

MINK

KEYPAD

MV 0040 – 0080 E ECOTORQUE

Instruction Manual Supplement



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Keypad_MV0040-0080E_Parameter

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1 Safety

Prior to handling the electrical device, this instruction manual should be read and understood. If anything needs to be clarified, contact your manufacturer representative.

Read this instruction manual carefully before use and keep for future reference.

This instruction manual remains valid as long as the customer does not change anything on the product.

The electrical device is intended for industrial use. It must be handled only by technically trained personnel.

Always wear appropriate personal protective equipment in accordance with the local regulations.

The electrical device has been designed and manufactured in accordance with the state-of-the-art methods. Nevertheless, residual risks may remain, as described in the following chapters and in accordance with the chapter Intended Use.

This instruction manual highlights potential hazards where appropriate. Safety notes and warning messages are tagged with one of the keywords DANGER, WARNING, CAUTION, NOTICE and NOTE as follows:



DANGER

... indicates an imminent dangerous situation that will result in death or serious injuries if not prevented.



WARNING

... indicates a potentially dangerous situation that could result in death or serious injuries.



CAUTION

... indicates a potentially dangerous situation that could result in minor injuries.



NOTICE

... indicates a potentially dangerous situation that could result in damage to property.



NOTE

... indicates helpful tips and recommendations, as well as information for efficient and trouble-free operation.

2 Product Description KEYPAD



The machine is equipped with an ECOTORQUE Variable Speed Drive (VSD).

The ECOTORQUE Variable Speed Drive (VSD) regulates the pumping speed of the machine and saves energy. For more information contact your Busch representative.

NOTICE

ECOTORQUE Variable Speed Drive (VSD) should primarily be controlled using Busch Vacuum Manager software, available at www.buschvacuum.com (free of charge).

Any changes to parameters outside of those done by Busch or certified representatives, particularly if made using methods other than the Busch Vacuum Manager software, which result in damage or malfunction of the ECOTORQUE Variable Speed Drive (VSD) or the machine, are not covered under the product warranty or liability.

The following parameters of ECOTORQUE VSD can be controlled:

1. Speed- / Pressure control
2. Auto / Manual START/STOP
3. Preset speed
4. Inlet pressure target setpoint
5. Ecomode
6. Regulation gains
7. Relais output settings and delays
8. Ramp time 'Acceleration / Deceleration'

3 First Time Start-Up

To start-up the KEYPAD for the first time, follow the instructions on the ABB-Homepage:
ACS-AP-S_Assistant control panels user's manual

4 Exceptional KEYPAD Use

If – for any reasons - the Busch Vacuum Manager software cannot be applied for controlling the pump, there is the exceptional possibility to operate the pump via a keypad.

The **ABB ACS-AP-S Assistant Control Panel (KEYPAD)** is a user interface designed for commissioning, monitoring, and operating the ABB **ACS280 drives**, applied on the **MINK MV 0040 – 0080 E ECO-TORQUE**. It provides graphical display and navigation keys that allow users to view drive status information, monitor actual values, access diagnostic messages, and modify selected drive parameters.

5 Parameters Allowed to be Modified



NOTICE

Wrong parameter modifications leads to malfunctions.

Damage to the machine.

- Only modify the listed parameters allowed.



NOTE

We highly recommend creating a manual backup of the drive parameter settings in one of the two available backup files before making any parameter changes.

Misadjustments leads to malfunctions.

- Follow the instructions on the ABB-Homepage: *ACS-AP-S_Assistant control panels user's manual*, Chapter **“Backups”**

No.	Correlation parameter in Busch Vacuum Manager	Parameter Number	Parameter name	Factory setting	Min.	Max.	Comment
1	Live data	1.06	Output frequency	n.a.	n.a.	n.a.	read only
2	Live data	1.07	Motor current	n.a.	n.a.	n.a.	read only
3	Live data	1.11	DC bus voltage	n.a.	n.a.	n.a.	read only
4	Live data	1.13	Output voltage	n.a.	n.a.	n.a.	read only
5	Live data	1.14	Output power	n.a.	n.a.	n.a.	read only
6	Advanced I/O - Relais - Option	10.24	RO1 source (Relais Output Source)	Fault (-1)			
7	ON Delay	10.25	RO1 on Delay [s]	0	0	3000	
8	OFF Delay	10.26	RO1 off Delay [s]	0	0	3000	
9	Pressure	12.12	AI1 scaled value	n.a.	n.a.	n.a.	read only
10	Control - Target speed	22.26	Constant speed 1 [rpm]	4800 on MINK MV 0080 E 4200 on MINK MV 0040-0060 E	1200 1200	4800 4200	
11	Advanced I/O - Ramps - Acceleration	23.12	Acceleration time 1 [s]	5	2	1800	
12	Advanced I/O - Ramps - Deceleration	23.13	Deceleration time 1 [s]	5	2	1800	
13	Advanced I/O - Gains - Proportional gain	25.2	Speed proportional gain	7.73 on MINK MV 0040-0080 E 3Ph-400V 2.0 on MINK MV 0040-0060 E 3Ph-230V	0	250	
14	Advanced I/O - Gains - Integration time	25.3	Speed integration time [s]	0.56 on MINK MV 0040-0080 E 3Ph-400V 0.5 on MINK MV 0040-0060 E 3Ph-230V	0	1000	
15	Control - Target pressure [only available with pressure trans- mitter and pump in pressure control]	40.24	Set 1 internal setpoint 0 [mbar]	400	0	1000	
16	Ecomode - Delay [only available with pressure trans- mitter and pump in pressure control]	40.44	Wakeup deviation [s]	5	0	3600	
17	Ecomode - Wakeup deviation [only available with pressure trans- mitter and pump in pressure control]	40.47	Wakeup deviation [mbar]	0	0	10000	

Notes

Grid of dots for notes.

BUSCH GROUP

The Busch Group is one of the world's largest manufacturers of vacuum pumps, vacuum systems, blowers, compressors and gas abatement systems. Under its umbrella, the group houses two well-known brands: Busch Vacuum Solutions and Pfeiffer Vacuum+Fab Solutions. Together, they offer solutions to a wide range of industries. A global network of highly competent local teams in 44 countries ensures that expert, tailor-made support is always available near you. Wherever you are. Whatever your business.



● Busch Group companies

▲ Busch Group production sites

● Busch Group service centers

■ Busch Group local representatives

www.buschvacuum.com

www.pfeiffer-vacuum.com