

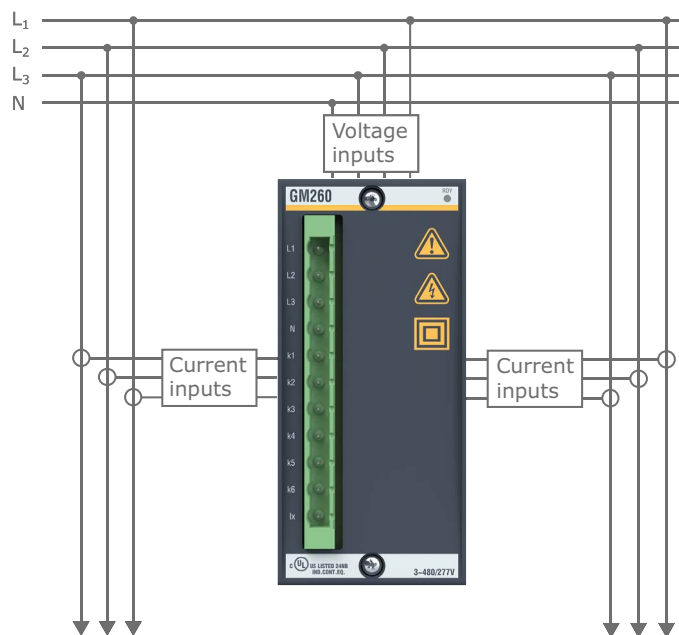
GM260 Grid Measurement Module

The GM260 module enables the safe, reliable and fast measuring of all relevant values for three-phase electrical networks. Two separate three-phase branches can be measured if there is a common voltage measuring point. The grid variables are calculated online in the module as True RMS values including harmonics up to the 40th harmonic. This is particularly useful for applications such as for operational measurement on machines or the energy monitoring in plants and buildings. As well as functions for determining the active, apparent and reactive power for each phase, two separate 4-quadrant energy counters are directly integrated in the module.

The GM260 module is fully integrated in the Bachmann SolutionCenter. Both the measured channel values and also the derived values are made available directly in the user interface.

Item	Item-No.
GM260	00022162-00
GM260 CC	00026118-00

- Measurement of current, voltage, frequency, power, power factor, phase angle
- Direct connection to input voltages up to 480 VL-L, RMS
- True RMS calculation online
- 2 independent 4Q energy counters
- Compact design for 2 three-phase branches



▼ Application example: Power measurement with common voltage input

GM260 – Grid Measurement	
Current/Voltage Measurement	
Measuring method	True RMS (incl. harmonics up to 40th)
Measurement interval	50 Hz: 10 ms 60 Hz: 8.33 ms
Voltage Measurement	
Number	3
Maximum rated voltage	$U_{L-L, RMS}: 480 V_{rms}, U_{L-N, RMS}: 277 V_{rms}$
Voltage measuring range	$U_{L-L, RMS}: 70 \text{ to } 625 V_{rms}, U_{L-N, RMS}: 36 \text{ to } 361 V_{rms}$
Accuracy ¹⁾	$\leq \pm 0.1 \%$
Continuous overload	$U_{L-L, RMS}: 680 V_{rms}, U_{L-N, RMS}: 390 V_{rms}$
Short-term overload(10x1 s, interval 10 s)	$U_{L-L, RMS}: 1039 V_{rms}, U_{L-N, RMS}: 600 V_{rms}$
Input impedance	$>2 M\Omega$
Current Measurement	
Number	6
Accuracy ¹⁾	$\leq \pm 0.3 \%$
Current transformer rated current	$1 A_{rms}$
Current measuring range	$0.01 \text{ to } 1.2 A_{rms}$
Current acquisition range	$0 - 1.2 A_{rms}$
Continuous overload	$1.2 A_{rms}$
Short-term overload (5x1 s, interval 300 s)	$20 A_{rms}$
Apparent ohmic resistance	$75 mVA$
Frequency Measurement	
Rated frequency	50 / 60 Hz
Reference range	45 to 65 Hz
Accuracy ¹⁾	$\leq \pm 0,010 \text{ Hz (with average filtering down to } \leq \pm 0,005 \text{ Hz)}$
Measurement interval	Updated at each positive zero crossing 50 Hz: 20 ms 60 Hz: 16.67 ms
Power Measurement – Active, Reactive and Apparent Power	
Measured values	P, Q, S per phase and as total
Accuracy ¹⁾	$\leq \pm 0.4 \%$
Calculation method	DIN 40110-2
Measurement interval	Updated at each positive zero crossing 50 Hz: 20 ms 60 Hz: 16.67 ms

1) Accuracy values as a percentage of the nominal value at 25 °C and reference conditions



GM260 – Grid Measurement	
Energy	
Number of energy counters	2
Accuracy*	≤ ±0.4 %
Resolution	1 Wh
Active energy	Supplied (positive), drawn (negative)
Reactive energy	Supplied (positive), drawn (negative)
Measurement interval	Updated at each positive zero crossing 50 Hz: 20 ms 60 Hz: 16.67 ms
Type of memory	Nonvolatile (on the module)
Memory cycle	1 sec
Electrical Safety	
Product standard	IEC/EN 61131-2
Generic standard	IEC/EN 60664-1
Pollution degree	2
Overvoltage category	3
Test surge voltage	4 kV
Protection class	2
Approvals / Certificates	
Maritime & Offshore	ABS, BV, DNV, LR, KR, NK, RINA
Ambient Conditions	
Operating temperature	-30 to +60 °C
Rel. air humidity, operation	5 to 95 % no condensation
Storage temperature	-40 to +85 °C
Rel. air humidity, storage	5 to 95 % with temporary condensation
Maximum operating height	2,000 m above sea level (operation up to 4,500 m on request)
Power Supply	
Via backplane	+5 V ≤130 mA, +15 V ≤45 mA
System Requirements	
Hardware	All M1 CPU families apart from ME203, SK1 backplane not required
Software	M-Base 3.91 / SolutionCenter 1.91 or higher (recommended) (if the release driver is installed manually, also executable from the system software of the CPU ≥M-Base 3.90)

Order Codes		
Item	Item No.	Description
GM260	00022162-00	Grid measurement module; 3x In 480V, 6x In 1A; U-, I-, P-, Q-, f-measurement; 4Q-energy metering
GM260 CC	00026118-00	Like GM260; ColdClimate (❄️)
Accessories		
SS-GM260 B	00023512-00	Terminal set Phoenix screw side (1x SS 76/11) with labeling strip