

Options for MICROMASTER 420 - Variant Independent Options



Overview

Basic Operator Panel (BOP)

With the BOP, individual parameter settings can be made. Values and units are shown on a 5-digit display.



Basic Operator Panel (BOP)

A BOP can be used for several inverters. It can be directly mounted on the inverter or in a control cabinet door using a mounting set.

Advanced Operator Panel (AOP)

The AOP enables parameter sets to be read out of the inverter or to be written into the inverter (upload/download). Different parameter sets can be stored in the AOP. It has a plain text display with the possibility of switching between several languages.



Advanced Operator Panel (AOP)

Up to 30 inverters can be controlled from an AOP via USS. It can be directly mounted on the inverter or in a control cabinet door using a mounting set.

[Asian Advanced Operator Panel \(AAOP\)](#)

The AAOP is the Chinese version of the AOP operator panel. It has an enhanced display and supports the operating languages of Chinese (simplified) and English.



Asian Advanced Operator Panel (AAOP)

Cyrillic Advanced Operator Panel (CAOP)

The CAOP is the Cyrillic version of the AOP Advanced Operator Panel. It supports the Cyrillic, German and English operator languages.

PROFIBUS module

For a complete PROFIBUS connection with up to ≤ 12 Mbaud. Remote control of the inverter is possible with the PROFIBUS module. Remote control and operation at the inverter can be combined using an operator panel plugged onto the PROFIBUS module. The PROFIBUS module can be supplied by an external 24 V DC power supply and is thus also active when the inverter is disconnected from the power supply.

Connection by means of a 9-pin Sub-D connector (available as an option).

DeviceNet module

For networking the inverters to the DeviceNet fieldbus system widely used on the American market. A maximum transmission rate of 500 kbaud is possible. Remote control of the inverter is possible with the DeviceNet module. Remote control and operation at the inverter can be combined using an operator panel plugged onto the DeviceNet module.

The connection to the DeviceNet bus system is made using a 5-pin connector with terminal strip.

CANopen module

Using the CANopen communications module, an inverter can be linked to the CANopen fieldbus system and remote control is then possible.

Remote control and operation at the inverter can be combined using an operator panel plugged onto the CANopen module. The module is connected to the bus system through a 9-pin Sub-D connector.

Connection kit for PC to inverter

For controlling an inverter directly from a PC if the appropriate software has been installed (e.g. STARTER).

Isolated RS-232 adapter module for reliable point-to-point connection to a PC. Includes a Sub-D connector and an RS-232 standard cable (3 m).

Connection kit for PC to AOP

For connecting a PC to an AOP or AAOP. Offline programming of inverters and archiving of parameter sets possible. Includes a desktop attachment set for an AOP or AAOP, an RS-232 standard cable (3 m) with Sub-D connectors and a universal power supply unit.

Operator panel door mounting set for single inverter

For mounting an operator panel in a control cabinet door. Degree of protection IP56. Contains a cable adapter module with screwless terminals for use with user's own RS-232 cables. ¹⁾

AOP door mounting set for multiple inverters (USS)

For mounting an AOP or AAOP in a control cabinet door. Degree of protection IP56. The AOP or AAOP can communicate with several inverters by means of the RS-485 USS protocol. The 4-pin connecting cable from the AOP or AAOP to the RS-485 terminals of the inverter and to the 24 V user terminal strip is not included. ²⁾

Start-up tools

- STARTER
is a graphic start-up software for guided start-up for MICROMASTER 410/420/430/440 frequency inverters under Windows 2000/XP Professional. Parameter lists can be read out, altered, stored, entered and printed.
- DriveMonitor
is a start-up software for list-oriented programming of frequency inverters. This program executes under Windows 98/NT/2000/ME/XP Professional.

Both programs are included on the Docu DVD which is provided with every inverter.

The variant independent options listed under the Ordering Data are suitable for all MICROMASTER 420 inverters.

1) A shielded cable of type Belden 8132 (28 AWG) is recommended. The maximum cable length is 5 m for RS-232.

2) A shielded cable of type Belden 8132 (28 AWG) is recommended. The maximum cable length is 10 m for RS-485.

Technical specifications

Technical Data	PROFIBUS module 6SE6400-1PB00-0AA0	DeviceNet module 6SE6400-1DN00-0AA0	CANopen module 6SE6400-1CB00-0AA0



Size (height x width x depth)	161 mm x 73 mm x 46 mm	
Degree of protection	IP20	
Degree of pollution	2 to IEC 60 664-1 (DIN VDE 0110/T1), no condensation permitted during operation	
Strain resistance	To DIN IEC 60 068-2-6 (if module is installed correctly)	
● Stationary		
- Deflection	0.15 mm in the frequency range of 10 Hz to 58 Hz	
- Acceleration	19.6 m/s ² in the frequency range of 58 Hz to 500 Hz	
● Transport		
- Deflection	3.5 mm in the frequency range 5 Hz to 9 Hz	
- Acceleration	9.8 m/s ² in the frequency range 9 Hz to 500 Hz	
Climatic category (during operation)	3K3 to DIN IEC 60 721-3-3	
Cooling method	Natural air cooling	
Permissible ambient or cooling agent temperature		
● Operation	-10 °C to +50 °C (+14 °F to +122 °F)	
● Storage	-25 °C to +70 °C (-13 °F to +158 °F)	-40 °C to +70 °C (-40 °F to +158 °F)
● Transport	-25 °C to +70 °C (-13 °F to +158 °F)	

Relative humidity (permissible humidity rating)			
• Operation	≤85 % (non-condensing)		
• Storage and transport	≤95 %		
Electromagnetic compatibility			
• Emission	to EN 55 011 (1991) Class A	-	
• Interference	to IEC 60 801-3 and EN 61 000-4-3	-	
Power supply	6.5 V ±5 %, max. 300 mA, internal from inverter or 24 V ±10 %, max. 350 mA, external	6.5 V ±5 %, max. 300 mA internal from inverter and 24 V, max. 60 mA from DeviceNet bus	The CAN bus is supplied from the inverter power supply
Output voltage	5 V ±10 %, max. 100 mA, galvanically isolated supply <ul style="list-style-type: none"> • for terminating the serial interface bus or • for supplying the OLP (Optical Link Plug) 	-	-
Data transmission rate	max. 12 MBaud	125, 250 and 500 kBaud	10, 20, 50, 125, 250, 500, 800 kBaud and 1 MBaud