

## Parameter settings for Danfoss VLT<sup>®</sup> 6000 HVAC

### 4–20 mA signal from pressure transmitter



The parameters used to control the frequency converters may be easily programmed by the user. The **[QUICK MENU]** button provides a list with a some of the most common parameters. The **[EXTEND. MENU]** button allows the user to program all parameters.

**Johnson Pump Horticulture** provides you with this Quick Start guide for optimizing your pump performance.

This guide assumes you are using the Display in *Display mode II*.

#### Parameter settings

##### Group 0 - Operation & Display

Param. no.	Description	Window text	Setting	Serial port value
001	Language	LANGUAGE	ENGLISH	0
005	Max. value of user-defined readout	CUSTOM READOUT	600.00	60000
006	Unit for user-defined readout	CUST. READ. UNIT	mbar	15
007	Large display readout	LARGE READOUT	FREQUENCY [Hz]	3
008	Small display readout 1.1	SMALL READOUT 1	SET POINT 1 [UNITS]	11
009	Small display readout 1.2	SMALL READOUT 2	FEEDBACK 1 [UNITS]	13
010	Small display readout 1.3	SMALL READOUT 3	ANALOG INPUT 60 [mA]	23

##### Group 1 - Load & Motor

Param. no.	Description	Window text	Setting	Serial port value
100	Configuration	CONFIG. MODE	CLOSED LOOP	1

##### Group 2 - References & Limits

Param. no.	Description	Window text	Setting	Serial port value
201	Output frequency low limit, $f_{MIN}$	MIN. FREQUENCY	0.000 Hz	0
202	Output frequency high limit, $f_{MAX}$	MAX. FREQUENCY	50.000 Hz	500
204	Minimum reference, $Ref_{MIN}$	MIN. REFERENCE	0.000	0
205	Maximum reference, $Ref_{MAX}$	MAX. REFERENCE	600.000	600000
206	Ramp-up time 1	RAMP UP TIME 1	15.00 sec.	15
207	Ramp-down time	RAMP DOWN TIME 1	15.00 sec.	15

##### Group 3 - Inputs & Outputs

Param. no.	Description	Window text	Setting	Serial port value
308	Terminal 53, analogue input voltage	AI [V] 53 FUNCT.	NO OPERATION	0
314	Terminal 60, analogue input current	AI [mA] 60 FUNCT.	FEEDBACK	2
315	Terminal 60, min. scaling	AI 60 SCALE LOW	4.0 mA	40000
316	Terminal 60, max. scaling	AI 60 SCALE HIGH	20.0 mA	200000

more...

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...Parameter settings, continued

#### Group 4 - Special functions

Param. no.	Description	Window text	Setting	Serial port value
413	Minimum Feedback, FB <sub>MIN</sub>	MIN. FEEDBACK	0.000	0
414	Maximum feedback, FB <sub>MAX</sub>	MAX. FEEDBACK	600.000	600000
415	Units relating to closed loop	REF. / FDBK. UNIT	mbar	15
418	Setpoint 1	SETPOINT 1	100.000	100000
423	PID proportional gain	PID PROP. GAIN	1.00	100
424	PID integration time	PID INTERG. TIME	10.00 sec.	1000

**All other parameter settings --> factory default settings**

### Troubleshooting

Not working?

Parameter 620 [OPERATION MODE]/[INITIALIZE] can be used to reset all parameters to the default factory settings.

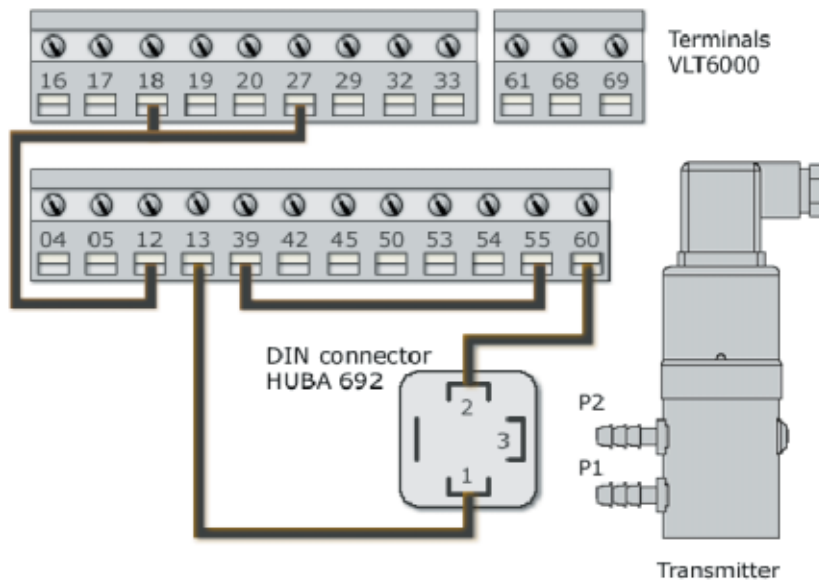
Procedure for initialisation:

1. Select initialisation (parameter 620)
2. Press **[OK]**
3. Disconnect mains power supply and wait for the light in the display to go out
4. Reconnect to mains
5. Initialisation of all parameters will be carried out
6. Reprogram the above parameters

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#### Wiring diagram



The pressure transmitter must be connected as showed in the diagram.

The connection between terminal 12 and 18 can be replaced by a contact from the controller.

#### Attention!

P1 of the transmitter is connected to the Supply.

P2 of the transmitter has to be connected to the Return.

To check if the transmitter is connected correctly:

1. Press **[DISPLAY MODE]**
2. Three values are shown in the display; parameter settings 008, 009 and 010.
3. The value to the right must be 3,8/3,9 mA while the pump is not running. When this value is 0 mA while the pump is not running, the transmitter is connected wrong or the parameter setting 315 is on 0 mA. When the value is 21 mA while the pump is not running, the pressure difference is more then 600 mbar or the transmitter is not working.

When the transmitter is connected correctly, press **[AUTO START]**.

1. The pump will run and the value to the right will increase till 6,5 mA (100 mbar).
2. The value in the middle will swing around 100 mbar (measured value transmitter).
3. The value to the left will be 100 (PRESET REF 418).