

## NÄTANALYSATOR FÖR PANELMONTAGE

DMG7000, 7500, 8000, 9000

### DMG7000

Nätanalysator med widescreen färg LCD. Expanderbar med 3 EXP moduler.

- Widescreen colour LCD 4,3"
- Expanderbar
- NFC konfiguration
- Kompatibel med EASY BRANCH SYSTEM



### PRODUKTBESKRIVNING

2022 är året då vi utökar vårt sortiment från Lovato med en nyutvecklad nätanalysator. Lovatos nya serie nätanalysatorer finns i fyra olika utföranden från DMG7500 till DMG9000, där alla modeller har en uppdaterad widescreen med LCD färgdisplay. Med hjälp av färgdisplay och tydliga tryckknappar kan man enkelt hantera och läsa av analysatorn i tuffa miljöer.

För att underlätta användandet av analysatorn kan du programmera LED indikatorer på produktens display. Här kan du för att anpassa produkten efter ditt egna behov styra vad de olika LED indikatorerna signalerar. Till exempel status av digitala ingångar eller utgångar, pågående kommunikation och indikation av energikonsumtion.

Nätanalysatorerna har också inbyggd PLC logik, med hjälp av detta kan analysatorn utföra enkla funktioner kopplade till timers, alarm och digitala ingångar. Dessa funktioner kan du enkelt programmera med hjälp av Lovatos gratis konfigurationsmjukvara Express.

Den nya serien är även utrustad med NFC konfiguration. Tack vare NFC funktionen kan du enkelt konfigurera och modifiera parametrar i Lovatos NFC app, detta även när nätanalysatorn inte är spänningssatt. Appen är gratis och går att ladda ner där du hittar appar.

De nya modellerna från DMG7500 och uppåt är även kompatibla med Lovatos nyhet EASY BRANCH. Med hjälp av EASY BRANCH kan du spara både tid och pengar vid installationer där du har flera mätpunkter.

Vid jämförelse av vanliga mätinstrument och EASY BRANCH minskar du inte bara antalet av dragna kablar utan även risken för felkoppling, och tack vare RJ45 kopplingen blir lösningen i princip idiotsäker!

För att bygga ett EASY BRANCH system använder du följande produkter:

- Nätanalysator DMG7500 - 9000
- EXS0000 Busmodulen för EASY BRANCH
- EXS4... mätmodul för strömtransformatorer och automatsäkringar
- EXS1-3.... för elektronisk mätning av automatsäkringar eller passande strömtransformatorer.

Tillsammans kan lösningen mäta upp till 33st 3-fas laster eller 99st 1-fas laster.

Modulerna EXS1... och EXS3... för elektronisk mätning har en självigenkänningsfunktion tillsammans med strömmodulen den är ansluten till. Detta underlättar för installatören som då ej behöver ställa in primärströmmen för strömtransformatorn eller typ av koppling (1-Fas, 3-Fas). LEDen indikerar den korrekta spänningen på den elektroniska strömtransformatorn, medan en LED på EXS4000 modulen indikerar att den är korrekt kopplad.

För att göra hela installationen ännu enklare behövs heller inga speciella kablar - en standard Cat.6 Ethernet kabel är allt som krävs.

Traditionell mätning jämfört med EASY BRANCH

Vid en mätning av 4st 3-fas laster som är övervakade i en elektronisk panel:

- EASY BRANCH: 1 Nätanalysator, 1 EXS0000 busmodul, 1 EXS4000, 4 elektroniska strömtransformatorer och enbart 5 Ethernetkablar.

- Traditionellt system: 1 HMI, 4 nätanalysatorer, 12 strömtransformatorer, 32 kablar.

## 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

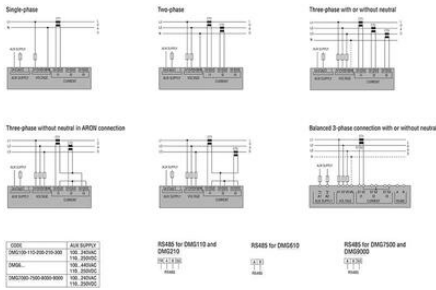
Thanks to the EXS... modules, a simplified and very fast wiring can be achieved in panels where it is necessary to read the electrical parameters of different loads, drastically reducing the costs and the installation times.



	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	-	•	•	•

## TEKNISK DATA

Antal expansionsmoduler max	3 st
Effektförbrukning	6 W
Effektförbrukning	15 VA
Expanderbar	Ja
Frekvens max	360 Hz
Frekvens min	45 Hz
Godkännanden	CSA C22.2-N°14, EN61000-6-2, EN61000-6-3, EN61010-1, UL 508
IP-klass anslutning	IP20
IP-klass front	IP65
Kompatibel med EASY BRANCH	Nej
Matningsspänning AC max	264 V AC
Matningsspänning AC min	90 V AC
Matningsspänning DC max	300 V DC
Matningsspänning DC min	100 V DC
Montage	Panelmontering
Mätnoggrannhet aktiv energi	Class 0,5S enl. IEC/EN 62053-22
Mätnoggrannhet reaktiv energi	Class 1 enl. IEC/EN 61557-12
Mätnoggrannhet spänning (L-L)	±0,2 % (80...830 V AC)
Mätnoggrannhet spänning (L-N)	±0,2 % (50...480 V AC)
Mätnoggrannhet ström	±0,2 % (0,1...1,2 x I <sub>n</sub> )
Mätområde spänning	20...830 V AC L-L. 10...480 V AC L-N. 1...480 V AC N-GND.
Mätområde ström	0,004-6
Temperaturområde drift från	-20 °C
Temperaturområde drift till	60 °C
Temperaturområde lager från	-30 °C
Temperaturområde lager till	80 °C
Typ av mätvärde	True RMS
Vikt	0,412 kg



## POWER ANALYZERS WITH WIDESCREEN COLOUR LCD DMG SERIES

- WIDESCREEN COLOR LCD**  
The large size of the color LCD (8.3") allows for the optimal view of measures and parameters in a clear, simple and intuitive way. The standard colour dimensions (80x200mm) ensure 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 or any other alarm programmed for the user, status of digital inputs or outputs, emission of pulses indicating energy consumption, communication warnings.
- 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 1s and IEC 61557-12 class 0.5s.
- NFC CONFIGURATION**  
Thanks to NFC technology, it's possible to configure and modify parameters even when the device is not powered through the QWERTY App, which can be downloaded for free from the Google Play Store and Apple Store for Android and iOS smart devices.
- PLC LOGIC**  
Thanks to the built-in PLC logic, the power analyzer can perform simple automations related to three and four phase and digital inputs. Programming with "contacts" **Labnet** is simple and intuitive thanks to the user of **3GPTnet** configuration software.

- EXPANDABILITY**  
Possibility to set up to 8 I/O - series expansion modules (additional inputs, outputs and communication ports).
- INTEGRATION WITH SIGNALS FROM THE FIELD**  
Thanks to the I/O - expansion modules it is possible to add digital and analog inputs to which field measurements such as gas or water consumption, tank level, temperature, pressures and much more are integrated into the data collection 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**  
Availability of modules with built-in RS485 and Ethernet communication ports.
- OPTICAL PORT**  
The optical port compatible with the communication device GIGaset and GIGaset is available and allows, thanks to **3GPTnet** software, the parameter configuration, the electrical network diagnostics and the firmware update of the power analyzer.
- EASY BRANCH POWER MONITORING SYSTEM**  
Thanks to the EXC - 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 time.

	DMG7000	DMG7500	DMG20000	DMG60000
Built-in RS485 port	●	●	●	●
Built-in Ethernet port (with web server)	—	—	●	●
Shunt RS485 gateway function	+ EXP1012 + EXP1013	+ EXP1013	+ EXP1012	●
Memory for data collection	—	—	●	●
Statistic of network quality according to IEC 61010	—	—	●	●
Neutral current measurement through dedicated CT	—	—	—	●
Neutral Earth voltage measurement	—	—	—	●
Compatibility with EASY MONITOR power monitoring system	—	●	●	●

## 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 transformation up to 600V.
- CHARTS AND HARMONICS**  
The electrical measurements are shown with waveform charts, polar diagrams and representations of the **harmonic spectrum up to the 50th order** which is a useful tool to better understand the state of the system.
- STATISTICS**  
The DMG60000 model also provides statistics on the quality of the network according to the **EN50160** standard - class C - voltage dips, sags, swells, interruptions, low frequency noises and much more.

	DMG7000	DMG7500	DMG20000	DMG60000
Built-in RS485 port	●	●	●	●
Built-in Ethernet port (with web server)	—	—	●	●
Shunt RS485 gateway function	+ EXP1012 + EXP1013	+ EXP1013	+ EXP1012	●
Memory for data collection	—	—	●	●
Statistic of network quality according to IEC 61010	—	—	●	●
Neutral current measurement through dedicated CT	—	—	—	●
Neutral Earth voltage measurement	—	—	—	●
Compatibility with EASY MONITOR power monitoring system	—	●	●	●