

MCR-SL-S-...00-U(I)-(LP)

Current Measuring Transducer for Sinusoidal and Non-Sinusoidal Alternating Currents



INTERFACE

Data Sheet

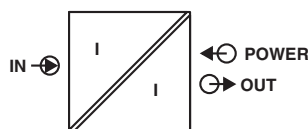
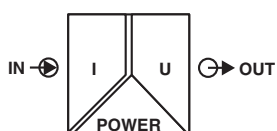
© PHOENIX CONTACT - 05/2006

Description

The **MCR-SL-S-...** current measuring transducers provide the user with the opportunity of retrofitting the current measuring transducer in an existing system without interruption. This is made possible by an open up coil that functions on the Rogowski principle. Insulated conductors on the primary side with a diameter of up to 18.5 mm can be embraced. The current measuring transducers are electrically isolated from one another on the input and output side.

The **MCR-SL-S-...-U** current measuring transducers convert sinusoidal and non-sinusoidal alternating currents up to 400 A into analog standard signals of 0...5 V or 0...10 V. The measuring ranges for input and output can be selected via a switch.

The **MCR-SL-S-...-I-LP** current measuring transducers convert sinusoidal and non-sinusoidal alternating currents up to 400 A into the analog standard signal of 4...20 mA. The measuring range at the output is set with a switch. On the output side, the current measuring transducers are operated in a 4...20 mA current loop, which simultaneously provides the power supply for the modules, which is necessary for signal conversion.



Make sure you always use the latest documentation.
It can be downloaded at www.download.phoenixcontact.com.
A conversion table is available on the Internet at
www.download.phoenixcontact.com/general/7000_en_00.pdf.



This data sheet is valid for all products listed on the following page:

Ordering Data

| Description | Type | Order No. | Pcs./Pkt |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------|----------|
| MCR current measuring transducer, for measuring sinusoidal and non-sinusoidal alternating currents, input current 0...100 A, output voltage 0...(5) 10 V | MCR-SL-S-100-U | 2813457 | 1 |
| MCR current measuring transducer, for measuring sinusoidal and non-sinusoidal alternating currents, input current 0...200 A, output voltage 0...(5) 10 V | MCR-SL-S-200-U | 2813460 | 1 |
| MCR current measuring transducer, for measuring sinusoidal and non-sinusoidal alternating currents, input current 0...400 A, output voltage 0...(5) 10 V | MCR-SL-S-400-U | 2813473 | 1 |
| MCR current measuring transducer, for measuring sinusoidal and non-sinusoidal alternating currents, input current 0...100 A, loop-powered output with 4...20 mA | MCR-SL-S-100-I-LP | 2813486 | 1 |
| MCR current measuring transducer, for measuring sinusoidal and non-sinusoidal alternating currents, input current 0...200 A, loop-powered output with 4...20 mA | MCR-SL-S-200-I-LP | 2813499 | 1 |
| MCR current measuring transducer, for measuring sinusoidal and non-sinusoidal alternating currents, input current 0...400 A, loop-powered output with 4...20 mA | MCR-SL-S-400-I-LP | 2813509 | 1 |

Technical Data

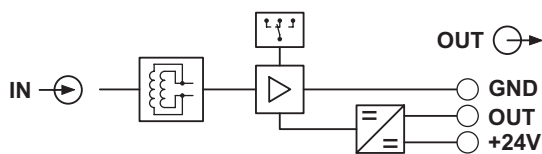
| General Data | MCR-SL-S-...-U | MCR-SL-S-...-I-LP | |
|--------------------------------------------|-----------------------------------------------------------|---------------------------------|-----------------------|
| Supply voltage | 20 V DC ... 30 V DC | | |
| Current consumption | < 30 mA | – | |
| Transmission error | < ±1% of end value | | |
| Cable position error | < 0.63% | | |
| Temperature coefficient | < 0.035%/K | < 0.025%/K | |
| Step response (10% ... 90%) | < 340 ms | | |
| Degree of protection | IP20 | | |
| Test voltage | 5 kV, 50 Hz, 1 min. | | |
| Ambient temperature range | -20°C ... +60°C | | |
| Dimensions (W x H x D) | 55 mm x 67 mm x 85 mm | | |
| Conductor cross section | 0.2 mm ² ... 2.5 mm ² | | |
| Housing design | Polyamide PA non-reinforced, green | | |
| Electromagnetic compatibility | CE compliant | | |
| Input | MCR-SL-S-100... | MCR-SL-S-200... | MCR-SL-S-400... |
| Input current | 0 A AC ... 100 A AC | 0 A AC ... 200 A AC | 0 A AC ... 400 A AC |
| Measuring range | 0 A ... 50/75/100 A | 0 A ... 100/150/200 A | 0 A ... 200/300/400 A |
| Response threshold | 1% of end value | | |
| Frequency range | 30 Hz ... 6000 Hz | | |
| Curve type | Sinusoidal and non-sinusoidal | | |
| Overload capacity (continuous) | No limitation | | |
| Surge strength (for 1 s) | No limitation | | |
| Connection method | Clamp-on cable design for 18.5 mm ∅ (insulated conductor) | | |
| Output | MCR-SL-S-...-U | MCR-SL-S-...-I-LP | |
| Output signal | 0 V ... (5)10 V | 4 mA ... 20 mA | |
| Max. output signal | 7 V (0...5 V); 14 V (0...10 V) | 25 mA | |
| Load | ≥ 10 kΩ | (U _B - 12 V) / 20 mA | |
| Approvals | | | |
| UL/C-UL Listed UL 508 | Yes | | |
| UL/C-UL Listed UL 1604 Class I, Division 2 | In preparation | | |

Features

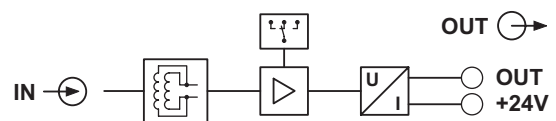
- Can be retrofitted with the open up Rogowski coil
- Choice of voltage or current output
- Measuring range selection with slide switch
- True r.m.s. value measurement from 30 Hz ... 6000 Hz
- Clamp-on cable design for 18.5 mm \varnothing (insulated conductor)

Block Diagrams

MCR-SL-S-...00-U



MCR-SL-S-...00-I-LP



Current Measurement

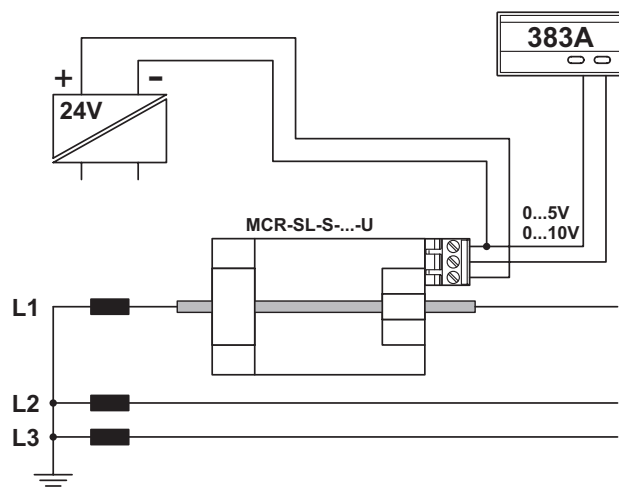


Figure 1 Current measurement

Current Monitoring

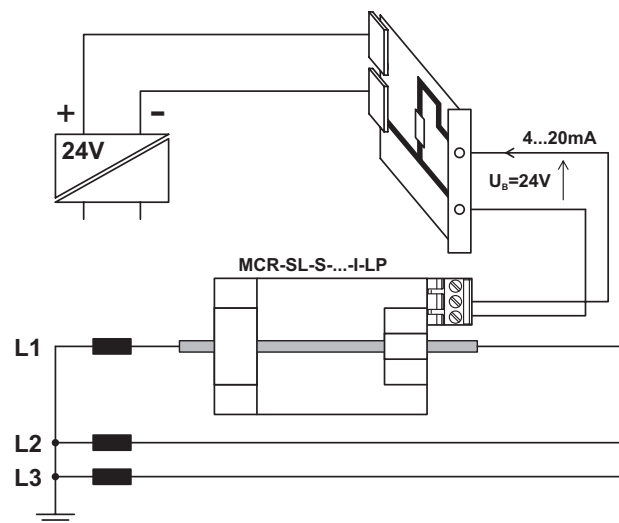


Figure 2 Current monitoring

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9