Panel Instruments Technical Datasheet

Schneider Electric panel instruments reliably comply with the most stringent standards, including IEC, MID, UL, etc., and we thoroughly test all products with recognized, third-party laboratories.

Our products are simple to install, configure, and use. This saves our partners time and money and lets them deliver the best solutions in a timely and cost-effective manner.

Whatever the size or type of application, the PowerLogic™ product line is an integral part of smart panels.

DB119006

PB112024

PB101118

16029

15202

16003

16029

iAMP

16061

iVLT

Function

iAMP
Ammeters measure the current flowing through an electric circuit in amps.

iVLT
Voltmeters measure the potential (voltage) difference of an electric circuit in volts.

Common technical data

- Accuracy: Class 1.5
- Complies with standards IEC 60051-1, IEC 61010-1 and IEC 61000-4
- Ferromagnetic device
- Pseudo-linear scale over 90°
- Ammeters (except catalog number 16029):
  - connection on CT, ratio In/5, to be ordered separately
  - interchangeable dials
- Temperature:
  - operating temperature: -25 °C to 55 °C
  - reference temperature: 23 °C
- Influence of temperature on accuracy: ±0.03 %/°C
- Utilisation frequency: 50 Hz to 60 Hz
- Consumption:
  - AMP: 1.1 VA
  - VLT catalog number 15060: 2.5 VA
  - VLT catalog number 16061: 3.5 VA
- Permanent overload:
  - AMP: 1.2 In
  - VLT: 1.2 Un
- Maximum overload for 5 s:
  - AMP: 10 In
  - VLT: 2 Un
- Connection: tunnel terminals for 1.5 to 6 mm^2 rigid cables

Commercial reference numbers

Type	Scale	Connection with CT	Width in mod. of 9 mm	Comm. ref. no.
iAMP with direct connection				
	0-30 A	no	8	16029
iAMP with connection on CT				
Basic device (delivered without dial)		X/5	8	16030
Dial	0-5 A			
	0-50 A	50/5		16032
	0-75 A	75/5		16033
	0-100 A	100/5		16034
	0-150 A	150/5		16035
	0-200 A	200/5		16036
	0-250 A	250/5		16037
	0-300 A	300/5		16038
	0-400 A	400/5		16039
	0-500 A	500/5		16040
	0-600 A	600/5		16041
	0-800 A	800/5		16042
	0-1000 A	1000/5		16043
	0-1500 A	1500/5		16044
	0-2000 A	2000/5		16045
iVLT				
	0-300 V		8	16060
	0-500 V		8	16061

See your Schneider Electric representative for complete ordering information.

PB112024

15202

iAMP

PB112023

15201

iVLT

PB112025

15208

iFRE

Function

iAMP
Ammeters measure in amps the current flowing through an electric circuit.

iVLT
Voltmeters measure in volts the potential (voltage) difference of an electric circuit.

iFRE
Frequency meters measure in hertz the frequency of an electric circuit from 20 to 600 V AC.

Common technical data

- Supply voltage: 230 V AC
- Operating frequency: 50 Hz to 60 Hz
- Display by red LED: 3 digits, h = 8 mm (0.31 in)
- Accuracy at full-scale : 0.5 % ±1 digit.
- Consumption: max. 5 VA or rated 2.5 VA
- Degree of protection:
  - IP40 on front face
  - IP20 at terminal level
- Connection: tunnel terminals for 2.5 mm^2 cables

Specific data

10 A direct reading ammeter
- Minimum value measured: 4 % of rating
- Measurement input consumption: 1 VA

Multi-rating ammeter
- Ratings:
  - in direct reading: 5 A
  - by CT (not supplied) configurable on the front face of the ammeter: 10, 15, 20, 25, 40, 50, 60, 100, 150, 200, 250, 400, 500, 600, 800, 1000, 1500, 2000, 2500, 4000, 5000 A
- Minimum value measured: 4 % of rating
- Measurement input consumption: 0.55 VA

Voltmeter
- Direct measurement: 0...600 V AC
- Input impedance: 2 MW
- Minimum value measured: 4 % of rating

Frequency meter
- Minimum value measured: 20 Hz
- Maximum value measured: 100 Hz
- Full-scale display: 99.9 Hz

Compliance with standards
- Safety: IEC/EN 61010-1
- EMC electromagnetic compatibility: IEC/EN 65081-1 and IEC/EN 65082-2

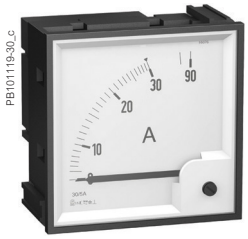
Commercial reference numbers

Type	Scale	Connection with CT	Width in mod. of 9 mm	Comm. ref. no.
Direct reading iAMP				
	0-10 A	No	4	15202
Multi-rating iAMP				
	0-5000 A	As per rating	4	15209
iVLT				
	0-600 V		4	15201
iFRE				
	20-100 Hz		4	15208

See your Schneider Electric representative for complete ordering information.

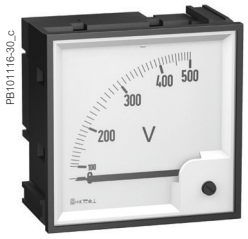
16009

AMP for standard feeder



16006

AMP for motor feeder



16005

VLT

Function

The 72 x 72 measurement devices are designed for flush-mounted installation on doors, wicket doors and front plates of enclosures and cubicles.

AMP

The ammeters measure in amps the current flowing through an electrical circuit.

VLT

The voltmeter measure in volts the potential difference (voltage) of an electrical circuit.

Common technical data

- Accuracy: Class 1.5
- Compliance with standard IEC 60051-1, IEC 61010-1 and IEC 61000-4
- Ferromagnetic device
- Scale length: 62 mm over 90°
- Mounting in enclosure or in cubicle
- Degree of protection: IP52
- Maximum operating position: 30° / vertical
- Temperature:
  - operation: -25 °C to 50 °C
  - reference: 23 °C
- Influence of temperature on accuracy: ±0.003 %/ °C
- Utilisation frequency: 50 Hz to 60 Hz

AMP specific technical data

- Needs a In/5 CT to be ordered separately
- Interchangeable dials to be ordered separately
- Consumption: 1.1 VA
- Permanent overload: 1.2 In
- Maximum overload for 5 s: 10 In

VLT specific technical data

- Consumption: 3 VA
- Permanent overload: 1.2 Un
- Maximum overload for 5 s: 2 Un

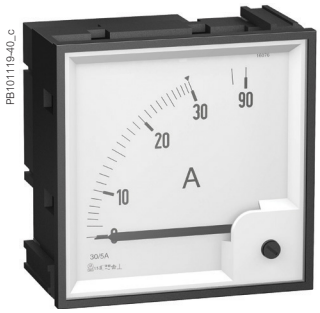
Commercial reference numbers

Type	Scale	Connection on CT	Comm. ref. no.
AMP for standard feeder			
Basic device (delivered without dial)		X/5	16004
1.3 In dial	0-50 A	50/5	16009
	0-100 A	100/5	16010
	0-200 A	200/5	16011
	0-400 A	400/5	16012
	0-600 A	600/5	16013
	0-1000 A	1000/5	16014
	0-1250 A	1250/5	16015
	0-1500 A	1500/5	16016
	0-2000 A	2000/5	16019
AMP for motor feeder			
Basic device (delivered without dial)		X/5	16003
3 In dial	0-30-90 A	30/5	16006
	0-75-225 A	75/5	16007
	0-200-600 A	200/5	16008
VLT			
	0-500 V		16005

See your Schneider Electric representative for complete ordering information.

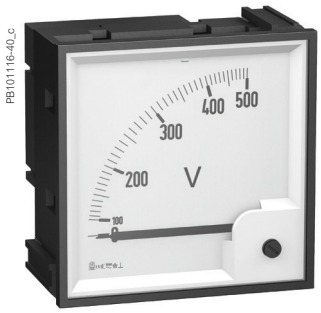
AMP for standard feeder

16079



AMP for motor feeder

16076



VLT

16075

Function

The 96 x 96 measurement devices are designed for flush-mounted installation on doors, wicket doors and front plates of enclosures and cubicles.

AMP

The ammeters measure in amps the current flowing through an electrical circuit.

VLT

The voltmeter measure in volts the potential difference (voltage) of an electrical circuit.

Common technical data

- Accuracy: class 1.5
- Compliance with standard IEC 60051-1, IEC 61010-1 and IEC 61000-4
- Ferromagnetic device
- Scale length: 80 mm over 90°
- Mounting in enclosure or in cubicle
- Degree of protection: IP52
- Maximum operating position: 30° / vertical
- Temperature:
  - operation: -25 °C to 50 °C
  - reference: 23 °C
- Influence of temperature on accuracy: ±0.003 % / °C
- Utilisation frequency: 50 Hz to 60 Hz

AMP specific technical data

- Needs a In/5 CT to be ordered separately
- Interchangeable dials to be ordered separately
- Consumption: 1.1 VA
- Permanent overload: 1.2 In
- Maximum overload for 5S: 10 In

VLT specific technical data

- Consumption: 3 VA
- Permanent overload: 1.2 Un
- Maximum overload for 5S: 2 Un

Commercial reference numbers

Type	Scale	Connection on CT	Comm. ref. no.
AMP for standard feeder			
Basic device (delivered without dial)		X/5	16074
1.3 In dial	0-50 A	50/5	16079
	0-100 A	100/5	16080
	0-200 A	200/5	16081
	0-400 A	400/5	16082
	0-600 A	600/5	16083
	0-1000 A	1000/5	16084
	0-1250 A	1250/5	16085
	0-1500 A	1500/5	16086
	0-2000 A	2000/5	16087
	0-2500 A	2500/5	16088
	0-3000 A	3000/5	16089
	0-4000 A	4000/5	16090
	0-5000 A	5000/5	16091
	0-6000 A	6000/5	16092
AMP for motor feeder			
Basic device (delivered without dial)		X/5	16073
3 In dial	0-30-90 A	30/5	16076
	0-75-225 A	75/5	16077
	0-200-600 A	200/5	16078
VLT			
	0-500 V		16075

See your Schneider Electric representative for complete ordering information.

Function

The 48 x 48 selector switches are designed for flush-mounted installation on doors, wicket doors and front plates of enclosures and cubicles.

CMA

The ammeter selector switch uses a single ammeter (by means of current transformers) for successive measurement of the currents of a three-phase circuit.

CMV

The voltmeter selector switch uses a single voltmeter for successive measurement of the voltages (phase-to-phase and phase-to-neutral) of a three-phase circuit.

Common technical data

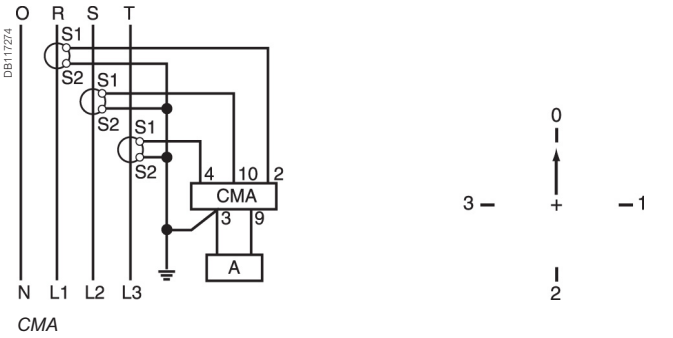
- Durability:
  - electrical: 100,000 operations
  - mechanical: 2,000,000 operations
- AgNi contact
- Operating temperature: -25 °C to 50 °C
- Compliance with standards IEC/EN 60947-3
- Degree of protection:
  - IP65 on front face
  - IP20 at terminal level

Commercial reference numbers

Type	Rating (A)	Voltage (V)	Number of positions	Comm. ref. no.
CMA	20		4	16017
CMV		500	7	16018

See your Schneider Electric representative for complete ordering information.

Connection



CMA

CMV

Reading 3 phase-to-earth voltages + 3 phase-to-phase voltages.

Note: when connecting do not remove the pre-cabling.
See appropriate Installation Guide for this product.

PB107119

15126

iCMA

PB107118

15125

iCMV

Function

iCMA

This 4-position ammeter selector switch uses a single ammeter (using current transformers) for successive measurement of the currents of a three-phase circuit.

iCMV

This 7-position voltmeter selector switch uses a single voltmeter for successive measurement of voltages (phase-to-phase and phase-to-neutral) of a three-phase circuit.

Common technical data

- Rotary handle
- Maximum operating voltage: 440 V, 50/60 Hz
- Nominal thermal current: 10 A
- Operating temperature: -20 °C to 55 °C
- Storage temperature: -25°C to 80°C
- Mechanical durability (AC21A-3 x 440 V): 2,000,000 operations
- Degree of protection:
  - IP66 on front face
  - IP20 at terminal level
- Electrical durability: 1,000,000 operations
- Connection: jumper terminals with captive screws, for cables up to 1.5 mm^2
- Complies with standards: IEC/EN 60947-3

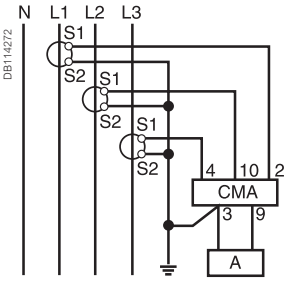
Commercial reference numbers

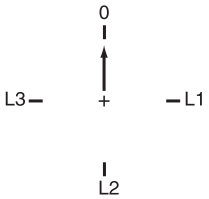
Type	Rating (A)	Voltage (V AC)	Width in mod. of 9 mm	Comm. ref. no.
iCMA	10	415	4	15126
iCMV	10	415	4	15125

See your Schneider Electric representative for complete ordering information.

Connection

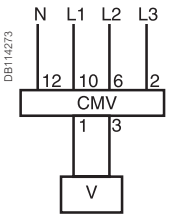
DB114272

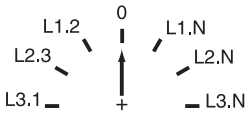




iCMA

DB114273





iCMV

See appropriate Installation Guide for this product.

PB112026

15440

iCH "DIN"

DB119003

15607

CH "48 x 48"

Function

Electromechanical counter that counts the operating hours of a machine or piece of electrical equipment. Giving a precise indication of operating time, the counter is used to decide when to carry out preventive maintenance.

Common technical data

- Electromechanical display
- Maximum display: 99999.99 hours
- Display accuracy: 0.01 %
- Without reset
- Storage temperature: -25 °C to 85 °C
- Connection: tunnel terminals for 2.5 mm2 cable

Specific technical data

iCH "DIN"

- Consumption: 0.15 VA
- Operating temperature: -10 °C to 70 °C
- Mounting on DIN rail

CH "48 x 48"

- Consumption:
  - 15607: 0.25 VA
  - 15608: 0.15 VA
  - 15609: 0.02 VA to 12 V and 0.3 VA to 36 V
- Operating temperature: -20 °C to 70 °C
- Degree of protection: IP65 on front face
- Mounting on front face of monitoring switchboards

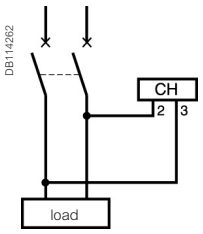
Commercial reference numbers

Type	Voltage (V)	Width in mod. of 9 mm	Comm. ref. no.
iCH "DIN"	230 V AC ± 10 %/50 Hz	4	15440
CH "48 x 48"	24 V AC ± 10 %/50 Hz		15607
	230 V AC ± 10 %/50 Hz		15608
	12 to 36 V DC		15609

See your Schneider Electric representative for complete ordering information.

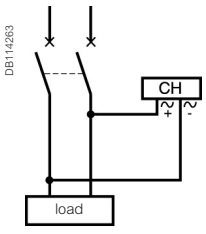
Connection

DB114262



iCH "DIN"

DB114263



CH "48 x 48"

See appropriate Installation Guide for this product.

iCL.eps

15443

iCI impulse counter

Function

Electromechanical counter designed to count impulses emitted by: kilowatt-hour meters, temperature overrun detectors, people meters, speed meters, etc.

Common technical data

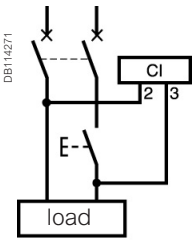
- Supply and metering voltage: 230 V AC ± 10 %, 50/60 Hz
- Consumption: 0.15 VA
- Maximum display: 9 999 999 impulses
- Without reset
- Metering data:
  - minimum impulse time: 50 ms
  - minimum time between 2 impulses: 50 ms
- Storage temperature: -25 °C to 85 °C
- Operating temperature: -10 °C to 70 °C
- Connection: tunnel terminals for 2.5 mm^2 cable

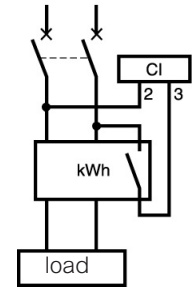
Commecial reference numbers

Type	Width in mod. of 9 mm	Comm. ref. no.
iCI	4	15443

Connection

DB114271

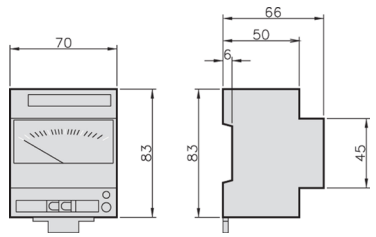




See appropriate Installation Guide for this product.

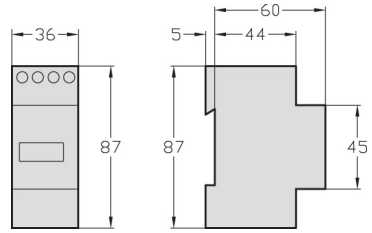
Analog ammeters and voltmeters iAMP, iVLT

DB103473



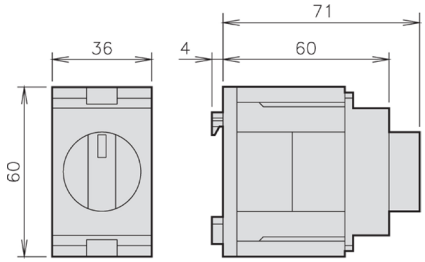
Digital ammeters, voltmeter and frequency meter iAMP, iVLT

DB103474



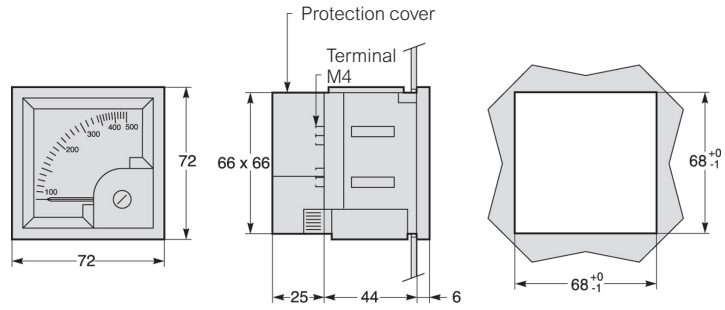
iCMA and iCMV selector switches

DB103475



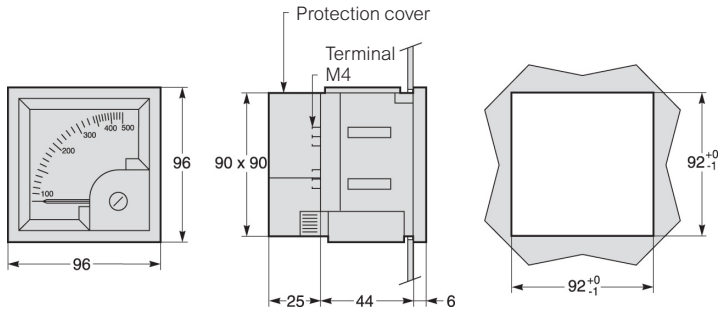
72 x 72 analog ammeters and voltmeter

DB103476



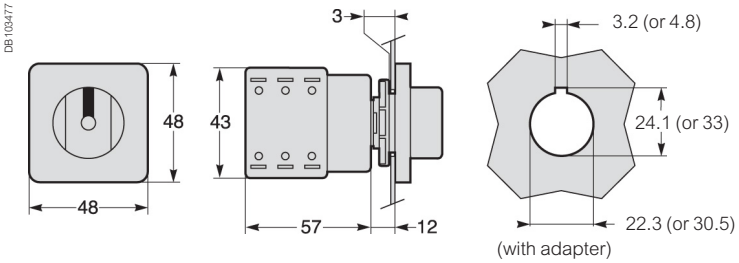
96 x 96 analog ammeters and voltmeter

DB103481

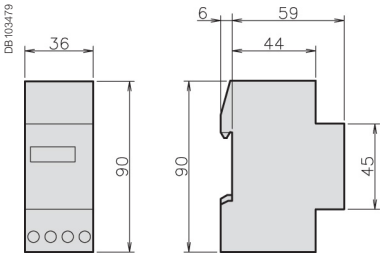


See the appropriate Installation Guide for this product.

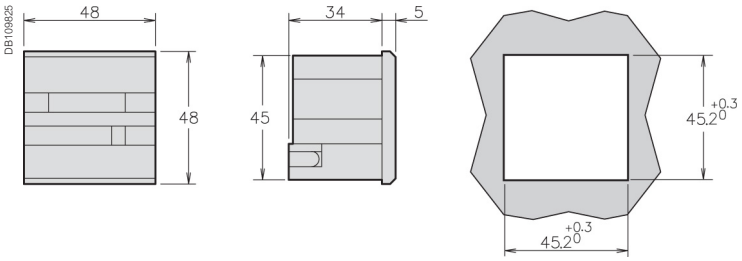
48 x 48 CMA and CMV selector switches



iCI impulse counter and iCH hour counter



48 x 48 CH hour counters



See the appropriate Installation Guide for this product.

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As standards, specifications and designs develop from time to time, please ask for confirmation of the information given in this document.

Over 75 % of Schneider Electric products have been awarded the Green Premium ecolabel.

Green Premium™