DIRIS Digiware C-31

Control and power supply interface

DIRIS Digiware C-31
Centralisation

Configuration with Easy Config System.

Function

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

Advantages

Compact:
Centralise your measurement data on 1 module without a local screen, for a complete system:
- single 24 VDC auxillary power supply,
- a single RS485 communication.

24 VDC Safety Extra Low Voltage power supply:
- eliminating hazardous voltage,
- the power supply is transmitted to the whole system by the Digiware bus.

The solution for

> Industry
> Building
> Infrastructure
> Data centers

Strong points

> Compact
> 24 VDC SELV (Safety Extra Low Voltage) power supply

Compliance with standards

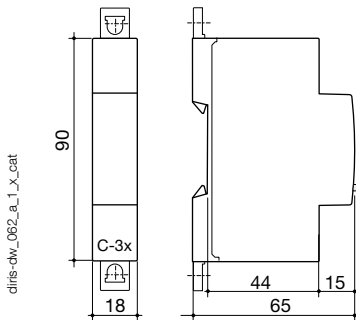> IEC 61557-12

> UL 61010
  Guide FTRZ/PICQ
  File E257746

Create your project

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

socomec
Innovative Power Solutions

Dimensions (mm)

diris-dw_062_a_1_x_cat

90

C-3x

18   44   15

65

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
Module voltage		
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 products on the Digiware Bus

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

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

Size 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 voltage module U-xx (0.72 W)
- 50 metres of cable (1.5 W)

and
- 19 DIRIS Digiware current modules I-3x (19 x 0.52 = 9.9 W)
  ⇨ **Total power = 14.845 W**

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

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

For example, it is possible to use
- 1 DIRIS Digiware D-50 display (2.5 W)
- 1 DIRIS Digiware voltage module U-xx (0.72 W)
- 50 metres of cable (1.5 W)

and
- 29 DIRIS Digiware current modules I-3x (29 x 0.52 = 15.1 W)
 ⇨ **Total power = 19.82 W**

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

Repeater

Whenever the power consumption is higher than 20 W or the distance is 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.

100 m max or max. 20 W power consumption

100 m max or max. 20 W power consumption
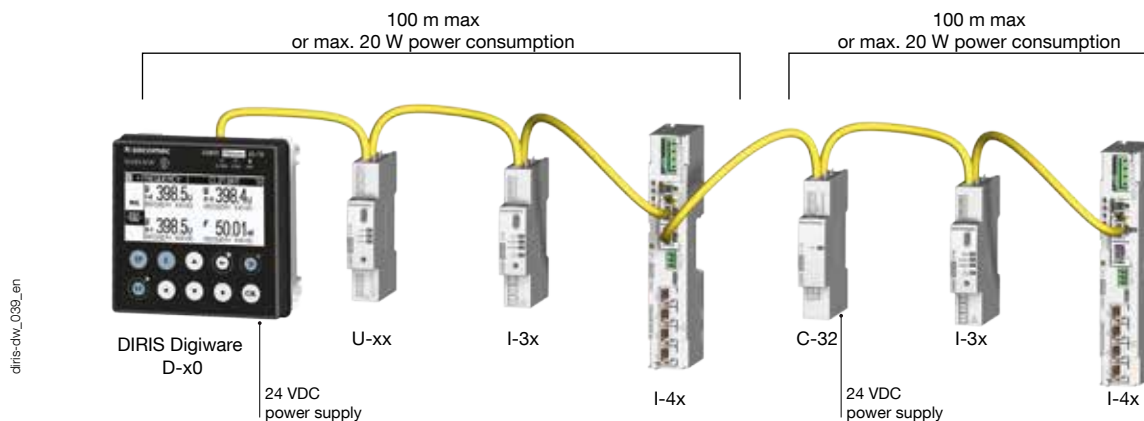
diris-dw_039_en

DIRIS Digiware D-x0

U-xx

I-3x

C-32

I-3x

24 VDC power supply

I-4x

24 VDC power supply

I-4x

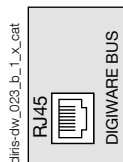# DIRIS Digiware *C-31*

Control and power supply interface

Connections

DIRIS Digiware C-31

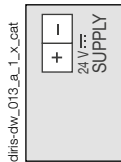| Power supply	Digiware bus	Communication
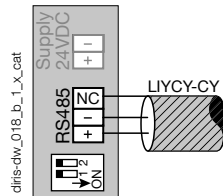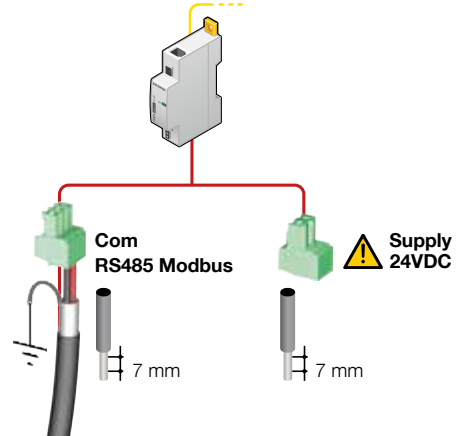
DIRIS Digiware C-32

Power supply	Digiware bus

DIRIS Digiware C-31

Com RS485 Modbus   7 mm

⚠️ **Supply 24VDC**   7 mm
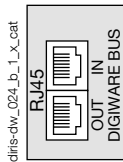
Technical characteristics

Electrical characteristics

Input voltage	24 VDC ± 20% - 20 W max
Connection	Removable screw terminal block, 2 positions, stranded or solid 0.2-2.5 mm² cable
P15 power supply	Characteristics: 100-240 VAC/ 24 VDC - 0.63 A - 15 W Modular format - Dimensions (H x L): 90 x 36 mm

Communication specifications

Digiware Bus	
Function	Connection between DIRIS Digiware modules
Cable type	Specific Socomec cable with RJ45 connections
RS485	
Connection type	2 to 3 half duplex wires
Protocol	Modbus RTU
Baudrate	9600 to 115 200 bauds
Function	Data configuration and reading
Location	Single-point on DIRIS Digiware C

Mechanical features

Casing type	DIN-rail mounting module and base
Casing protection index	IP20 / IK06
Front panel protection index	IP40 on the nose in modular assembly / IK06

Environmental specifications

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

References

DIRIS Digiware		Reference
C-31	System interface - no display, RS485 output	4829 **0101**
C-32	Repeater	4829 **0103**

Expert Services

√

EXPERT
SERVICES

To ensure that you always have a functional and accurate energy monitoring system, Socomec offers many services:
• Device integration
• System audit
• Commissioning
• Training of your teams

Also, ideal for ISO 50001 sites (periodic verification):
• Verification of measurement consistency at 3%
• Verification of measurement accuracy to 0.2%

For more information, consult your Socomec contact.