



DMI 552 DMI 553

Digital Measuring Instrument
for AC and DC
Leaflet



DMI 552



DMI 553



HAEFELY

Current and voltage – our passion

Designed by





GENERALITIES

The best partner

High-voltage measurements are done by connecting a specialized voltmeter (like the DMI 552 or DMI 553) to the secondary unit of a voltage divider, or to a current-to-voltage transducer (like a shunt).

HAEFLY, the pioneer company for high-voltage testing, has been continuously developing and upgrading application specific high-voltage test equipment. The DMI 552 & DMI 553 are the latest in the long line of Kilovoltmeters since the 1920s, offering the user the features and reliability gained from all these years of experience.

Measures according to IEC 61083-3:2020

The DMI 552 has been developed to measure, record and visualize events during dielectric and breakdown tests in high-voltage applications according to IEC 61083-3:2020. This

standard defines the requirements for instruments used in AC and DC high voltage applications.

HAEFLY CaMS™

New software based on CaMS™ (HAEFLY's Control and Measurement Studio) provides the most flexible and user-configurable environment on the market. Anything from single meter display up to complex analysis can be configured and displayed, depending on the user's experience, application or need.

Galvanic isolation

The optically decoupled front-end provides complete galvanic isolation between control room and test field. It thus affords the personnel the highest safety level and in addition minimizes ground loop, resulting in a reduced interference coupling.



EXPERT'S CHOICE
TO FULFILL
INTERNATIONAL
STANDARDS



PROVIDING THE
HIGHEST ACCURACY
IN THE MARKET

FEATURES

Designed to measure voltage and current in high voltage applications.

Measures AC voltage and currents as RMS, Peak and Peak/√2 among others.

Measures DC voltage and currents as Mean, Peak and Ripple.

Flash detection with voltage indication.

Real time scope and frequency analysis FFT.

Additional AC/DC input channel (optional).

Computer controlled with HAEFLY CaMS graphical user interface.

Optically decoupled from computer.

Compact, reliable, and EMC hardened design, IP50.

ADVANTAGES

→ Approved for dielectric tests as per IEC 61083-3 - as Peak/√2 is the required measured parameter.

→ The Peak/√2 required value during dielectric test is measured and recorded.

→ One device, 2 applications, same device can be used for AC and DC application.

→ Exact voltage just before failure is recorded and held – if a failure arises during the test, failure indication, voltage measured before the flash and waveshape during the flash is shown and recorded for further analysis

→ Waveshape quality of the signal is continuously shown on the screen.

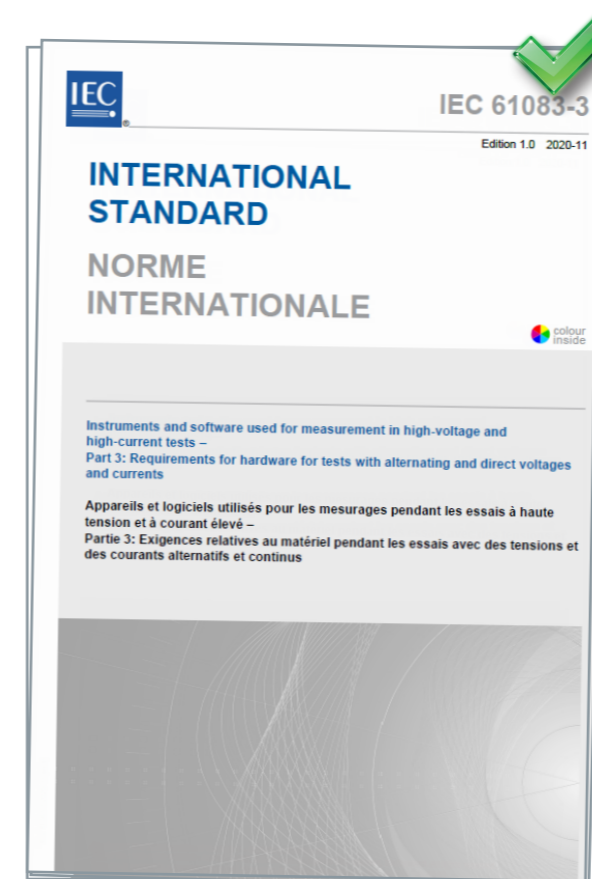
→ Voltage and current readings in one single device – values can be simultaneously shown and recorded.

→ Reduced training time - Modern SW makes the use of the device easier than ever. Operators can start using the device in minutes.

→ The galvanic isolation ensures the full safety of the operating personnel. With the DMI 552, there is no electrical connection between the control room and the high voltage test room.

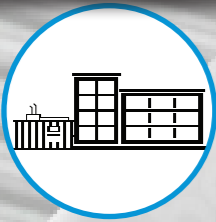
APPLICATIONS

- High voltage laboratories
- On-site high voltage test
- Calibration laboratories



TAILORED SOLUTION

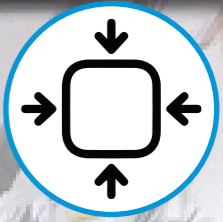
Lab-optimized



Strong



Compact



Battery-operated



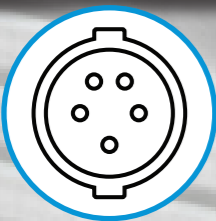
DMI 552



DMI 553



Rugged fiber optics



Mains supply



Light-weight

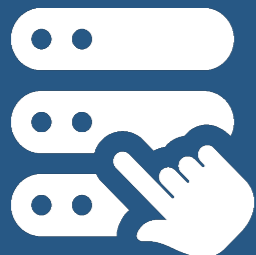


Portable

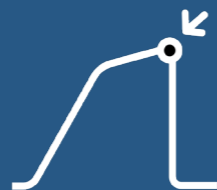


LAB-OPTIMIZED OR PORTABLE DESIGN

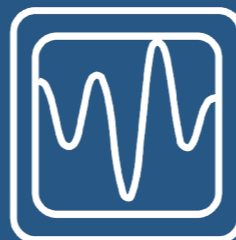
SOFTWARE FEATURES



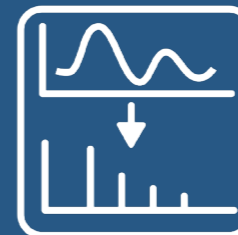
LARGE INDICATORS
Free selection
between 20 values.



PEAK & HOLD
Keeps the values in case
of breakdown (flash).



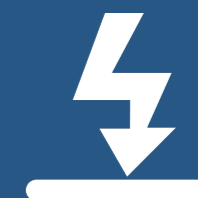
SCOPE
Shows the waveshape
continuously.



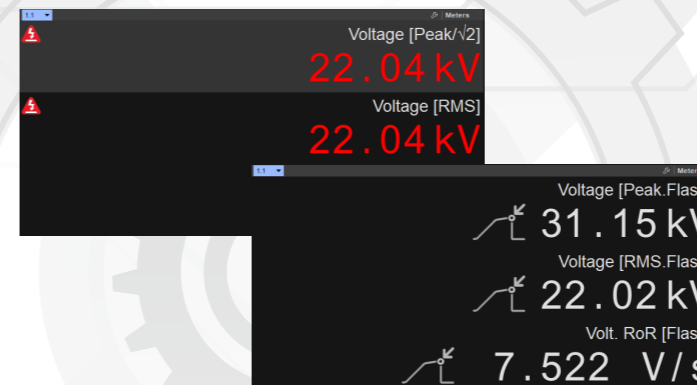
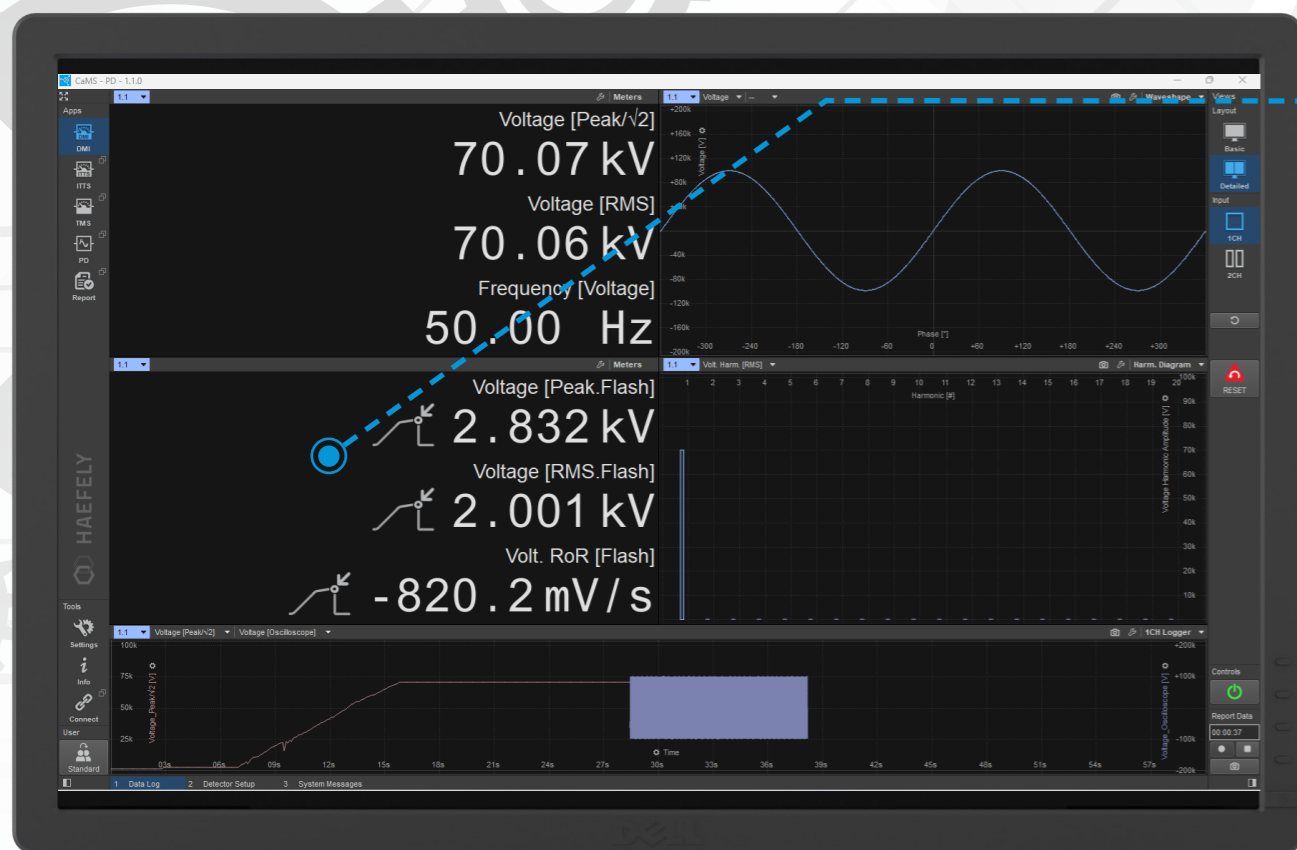
FFT
Measures and represents
harmonics content.



DATA LOGGING
Collects key data
during test.

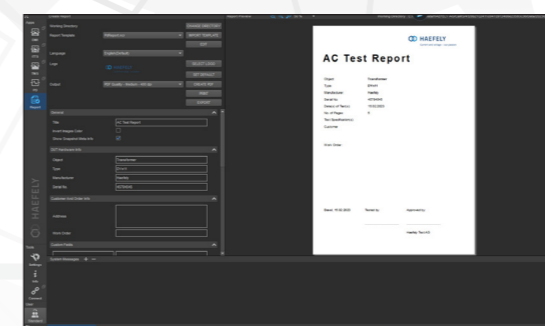


BREAKDOWN
Visual breakdown
indication



REPORTING, DATA EXPORT

USER ROLES

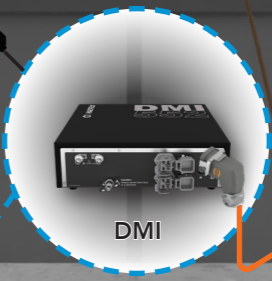
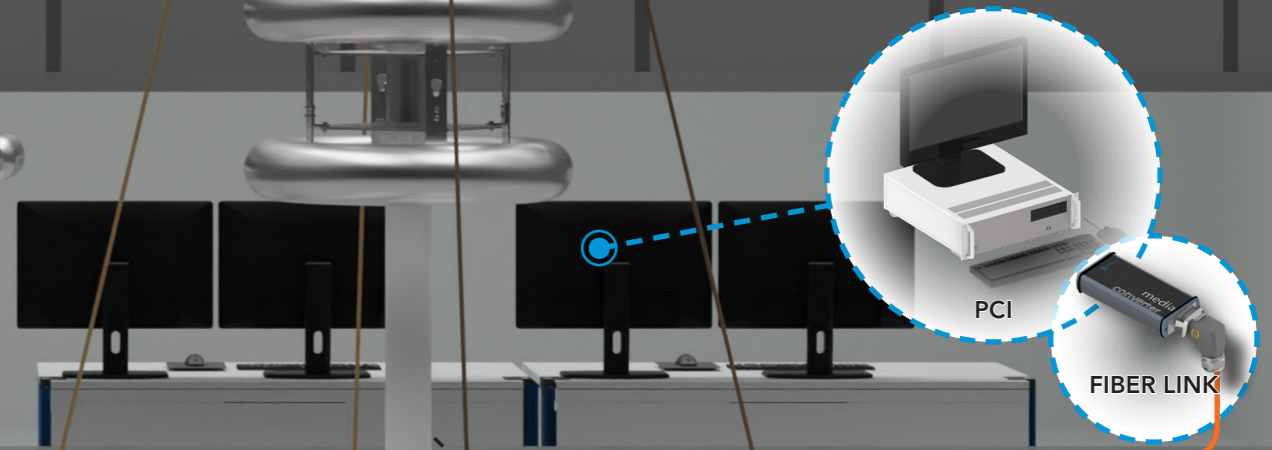
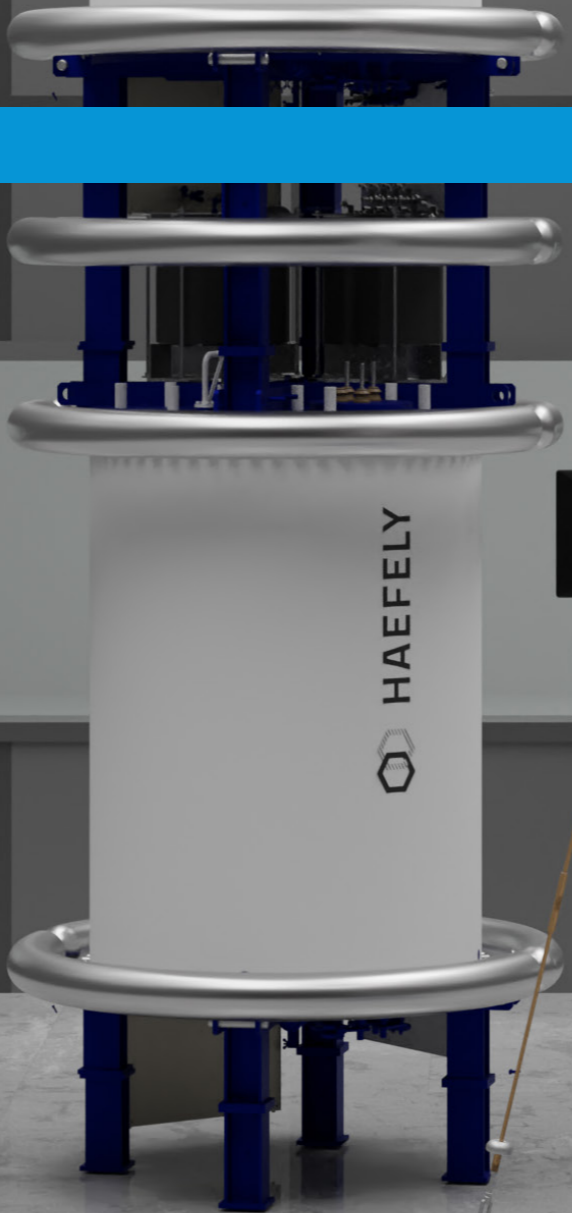
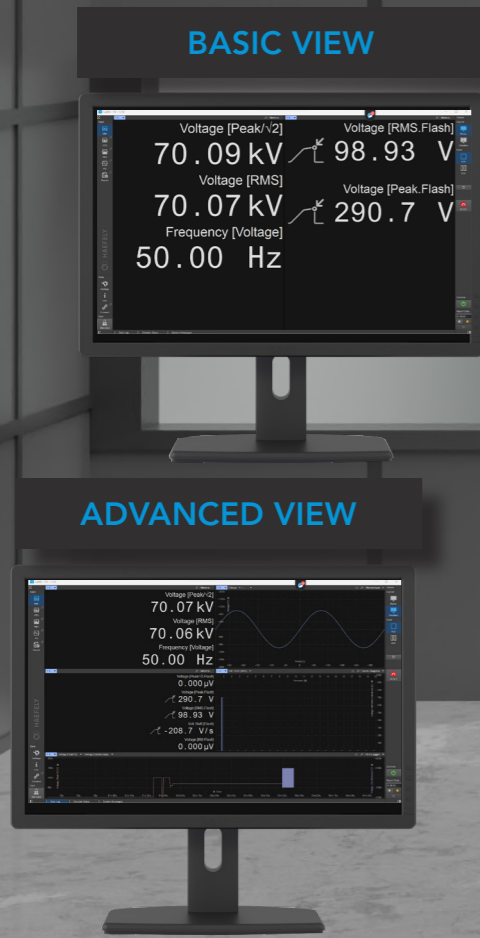


- Custom editable templates
- Print or PDF
- SQLite database
- CSV and PNG data export



- User Roles
- Password protection
- Limited features and widget access

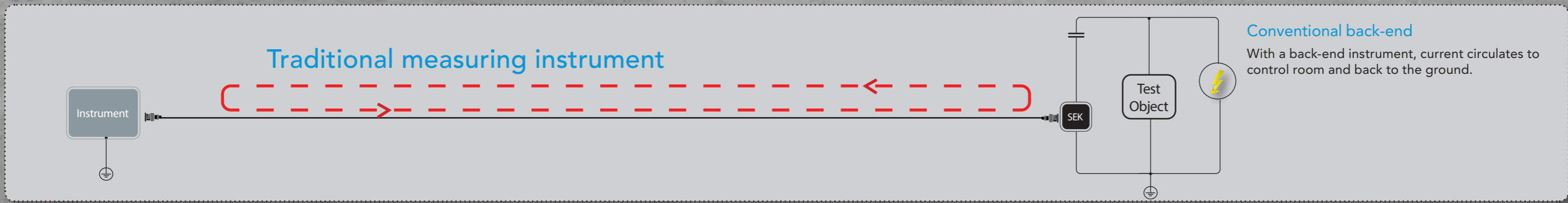
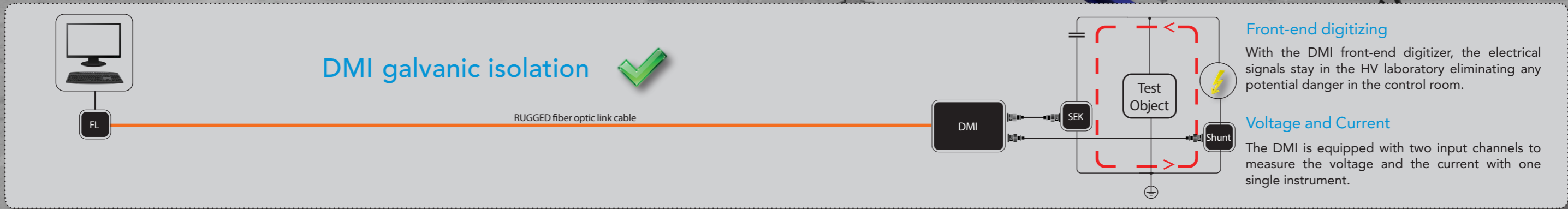
DMI CONNECTION

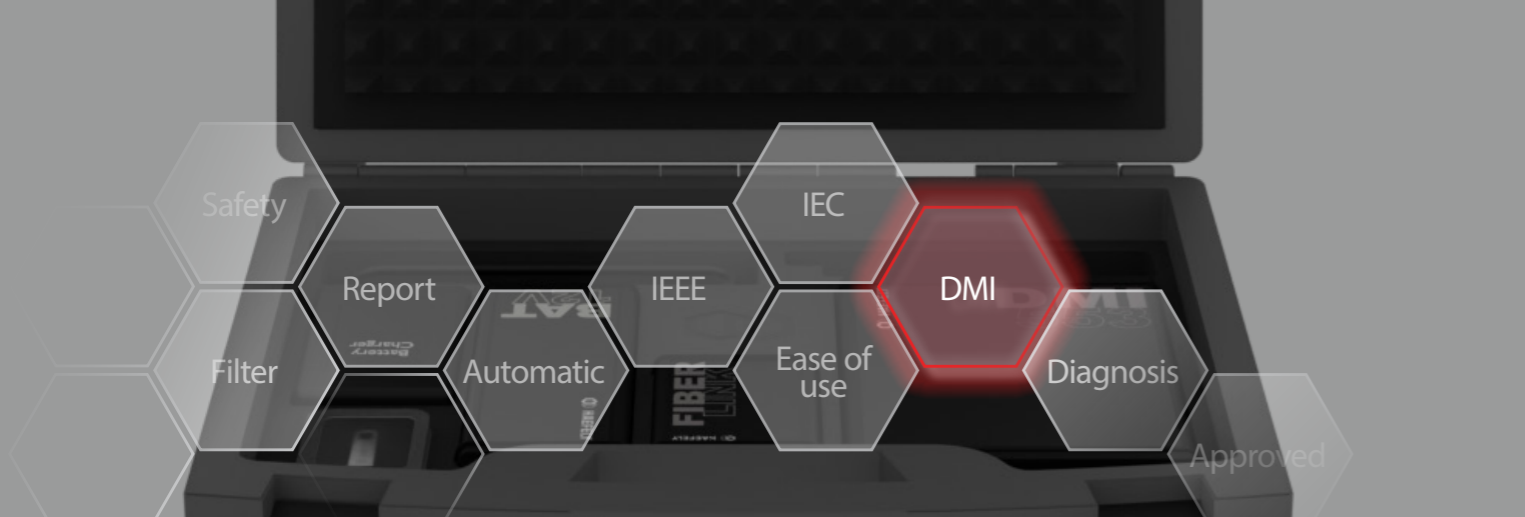


Galvanic Isolation ✓
 Fiber optic link between the DMI and the control PC provides a complete galvanic isolation, with the following benefits:

- The length of the fibre optic cable does not impact the measurement ratio or the calibration.
- Fully ensures safety of personnel. With the DMI, there is no electrical connection between the control room and the high voltage test room.

DMI CaMS™ Software - modern & easy to use!





DMI BASIC SPECIFICATIONS

	DMI 552	DMI 553
Supply	Mains	Battery
Input Voltage (AC & DC)	0...400 V _{Peak}	
Accuracy	±0.1 % of reading ±10 uV	
Meas Values Voltage / Current ⁽¹⁾	Amplitude AC	±Peak, ±Peak/√2, RMS _{fund} , Peak _{AVG} , RM, RM _{Corr} , Mean, Peak Factor, Rate of Rise
	Amplitude DC	Mean, Ripple, f _{Ripple} , Peak, Rate of Rise
	Harmonics	1...20 th individual (Amplitude, Phase, Ratio), THC, THD
	Peak and Hold	Peak Flash, RM _{Corr} , Flash, Rate of Rise Flash

Complete technical specifications in the DMI Datasheet available at www.HAEFLY.com

STANDARD PACKAGE

1	DMI	Rugged Digital Measuring Instrument	DMI 552
		Portable Digital Measuring Instrument	DMI 553
	Including		
2		Software on USB stick	
3		Fiber Optic - USB/Ethernet adaptor (Fiber Link)	
4		Fiber Optic Cable, 20 m	
5		Battery (DMI 553)	
6		Transport case (DMI 553)	
7		Connection set (per channel)	
		Instruction Manual & Test Report	
8	Extended Warranty		
		2 years	DMI/WE2
		3 years	DMI/WE3



OPTIONS

DMI 55X Options

9	DMI 553/BATT	Additional/spare battery pack for DMI 553 portable version	
10	DMI 553/SUP	External 12 V power supply for DMI 553 portable version	
	DMI552/MSET-19RACK	Mounting set 19" 3HE for DMI 552 laboratory rugged version	
	DMI552/MSET-UNI	Universal mounting set for DMI 552 laboratory rugged version	

ADD ON (SOFTWARE KEY)

DMI 55X/SKCH	Software Key to enable additional input/channel (Voltage or Current)	
DMI 55X/SKDO	Software Key to control up to 8 digital outputs (Flash, Trips) using Moxa ioLogik E1212 (not included).	

ACCESSORIES

High Voltage Dividers

11	9231	The 9231 (25 ... 200 kV) have been specially developed for AC high voltage measurement. Includes a double base to allocate the measuring instrument.	
11	9241	The 9241 (25 ... 200 kV) have been specially developed for AC & DC high voltage measurement. Includes a double base to allocate the measuring instrument.	

Secondary Units

12	SEK 463	Secondary unit for AC & DC measurement. 140V output voltage. Other voltages on request.	
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Computers

13	LAPTOP	Laptop, Intel processor, Windows 10, 15.6" display, Full HD (1920 x 1080)	
14	PCI 811c	Industrial PC (EMC tested, suitable for working in HV laboratories) Intel processor, Windows 10, Monitor 24", keyboard and mouse	



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