

SDRM202

Static and dynamic resistance measurement

Megger[®]



- Accessory for EGIL, EGIL200, TM1700 and TM1800
- Enables resistance measurement on circuit breakers
- Small and light weight
- Time saving quick connectors for current cables
- Hook up close to the test object to maximise test current and minimise cable weight
- Flexible current cables even at low temperatures
- Up to 200 A initial test current per channel

DESCRIPTION

The SDRM202 is an accessory for the circuit breaker analysers TM1800, TM1700, EGIL200 and EGIL.

- The EGIL must be equipped with the SDRM option, and the required PC software CABA Win need to have version R03A or higher
- EGIL200 must have the SDRM or Plus software license to be able to run SRM and DRM
- EGIL213 manages simultaneous three-phases measurement on one break per phase or phase wise measurement on up to three breaks per phase
- EGIL211, EGIL223 and EGIL243 manages measurement on one break at a time

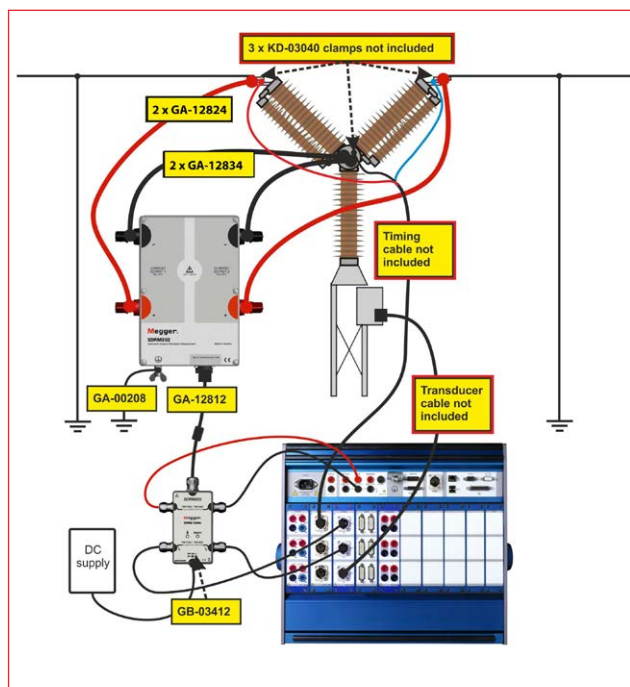
The SDRM202 is intended to use for both static and dynamic resistance measurements (SRM and DRM) on high voltage circuit breakers or other low resistive devices. Used together with TM1800, TM1700, EGIL200 or EGIL the current through, and the voltage drop across the circuit breaker contacts, are measured. The measuring unit can thus calculate the resistance as a function of time.

A system consists of an SDRM202 unit with current cables and an SDRM cable which comes in two versions, for TM1800/TM1700/EGIL200 and EGIL respectively. The SDRM Cable is a small box with integrated cables for connection to the SDRM202 and to TM1800, TM1700, EGIL200 or EGIL.

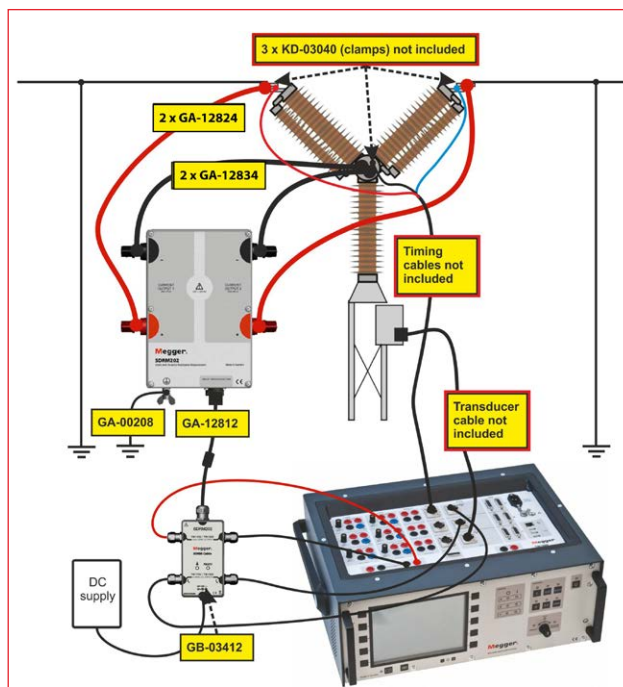
The SDRM202 has two current sources which allows simultaneous resistance measurement on two breaks provided that the connected breaker analyser has the number of channels required.

Static and dynamic resistance measurement

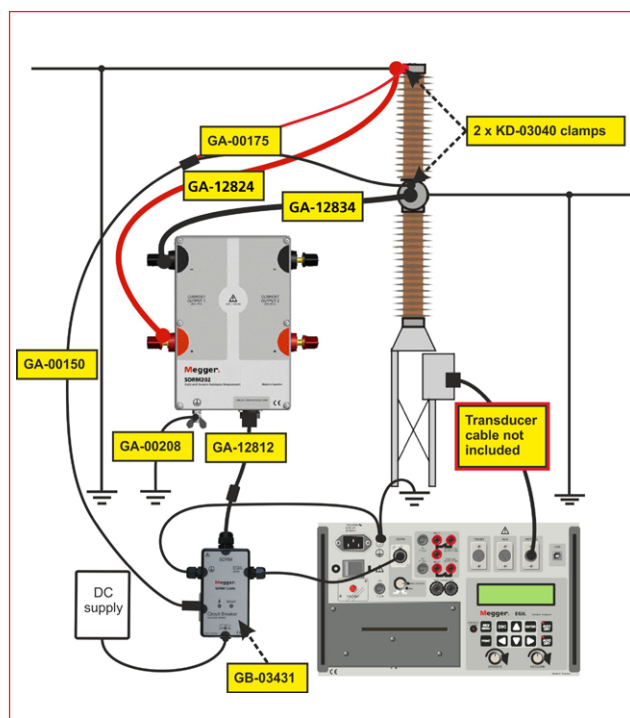
HOOK-UP EXAMPLES AND CABLE DESIGNATIONS



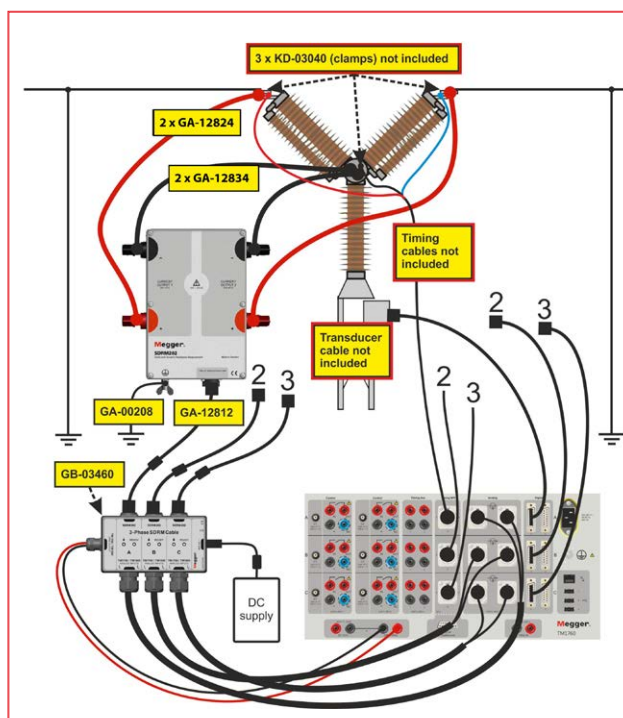
Timing cable is included with the TM1800 timing module. Transducer cable is selected together with the the type of transducer used.



Timing cable is included with the TM1700. Transducer cable is selected together with the the type of transducer used.



Transducer cable is selected together with the the type of transducer used.



The picture shows how a 3-phase SDRM cable is connected to one of the phases. Numbers "2" and "3" are correspondingly connected to phases 2 and 3.

SDRM202

Static and dynamic resistance measurement

INCLUDED ACCESSORIES

- Included accessories only when applicable
- For part number, see ordering information



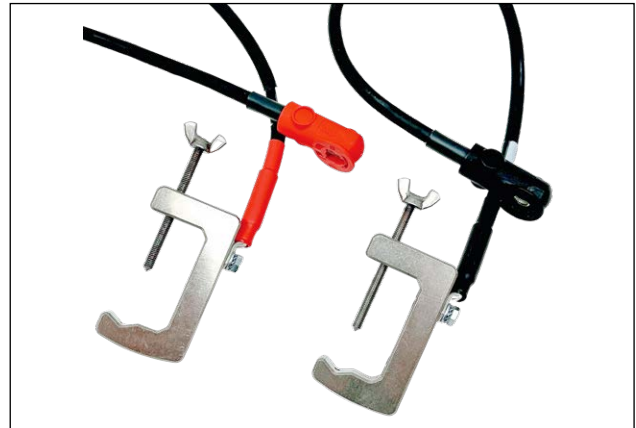
SDRM Cable for EGIL



SDRM Cable for TM1700/TM1800/EGIL200



3-phase SDRM Cable for TM1700/TM1800/EGIL200



Red current cable 3.0 m (9.8 ft)

Black current cable 0.5 m (1.6 ft)

Static and dynamic resistance measurement

SPECIFICATIONS SDRM202

Inaccuracy is specified for 1 year after calibration at 22 °C to 28 °C, relative humidity 90%. Specifications are valid, after 30 minutes warm up time. Specifications are subject to change without notice.

Environment

Application field The instrument is intended for use in high-voltage substations and industrial environments.

Installation category CAT I

Pollution degree 2

Temperature

Operating -20 °C to +50 °C (-4 °F to +122 °F)
Storage & transport -40 °C to +70 °C (-40 °F to +158 °F)

Humidity 5 % – 95 % RH, non-condensing

CE-marking

LVD 2014/35/EU

EMC 2014/30/EU

RoHS 2011/65/EU

Classifications and standards

Vibration IEC 60068-2-6
 2 g for 5-500 Hz

Shock (non-operating) IEC 60068-2-27
 30 g, half-sine, 11 ms

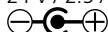
Degree of protection

SDRM202 (Box) and SDRM Cable interconnected IP 43

SDRM Cable IP 41

General

Power inlet 24 V / 2.5 A



Voltage 24 V DC (max) 21 V DC (min)

Current 2.5 A (max 50 % intermittence)

Dimensions 160 x 240 x 90 mm
 (6.3"x 9.4"x 3.5") excl. binding posts

Weight

SDRM202 1.8 kg (4 lbs)
 4.3 kg (9.5 lbs) incl. current cables

Total incl. transport case with accessories 11 kg (24 lbs)

SDRM202 – Terminals

CURRENT OUTPUT terminals 1 and 2

Open circuit 2.5 V DC (max)

Short circuit current (max)

Instantaneous 500 A DC
After 2 seconds 150 A ±10 %

Minimum current with cables

Instantaneous 200 A DC
After 1 second 140 A DC

Overvoltage protection 45 V between terminals and between terminals and ground

NOTE: Not to be connected to circuits generating peak power pulse above 1500 W (10/1000 µs)

SDRM Cable – Terminals

TM1700 / TM1800

ANALOG INPUT terminals I₁ and I₂

Voltage (max) 12 V DC
Voltage 10 V/250 A
Short circuit current (max) 100 mA

SRM inaccuracy

TM1800, TM1700 1 % ±1 µΩ
EGIL200 1.5 % ±1 µΩ

SRM measurement range

TM1800, TM1700 0 - 6 mΩ
EGIL200 0 - 32 mΩ

DRM measurement range

TM1800, TM1700, EGIL200 0 - 32 mΩ

TM1700 / TM1800

DRM OUTPUT terminal/TRIG terminal

Voltage 60 V DC (max)
Trig threshold 9 V (min) 10 V (max)
Trig current at trig threshold 40 mA (max)

EGIL SDRM Cable – Terminals

Circuit Breaker

VOLTAGE SENSE terminal

Pin	Signal	Maximum rating
1	Voltage sense positive input	6.8 V, 25 mA
2,4	Shield protective earth	N/A
3	Voltage sense negative input	0 V
5	Not connected	N/A

Measurement ranges

DRM / MOTION mode 0 – 32 mΩ
SRM mode 0 – 2 mΩ
DRM mode 0 – 32 mΩ
SRM inaccuracy 2 % ±2 µΩ

ORDERING INFORMATION

Item	Part No.
SDRM202 for TM1800/TM1700/EGIL200 (1 pc)	CG-90200

Included accessories

SDRM cable TM1700/TM1800/EGIL200 (1 pc)	GB-03412
SDRM multi cable extension (1 pc)	GA-12812
DC supply (1 pc)	HC-04211
Current cable, red (2 pcs)	GA-12824
Current cable, black (2 pcs)	GA-12834
Ground cable (1 pc)	GA-00208

SDRM202 for TM1800/TM1700/EGIL200 (3 pcs)For CG-90230

3-Phase measurement on two breaks/phase
Note that EGIL200 at the most manages 3-phase measurement on 1 break/phase (EGIL213).

Included accessories

3-phase SDRM cable TM1700/TM1800/EGIL200 (1 pc)	GB-03460
SDRM multi cable extension (3 pc)	GA-12812
DC supply (1 pc)	HC-04212
Current cable, red (6 pcs)	GA-12824
Current cable, black 6 pcs)	GA-12834
Ground cable (3 pcs)	GA-00208

SDRM202 for EGIL (1 pc) CG-90220

Included accessories

SDRM Cable EGIL (1 pc)	GB-03431
SDRM multi cable extension (1 pc)	GA-12812
DC supply (1 pc)	HC-04211
Voltage sense (1 pc)	GA-00175
Voltage sense extension cable (1 pc)	GA-00150
Current cable, red (2 pcs)	GA-12824
Current cable, black (2 pcs)	GA-12834
Clamps (2 pcs)	KD-03040
Ground cable (1 pc)	GA-00208

Optional accessories

SDRM multi cable extension
10 m (33 ft) GA-12812

Separate SDRM Cables
For TM1800/TM1700/EGIL200 CG-90205
For EGIL CG-90225

3-phase SDRM cable
For TM1700/TM1800/EGIL200. Includes DC supply HC-04212. CG-90235

Postal address

Megger Sweden AB
Box 724
SE-182 17 Danderyd
SWEDEN

T +46 8 510 195 00
E seinfo@megger.com

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