three mounting types NLS, DIN rail, and direct mounting provide you with a high degree of flexibility in shielding design.

SCC shield clamps
Up to a cable diameter of 20 mm

SCC shield clamps are available in four versions, thus enabling consistent shielding for cable diameters from 2 mm to 20 mm. The shield clamps are vibration-resistant (EN 50155), and their resistance to corrosion is tested in accordance with the DIN 60068 168-hour salt-spray test. To ensure that the shielding is effective against interferences, the shield clamp encloses at least 75% of the shielding braid.
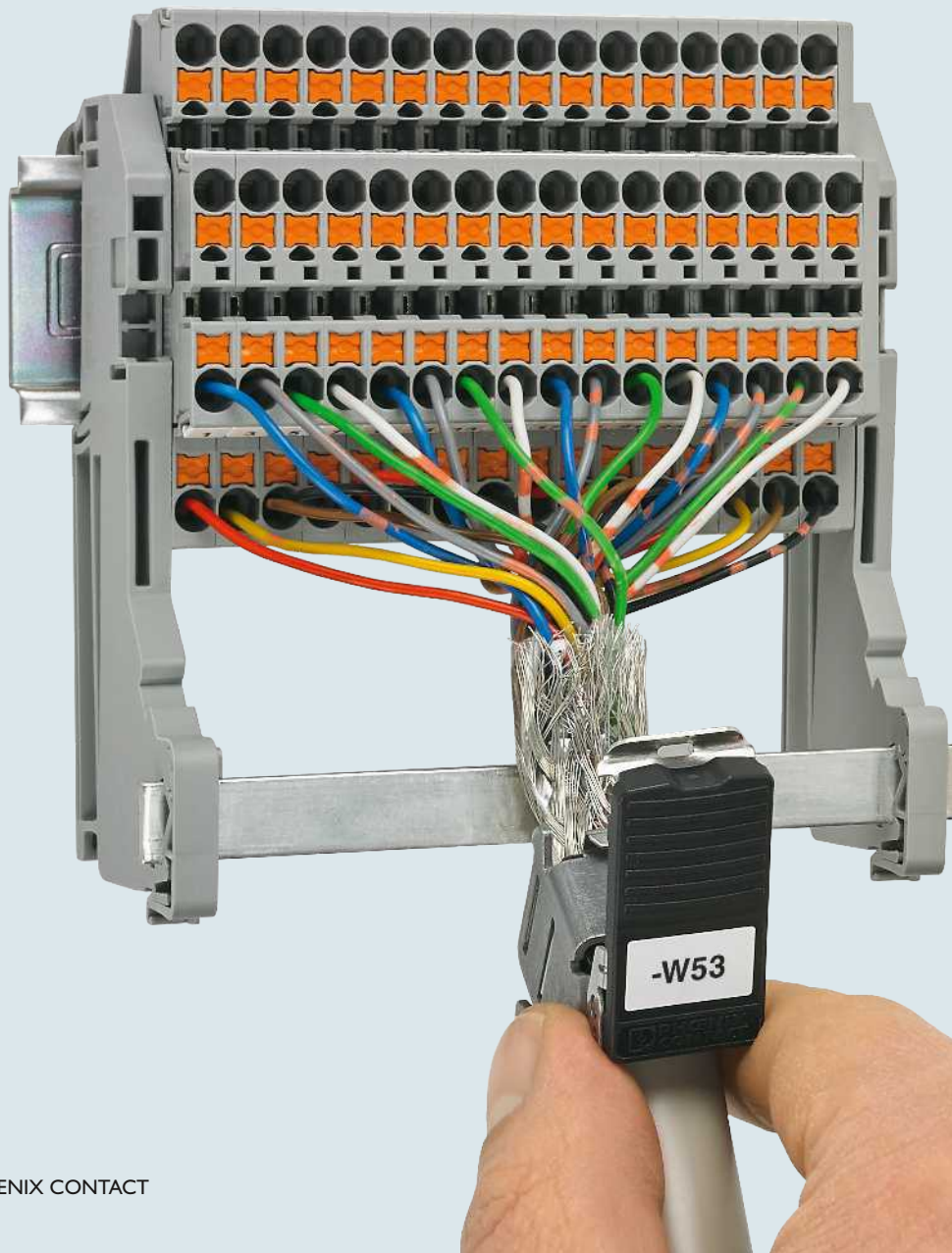
Electromagnetic compatibility (EMC)

According to the definition in the IEC 61000 series of standards, EMC is the ability of a mechanism or system to function satisfactorily in its electromagnetic environment without interfering with other systems.

There are therefore limit values that must be observed to ensure satisfactory functioning. The correct shielding of cables and conductors is necessary to ensure that these limit values are not exceeded.

To reduce interference couplings and interference emissions, the cable shielding can, for example, be contacted with the control cabinet inlet. Furthermore, an EMC seal on the housing door is recommended.

	Commercial zone	Industrial zone
Electrical field strength	3 V/m	10 V/m
Magnetic field strength	3 A/m	30 A/m

Example IEC 61000-6/-2: Permitted field strengths

Shield connection

The type of shield connection used depends mainly on the type of interference to be expected. For the suppression of electrical fields, it is necessary to ground (1) the shield at one end. However, interferences caused by an alternating magnetic field are only suppressed when the shield is grounded at both ends. Connecting the shield at both ends (2), however, creates a ground loop, bringing with it the associated well-known drawbacks. Galvanic interferences along the reference potential in particular influence the useful signal, and reduce the shielding effect. Here, the use of tri-axial cables (4), in which the inner shield is connected at one end and the outer shield at both ends, can remedy this problem. To reduce galvanic interferences when the conductor shield is connected at both ends, one end is often also connected to the reference potential via a capacitor (3). This interrupts the ground loop, at least for direct and low-frequency currents.
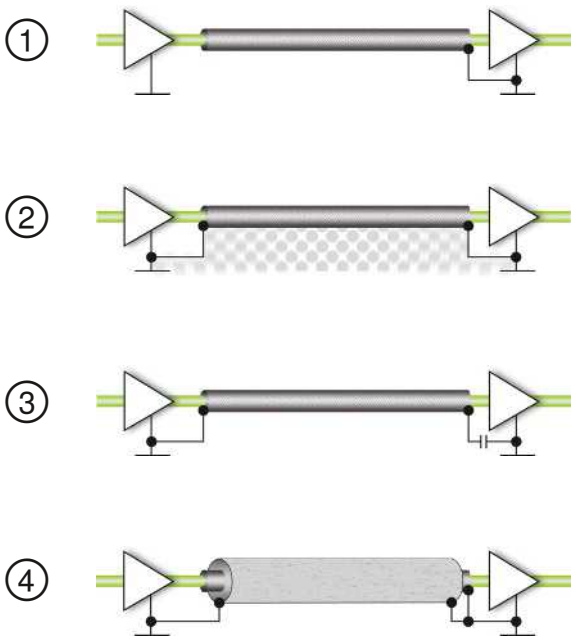
Types of shield connection

Ground loop

A ground loop is an arrangement in which the reference potential is closed to form a ring.

SCC shield clamps

NLS mounting

	Cable diameter	Item	Order No.
	2 mm … 5 mm	SCC 5	1019420
	3 mm … 10 mm	SCC 10	1019421
	8 mm … 15 mm	SCC 15	1019422
	10 mm … 20 mm	SCC 20	1019423

Direct mounting

	Cable diameter	Item	Order No.
	2 mm … 5 mm	SCC 5-F	1019425
	3 mm … 10 mm	SCC 10-F	1019426
	8 mm … 15 mm	SCC 15-F	1019427
	10 mm … 20 mm	SCC 20-F	1019428

DIN rail mounting

	Cable diameter	Item	Order No.
	2 mm … 5 mm	SCC 5-NS35	1019436
	3 mm … 10 mm	SCC 10-NS35	1019440
	8 mm … 15 mm	SCC 15-NS35	1019443
	10 mm … 20 mm	SCC 20-NS35	1019446

Accessories

Support brackets for DIN rail mounting of neutral busbars

	NLS receptacle	Item	Order No.
	NLS receptacle on one side	AB-SK	3025341
	NLS receptacle on both sides	AB-SK 65-D	3026900

Support brackets for direct mounting of neutral busbars

	Installation	Item	Order No.
	Non-contacting design	AB/SS	0404428
	Contact-forming assembly on the mounting plate	AB/SS-M	3025888

Support brackets for direct mounting of shield clamps

	Mounting	Item	Order No.
	Direct mounting	AB-SK/E	3026476
	DIN rail mounting	AB-SK/E	3213111

Neutral busbars

	Dimensions	Item	Order No.
	3 mm x 10 mm x 1,000 mm	NLS-CU 3/10 SN 1000MM	0402174
	3 mm x 10 mm x 2,000 mm	NLS-CU 3/10 SN 2000MM	0402006

Self-adhesive marking material

	Suitable for	Item	Order No.
	SCC 5	EML (10X7)R	0816663
	SCC 10	EML (10X7)R	0816663
	SCC 15	EML (15X9)R	0815677
	SCC 15	EML (15XE)R	1117364
	SCC 20	EML (20XE)R	0803452

Printers

	Item	Order No.
	THERMOMARK ROLL 2.0	1085260
	THERMOMARK ROLLMASTER 600	0804663

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