

**NY GENERASJON
NETTANALYSATORER**

DMG7000,7500,8000,9000

DMG7000

Panelmontert multiinstrument, LCD, ekspander.

- Widescreen colour LCD 4,3"
- Ekspanderbar
- NFC konfigurerebar
- Kompatibel med EASY BRANCH SYSTEM
- 92 x 92 mm hull

**PRODUKTBESKRIVELSE**

2022 er året da vi utvider vårt sortiment fra Lovato med en nyutviklet nettanalysator/multiinstrument. Lovato's nye serie nettanalysatorer finnes i fire ulike utførelser fra DMG7500 til DMG9000, der alle modeller har en ny oppdatert widescreen med LCD fargedisplay. Med hjelp av fargedisplay og tydelige trykknapper kan man enkelt lese av nettanalysatorens verdier og funksjoner med forskjellige ulike oppsett for visuell tydelighet.

For å gjøre dette mest mulig brukervennlig, kan man programmere LED indikatorer på produktets display. Her kan du for eksempel tilpasse produktet etter dine behov, man kan styre hva de ulike LED indikeringene står for. For eksempel status av digitale innganger eller utganger. Pågående kommunikasjon og indikasjon av energi forbruk.

Nettanalysatorene har også innebygget PLS logikk, med hjelp av dette kan analysatoren utføre enkle funksjoner, eksempel tidsfunksjoner, alarm og digitale innganger. Disse funksjoner kan du enkelt programmeres med hjelp av Lovatos gratis software Express.

Den nye serien har også NFC konfigurasjon. Takket være NFC funksjonen kan du enkelt konfigurere og modifisere parametere i Lovatos NFC app, dette kan gjøres selv om ikke spenningen er på. Appen er gratis finnes for både Android og IOS.

De nye modellene fra DMG7500 og oppover er også kompatible med Lovatos nyhet EASY BRANCH. Med hjelp av EASY BRANCH kan du spare både tid og penger ved installasjoner der du har flere målepunkter.

Ved sammenligning av vanlige måleinstrument og EASY BRANCH minsker du ikke bare antallet av kabler å trekke, samt at risikoen for feilkobling. Takket være RJ45 koblingen blir løsningen i prinsipp idiotsikker!

For å bygge ett EASY BRANCH system benytter du følgende produkter:

- Nettanalysator DMG7500 - 9000
- EXS0000 Bus modulen for EASY BRANCH
- EXS4... målemodul for strømtransformatorer og automatsikringer
- EXS1-3.... for elektronisk måling av automatsikringer eller passende strømtransformatorer.

Til sammen kan løsningen måle opp til 33 stk 3-fase eller 99 stk 1-fase.

Modulene EXS1... og EXS3... for elektronisk måling har en selvgjenkjenningfunksjon sammen med strømmodulen den er tilkoblet til. Dette gjør det lettere for installatøren som da ikke behøver stille inn primærstrømmen for strømtransformatoren eller type av kobling (1-fase, 3-fase). En LED indikerer den korrekte spenningen på den elektroniske strømtransformatoren, mens en annen LED på EXS4000 modulen indikerer at den er korrekt kopleet.

For å gjøre hele installasjonen enda enklere behøves heller ingen spesielle kabler - en standard Cat.6 Ethernet kabel er alt som kreves.

Tradisjonell måling sammenlignet med EASY BRANCH

Vid en måling av 4 stk 3-fase laster som er overvåket i et elektronisk panel:

- EASY BRANCH: 1 Nettanalysator, 1 stk EXS0000 bus modul, 1 stk EXS4000, 4 stk elektroniske strømtransformatorer og kun 5 stk Ethernetkabler.

- Tradisjonelt system: 1 HMI, 4 stk nettanalysatorer, 12 stk strømtransformatorer, 32 kabler.

POWER ANALYZERS WITH WIDESCREEN COLOUR LCD DMG SERIES



WIDESCREEN COLOR LCD

The large size of the colour LCD (4.3") allows for the optimal view of measures and parameters in a clear, simple and intuitive way. The standard cutout dimensions (92x92mm) ensures a perfect compatibility with the usual front panel solutions.



10 LANGUAGES

The language shown can be selected from a large number of choices: English, French, German, Italian, Spanish, Portuguese, Polish, Russian, Czech, Chinese.

PROGRAMMABLE LEDs

3 front LEDs are programmable and let the user know the status of the device at any time; alarms programmed by the user, status of digital inputs or outputs, emission of pulses indicating energy consumption, communication in progress.



HIGH ACCURACY LEVEL FOR MEASUREMENTS

The measurements are verified according to the recognized international standards for measuring instruments: IEC 62053-22 (class 0.5s), IEC 62053-24 (class 1) and IEC 61557-12 (class 0.5).

NFC CONFIGURATION

Thanks to NFC technology, it is possible to configure and modify parameters (even when the device is not powered) through the **NFC LOVATO** App, which can be downloaded for free from the Google Play Store and App Store for Android and iOS smart devices.



PLC LOGIC

Thanks to the built-in PLC logic, the power analyzers can perform simple automations related to timers and alarm states and digital inputs. Programming with "contacts" (**Ladder**) is simple and intuitive thanks to the use of **Xpress** configuration software.



EVERYTHING UNDER CONTROL!

MEASUREMENTS

DMG power analyzers display all the measurements useful for a complete check of the electrical network. The voltage measurement input does not require external transformers up to 600VAC.

CHARTS AND HARMONICS

The electrical measurements are shown with waveform charts, polar diagrams and representations of the **harmonic spectrum up to the 63rd order** which is a useful tool to better understand the state of the system.

STATISTICS

The DMG9000 model also provides statistics on the quality of the network according to the **EN50160** standard - class C - (voltage dips, overvoltages, interruptions, low frequency noises and much more).



Waveforms



Polar diagram



Currents



Energy consumption control

EXPANDABILITY

Possibility to add up to 3 EXP... series expansion modules (additional inputs, outputs and communication ports).

INTEGRATION WITH SIGNALS FROM THE FIELD

Thanks to the EXP... expansion modules it is possible to add **digital and analog inputs** by which field measurements such as gas or water consumption, tank levels, temperatures, pressures and much more are integrated into the data collection in order to obtain a complete energy management.

OPTICAL PORT

The optical port compatible with the communication devices CX01 and CX02 is available and allows, thanks to **Xpress** software, the parameter configuration, the electrical network diagnostics and the firmware update of the power analyzer.

DEGREE OF PROTECTION: IP65

Possibility of use in harsh environments thanks to the gasket on the back which guarantees the **IP65** degree of protection.

COMMUNICATION

Availability of models with built-in **RS485** and **Ethernet** communication ports.

EASY BRANCH POWER MONITORING SYSTEM

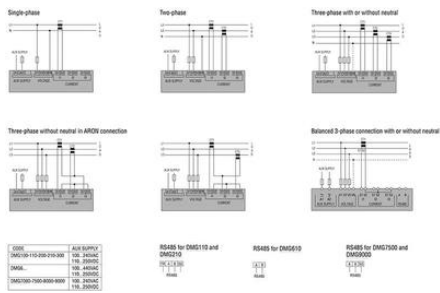
Thanks to the **EXS...** modules, a simplified and very fast wiring can be achieved in panels where it is necessary to read the electrical parameters of different loads, drastically reducing the costs and the installation times.



	DMG7000	DMG7500	DMG8000	DMG9000
Built-in RS485 port	-	•	-	•
Built-in Ethernet port (with web-server)	-	-	•	•
Ethernet-RS485 gateway function	+ EXP1012 + EXP1013	+ EXP1013	+ EXP1012	•
Memory for data collection	-	-	•	•
Statistics of network quality according to EN50160	-	-	-	•
Neutral current measurement through dedicated CT	-	-	-	•
Neutral-Earth voltage measurement	-	-	-	•
Compatibility with EASY BRANCH power monitoring system	-	•	•	•

TEKNISKE DATA

Antall ekspansjonsmoduler maks.	3 pc
EASY BRANCH compatibility	Nei
Effektforbruk	6 W
Effektforbruk	15 VA
Ekspanderbar	Ja
Frekvens maks.	360 Hz
Frekvens min.	45 Hz
Godkjenninger	CSA C22.2-N°14, EN61000-6-2, EN61000-6-3, EN61010-1, UL 508
IP-klasse front	IP65
IP-klasse tilkobling	IP20
Matespenning AC maks.	264 V AC
Matespenning AC min.	90 V AC
Matespenning DC maks.	300 V DC
Matespenning DC min.	100 V DC
Montering	Panelmontering
Målenøyaktighet spenning (L-L)	±0,2 % (80...830 V AC)
Målenøyaktighet spenning (L-N)	±0,2 % (50...480 V AC)
Oppbevaringstemperatur fra	-30 °C
Oppbevaringstemperatur til	80 °C
Temperaturområde drift fra	-20 °C
Temperaturområde drift til	60 °C
Type måleverdi	True RMS
Vekt	0,412 kg



POWER ANALYZERS WITH WIDESCREEN COLOUR LCD DMG SERIES

- WIDESCREEN COLOR LCD**
The large size of the colour LCD (A27) allows for the optimal view of measurements and parameters in a clear, simple and intuitive way. The standard colour displays (200000) ensure a perfect compatibility with the usual front panel solutions.
- 10 LANGUAGES**
The language from which to be selected from a large number of choices: English, French, German, Italian, Spanish, Portuguese, Polish, Russian, Czech, Chinese.
- PROGRAMMABLE LEDS**
3 front LEDs are programmable and let the user know the status of the device at any time: alarms programmed by the user, status of digital inputs or outputs, presence of pulse indicating energy consumption, communication in progress.
- HIGH ACCURACY LEVEL FOR MEASUREMENTS**
The measurements are verified according to the international standards for measuring instruments: EC 62053-22 (class 0.5s), EC 62053-24 (class 1) and EC 61517-12 (class 0.5).
- NFC CONFIGURATION**
Thanks to NFC technology, it is possible to configure and modify parameters even when the device is not powered through the LCD/LED App, which can be downloaded for free from the Google Play Store and App Store for Android and iOS smart devices.
- PLC LOGIC**
Thanks to the built-in PLC logic, the power analyser can perform simple automations related to binary and alarm status and digital inputs. Programming with terminals is simple and intuitive thanks to the use of XCP/PC configuration software.

- EXPANDABILITY**
Possibility to add up to 3 IOP - series expansion modules (additional inputs, outputs and communication ports).
- INTEGRATION WITH SIGNALS FROM THE FIELD**
Thanks to the DSP - expansion modules it is possible to add digital and analog inputs to which field measurements such as gas or water consumption, tank levels, temperature, pressure and much more are integrated into the data collector in order to obtain a complete energy management.
- DEGREE OF PROTECTION: IP65**
Possibility of use in "harsh" environments. Thanks to the gasket on the back which guarantees the IP65 degree of protection.
- COMMUNICATION**
Modularity of modules with built-in RS485 and Ethernet communication ports.
- OPTICAL PORT**
The optical port compatible with the communication device ODD and ODD2 is available and allows, thanks to XCP/PC software, the parameter configuration, the electrical network diagnosis and the firmware update of the power analyser.
- EASY BRANCH POWER MONITORING SYSTEM**
Thanks to the LCD - module, a simplified and very fast wiring can be achieved in panels where it is necessary to reach the electrical parameters of different loads, drastically reducing the costs and the installation times.

	DMG7000	DMG7500	DMG8000	DMG9000
Built-in RS485 port	—	●	—	●
Built-in Ethernet port (with web server)	—	—	●	●
Ethernet RS485 gateway function	+ EXP1012 + EXP1013	+ EXP1013	+ EXP1012	●
Memory for data collection	—	—	●	●
Statistics of network quality according to IEC61000	—	—	—	●
Neutral current measurement through dedicated CT	—	—	—	●
Neutral-Earth voltage measurement	—	—	—	●
Compatibility with EASY BRANCO power monitoring system	—	●	●	●

EVERYTHING UNDER CONTROL!

MEASUREMENTS

DMG power analyser displays all the measurements, suitable for a complete check of the electrical network. The voltage measurement report does not require external transformers up to 600VAC.

CHARTS AND HARMONICS

The electrical measurements are shown with waveform charts, polar diagram and representations of the harmonic spectrum up to the 40th order which is a useful tool to better understand the state of the system.

STATISTICS

The DMG9000 model also provides statistics on the quality of the network according to the EN50160 standard - class C - voltage dips, overvoltages, interruptions, low frequency noise and much more.



Waveforms



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Energy consumption control