



MD 4070 MONITORING DEVICE 10 kHz to 400 (600) MHz



MD 4070

- As required in IEC/EN 61000-4-6
- Suitable for BCI testing per ISO 11452-4, RTCA/DO-160 section 20, MIL-STD-461 and various automotive standards
- Active/passive operation for wide dynamic range
- Suitable for NSG 4070
- Ruggedly designed

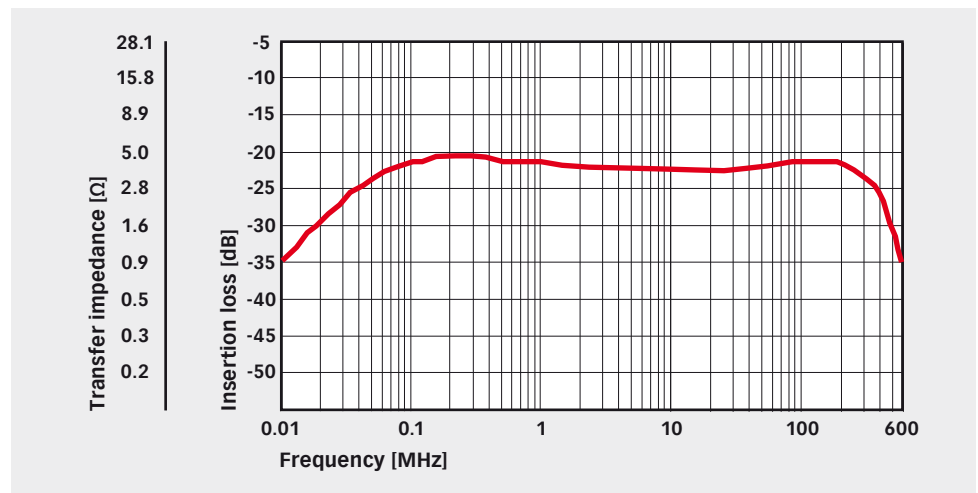
The monitoring device MD 4070 can be used as an active or passive current sensor probe to measure the current in a conductor without connecting it directly. The MD 4070 allows fast and easy measurement as it can be quickly clamped around the current carrying conductor.

The MD 4070 is characterized over the frequency range from 10 kHz to 400 (600) MHz. The MD 4070 can be used for the procedure for clamp injection when the common-mode impedance requirements cannot be met given in chapter 7.4 of IEC/EN 61000-4-6 „Immunity to conducted disturbances, induced by radio frequency fields“. The MD 4070 can also be used as current monitor for BCI testing as per ISO 11452-4, RTCA/DO-160 section 20, MIL-STD-461 and various automotive standards.

Passive mode: Technical specifications

Frequency range:	10 kHz to 400 (600) MHz
Insertion loss:	typical approx. -22 dB (50 Ω system, 100 kHz to 230 MHz)
Transfer impedance:	typical approx. 4 Ω (100 kHz to 230 MHz)
Frequency response 100 kHz to 230 MHz:	±1.5 dB
Frequency response 40 kHz to 400 MHz:	typical +1.5 dB / -5 dB
Frequency response 10 kHz to 600 MHz:	typical +1.5 dB / -15 dB
Signal output:	BNC socket
Max. signal current:	1 A

Passive mode: Typical transfer impedance and insertion loss



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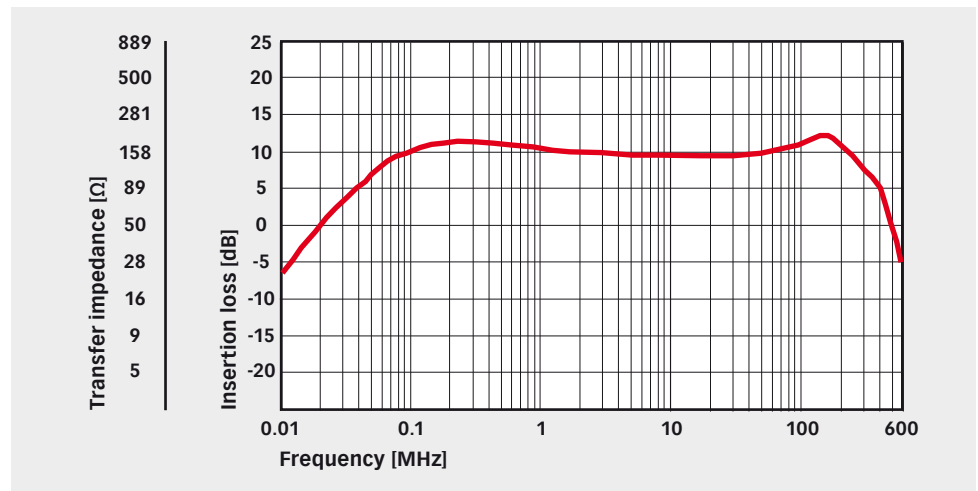


MD 4070, side view

Active mode: Technical specifications

Frequency range:	10 kHz to 400 (600) MHz
Insertion loss:	typical approx. +10 dB (50 Ω system, 100 kHz to 230 MHz)
Transfer impedance:	typical approx. 158 Ω (100 kHz to 230 MHz)
Frequency response 100 kHz to 230 MHz:	± 2 dB
Frequency response 40 kHz to 400 MHz:	typical +2 dB / -6 dB
Frequency response 10 kHz to 600 MHz:	typical +2 dB / -18 dB
Max. signal current (linear):	30 mA
1 dB compression point (output):	>27 dBm
Supply voltage:	12 V
Supply current:	approx. 0.6 A
DC-connector:	ODU-female 2 pins, plus on all inner conductors

Active mode: Typical transfer impedance and insertion loss



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MD 4070 in suitcase

Technical specifications for remote operation

Level:	TTL up to 12 V (high = active, low = passive)
Switch:	passive (LED green)
DC-connector:	ODU-female 3 pins, plus on all inner conductors
Cable LE 242	
Purpose:	Connection to NSG 4070 user port, pin 9
Connectors:	D-Sub 15 pins male, ODU-male 3 pins, plus on all inner conductors
Length:	approx. 1.5 m

Environmental conditions

Classification:	Indoor use only
Operating temperature:	0°C to +40 °C
Storage and transport temperature:	-10°C to +60 °C
Relative humidity:	up to 90% (no moisture condensation)

Mechanical specification of the probe

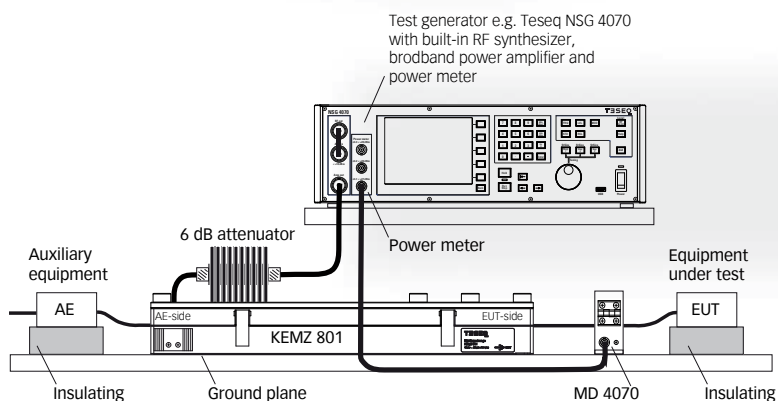
Size (W x H x D):	113 x 98 x 59 mm ³
Free cable diameter:	23 mm
Weight:	approx. 830 g

Specification of the power supply unit PSU 6001

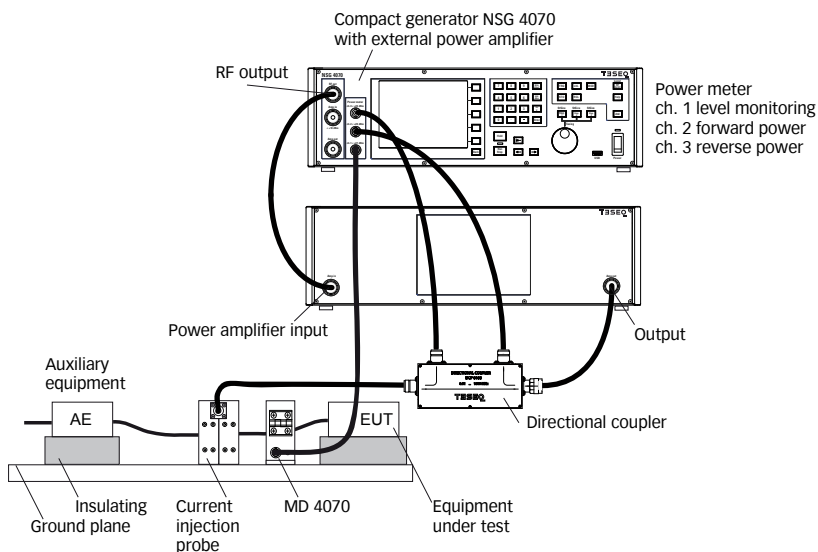
Country code for mains connector:	Euro, UK, US, JP, AUS
Input:	100 to 240 V, 47 to 63 Hz, 400 mA
Output:	12 V DC, 1.25 A
DC-connector:	ODU-male, 2 pins, plus on inner conductors
Cable length:	approx. 2 m
Weight:	approx. 220 g

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Test set-up example according IEC/EN 61000-4-6 with EM clamp and monitoring probe

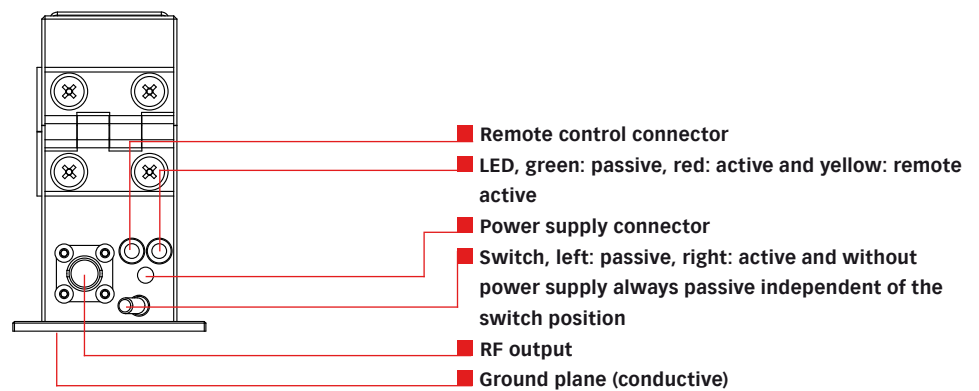
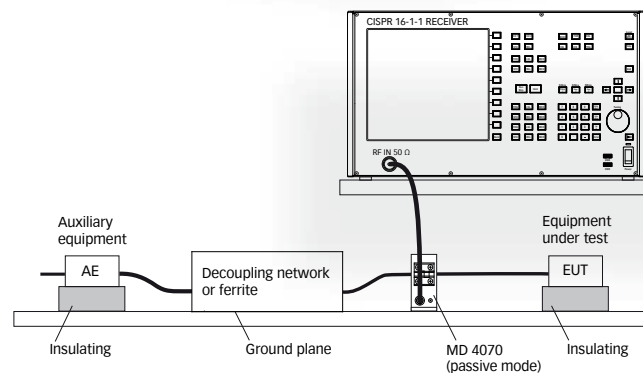


Test set-up example according IEC/EN 61000-4-6 or BCI standards with current injection probe, MD 4070 and NSG 4070 with external power amplifier



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Test set-up example for current measurement according to CISPR 22



Delivery information



**PCJ 9201B calibration jig,
recommended for MD 4070 calibration**

Part number	Description
253900	MD 4070 Monitoring device (current sensing probe) active/passive with PSU 6001 and LE 242 in suitcase
97-253900	MD 4070-TC Traceable calibration (ISO17025), order only with device MD 4070
252052	PCJ 9201B Calibration jig for current probes, meets ISO 11452-4 ,RTCA/DO-160 section 20, MIL-STD-461 and IEC/EN 61000-4-6
348-345	CHA 9545 RF cable, BNC(m)-BNC(m), 3 m, RG223

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