

Measuring and communication module for external current transformers



Part no. **NZM-XMC-TC-MB**  
 Catalog No. **169832**  
 Eaton Catalog No. **NZM-XMC-TC-MB**  
 EL-Nummer **4315533**  
 (Norway)

**Delivery program**

Product range		Accessories
Accessories		Measuring modules
Accessories		Accessories, diagnostics & communication
Description		For measuring current, voltage, power, and energy.  In addition, the module requires three current transformers and three voltage taps wired externally. X/5A standard current transformers rated for up to 6,300 A are suitable.  230 VAC power supply  2 configurable outputs (S0 pulse, alarm, etc.)  RS-485 Modbus port (slave)  The total energy consumption value will be stored in retentive memory on the module.  BreakerVisu displays (NZM-XMC-MDISP..) can be used for visualization and logging purposes.
Number of poles		3/4 pole
For use with		NZM...
Rated operating frequency		AC 50/60 Hz
Standard/Approval		IEC 664 VDE 0110 UL 94 IEC 801 IEC 348 IEC 571-1 EN 61000-6-3 EN 61000-6-1 EN 61010-1 EN 61000-4-11 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 55011 CE
Construction size		NZM1/2/3/4

**Notes**

The minimum clearances relative to the NZM circuit-breaker need to be maintained for installation.

The module can be installed on the input or outgoing side, as well as on a top hat DIN rail.

The Eaton Modbus Configurator ([www.eaton.eu](http://www.eaton.eu)) can be used to set up the module.

Cannot be combined with NZM-XMC-DISP display device.

**Technical data**

**General**

Dimensions (W x H x D)	mm	52 x 85 x 70
Weight	kg	0.21

**Environmental conditions**

Operating temperature	°C	-10 - +50
Relative humidity, non-condensing (IEC/EN 60068-2-30)	%	5 - 95
Ambient temperature		
Storage	θ	°C -10 - +50
Suitable for height		up to 2000 m
Degree of Protection		IP30

**Power supply**

Rated operational voltage	U <sub>e</sub>	V AC	230
Max. voltage tolerance (%)		%	- 15/+ 10

Frequency		Hz	50/60
Overvoltage category			Category III - 300 VAC / 520 VAC (EN 611010)
Protection		A	0.5 - 2 (part no. gL or M)
min. terminal capacity		mm <sup>2</sup>	1

### Max. current

Rated operational current	I <sub>e</sub>	A AC	5 (ext. transformer required)
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### Accuracy

Voltage measurement			0.5% +/- 1 digit
Current measurement			0.5% +/- 1 digit
Power/energy metering			0.5% +/- 1 digit
Current / voltage sensors			external
Power Factor			0.5 - 1
Measuring range limiting: ITF / Shunt			0.2 - 120 %/2 - 120 %

### Messkreis

Voltage: phase to neutral conductor/phase to phase		V AC	300/520
Operation Frequency		Hz	45 - 65
Nominal Current		A	5
Long-term overload			1.2 x I <sub>n</sub>
Power consumption for voltage measurement		VA	0.7
Power consumption for current measurement: ITF/shunt		VA	0.9/0.75
Min. terminal capacity (voltage measurement)		mm <sup>2</sup>	1
Min. terminal capacity (current measurement)		mm <sup>2</sup>	2.5

### Ausgänge

Opto-isolated transistor outputs			NPN
Maximum switching voltage		V DC	24
Maximum switching current		mA	50
Maximum frequency		Pulse / s	5
Pulse duration		ms	100

## Design verification as per IEC/EN 61439

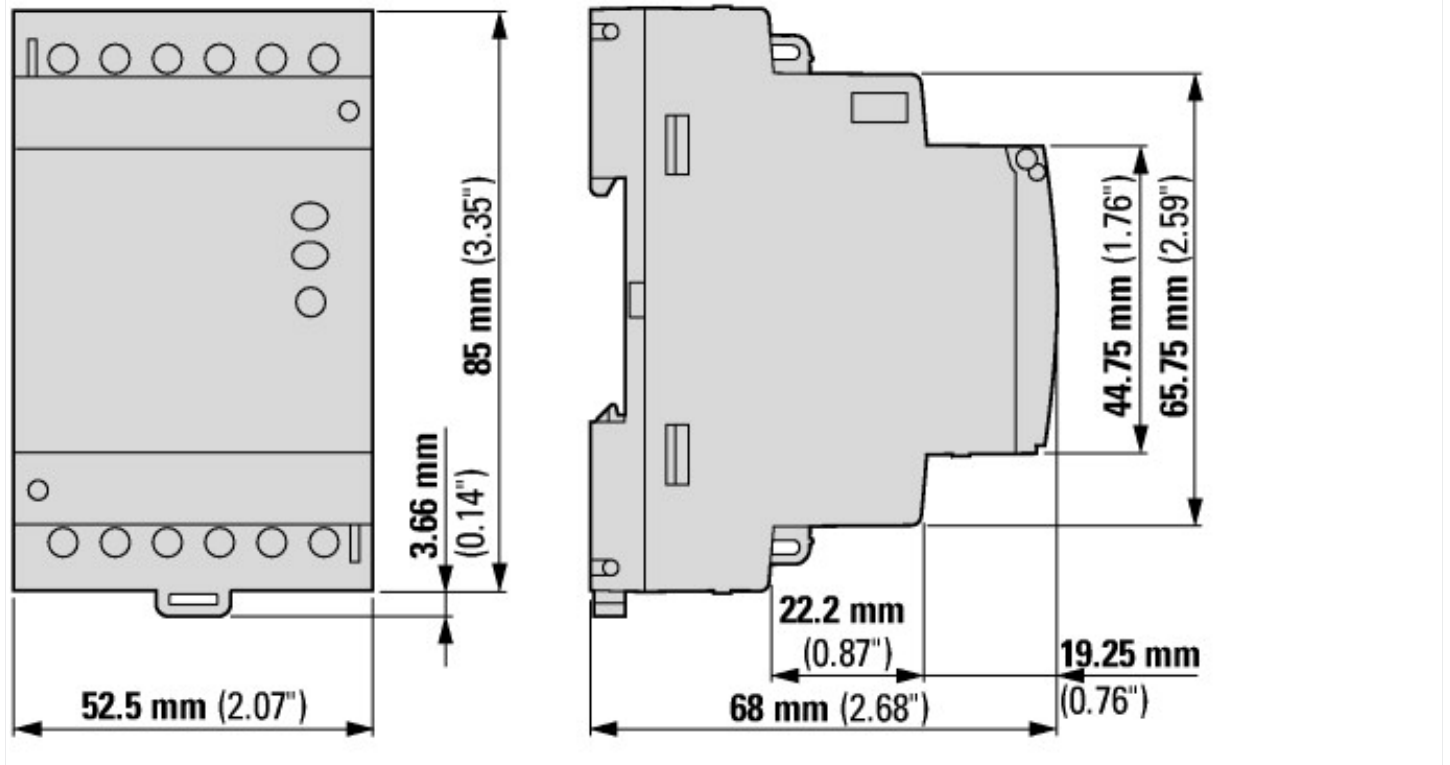
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switchgear must be observed.

## Technical data ETIM 6.0

PLC's (EG000024) / Fieldbus, decentr. periphery - communication module (EC001604)		
Electric engineering, automation, process control engineering / Control / Field bus, decentralized peripheral / Field bus, decentralized peripheral - communications module (ecl@ss8.1-27-24-26-08 [BAA073010])		
Supply voltage AC 50 Hz	V	195.5 - 253
Supply voltage AC 60 Hz	V	195.5 - 230
Supply voltage DC	V	0 - 0
Voltage type of supply voltage		AC
Supporting protocol for TCP/IP		No
Supporting protocol for PROFIBUS		No
Supporting protocol for CAN		No
Supporting protocol for INTERBUS		No
Supporting protocol for ASI		No
Supporting protocol for KNX		No
Supporting protocol for MODBUS		Yes
Supporting protocol for Data-Highway		No
Supporting protocol for DeviceNet		No
Supporting protocol for SUCONET		No
Supporting protocol for LON		No
Supporting protocol for SERCOS		No
Supporting protocol for PROFINET IO		No
Supporting protocol for PROFINET CBA		No
Supporting protocol for Foundation Fieldbus		No
Supporting protocol for EtherNet/IP		No
Supporting protocol for AS-Interface Safety at Work		No
Supporting protocol for DeviceNet Safety		No
Supporting protocol for INTERBUS-Safety		No
Supporting protocol for PROFIsafe		No
Supporting protocol for SafetyBUS p		No
Supporting protocol for other bus systems		No
Radio standard Bluetooth		No
Radio standard WLAN 802.11		No
Radio standard GPRS		No
Radio standard GSM		No
Radio standard UMTS		No
IO link master		No
System accessory		Yes
Degree of protection (IP)		IP30
With potential separation		Yes
Fieldbus connection over separate bus coupler possible		Yes
Rail mounting possible		No
Wall mounting/direct mounting		Yes
Front build in possible		No
Rack-assembly possible		No
Suitable for safety functions		No
Category according to EN 954-1		-
SIL according to IEC 61508		None
Performance level acc. to EN ISO 13849-1		None
Appendant operation agent (Ex ia)		No
Appendant operation agent (Ex ib)		No
Explosion safety category for gas		None
Explosion safety category for dust		None
Width	mm	52

Height	mm	85
Depth	mm	70

## Dimensions



## Additional product information (links)

<b>12/13 IL01219006Z (replaces AWA1230-2617)</b>	
12/13 IL01219006Z (replaces AWA1230-2617)	<a href="ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL01219006Z2013_12.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL01219006Z2013_12.pdf</a>
<b>05/13 MN01219001Z (replaces AWB1230-1630en)</b>	
05/13 MN01219001Z (ersetzt AWB1230-1630en) - Deutsch	<a href="ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN01219001Z_DE.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN01219001Z_DE.pdf</a>
05/13 MN01219001Z (replaces AWB1230-1630en) - English	<a href="ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN01219001Z_EN.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN01219001Z_EN.pdf</a>
05/13 MN01219001Z (sostituisce AWB1230-1630de) - italiano	<a href="ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN01219001Z_IT.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN01219001Z_IT.pdf</a>