

DIRIS Digiware C-31

Control and power supply interface
for the DIRIS Digiware system



DIRIS Digiware C-31
System interface



Configuration
with the Easy Config system

Functions

For applications without a local display DIRIS Digiware C-31 interfaces centralise all measurements and communicate data over RS485 to external software or a PLC. The DIRIS Digiware C-31 interface is powered by 24 VDC.

Advantages

Compact

Centralise your measurement data on a single module without a local screen, for a complete system:

- a single 24 VDC power supply,
- a single RS485 communication.

Safety Extra Low Voltage power supply 24 VDC

- No hazardous voltage.
- Electrical power is sent to the complete system via the Digiware bus.

The solution for

- > Data centres
- > Healthcare
- > Energy
- > Industry



Strong points

- > Compact
- > Safety Extra Low Voltage 24 VDC power supply

Conformity to standards

- > IEC 61557-12



- > UL 61010
Guide FTRZ/PICQ
File E257746

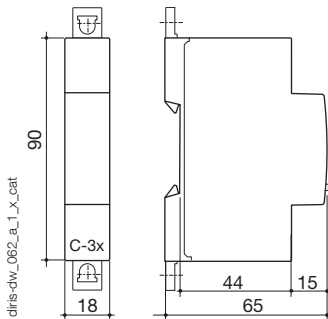


Create your own project

- > Find the best DIRIS Digiware configuration:
www.meter-selector.com



Dimensions (mm)



Configuration

Equipment consumption

Product	Power delivered (W)	Power consumed (W)
Power supply		
P15 100-240 VAC / 24 VDC	15	
P30 100-240 VAC / 24 VDC	20	
Cables		
50-metre package		1.5
System interfaces		
DIRIS Digiware D-50/D-70		2.5
DIRIS Digiware C-31		0.8
Voltage module		
DIRIS Digiware U-xx		0.72
DIRIS Digiware U-3xdc		0.6
Current modules		
DIRIS Digiware I-3x		0.52
DIRIS Digiware I-4x		1.125
DIRIS Digiware I-6x		0.7
DIRIS Digiware I-3xdc (+ 3 DC current sensors)		2
DIRIS Digiware S-xx		0.35
Input / output modules		
DIRIS Digiware IO-10/IO-20		0.5
Repeater		
DIRIS Digiware C-32		1.5

Calculation rules for the max. number of devices on the Digiware Bus

The total power consumed by the equipment connected to the Digiware bus must not exceed the power delivered by the 24 VDC supply.

The power supply must not exceed 20 W / 70 °C or 27 W / 40 °C.

Configuration with P15 power supply (ref: 4829 0120) delivering 15 W

For example, it is possible to use

- 1 DIRIS Digiware D-50 display (2.5 W)
 - 1 DIRIS Digiware U-xx voltage module (0.72 W)
 - 50 metres of cable (1.5 W)
- and
- 19 DIRIS Digiware I-3x current modules (19 x 0.52 = 9.9 W)
- ⇒ **Total power = 14.845 W**

or

- 9 DIRIS Digiware I-4x current modules (9 x 1.125 = 10.125 W)
- ⇒ **Total power = 14.345 W.**

Configuration with a 24 VDC power supply delivering a maximum of 20 W (P30 power supply ref.: 4729 0603)

For example, it is possible to use

- 1 DIRIS Digiware D-50 display (2.5 W)
 - 1 DIRIS Digiware U-xx voltage module (0.72 W)
 - 50 metres of cable (1.5 W)
- and
- 29 DIRIS Digiware I-3x current modules (29 x 0.52 = 15.1 W)
- ⇒ **Total power = 19.82 W**

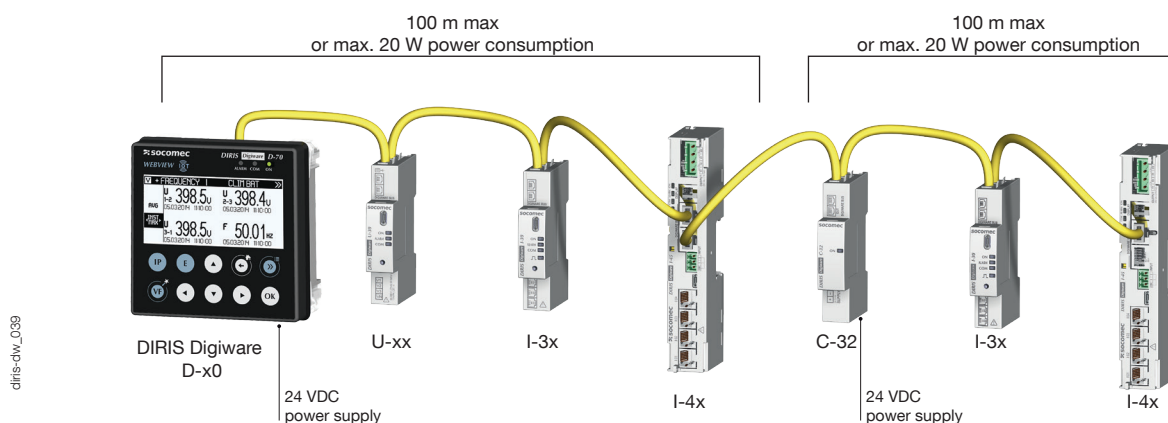
or

- 13 DIRIS Digiware I-4x current modules (13 x 1.125 = 14.625 W)
- ⇒ **Total power = 19.345 W.**

Repeater

With power consumptions higher than 20 W or distances greater than 100 m, a DIRIS Digiware C-32 repeater is required.

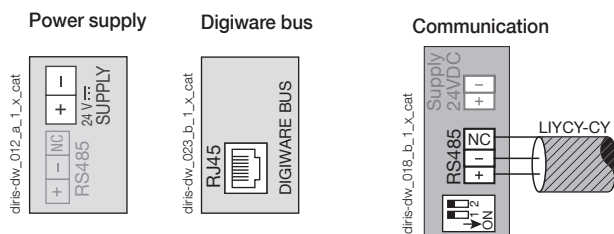
In a DIRIS Digiware system, a maximum of 2 repeaters may be used.



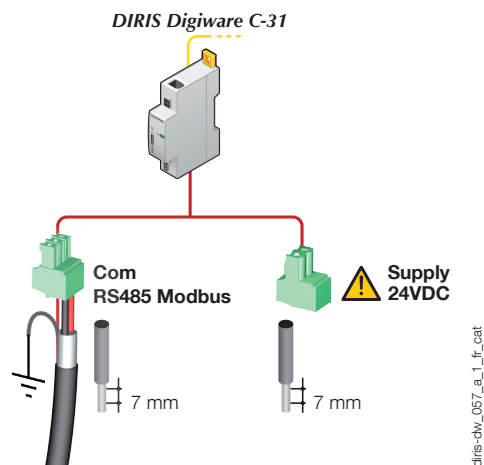
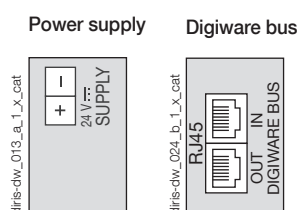
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Connections

DIRIS Digiware C-31



DIRIS Digiware C-32



Technical characteristics

Electrical characteristics	
Input power	24 VDC $\pm$ 20% - 20 W max.
Connection	Removable screw terminal block, 2 positions, stranded or solid 0.2 - 2.5 mm ² cable
P15 power supply	Technical characteristics: 100-240 VAC/ 24 VDC - 0.63 A - 15 W Modular format - Dimensions (H x W): 90 x 36 mm

Communication characteristics	
Digiware bus	
Functions	Connection between DIRIS Digiware modules
Cable type	Specific Socomec cable with RJ45 connections
RS485	
Type of connection	2 to 3 half duplex wires
Protocol	Modbus RTU
Baud rate	9600 to 115 200 bauds
Functions	Data configuration and reading
Location	Single-point on DIRIS Digiware C

Mechanical functions	
Case type	Modular for DIN-rail and backplate mounting
Case Ingress Protection rating	IP20 / IK06
Front panel Ingress Protection rating	IP40 front face in modular assembly / IK06

Environmental specifications	
Ambient operating temperature	-10 to 70 °C
Storage temperature	-25 to 70 °C
Operating humidity	55 °C/97% RH
Operating altitude	< 2000 m

References

DIRIS Digiware		Reference
C-31	System interface - without display, RS485 output	4829 0101
C-32	Repeater	4829 0103

Expert Services



EXPERT SERVICES

To continuously ensure a functional and accurate energy monitoring system, Socomec offers a wide range of services:

- Device integration
- System audit
- Commissioning
- Training for your teams

Ideal for ISO 50001 sites (periodic verification):

- Measurement consistency check to 3%
- Measurement accuracy check to 0.2%