DIRIS Digiware C-31

Control and power supply interface

DIRIS Digiware C-31

Configuration with Easy Config System

Function

For applications without a local display, the DIRIS Digiware C-31 interface centralizes the measurements from your Digiware system and communicates data to any external software or PLC via Modbus over RS485. The DIRIS Digiware C-31 interface is supplied with 24 VDC.

Advantages

Compact

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

- Single 24 VDC power supply
- A single RS485 Modbus communication interface

24 VDC Safety Extra Low Voltage power supply

- No dangerous voltage
- The power supply feeds the entire system through the Digiware bus

The solution for

> Industry
> Building
> Data centers
> Infrastructure

Strong points

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

Compliance with standards

> UL 61010-1
CSA-C22.22
No. 61010-1
Guide FTRZ/PICQ
File E257746

> IEC 61557-12

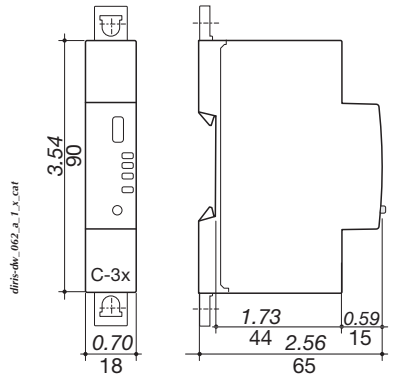
> ISO 14025

Create your project

> Find the best DIRIS Digiware architecture:
www.meter-selector.com
METER SELECTOR DIGITAL TOOL AVAILABLE

socomec Innovative Power Solutions

Dimensions (in/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	
Digiware Bus cables		
164 feet / 50 meter package		1.5
System interfaces		
DIRIS Digiware D-50/D-70		2.5
DIRIS Digiware M-50/M-70		2.5
DIRIS Digiware C-31		0.8
Voltage Modules		
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
DIRIS Digiware BCM		1.25
Input/output modules		
DIRIS Digiware IO-10/IO-20		0.5
Repeater		
DIRIS Digiware C-32		1.5

Repeater

Whenever the power consumption is higher than 20 W or the distance is greater than 328 ft / 100 m, a DIRIS Digiware C-32 repeater is required.
In a DIRIS Digiware system, a maximum of 2 repeaters may be used.

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 delivered by the 24 VDC supply.
The power supply must not exceed 20 W (for 70 °C / 168 °F ambient temperature) or 27 W (for 40°F / 104 °F ambient temperature).

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)
- 164 feet / 50 meters of RJ45 cables (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)

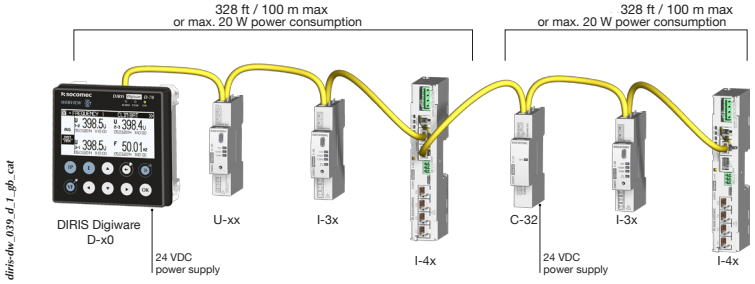
For example, it is possible to use
- 1 DIRIS Digiware D-50 display (2.5 W)
- 1 DIRIS Digiware voltage module U-xx (0.72 W)
- 164 feet / 50 meters of RJ45 cables (1.5 W)

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.

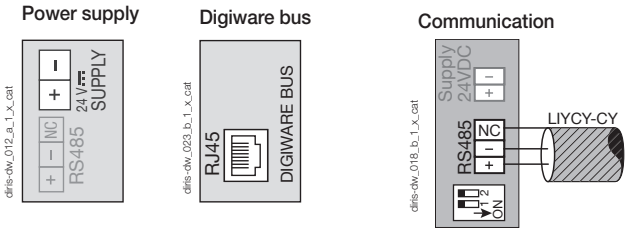


DIRIS Digiware C-31

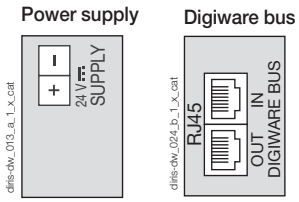
Control and power supply interface

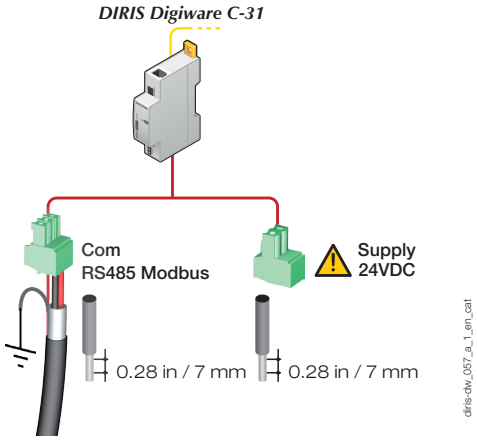
Connections

DIRIS Digiware C-31



DIRIS Digiware C-32





Technical characteristics

Mechanical characteristics	
Mounting	DIN-rail or back plate
Protection degree	IP40, front face
Electrical characteristics	
Power supply	24 VDC ±10% - 20 W max
Power consumption	0.8 VA
Connection	Removable screw terminal block, 2 positions, stranded or solid AWG 13 ... AWG 24 or 0.25 … 2.5 mm² cable
Environmental characteristics	
Storage temperature	-13 ... +158 °F / -25 ... +70°C
Operating temperature	'+14 ... +158°F / -10 ... +70°C
Humidity	0% to 97% RH / +131°F/+55°C, non condensing
Operating altitude	≤ 6560 ft / 2000 m

Communication characteristics	
Digiware Bus	
Connection type	Socomec RJ45 cable
Function	Proprietary bus connecting Digiware units
RS485	
Connection type	Half-Duplex, 2-3 wires
Protocol	Modbus RTU, configurable as Master or Slave
Baudrate	9600 - 1115200 bds

References

DIRIS Digiware		Reference
C-31	RS485 Modbus RTU system interface	4829 **0101**

Power supply & repeater		Reference
P15	Power supply 100-240 VAC/ 24 VDC 15 W	4829 **0120**
P30	Power supply 100-240 VAC/ 24 VDC 20 W	4729 **0603**
C-32	Power supply repeater for Digiware system	4829 **0103**

Accessories	Sold in multiples of	Reference
2-pole RM Class CC fuse holder to protect power supply input	6	5705 **0002**
Digiware Bus terminating resistor (already supplied with DIRIS Digiware C, M & D)	1	4829 **0180**

Digiware bus cables [1]		Reference
RJ45 cables for Digiware Bus	Length 0.20 ft / 0.06 m	4829 **0189**
	Length 0.32 ft / 0.10 m	4829 **0181**
	Length 0.66 ft / 0.20 m	4829 **0188**
	Length 1.64 ft / 0.50 m	4829 **0182**
	Length 3.28 ft / 1 m	4829 **0183**
	Length 6.56 ft / 2 m	4829 **0184**
	Length 9.84 ft / 3 m	4829 **0190**
	Length 16.4 ft / 5 m	4829 **0186**
	Length 32.8 ft / 10 m	4829 **0187**
	164.04 ft / 50 m reel + 100 connectors	4829 **0185**

(1) To guarantee the proper operation of the DIRIS Digiware system, do not substitute Socomec Digiware bus cables with standard Ethernet RJ45 cables.

Commissioning		Reference
1/2 day remote commissioning	Remote commissioning including installation verification, programming and communication testing	9230**100027**
1/2 day on-site commissioning	On-site commissioning including installation verification, programming and communication testing	9230**100004**

Expert Services

Our service engineers are an essential part of our team, and they are dedicated to ensuring your power monitoring system provides accurate and reliable measurements to your EPMS software or SCADA system.

Our services include:

- Site audits to verify the proper wiring of your system
- Personnel training on how to configure, operate and maintain power monitoring equipment and associated software
- Remote and on-site commissioning to ensure that your system is up and running quickly, with peace of mind.

For further information, please contact your nearest SOCOMEC branch.