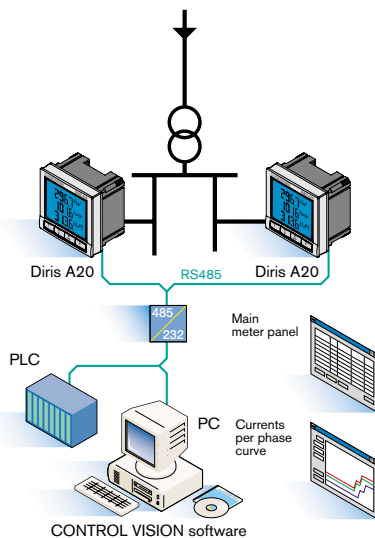


dine_560_a_1_x_cat

DIRIS A20

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. LCD display 2. Direct access key for instantaneous and max. currents values 3. Direct access key for voltages and frequency | <ol style="list-style-type: none"> 4. Direct access key for active, reactive and apparent power (instantaneous and max. values) and power factor 5. Direct access key for energies |
|--|--|

Applications



dine_576_a_1_gb_cat

Using electrical parameters means using several analog or digital single-function products such as ammeters, voltmeters or wattmeters.

DIRIS A20, with its six direct access keys and LCD display, helps you use all the parameters in an LV or HV installation. These parameters can be centralized on a PC or PLC through an RS485 link using JBUS/MODBUS protocol®. The casing is designed so that the installer can easily fit the DIRIS A20 to the door of a cabinet. To facilitate and optimize the operator's work, the DIRIS A20 uses one of the most functional principles for integrating communications or metering. Simply fit a module to the rear of the casing to add a function.

Measurement in real effective values (TRMS) of :

- current per phase and neutral in instant
- phase-to-neutral and phase-to-phase voltages
- frequency
- active positive power total in instant and maximum value over a programmable period
- reactive positive power total in instant
- apparent positive power total in instant
- Power Factor (PF) total with inductive or capacitive indication.

Energies meters

- Positive active energy meter
- Positive reactive energy meter.

Functions

The DIRIS A20 is a multi-function meter for measuring electrical values in all low voltage networks. All the parameters can be configured and displayed on its front panel and measuring and timing functions used.

Conformity to standards

- IEC 62053-22 class 0,5 S
- IEC 62053-23 class 2
- IEC 61010-1
- IEC 61000-4-2
- IEC 61000-4-3
- IEC 61000-4-4
- IEC 61000-4-5
- IEC 61000-4-6
- IEC 61000-4-8
- IEC 61000-4-11
- IEC 60068-2-6
- IEC 60068-2-11
- IEC 60068-2-30



DIRIS A20

References

Basic device

Auxiliary power supply U_s

110 ... 400 V~ / 120 ... 350 V ==

Reference

4825 **0A20**

Options

Plug-in modules

Reference

Pulse output module

4825 **0080**

Communication module RS485 JBUS / MODBUS®

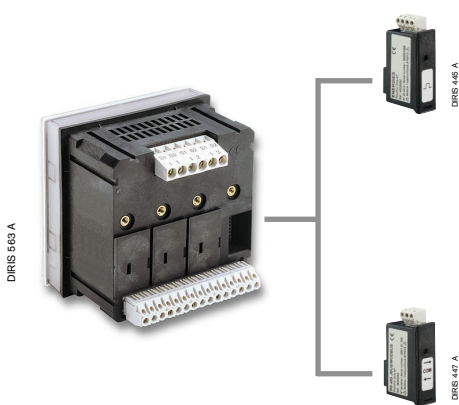
4825 **0082**

Pulse output

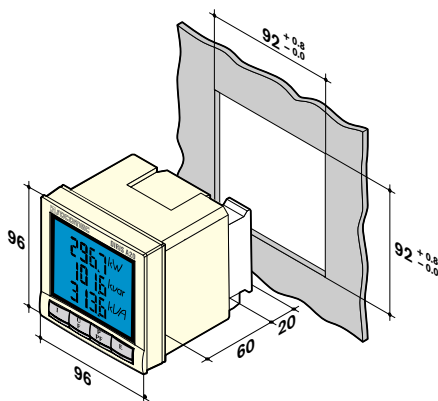
1 configurable output impulses (type, weight and duration) for kWh + and kvarh +.

Communication

RS485 link with JBUS/MODBUS® protocol (speed up to 38400 bauds)



Overall dimensions



Type	panel mounting
Dimensions H x W x D	96 x 96 x 60 mm
Case protection rating	IP 20
Front protection rating	IP 52
Display type	LCD
Terminal block type	fixed and pull-out
Voltage and other connection section	0,2 ... 2,5 mm ²
Current connection section	0,5 ... 6 mm ²
Weight	400 g

Electrical characteristics

Current measurement on inputs (TRMS)

CT primary	9 999 A
CT secondary	5 A
Measurement range	0 ... 11 kA
Input consumption	0,6 VA
Measurement updating period	1 s
Accuracy	0,2%
Sustained overload	6 A
Intermittent overload	10 I _n for 1 s

Voltage measurement (TRMS)

Direct measurement between phases	5 ... 500 V~
Direct measurement between phase and neutral	3 ... 289 V~
Input consumption	≤ 0,1 VA
Measurement updating period	1 s
Accuracy	0,2%
Sustained overload	800 V~

Power measurement

Measurement updating period	1 s
Accuracy	0,5%

Power factor measurement

Measurement updating period	1 s
Accuracy	0,5%

Frequency measurement

Measurement range	45 ... 65 Hz
Measurement updating period	1 s
Accuracy	0,1%

Energy accuracy

Active (according to IEC 62053-22)	class 0,5 S
Reactive (according to IEC 62053-23)	class 2

Auxiliary power supply

AC voltage	110 ... 400 V~
AC tolerance	± 10%
DC voltage	120 ... 350 V =
DC tolerance	± 20%
Frequency	50 / 60 Hz
Consumption	10 VA

Outputs (Pulse)

Number of relays	1
Type	100 V = - 0,5 A - 10 VA
Max. number of operations	≤ 10 ⁸

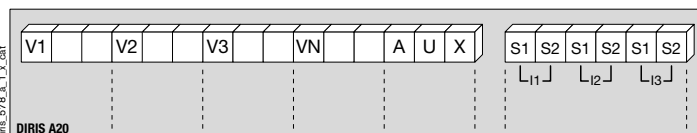
Communication

Link	RS485
Type	2 ... 3 wires half duplex
Protocol	JBUS/MODBUS® in RTU mode
JBUS/MODBUS® speed	1400 ... 38400 bauds

Operating conditions

Operating temperature	- 10 ... + 55 °C
Storage temperature	- 20 ... + 85 °C
Relative humidity	95%

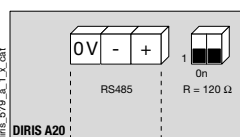
Terminal blocks



S1 - S2 : current inputs

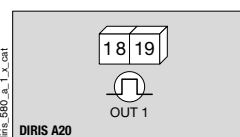
AUX : auxiliary power supply U_s
V1, V2, V3 & VN : voltage inputs

• Communication module



Liaison RS485
R = 120 Ω : internal resistance for the RS485 link

• Pulse output module



18 - 19 : pulse output no. 1



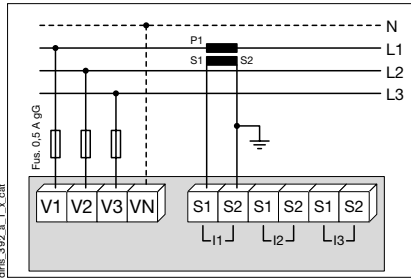
Connections

Recommendation : when disconnecting the DIRIS, it is essential that the secondaries of each current transformer be short-circuited.

This can be done automatically using a product from the SOCOMEC catalogue, the PTI.

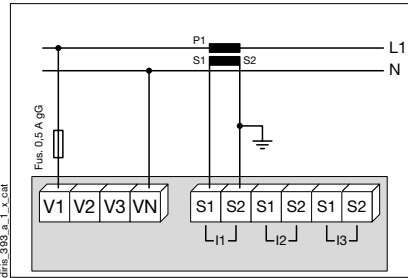
Low voltage balanced network

- 3/4 wires with 1 CT

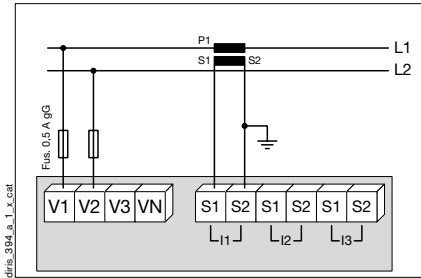


The use of 1 CT reduces by 0.5 % the accuracy of the phases whose current is worked out by vector calculation.

- Single phase

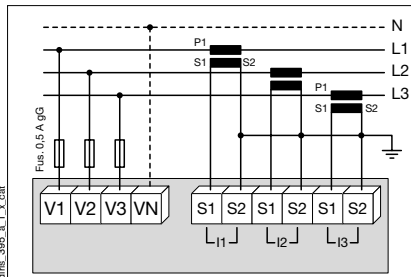


- Two phase

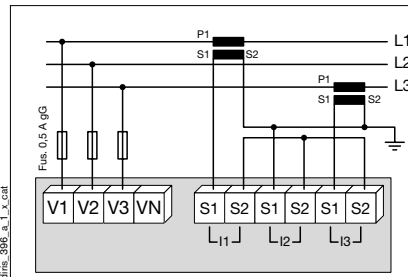


Low voltage unbalanced network

- 3/4 wires with 3 CTs

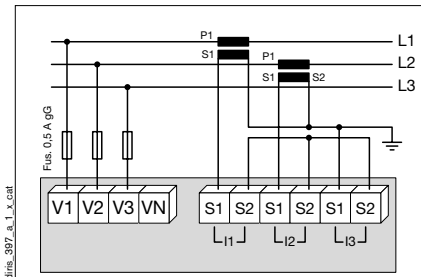


- 3 wires with 2 CTs



The use of 2 CTs reduces by 0.5 % the accuracy of the phase whose current is worked out by vector calculation.

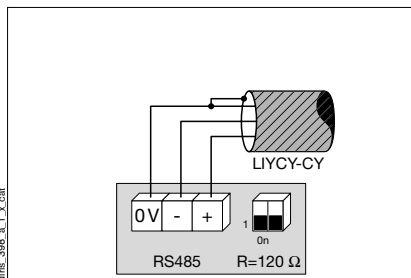
- 3 wires with 2 CTs



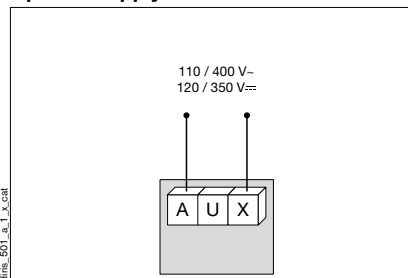
The use of 2 CTs reduces by 0.5 % the accuracy of the phase whose current is worked out by vector calculation.

Other information

- Communication via RS485 link



- Alternating and direct voltage auxiliary power supply



It is recommended that the auxiliary power supply be protected by the use of BS88 2A gG fuses