

# DAK – A - 48-PC

**DIGITAL UNIVERSAL  
AMMETER**  
RS485 MODBUS RTU

**TRUE RMS**

**With Demand**

**RS485 MODBUS RTU**



## General Information

The device can be used in electrical panels, laboratories and test devices. With the assistance of a current transformer, it measures the AC current passing through the system in terms of Amper unite.

- With supplied current transformer, the device measures between 1 and 100A.
- The measured maximum demand value and the peak value are saved to memory. Even if the supply voltage is interrupted the device keeps the memorised values.

## Button Function

With using the direction buttons, it is possible to go through the menu up and down. If the set button is pressed, "dd-t" (demand time) and its value will flash on the screen. After pressing the set button again, with using the direction buttons the value could be increased or decreased (between 10min and 60min). Pressing set button saves the desired value to memory. With pressing down button "Clr" (clear) appears on the screen. By pressing the set button on this menu memorised demand and peak values would be deleted.

In "d-no" (device number) menu with the direction buttons the value could be increase or decreased (between 0001 and 0255) Pressing set button saves the desired value to memory. If more than one device is connected to the same network via RS485 port, the device number should be different for each device.

With pressing down button "quit" appears on the screen. After pressing the set button "SET" menu would be closed.

On the measurement screen:

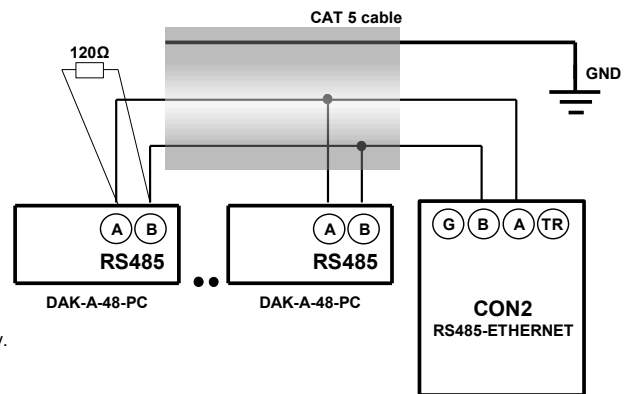
For peak value please press up button.

For maximum demand value please press down button.

## REGISTER TABLE

Device Header	Address	Description	Value	Access
Device Header	0x0000	Country code	0x0365 (869)	R
	0x0001	Company code	0X1D0C (7436)	R
	0x0002	Product code 31-16	0X0001 (88415)	R
	0x0003	Product code 15-0	0X595F (88415)	R
	0x0004	Check Barcode (K)	0X0005 (5)	R
	0x0005	Program Version	0X0100 (V1.00)	R
	0x0006	User Define N 31-16	0x00-0xFFFF	R/W
0x0007	User Define N 15-0	0x00-0xFFFF	R/W	
For DAM	0x1000	Real Time Value	milliamps	R
	0x1001	Demand Value	milliamps	R
	0x1002	Peak Value	milliamps	R
For DAK	0x2000	Real time value 31-16	milliamps	R
	0x2001	Real time value 15-0	milliamps	R
	0x2002	Demand value 31-16	milliamps	R
	0x2003	Demand value 15-0	milliamps	R
	0x2004	Peak value 31-16	milliamps	R
Adjustment	0x4000	CTRF set (current transformer)	DAK model = 20	R/W
	0x4001	Demand time	10-60 minutes	R/W
	0x4002	Modbus device order no	1-255	R/W
	0xFFC	CLR Demands and Peaks	0x55AA	W

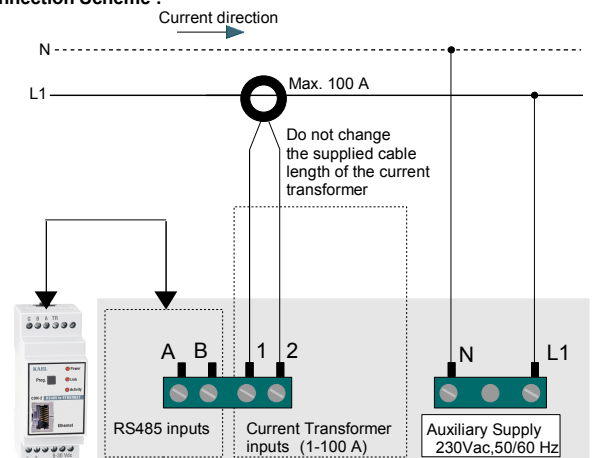
## RS485 Connection



## Technical Data

Operational Voltage (Un)	: 230Vac
Operating Range	: (0,8-1,1) x Un
Frequency	: 50 / 60 Hz
Power Consumption	: < 4VA
Measurement Sensitivity	: %1±1 digit
Current Measurement	: 1 - 100 A
Baud Rate	: 9600 BPS
Device No	: 1 - 255
Parity	: no parity
Stop Bit	: 1
Flow Control	: None
Display	: 4 Digits LED Display
Protection Class	: IP 20
Terminal Protection Class	: IP 00
Operation Temperature	: - 5 °C .... + 50 °C
Operation Humidity	: %15 ..... %95 (without condensation)
Installation	: to the panel tap
Dimensions	: 48 x 48 x 50 mm

## Connection Scheme :

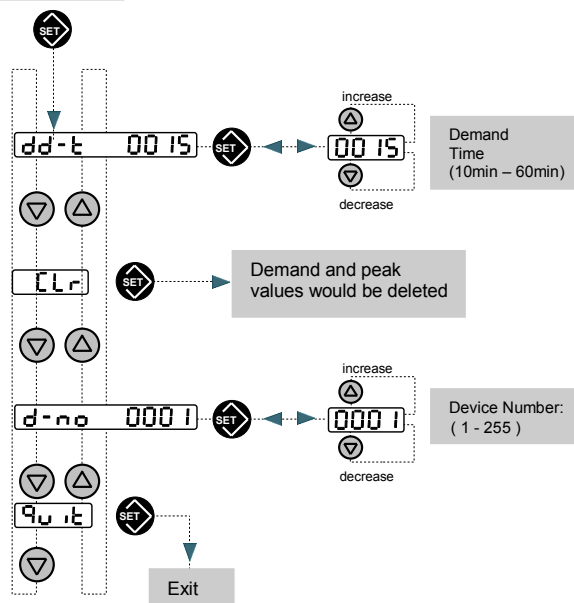


CON-2  
RS485 - Ethernet

## WARNING

- The message "Err1" or "Err2" on the screen means that the device has got a failure
- Can be used only with the supplied toroid current transformer. Can not be used without current transformer. A current that is higher then 100A passing through the measurement inputs may damage the device.
- To clean the device use dry dustcloth after de-energizing the device.

Entering  
the Parameters



## MODBUS – RTU PROTOCOL

ADDRESS	FUNCTION	DATA	CRCL	CRCH	T
8 BIT	8 BIT	8 BIT	8 BIT	8 BIT	3,5 Character waiting time

The maximum length of the package is 255 byte.

## MODBUS – RTU Functions

03H	READING THE REGISTERS
06H	WRITING INDIVIDUAL REGISTER
10H	WRITING MULTIPLE REGISTER