

DIRIS Digiware D

Multi-point display and communication gateway



DIRIS Digiware D-50/D-70



Function

DIRIS Digiware D-50 and D-70 remote displays allow local visualization of measurements from DIRIS Digiware modules, and centralize the 24 VDC power supply and communication bus to a single device.

The D-50 and D-70 displays also act as the Ethernet gateway for all slave devices connected on the Digiware and RS485 bus.

The D-50 and D-70 displays offer a wide range of functionalities, including:

- memory extension for connected devices
- automatic export of logged consumption and data via MQTT or FTP(S).
- notification emails if there is an alarm on one of the connected devices (SMTPS)
- automatic time synchronization of all connected devices via SNTP.

Advantages

Plug & Play

- Direct Digiware and RS485-to-Ethernet gateway.
- Automatic detection of connected devices.
- Easy setup.
- Safety Extra-Low Voltage 24 VDC power supply.

Multi-circuit

- One display to visualize measurements from up to 196 circuits.
- Quick access button to easily scroll through the different circuits.

Embedded webserver

WEBVIEW-M is embedded in the D-70 display to visualize measurements and consumptions remotely on a web-browser and without any license fees.

Cybersecurity

D-50 and D-70 displays include advanced cybersecurity features in compliance with IEC 62443 for secure data transmission and reduce the risk of cyberattacks:

- Customized security policy (blocking or restricting certain protocols and services);
- HTTPS secured navigation using TLS/SSL certificates;
- Secured data exports (FTPS, MQTT, SMTPS);
- Firewalls and whitelist protocols to guard against denial-of-service attacks.

Advanced connectivity

The D-50/D-70 displays communicate measurement data to any BMS/SCADA system using multiple protocols: Modbus RTU, Modbus TCP, BACnet IP and SNMP v1, v2, v3 (encrypted).

The solution for

- > Data center
- > Industry
- > Buildings



Strong points

- > Plug & Play
- > Multi-circuit
- > Embedded webserver
- > Advanced connectivity
- > Cybersecurity

Compliance with standards

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



- > IEC 62974-1 (Energy server)



- > IEC 62443 (Cybersecurity)

- > ISO 14025



Create your project

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



Application		
		
DIRIS Digiware	D-50	D-70
Digiware Bus	•	•
RS485	Configurable as Modbus Master or Slave	Configurable as Modbus Master or Slave
Ethernet	Modbus TCP BACnet IP SNMP MQTT, FTP(S) (data export) SMTP(S) (email notification) SNTP (time synchronization)	Modbus TCP BACnet IP SNMP MQTT, FTP(S) (data export) SMTP(S) (email notification) SNTP (time synchronization)
Webserver	WEB-CONFIG	WEBVIEW-M

Functions



WEBVIEW-M

Embedded web server in the DIRIS Digiware D-70 display

WEBVIEW-M allows the display and remote monitoring of all the electric parameters measured by up to 32 devices. They are displayed in the form of overview screens, graphs or tables for clear and user-friendly analysis.

Access to WEBVIEW is made by a web browser on a PC or tablet and offers multiple features such as the automatic export of data via FTPS or e-mail notification in the presence of alarms (SMTPS).

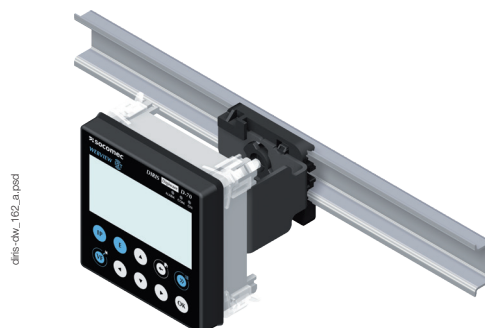
The Photoview application displays measurements on a customized background picture such as a one-line diagram, an electrical panel, or a site map.

Accessories

DIN rail mounting kit

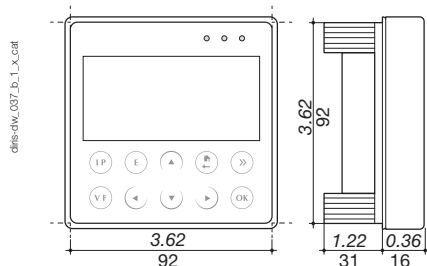
The accessory allows you to install the DIRIS Digiware D-50/D-70 display on a DIN rail.

This kit is not included with the displays and must be ordered separately.

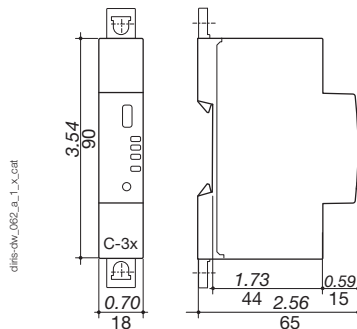


Dimensions (in/mm)

DIRIS Digiware D-50/D-70



DIRIS Digiware C-31



Power Supply Sizing

Device 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 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

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/168°F/70°C or 27 W/104°F/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)
- 164 feet / 50 meters 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)
- 164 feet / 50 meters 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

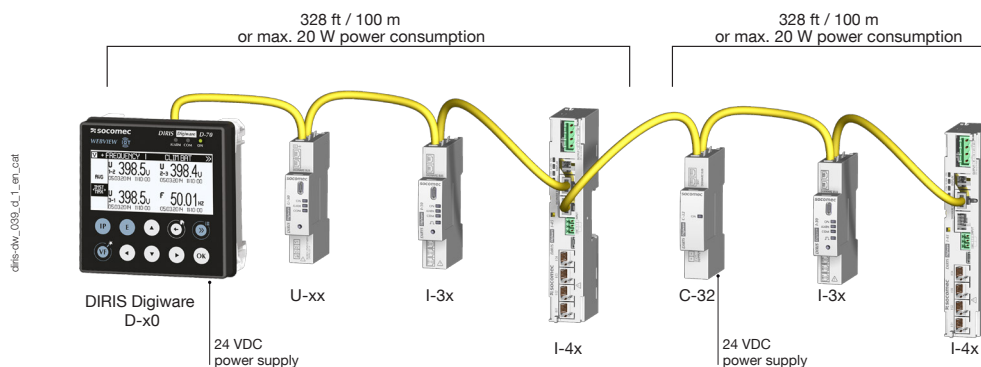
or

- 13 DIRIS Digiware current modules I-4x (13 x 1.125 = 14.63 W)
- ⇒ Total power = 19.35 W.

Repeater

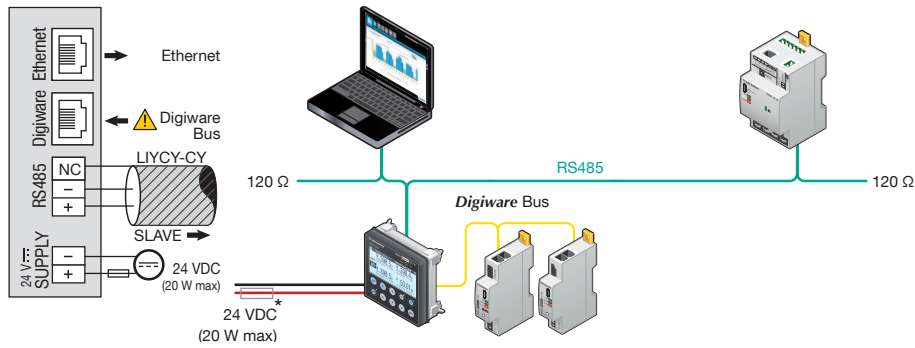
Whenever the power consumption is higher than 20 W or the distance is greater than 328 ft / 100 m, a DIRIS Digiware C-32 repeater is required.

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



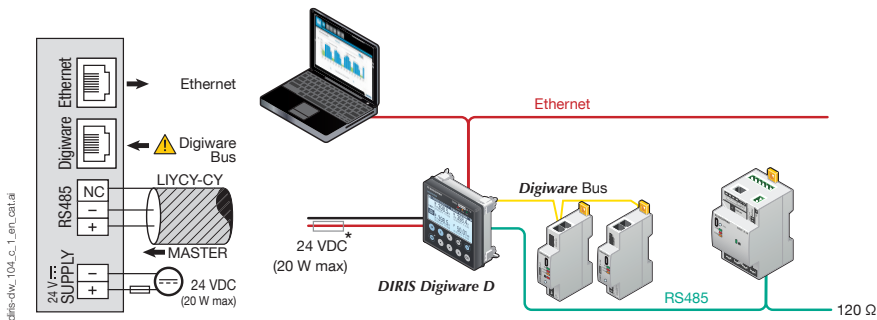
Connections

RS485 slave mode



(*) 1A / 24 VDC fuse protection is recommended if the 24 VDC power supply is not provided by Socomec.

RS485 master mode



(*) 1A / 24 VDC fuse protection is recommended if the 24 VDC power supply is not provided by Socomec.

Technical characteristics

Mechanical characteristics

Type of screen	Capacitive touch-screen technology, 10 keys
Screen resolution	350 x 160 pixels
Ingress Protection	IP65, front face

Electrical characteristics

Power supply	24 VDC $\pm 10\%$ - 20 W max
Power consumption	2.5 VA
Battery lifetime	10 years
Connection	Removable screw terminal block, 2 positions, AWG 16 ... AWG 24 or 0.25 ... 1.5 mm ² stranded or solid cable

Environmental characteristics

Storage temperature	-13 ... +158 °F / -25 ... +70 °C
Operating temperature	+14 ... +131 °F / -10 ... +55 °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 bds (max. 10 devices) 38400 bds - 115200 bds (max. 32 devices)
Ethernet	
Connection type	RJ45 10/100 Mbs
Protocol	Modbus TCP/IP, BACnet IP, SNMP v1, v2, v3, HTTP(S), FTP(S), SMTP(S), MQTT
USB	
Connection type	USB Type Micro-B
Protocol	Modbus RTU over USB
Function	Firmware upgrade and configuration

References

DIRIS Digiware D		Reference
D-50	Display and multi-protocol Ethernet gateway	4829 0204
D-70	Display and multi-protocol Ethernet gateway with embedded WEBVIEW-M web server	4829 0203

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
6.5-ft USB Cable for configuration - Type A to Type Micro-B	1	4829 0050
DIN rail mounting kit for DIRIS Digiware D-50/D-70	1	4829 0230

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	9230100027
1/2 day on-site commissioning	On-site commissioning including installation verification, programming and communication testing	9230100004

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.

