

I-STAR Efficiency 1P



EN Data sheet

Related Documentation

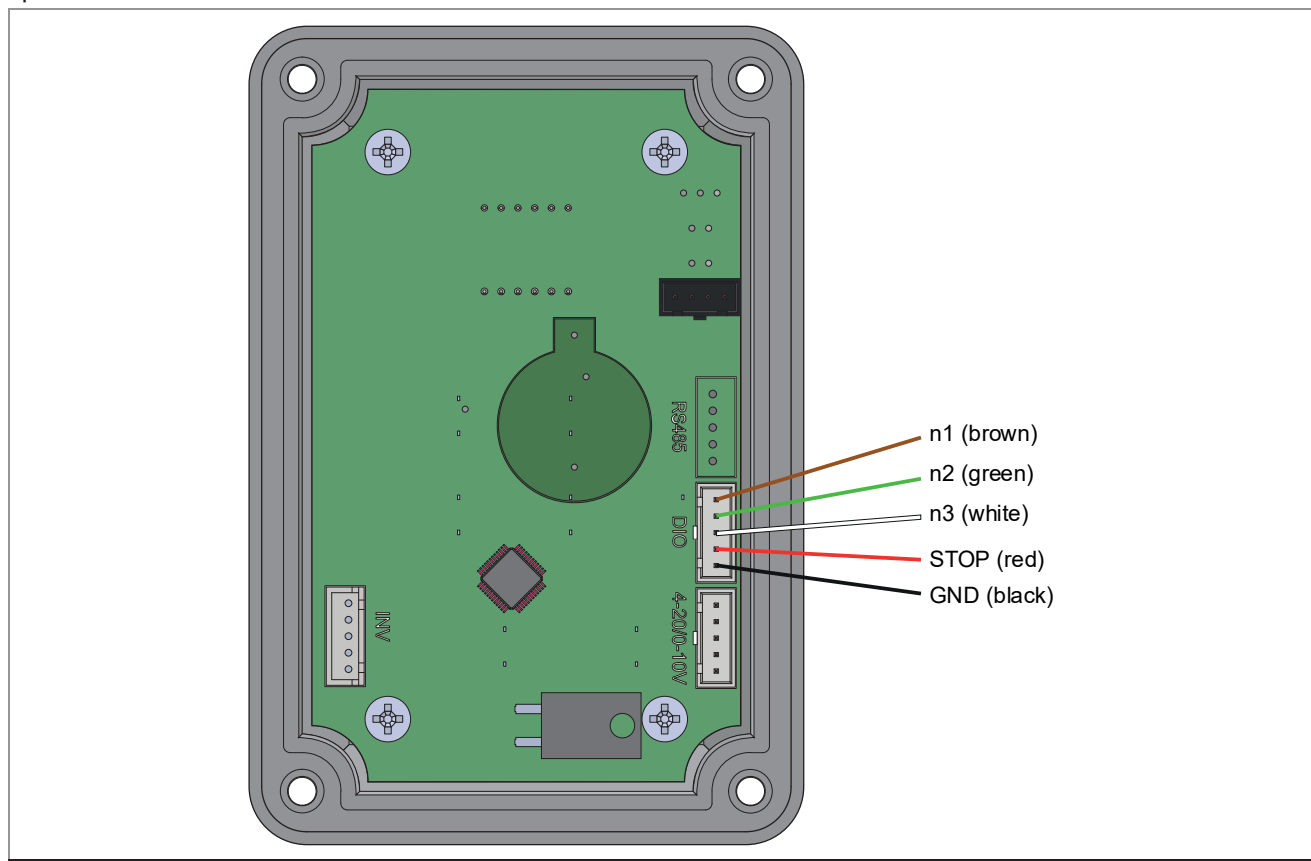
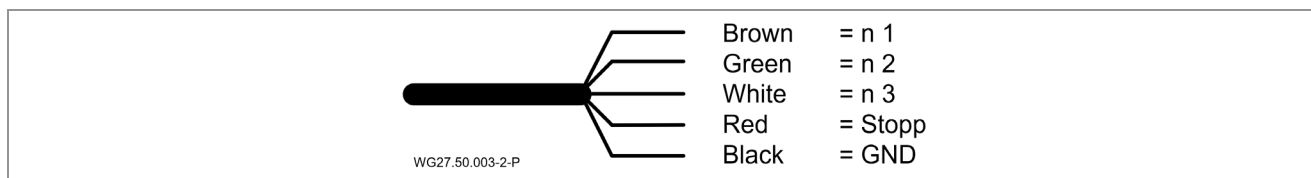
The additional information compiled in this data sheet must be kept together with the original operation manual for „Non-self-priming and self-priming pumps with/without plastic lanterns“ and must be accessible to the relevant personnel at all times.

Glossary	
TD	Technical data
Sa	Inlet connection
Da	Outlet connection
d-Saug	Recommended diameter of the suction line up to 5 m
d-Druck	Recommended diameter of the pressure line up to 5 m
max. L	Maximum length of the pump
D	Density
P ₁	Power input
P ₂	Power output
I	Rated current
L _{pa} (1 m)	Sound pressure level at 1 m measured in accordance with DIN 45635
L _{wa}	Acoustic capacity
m	Weight
WSK	Built-in or external overload switch
PTC	PTC resistor
H _{max.}	Total dynamic head
SP	Self-priming
H _s ; H _z	Geodetic head between water level and pump
H _s	Total suction head
H _z	Total dynamic head with flooded suction
IP	Type of motor enclosure
W-KI	Class of insulation
n	Motor speed
P-GHI	2.5 bar max. casing pressure/system pressure
T	Water temperature
●	Yes
○	No
T/°C	Clarification of the max. water temperature 40 °C (60 °C): 40 °C = the max. water temperature allowed according to the GS approval. (60 °C) = the pump is designed to withstand a max. water temperature of 60 °C.
1~/3~	Suitable for continuous operation at 1~ 220 - 240 V ± 5% 3~ Y/Δ 380 - 420 V/220 - 240 V ± 5% 3~ Y/Δ 660 - 725 V/380 - 420 V ± 5% For standard voltage in accordance with DIN IEC 60038; DIN EN 60034

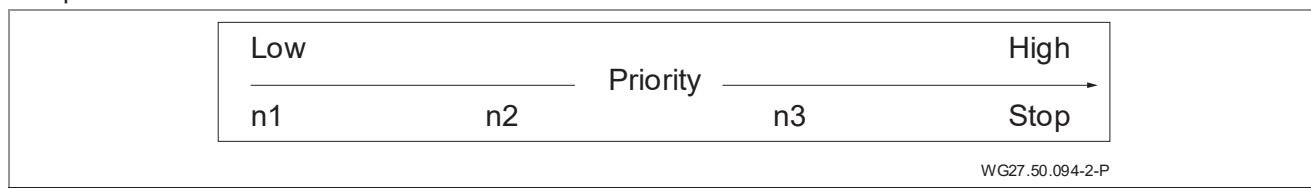
The pump has a permanent magnetic motor and is electronically protected against overload.

Connecting external switch contacts

The pump has a 5-wire cable with open ends for external control. Assignment of the cables to the individual speeds is as follows:



The cables must be connected potential free. Only switch the contacts individually (observe priority of the contacts). Otherwise the desired speed is not activated. The digital inputs must be activated accordingly in the Setup menu for external activation.



NOTICE

If the control cable is missing, defective or damaged, it is possible to connect an external control cable. Open the four screws on the terminal box lid for this purpose and remove the lid carefully. Feed the grey control cable through the cable gland and attach the white plug in the lid to the upper socket with the "DIO" designation. Close the terminal box lid again and tighten the four screws firmly.

➔ The control cable can be ordered from the manufacturer.

NOTICE

If the pump starts from a standstill, it starts up in priming mode and then with the selected programme. During operation the pump is started up to the programme directly, without priming time. If external control is not necessary, the cable ends need to be insulated.

NOTICE

For easy interaction with peripheral devices such as electric heat exchangers or dosing systems, installing a flow monitor with the appropriate evaluation unit is recommended. This can also output a fault message.

Function

Default settings:

Programs:

1 = 2000 min⁻¹

2 = 2400 min⁻¹

3 = 2850 min⁻¹

Priming speed:

= 2850 min⁻¹

Priming time:

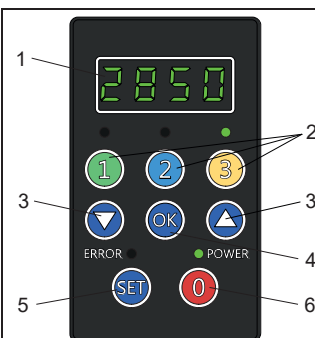
= 5 minutes

Speed which can be set:

1000 - 2850 min⁻¹ (in 50 min⁻¹ steps)

Priming time which can be set:

0 - 10 minutes (in 1 min steps)



User interface:

(1) **LED display:** displays the current motor speed

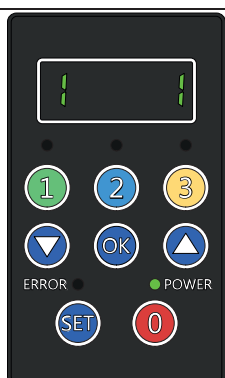
(2) **1 2 3** : used to select the speeds

(3) **↓ ↑** : to change the speed; to change in the programming mode

(4) **OK** : to confirm the speed; to save in the programming mode

(5) **SET** : used to enter the programming mode or to reset the control.

(6) **0** : to stop the motor.



Setting control mode/operation mode:

When switching on the power supply (insert the mains plug) and simultaneously pressing the **SET** button, the display shows two numbers "##". The number on the left stands for the control mode and the number on the right for the operating mode.

The control mode can be changed with the **↓** button and the operating mode with the **↑** button. Press **OK** to save.

Control mode ↓		Operating mode ↑	
0	Control via control panel	1	constant speed
1	Control via control panel + external control by potential-free contacts		



Operation:

Press button **1**, **2** or **3** to select the preset speed.

If the pump starts from standstill, it starts in suction mode and then runs at the selected speed.

As long as the pump is in the priming phase, the LED of the selected speed range flashes.

During operation the pump is started up to the fixed speed directly, without priming time.

The motor is stopped by pressing the button **0**. The "Power" LED flashes and the display shows "OFF".



Setting the speeds:

Press the button for the speed to be changed. The speed can now be changed with the button.



Notice: During the suction phase it is not possible to change the speed.



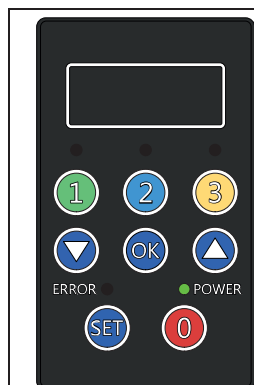
Setting the priming parameters:

The motor has to be stopped () to programme the priming time. Press the button for at least 3 seconds until the display begins to flash. Now the speed with which the motor is to start up during the priming time can be set. The speed can be changed with the buttons and saved with . The length of the suction time can be determined following adjustment of the suction speed. The priming time can be set between 0 (=Off) and 10 minutes.



Resetting:

The motor can be reset to the state of delivery by pressing the button for at least 15 seconds. The motor stops and the three LEDs of the speeds light up.



The display of the control unit switched off after 3 minutes without action, except if an external control unit for example emits a signal to the pump every minute.

After a voltage drop the pump automatically starts up again with the speed last set, or remains stopped if it had been stopped beforehand.

The pump can be turned on and off using the control cable (potential-free contact) intended for this purpose. The mains voltage should not be interrupted to achieve this. This can be realised via a BADU Blue, BADU OmniTronic, BADU NetLink or a coupling relay. This puts less stress on the electronics.

Overview of possible operating and error messages

If a error occurs, the motor switches off permanently. Exception error: "Undervoltage". The motor automatically switches back on as soon as the voltage is over 209 V for at least 6 seconds.

If an defect occurs, the system must be disconnected from the power supply. See chapter "Faults" of the original operating manual "non self-priming and self-priming pumps with/without plastic lanterns (AK version)".

Error no.	Description
E-01	Overvoltage DC intermediate circuit
E-02	Overvoltage DC intermediate circuit (signal only, motor doesn't stop)
E-03	Low DC intermediate circuit voltage (motor stops)
E-04	Power module overcurrent – software level
E-07	AC Voltage input is too high
E-08	AC Voltage input is too low
E-11	Motor speed protection
E-13	Power module overheating
E-16	Motor speed not synchronous to control
E-22	Output phase open circuit
E-51	Power module heat sensor error
E-60	Motor blocked
E-63	Digital process signal, error, programme not regulated
E-66	Communication error – terminal box

The following points refer to the related documentation!

Installing or removing the cover/strainer basket

