

Programming Guide

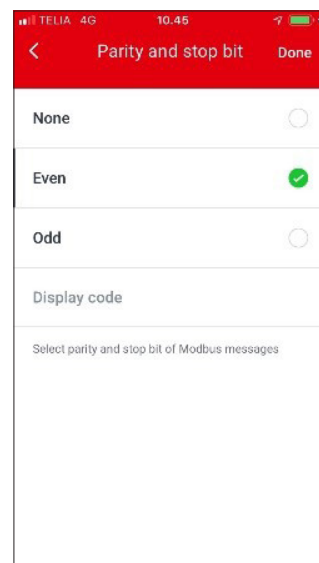
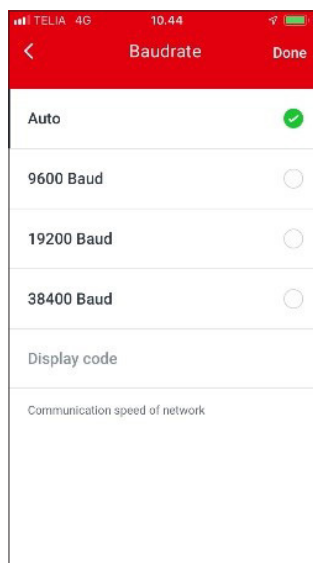
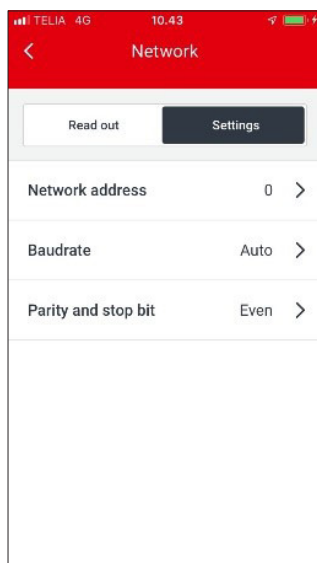
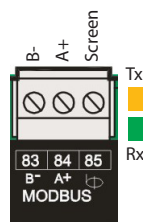
Basic Modbus parameter list

AK-CC55 Water Loop

SW Ver. 1.2x



Danfoss AK-CC55 Water Loop Case controllers



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Modbus Communication

Danfoss AK-CC55 controllers are using Modbus RTU.
Communication speed is default "auto detection"
Default communication settings are "8 bit, Even parity, 1 stop bit".

Network address can be set via AK-UI55 setting display and Network address as well as Network communication settings can be changed via the AK-UI55 Bluetooth display and the AK-CC55 Connect service app. For further information see AK-CC55 Documentation.

Danfoss AK-CC55 controllers are Modbus compliant and **MODBUS Application Protocol Specification** can be found via below link

<http://modbus.org/specs.php>

AK-CC55 Documentation:

AK-CC55 User Guides and Installation Guides can be found via www.danfoss.com:

<https://www.danfoss.com/en/products/electronic-controls/dcs/evaporator-and-room-control/#tab-overview>

Parameter list for Compact (084B4058)

Parameter	PNU	Value	Min.	Max.	Type	RW	Scale	A
Readouts								
--- Sum alarm	2541	0	0	1	Integer	R	0	
u00 Ctrl. state	2007	0	0	50	Integer	R	0	
u17 Ther. air	2532	0.0	-200.0	200.0	Float	R	1	
u12 S3 air temp.	2530	0.0	-200.0	200.0	Float	R	1	
u16 S4 air temp.	2531	0.0	-200.0	200.0	Float	R	1	
u09 S5 temp.	1011	0.0	-200.0	200.0	Float	R	1	
u93 S8 temp	2616	0.0	-200.0	200.0	Float	R	1	
u98 S7 temp	2621	0.0	-200.0	200.0	Float	R	1	
U72 Food temp.	2702	0.0	-200.0	200.0	Float	R	1	
U73 Def.StopTemp	2703	0.0	-200.0	200.0	Float	R	1	
u57 Alarm air	2578	0.0	-200.0	200.0	Float	R	1	
u86 Ther. band	2607	1	1	2	Integer	R	0	
u13 Night Cond.	2533	0	0	1	Integer	R	0	
u90 Cutin temp.	2612	4.0	-200.0	200.0	Float	R	1	
u91 Cutout temp.	2613	2.0	-200.0	200.0	Float	R	1	
u52 Comp. Cap.	2685	0	0	100	Integer	R	0	A
U28 Pump speed	2665	0	0	100	Integer	R	0	A
Settings								
r12 Main switch	117	0	-1	1	Integer	RW	0	
r00 Cutout	100	2.0	r03	r02	Float	RW	1	
r01 Differential	101	2.0	0.1	20.0	Float	RW	1	
--- Def. Start	1013	0	0	1	Integer	RW	0	
d02 Def.StopTemp	1001	6.0	0.0	50.0	Float	RW	1	
d04 Max Def.time	1003	45	d24	360	Integer	RW	0	
d28 DefStopTemp2	1046	6.0	0.0	50.0	Float	RW	1	
d29 MaxDefTime2	1047	45	d24	360	Integer	RW	0	
A03 Alarm delay	10002	30	0	240	Integer	RW	0	
A13 HighLim Air	10019	8.0	-60.0	50.0	Float	RW	1	
A14 LowLim Air	10020	-30.0	-60.0	50.0	Float	RW	1	

Note: Parameters marked with "X" in the "A" (App mode column) is not present in all App modes (for further info see AK-CC55 User Guide).

Parameter	PNU	Value	Min.	Max.	Type	RW	Scale	A
Alarms								
--- Contr. error	20000	0	0	1	Boolean	R	1	
--- RTC error	20001	0	0	1	Boolean	R	1	
--- S3 error	20002	0	0	1	Boolean	R	1	
--- S4 error	20003	0	0	1	Boolean	R	1	
--- S5 error	20004	0	0	1	Boolean	R	1	
--- S7 error	20005	0	0	1	Boolean	R	1	
--- S8 error	20006	0	0	1	Boolean	R	1	
--- High t.alarm	20007	0	0	1	Boolean	R	1	
--- Low t. alarm	20008	0	0	1	Boolean	R	1	
--- Door alarm	20009	0	0	1	Boolean	R	1	
--- Max HoldTime	20010	0	0	1	Boolean	R	1	
--- DI1 alarm	20011	0	0	1	Boolean	R	1	
--- DI2 alarm	20012	0	0	1	Boolean	R	1	
--- Comp. fault	20013	0	0	1	Boolean	R	1	
--- Standby mode	20014	0	0	1	Boolean	R	1	
--- Case clean	20015	0	0	1	Boolean	R	1	
--- SpeedDriveAl	20016	0	0	1	Boolean	R	1	
--- Refg.Leak	20017	0	0	1	Boolean	R	1	
--- MaxBrineTemp	20018	0	0	1	Boolean	R	1	
--- Wrong IO cfg	20019	0	0	1	Boolean	R	1	
--- Max Def.Time	20020	0	0	1	Boolean	R	1	

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