



Flush-mount LCD  
multimeters  
DMG510  
Three-phase +  
neutral

Product designation

Product type designation

Type

#### Auxiliary supply Us

|                                   |     |           |
|-----------------------------------|-----|-----------|
| Auxiliary rated supply voltage AC | VAC | 100...240 |
| Auxiliary rated supply voltage DC | VDC | 120...250 |
| Auxiliary operating voltage range |     |           |
| AC                                |     |           |
|                                   | min | VAC 90    |
|                                   | Max | VAC 264   |
| DC                                |     |           |
|                                   | min | VDC 93.5  |
|                                   | Max | VDC 300   |

Operational frequency

|     |    |    |
|-----|----|----|
| min | Hz | 45 |
| max | Hz | 66 |

Power consumption

|     |    |     |
|-----|----|-----|
| Max | VA | 9.5 |
|-----|----|-----|

Power dissipation Max

|   |     |
|---|-----|
| W | 3.5 |
|---|-----|

#### Measuring voltage inputs

|                         |               |     |          |
|-------------------------|---------------|-----|----------|
| Rated voltage (Ue)      |               |     |          |
|                         | phase-phase   | VAC | 480      |
|                         | phase-neutral | VAC | 277      |
| Operating voltage range |               |     |          |
|                         | phase-phase   | VAC | 50...576 |
|                         | phase-neutral | VAC | 30...330 |

Voltage inputs operational frequency

|     |    |    |
|-----|----|----|
| min | Hz | 45 |
| max | Hz | 66 |

Voltage inputs measurement method

True RMS

Connection method

Single. two.  
three-phase with  
or without neutral.  
balanced three-  
phase system

#### Current inputs

|                    |   |                                                |
|--------------------|---|------------------------------------------------|
| Rated current (Ie) | A | 1A/5A                                          |
| Measurement range  |   | 0.01...1.2 /<br>0.01...6                       |
| Measurement method |   | TRMS                                           |
| Overload capacity  |   | +20% Ie by<br>external CT with<br>5A secondary |
| Overload peak      | A | 50A for 1s                                     |

### Accuracy

|                 |                           |
|-----------------|---------------------------|
| VLN voltage     | ±0.5%                     |
| VLL voltage     | ±0.5%                     |
| Current         | ±0.5%                     |
| Frequency       | ±0.05%                    |
| Active power    | ±0.5%                     |
| Active energy   | Class 1 (IEC/EN 62053-21) |
| Reactive energy | Class 2 (IEC/EN 62053-23) |

### Insulations

|                                       |    |     |
|---------------------------------------|----|-----|
| Rated insulation voltage Ui IEC/EN    | V  | 480 |
| Rated impulse withstand voltage Uimp  | kV | 9.5 |
| Operating frequency withstand voltage | kV | 5.2 |

### Mechanical features

|                         |     |                 |     |           |
|-------------------------|-----|-----------------|-----|-----------|
| Housing type            |     |                 |     | Polyamide |
| Terminals type          |     |                 |     | Removable |
| Conductor cross section |     |                 |     |           |
|                         | min | mm <sup>2</sup> | 0.2 |           |
|                         | Max | mm <sup>2</sup> | 2.5 |           |
|                         | min | AWG             | 24  |           |
|                         | Max | AWG             | 12  |           |

### Tightening torque (Max)

|      |     |
|------|-----|
| Nm   | 0.5 |
| lbin | 4.5 |

|        |   |                |
|--------|---|----------------|
| Fixing |   | Flush-mounting |
| Weight | g | 320            |

### Ambient conditions

#### Temperature

##### Operating temperature

|     |    |     |
|-----|----|-----|
| min | °C | -20 |
| max | °C | +60 |

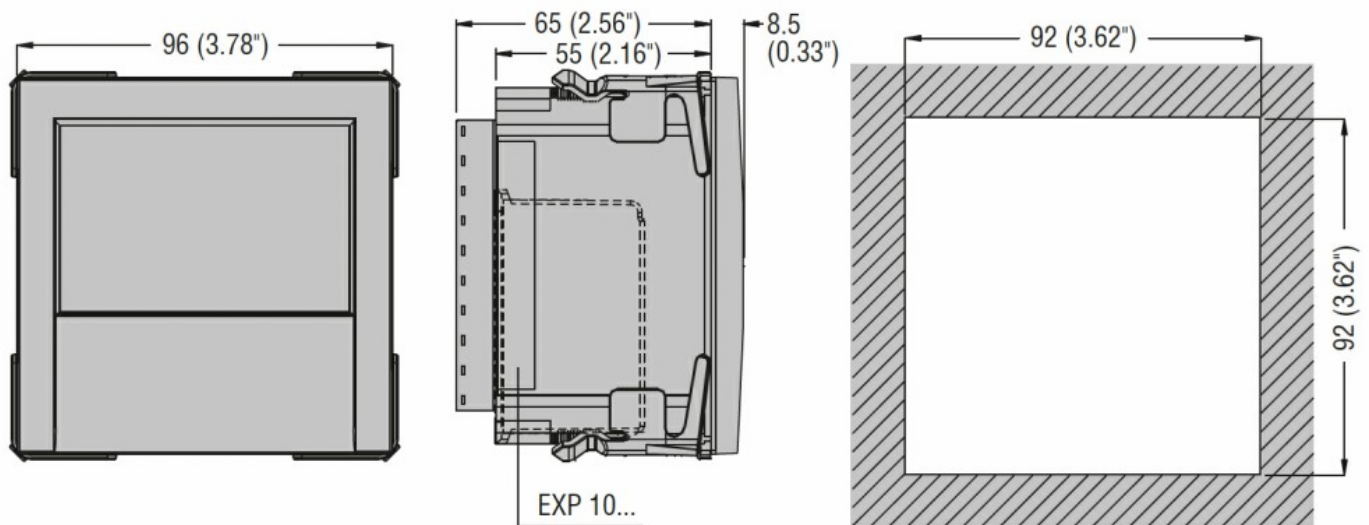
##### Storage temperature

|     |    |     |
|-----|----|-----|
| min | °C | -30 |
| max | °C | +80 |

|                          |   |     |
|--------------------------|---|-----|
| Relative humidity        | % | <90 |
| Maximum Pollution degree |   | 2   |

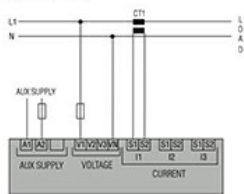
|                   |                                   |
|-------------------|-----------------------------------|
| Protection degree | IP40 on front -<br>IP20 terminals |
|-------------------|-----------------------------------|

### Dimensions

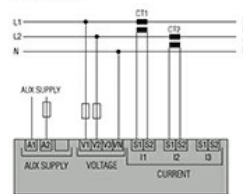


## Wiring diagrams

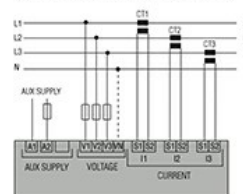
### Single-phase



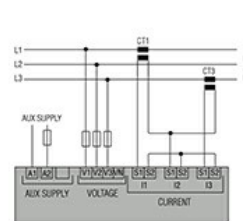
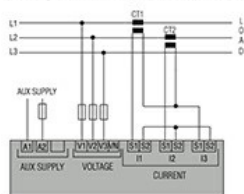
### Two-phase



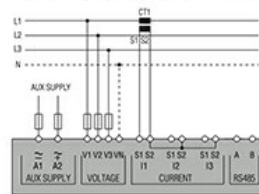
### Three-phase with or without neutral



### Three-phase without neutral in ARON connection



### Balanced 3-phase connection with or without neutral



| CODE                   | AUX SUPPLY                   |
|------------------------|------------------------------|
| DMG100-110-200-210-300 | 100...240VAC<br>110...250VDC |
| DMG6...                | 100...440VAC<br>110...250VDC |
| DMG7000-7500-8000-9000 | 100...240VAC<br>110...250VDC |

### RS485 for DMG110 and DMG210



### RS485 for DMG610



### RS485 for DMG7500 and DMG9000



## Certifications and compliance

### Compliance

IEC/EN 61000-6-2  
IEC/EN 61000-6-3  
IEC/EN 61010-1  
IEC/EN 61010-2-030  
UL61010-1

### Certificates

CE  
EAC

## ETIM classification

ETIM 8.0

EC002301 -  
Multifunction  
measuring  
instrument