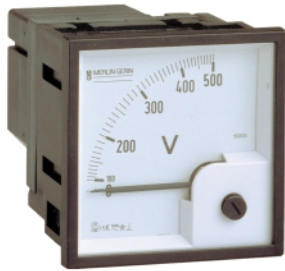


# Voltage measurement **VLT**

## Frequency measurement **FRE**

### Multi 9 Merlin Gerin



VLT: 16005



VLT: 16061



VLT: 15201



FRE: 15208

The modular and flush-mounting **VLT Voltmeters** and **FRE Frequency Meter** are designed to take voltage and frequency measurements, respectively, on all types of low voltage electrical circuits.

#### Operation

##### Flush-mounting voltmeter:

###### ■ Analog VLT:

□ voltage is read in volts directly on an interchangeable dial, 72 mm high and 72 mm wide with a scale of 90°.

##### Modular voltmeters and frequency meter:

###### ■ Analog VLT:

□ voltage is read in volts on an interchangeable dial with a scale of 90°.

###### ■ Digital VLT:

□ voltage is read in volts on a 3-digit display with red LED.

###### ■ Digital FRE:

□ frequency is read in Hertz (Hz) on a 3-digit display with red LED.

#### Advantages

A comprehensive, modern product range designed to adapt to all kinds of electrical installations.

##### ■ Comfort:

□ clear, accurate measurements,  
□ interchangeable dials.

##### ■ Attractive design:

□ compact dimensions,  
□ modern.

##### ■ Installation:

□ ease of mounting and connection,  
□ optional connection with a voltmeter selector switch (for the VLT).

##### ■ Modular VLT and FRE consistent with the entire Multi 9 offer:

□ same profile,  
□ same connections.

#### The range

##### Modular layout

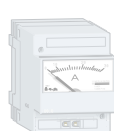
multimeter PM9 (product datasheet M9FP256.en)



AMP  
digital



AMP  
analog



TI  
(product  
datasheet  
M9FP212.en)



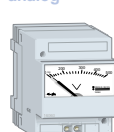
CMA



VLT  
digital



VLT  
analog



FRE digital



CMV

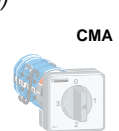


##### Flush-mounting layout

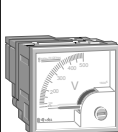
AMP 72x72  
(product datasheet  
M9FP190.en)



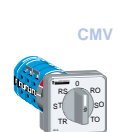
CMA



VLT 72x72



CMV

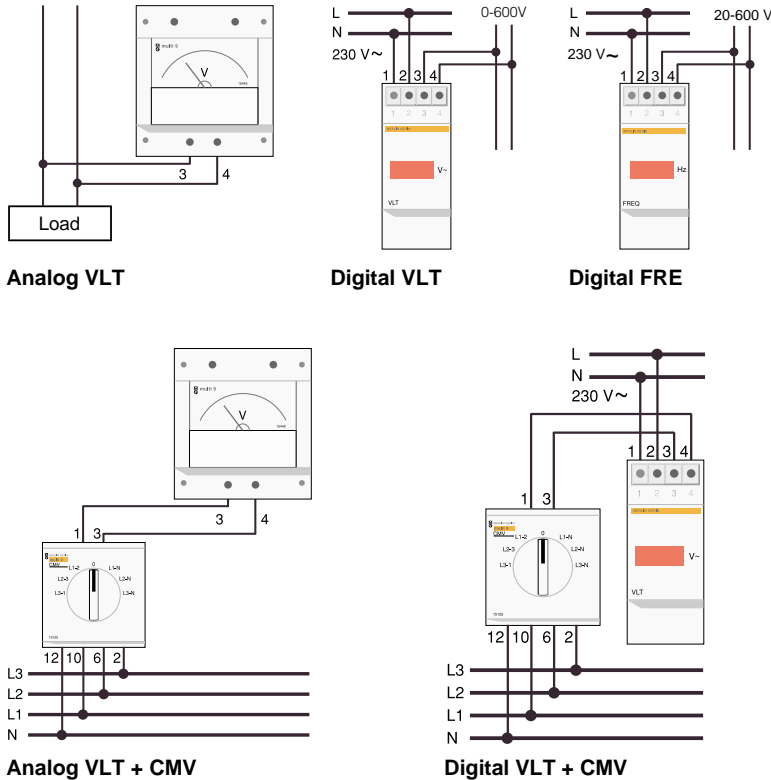


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## Implementation

- Installation:
  - adapted to all types of modular electrical switchboards and enclosures,
  - ease of installation on symmetrical rail.
- Installation of the flush-mounting VLT:
  - requires a square cut-out in the wall.

## Schematic diagrams



## Technical data

### Mechanical data:

#### Flush-mounting VLT

- Operating position: 30°/vertical.
- Scale length in 90°: 62 mm.
- Connection by 4mm Ø lugs.
- Overall dimensions: h = 72 ; w = 72 mm.
- Weight (g): 180.

#### Analog modular VLT

- Ferromagnetic device.
- Connection:
  - tunnel terminals for 1.5 to 6 mm<sup>2</sup> rigid cable.
- Pseudo-linear scale over 90°.
- Overall dimensions: h = 79 ; w = 72 ; d = 66 mm.
- Weight (g): 170.

#### Digital modular VLT/FRE

- Display: 3-digit display with red LED, h: 8 mm.
- Connection:
  - tunnel terminals for two 2.5 mm<sup>2</sup> cables.
- Full-scale accuracy: 0.5% ±1 digit.
- Overall dimensions: h = 87 ; w = 36 ; d = 61 mm.
- Weight (g): 170.

## Environment

### Flush-mounting VLT

- Complies with standards: IEC 414 - IEC 61010.
- Degree of protection on front face: IP 520.
- Installation ambient temperature: -25°C to +50°C.
- Storage temperature: -40°C to +80°C.
- Effect of temperature on accuracy: ±0.03%/°C.

### Analog modular VLT

- Complies with standards: IEC 51 - IEC 414.
- Degree of protection:
  - of terminal block IP 40,
  - of terminals IP 20.
- Installation ambient temperature: -25°C to +55°C.
- Storage temperature: -40°C to +80°C.
- Reference temperature: 23°C.
- Effect of temperature on accuracy: ±0.03%/°C.

### Digital modular VLT/FRE

- Complies with standards: IEC 61010.
- Degree of protection:
  - of terminal block IP 40,
  - of terminals IP 20.
- Installation ambient temperature: -25°C to +55°C.
- Storage temperature: -40°C to +80°C.

## Choice table

Type	Overall dimensions in mod. of 9 mm or in mm	Consumption	Accuracy class	Permanent overload	Instantaneous overload for 5 sec.	Auxiliary source Voltage VAC (-15..+10%) Frequency (Hz)	Cat. no.
<b>Modular devices:</b>							
<b>Analog VLT</b>							
0... 300 V	8	2.5 VA	1.5	1.2 Un	2 Un	50...60	<b>16060</b>
0... 500 V	8	3.5 VA	1.5	1.2 Un	2 Un		<b>16061</b>
<b>Digital VLT</b>							
0... 600 V	4	0.3 VA		1.1 Un		230	<b>15201</b>
<b>Digital FRE</b>							
20... 100 Hz*	4	0.3 VA		1.1 Un		230	<b>15208</b>
<b>Voltmeter selector switch (7 positions)</b>							
CMV	4			1,1 Un		415	<b>15125</b>
* Network voltage: 20-600 V.							
<b>Flush-mounting devices:</b>							
<b>Analog VLT</b>							
0... 500 V	72 X 72	3 VA	1.5	1.2 Un	2 Un	50...60	<b>16005</b>
<b>Voltmeter selector switch (7 positions)</b>							
CMV	48 X 48			2 Un		500	<b>16018</b>

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