



DIRIS DigiBOX B

Enclosed single-point metering solution for retrofit applications



 Configuration with EasyConfig Systems.

Function

DIRIS DigiBOX B is an easy-to-install enclosed single-point metering solution. It provides users all they need for installation at site right out of the box, just select the type and the range of CTs from our wide plug and play CT selection. With just four part numbers for the meters, you are able to address most of your metering needs.

Manufactured in a UL508 A shop with utmost care for quality and reliability. Factory voltage wiring is clean and safe for installations. DigiBOX B is powered by our DIRIS B30 meters; a power monitoring device in a modular format that communicates via RS485.

Advantages

cULus rated electrical design

- cULus listed enclosures and components
- cULus 508 A assembly facility
- Fused voltage connections
- Reliable detailed wiring instructions

RJ12 current sensor connection

- Fast: automatic detection of ratings and verification of current flow direction
- Reliable: identification of cables by color coding and wiring control by the system
- Disconnection of the current sensor
- secondary under load
- Auto-configuration of parameters

Accurate

Accuracy of measurements guaranteed according to ANSI C12.20 and IEC 61557-12

standards:

- Class 0.5 from 2% to 120% of rated current for the global measurement chain (associated with TE/iTR/TF current sensors).
- Class 0.2 for the meter alone

The solution for

- > Industry
- > Building
- > Infrastructure



Strong points

- > Easy to order
- > RJ12 current sensor connection
- > Class 0.5 system accuracy

Conformity to standards

- > cULus 508A
- > UL 61010-1
CSA-C22.2 No. 61010-1
Guide PICQ
File E257746
- > ANSI C12.20
- > IEC 61557-12



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DIRIS B characteristics

Electrical characteristics

Auxiliary power supply	
AC voltage	110-230 VAC $\pm 15\%$ (Ph/N ou Ph/Ph) Cat III
Frequency	50/60 Hz
Consumption	< 2 VA without display < 6 VA with display
Connection	Removable spring-cage terminal, 2 x 2 positions, AWG 10 ... 24 / 0.5 ... 2.5 mm ² solid cable or AWG 15 ... 30 / 0.25 ... 1.5 mm ² stranded cable with ferrule

Measurement characteristics

Energy and power measurement	
Accuracy	Class 0.2 DIRIS B alone
Active energy and active power	Class 0.5 with TE, ITR or TF current sensors Class 1 with TR current sensors
Reactive energy accuracy	Class 2 with TE, TR/ITR or TF current sensors
Power factor measurement	
Accuracy	Class 0.5 with TE, ITR or TF current sensors Class 1 with TR current sensors

Voltage measurement	
Network characteristics measured	50-300 VAC (Ph/N) - 87-520 VAC (Ph/Ph) - CAT III
Frequency range	45 ... 65 Hz
Frequency accuracy	Class 0.02
Network type	Single-phase / Two-phase / Two-phase with neutral / Three-phase / Three-phase with neutral
Measurement by voltage transformer	Primary: 400 000 VAC Secondary: 60, 100, 110, 173, 190 VAC
Input consumption	≤ 0.1 VA
Permanent overload	300 VAC Ph/N
Voltage measurement accuracy	Class 0.2
Connection	Removable spring-cage terminal, 2 x 6 positions, AWG 10 ... 24 / 0.5 ... 2.5 mm ² solid cable or AWG 15 ... 30 / 0.25 ... 1.5 mm ² stranded cable with ferrule

Current measurement	
Number of current inputs	4
Associated current sensors	Solid TE, split-core TR/ITR, flexible TF current sensors
Accuracy	Class 0.2 DIRIS B alone Class 0.5 with TE, ITR or TF current sensors Class 1 with TR current sensors
Connection	RJ12 connectors with specific SOCOMEC cable

Input characteristics

Number	2
Type / Power supply	Optocoupler internal polarisation (12 VDC $\pm 10\%$) or external polarisation (10-30 VDC $\pm 10\%$)
Input function	Logic status, pulse meter or synchronization pulse status (input 1)

Communication characteristics

DIRIS B RS485	
Link	RS485
Connection type	2 ... 3 half duplex wires
Protocol	Modbus RTU
Speed	1200 ... 115200 bauds
USB	DIRIS B RS485 configuration

Environment characteristics

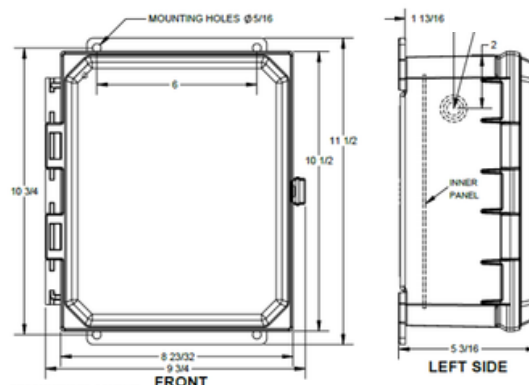
Operating temperature	+14 ... +158 °F / -10 ... +70 °C
Storage temperature	-13 ... +185 °F / -25 ... +85 °C
Operating humidity	131 °F / 55 °C / 97% relative humidity
Operating altitude	6560 feet / 2000 m
Vibration	1G from 10 to 100Hz

DIRIS D-30 display characteristics

Mechanical characteristics	
Screen type	Capacitive touch-screen technology, 10 keys
Screen resolution	350 x 160 pixels
Single product connection	
RJ9	Self-supply and data
Micro-USB	Updating
Degree of protection	IP65 (front face)
Environment	
Storage temperature (°C)	-4 ... +158 °F / -20 ... +70 °C
Operating temperature (°C)	-4 ... +158 °F / -20 ... +70 °C
Humidity	95 % at 104 °F / 40 °C
Installation category	CAT III
Degree of pollution	2

Dimensions

Length	9.75 in
Width	5.1875 in
Height	11.5 in



References

Description

DIRIS B30 Meter enclosed RS485 Output and No Display enclosed in NEMA 4X PC enclosure prewired - 120/240 Wye	USDBBB30ND0
DIRIS B30 Meter enclosed RS485 Output and With Display enclosed in NEMA 4X PC enclosure prewired - 120/240 Wye	USDBBB30D30
DIRIS B30 Meter enclosed RS485 Output and No Display enclosed in NEMA 4X PC enclosure prewired - 277/480 Wye	USDBPB30ND0
DIRIS B30 Meter enclosed RS485 Output and With Display enclosed in NEMA 4X PC enclosure prewired - 277/480 Wye	USDBPB30D30