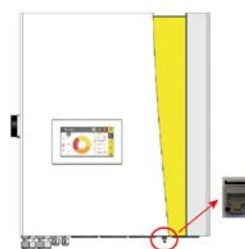
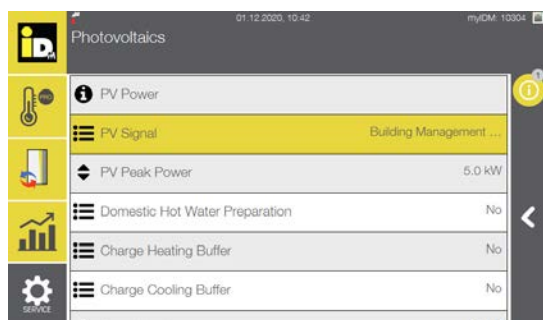


## 2.2.5. Communication via building management system/Smartfox

Communication with the NAVIGATOR controller 2.0 can take place via Modbus TCP, via EIB-KNX or via BACnet IP. To do this, the NAVIGATOR control unit 2.0 must be connected to the PV system using a network cable (provided by the customer) with a switch, hub or router (provided by the customer).

The network socket for the network cable is located on the outside of the heat pump casing or inside the heat pump on the electrical system (for AERO ILM heat pumps). The exact position of the respective network socket can be found in the installation instructions for the heat pump.



Network socket on the outside of the cladding on the wall cabinet of a TERRA AL Twin heat pump.

Communication between the NAVIGATOR controller 2.0 and the PV system takes place via the following addresses:

### Example: „Modbus TCP“

74	FLOAT	RW/RO	Current PV surplus		[kW]
76	FLOAT	RW/RO	Power of electric heating element		[kW]
78	FLOAT	RW/RO	Current PV production		[kW]
82	FLOAT	RW/RO	House consumption	0	[kW]
84	FLOAT	RW/RO	Battery discharge	0	[kW]
86	WORD	RW/RO	Battery level	-1	[%]
4122	FLOAT	RO	Current power consumption heat pump		[kW]

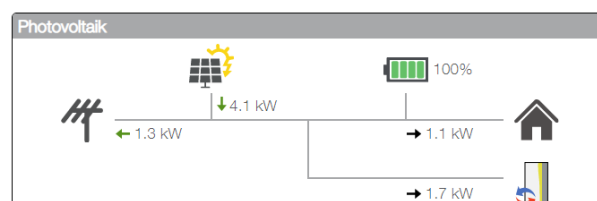
### Navigator control display:

#### 1. only the PV surplus is communicated



Current PV surplus and current power consumption of the heat pump

#### 2. all PV values are communicated



Graphic current flow

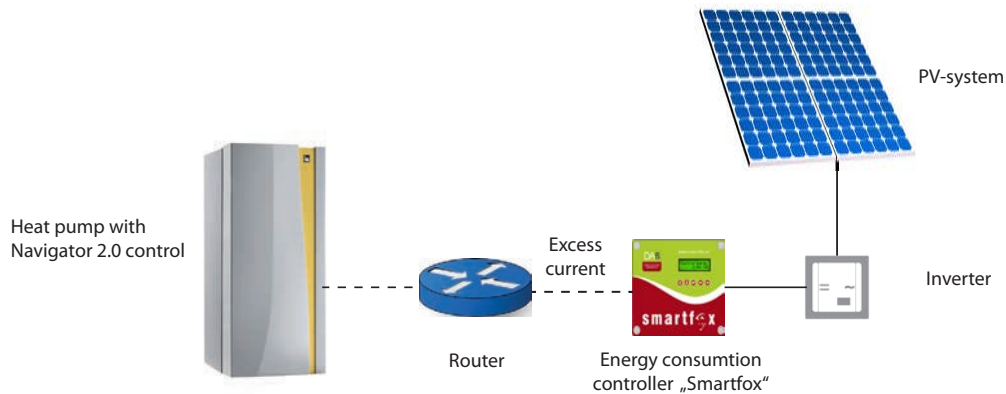


Modbus TCP communicates via TCP port 502, BACnet IP via UDP port 47808.

The building management system/Smartfox communication and myIDM function in parallel if all network participants are in the same network!

## Example: „Smartfox“ solar energy management system

The „Smartfox“ energy manager communicates with the heat pump via the network (LAN) using the Modbus TCP protocol (network cable and switch provided by the customer). The heat pump is operated with the surplus power from the PV system.

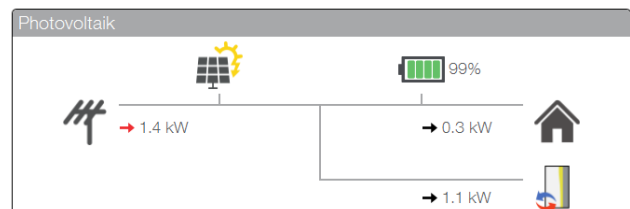
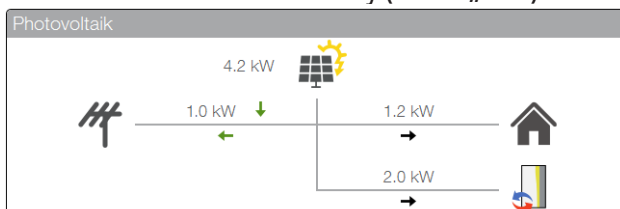


### Navigator control settings:

- » PV signal „Building management system/ Smartfox“
- » Network connection
- » Enter IP address manually (DHCP „Off“)

### Smartfox“ settings:

- » Settings/Heat pump“ menu
- » Manufacturer „IDM“
- » IP address of the heat pump must be entered



In order for communication with the iDM heat pump to work, a separate license is required for the „Smartfox“. This must be requested from „Smartfox“! (<http://shop.smartfox.at/index.php>)



The heat pump and Smartfox must be in the same network. Network communication with the „Smartfox Light“ is not possible!