TECHNICAL DATASHEET

TITLE

Camur III Power Interface

DESCRIPTION

Camur III Power Interface provides two digital outputs and one analog output for remote control of third party equipment.

PRODUCT IMAGE

Camur III Power Interface

PROTECTOR AS
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1 Description

Camur III Power Interface links third party equipment (like power supplies for cathodic protection) with the Camur system and Camur Workspace. Camur III Power Interface provides two digital outputs (relays) and one analogue output (voltage or current) for remote control of third party equipment. Four analogue inputs (0-5 VDC) are provided as well. One of the digital outputs (D1) responds to the decay command in Camur Workspace, and may be used to perform depolarisation measurements with third party power supplies or when using galvanic anodes.

Configuration of outputs (relays and analog) is done with electronic jumpers inside the node. The lid has to be unscrewed to access these jumpers.

2 Technical Specification

Inputs

Analog inputs (A)	4 (A1 ... A4)
Range	0 ... 5 VDC (unipolar)
Resolution	0.1 mV
Accuracy	0.01 %
Temp. coeff.	0.009 % / °C
Noise	± 1 division
Impedance	122 kΩ
Sampling int.	≥ 1 s

Outputs

Analog output (AO)	1 (jumper-selectable U or I)
Output range (U/I)	0.01 ... 5 V DC @ 4.5 mA / 0.01 ... 20 mA DC
Resolution	0.001 VDC / 0.001 mA DC
Digital outputs	2 (D1-D1, D2-D2)
Type	Relay
Depolarisation feature	D1
Output functions (jumper-selectable)	Form A: Normally open (NO) Form B: Normally closed (NC)
Rated load	0.5 A @ 125 V AC / 1 A 24 V DC
Rated carry current	2 A
Max. switching voltage	75 V AC, 50 V DC

Max. switching current	1 A
Max. switching power	62.5 VA, 30 W

Default settings

Analog output	Voltage
Digital output 1 (D1)	Normally open (NO)
Digital output 2 (D2)	Normally open (NO)

Power in	12 ... 48 VDC
Power consumption	14 mA @ 24 V
Dimensions box (WxHxD)	63 x 82 x 34 mm
Dimensions w/connectors	91 x 103 x 34 mm
Weight	139 g
Operating temperature & humidity range	-40°C to 60°C 0% – 95% RH non-condensing

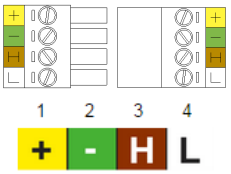
Delivered with DIN-rail mounting clip

3 Connectors

Bus

Via left side and right side bus connector (different, must be ordered separately).

(+, - , H , L)



Input

Quick plug connector

A1 ... A4	analog inputs
AO	analog output
G	common GND for analog inputs and output
D1	digital output 1 (relay). Responds to the decay command I Workspace; can be used to switch power supply output on/off or galvanic anode connection in/out
D2	digital output 2 (relay). Can e.g. be used to trigger local operation of power supply or other functionality of third-party equipment

4 Configuration

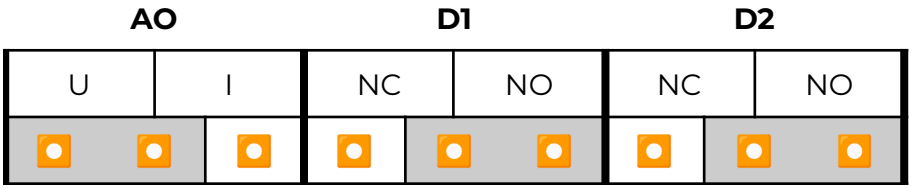
Camur III Power Interface is pre-configured for use with third party power supplies for CP.

D1 (Digital output 1, "Output on") is typically used to turn a power supply on and off, both manually and automatically when performing a depolarisation measurement (decay).

D2 (Digital output 2, "Local") can be e.g. be used to select local or remote control of a power supply.

Depending on configuration jumpers the relays are open or closed.

To access the configuration jumpers, you need to unscrew the lid of the node using a Torx 7 driver. By default the configuration will look like this, the gray terminals indicating the default placement of the three jumpers:



AO (analogue output)
U Voltage output for control of power supply **(default)**
I Current output for control of power supply
D1 (digital output 1)
NC Normally closed relay
NO Normally open relay **(default)**
D2 (digital output 2)
NC Normally closed relay
NO Normally open relay **(default)**
Jumper configuration guide:

	Check box	**State**	**Jumper settings**	**Relay state**
D1 Digital output 1	Unchecked	Normal	NO	Open
			NC	Closed
	Checked	Active	NO	Open
			NC	Closed
D2 Digital output 2	Unchecked	Active	NO	Open
			NC	Closed
	Checked	Normal	NO	Open
			NC	Closed

A relay can be in two states, normal or active. When the control voltage to the coil is off the contacts of the relay are in normal state. Depending on the design of the relay, the contact can be open or closed in normal state.

Observe that when the Camur III Power Interface is unpowered the relays are in normal state and it can be important that the configuration of the output contacts (jumpers in position NO or NC) sets the connected equipment in a safe operating mode.

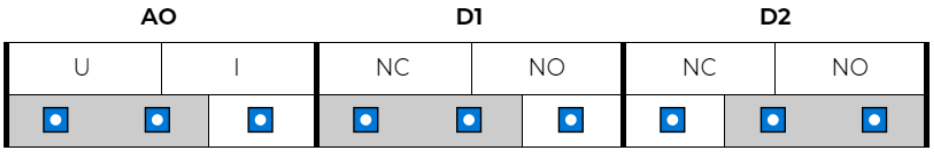
Depending on the third party equipment and the configured normal state of the relays, it may be necessary to apply the "Inverted" setting in Workspace. For example, if a normally closed relay yields an ON state on D1, Checking "Output on" in Workspace will open the relay and set it in the OFF state. In this situation, the "Inverted" setting will provide consistency between user interface and system state.

Relay D1 and D2 are controlled by checkbox *Output on* and *Local* in Camur II Monitor.

5 Using Camur III Power interface for a Galvashield* installation

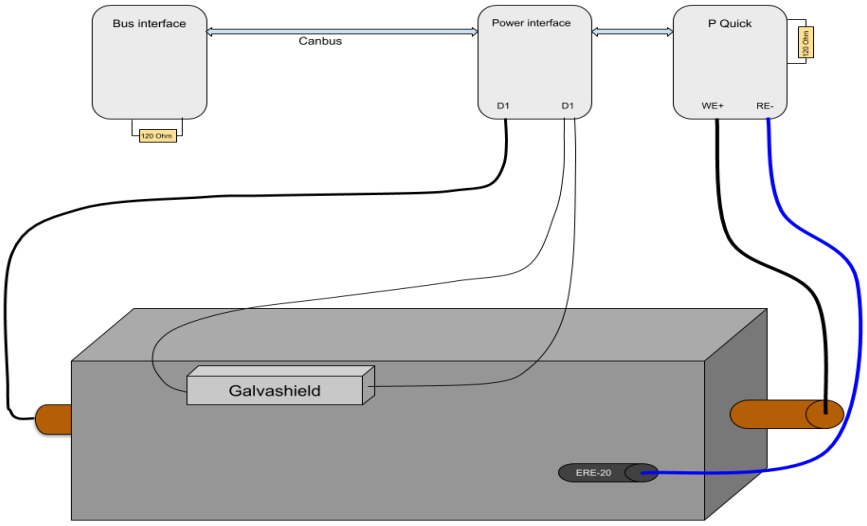
Change jumper setting D1 to NC.

Galvashield will then be connected if Camur II/Camur Workspace is disconnected.



In settings checkbox Output on and Invert D1 should be filled.

Example:



Works from software version Camur II Server 3.24.3.11 in combination with

5 Recording Types

The Camur III Power Interface node supports recording types Monitor, Monitor Extended and Decay[1] in Camur II software and Camur Workspace.

6 Annotation

HS export code: 9031 8000

Certification Marks: CE

[1] Only A1 and A2