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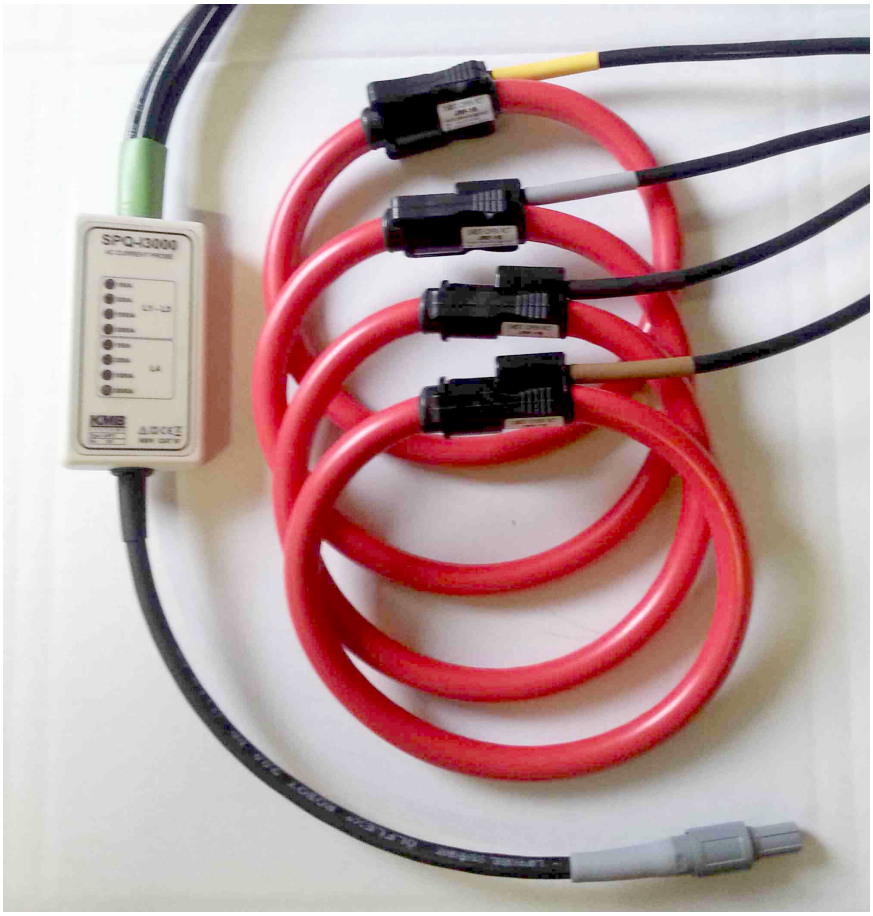
SPQ-Ixxx-3/4xxx

Intelligent Flexible Current Probe (Rogowski coil, RCT)



Instrument Description

SPQ-Ixxx-3/4xxx Rogowski Current probes (RCT) is designed as an optional accessory for NEMO analyzers. It provides indirect measurement of 3 or 4 currents (L1, L2, L3 and N or L4) in low voltage networks. These probes are designed with three or four Rogowski coils assembled to the common integrator housing. Each probe has four remotely switched measuring ranges according to its type. One measuring range can be configured together for L1, L2, L3 inputs and another one for N or L4.

We provide two mechanically and electrically different types of RCT: JRF with push-pull lock and MFC with bayonet lock. Both types are also manufactured in different lengths of RCT.

Instrument Installation

WARNING

Installation, operation and maintenance of the probe may by carried out by qualified personnel only with respect to installation instructions and safety regulations in low voltage networks.

When operated in contradiction with the technical specifications, proper functionality is not guaranteed. Don't touch instrument terminals and don't use the instrument without its cover.

Operation Instructions

1. Connect the probe to the NEMO analyzer and turn on the instrument
2. Connect the instrument to the PC, turn on ENVIS.Daq and connect to the instrument.
3. Set or check the appropriate current range settings for L1, L2, L3 and L4 (the respective LED will lit on the probe).
4. Connect sensors around the measured wires. Orientation of probes is given by the arrow and **P1, P2** signs. Arrow corresponds to the positive flow of energy.
5. Take special care to installation: tightly close and check each sensor. Place its lock as far as possible from the measured wires. Keep probes and especially its lock clean. Probes are calibrated in perpendicular position to the measured wires.

RCT Probe Types and Options

SPQ-I300-3JRF1

Instrument model

SPQ	Current probe for NEMO instruments

Maximal nominal current range

I300	300 A
I1000	1000 A
I3000	3 kA
I10000	10 kA

Number of measured currents

3	L1, L2 , L3
4	L1, L2 , L3 + N

Current probe type

JRF	JRF-x shielded push-pull Rogowski probes
MFC	MFC150 shielded bayonet Rogowski probe

Probe length / inner diameter

0	25cm / 8cm
1	40cm / 12cm
2	60cm / 19cm
3	100cm / 31cm

Technical Parameters

Number of measured currents	SPQ-Ixxx-3xxx: 3 SPQ-Ixxx-4xxx: 4			
Nominal current(s): SPQ-I300 SPQ-I1000 SPQ-I3000 SPQ-I10000	 10 A_{AC} 30 A_{AC} 100 A_{AC} 300 A_{AC}	 30 A_{AC} 100 A_{AC} 300 A_{AC} 1 000 A_{AC}	 100 A_{AC} 300 A_{AC} 1 000 A_{AC} 3 000 A_{AC}	 300 A_{AC} 1 000 A_{AC} 3 000 A_{AC} 10 000 A_{AC}
Measuring range	1% ÷ 110% of nominal current			
Measuring uncertainty	1% rdg. + 0,5% rng.			
Influence of position	±2% rdg.			
Influence of external field	maximum ±2% of the surrounding field			
Phase shift error	-2,0° ÷ +2,0°			
Bandwidth	40Hz ÷ 10kHz			
Permanent / short overload current: SPQ-I300 SPQ-I1000 SPQ-I3000 SPQ-I10000	 3kA_{AC} / 30kA_{AC} @ 1s 10kA_{AC} / 100kA_{AC} @ 1s 30kA_{AC} / 200kA_{AC} @ 1s 100kA_{AC} / 200kA_{AC} @ 1s			
Measurement class JRF probes MFC probes	ČSN EN 61010-2-030 600V / CAT.III, 300V / CAT.IV 1000V / CAT.III, 600V / CAT.IV			
Safety	ČSN EN 61010–1, double insulation			
IP protection, pollution degree	IP40, 2			
Working / storage temperature	-20°C ÷ +60°C / -40°C ÷ +85°C			
Humidity	85 % non-condensing			
Working / storage altitude	2000m / 12000m			
Weight 3JRF 4JRF 3MFC 4MFC	length „0“ --- --- 490 g 625 g	length „1“ 590 g 760 g 530 g 680 g	length „2“ 710 g 920 g 585 g 750 g	length „3“ 950 g 1240 g 690 g 900 g
Dimensions: diameter of probe / lock length / diameter of the probe cable length to probes integrator cable length to integrator	 JRF: 13mm / 22mm, MFC: 8mm / 11mm See probe types above 2 m Length 85mm × width 45mm × height 23mm 300 mm			
Material of the case	ABS			
Connector	LEMO push-pull self-latching connection system			

Maintenance, Service

For reliable operation the proper operational conditions must be met. If the product has a breakdown, you need to complain to the supplier (see header for address).

The product must be in a proper package to prevent damage in transit. Description of the problem or its symptoms must be delivered together with the product. If a warranty repair is claimed, the original filled warranty certificate (bellow) must be sent in. In case of an out–of–warranty repair you must enclose an order for the repair.

Supplier: Manufacturer:

K M B systems, s.r.o.
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Warranty Certificate

Warranty period of 24 months from the date of purchase is provided for the sensor. Problems in the warranty period, caused by a faulty workmanship, design or inconvenient material, will be repaired free of charge by the manufacturer or an authorized servicing organization.

The warranty ceases even within the warranty period if the user makes an unauthorized modification or changes to the instrument, connects it to out-of-range quantities, if the instrument got damaged in out-of-specs falls or by improper handling or if it has been operated in contradiction with the technical specifications presented.

type of product: **SPQ-**..... serial number .....

date of dispatch: .....

final quality inspection: .....

manufacturer's seal:

date of purchase: .....

supplier's seal: