

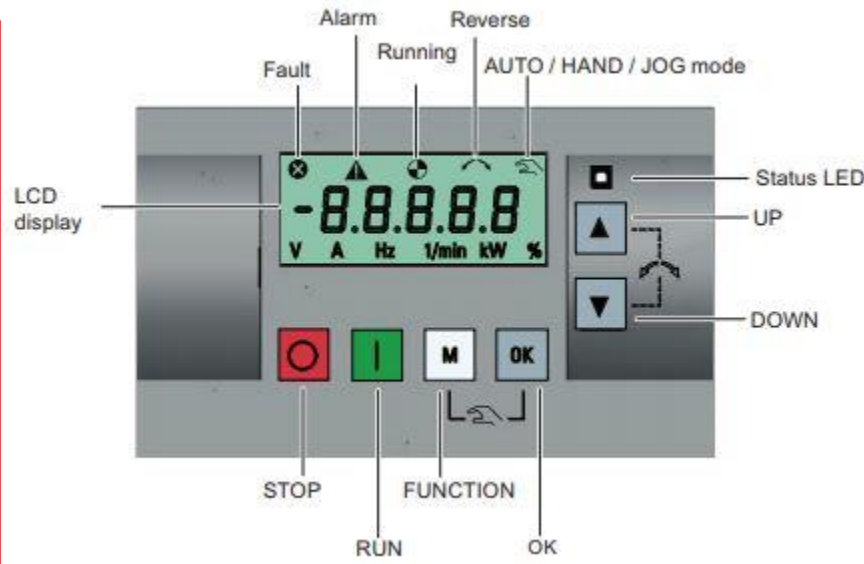


V20 BOP Commissioning Aid

Revision Date: 09/04/2019

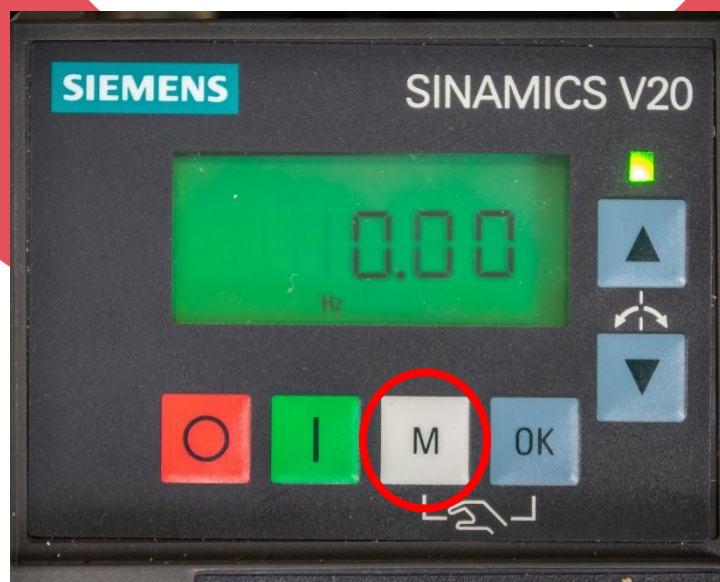
1. After the electrical and mechanical installation. It's time to commission the drive using the Basic Operating Panel (BOP).
2. Power up the drive to start commissioning.

Below is a summary of button functions and status icons that will be used throughout this procedure.

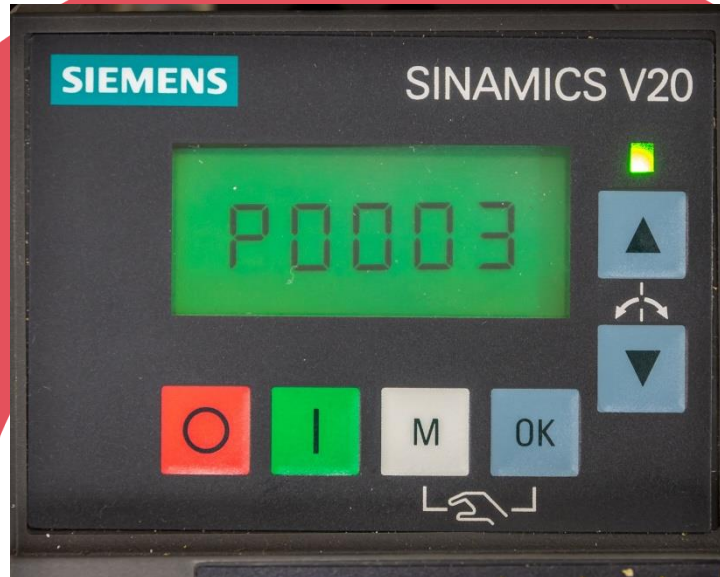


Before commissioning the drive, it's a good practice to factory reset; even if you just took the drive out of the box. The steps below will guide you through this process.

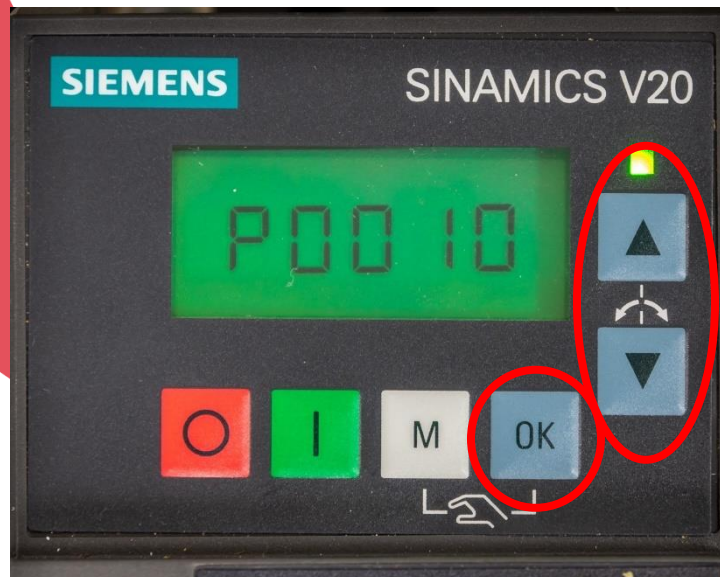
3. Press the M button once quickly to open the parameters menu.



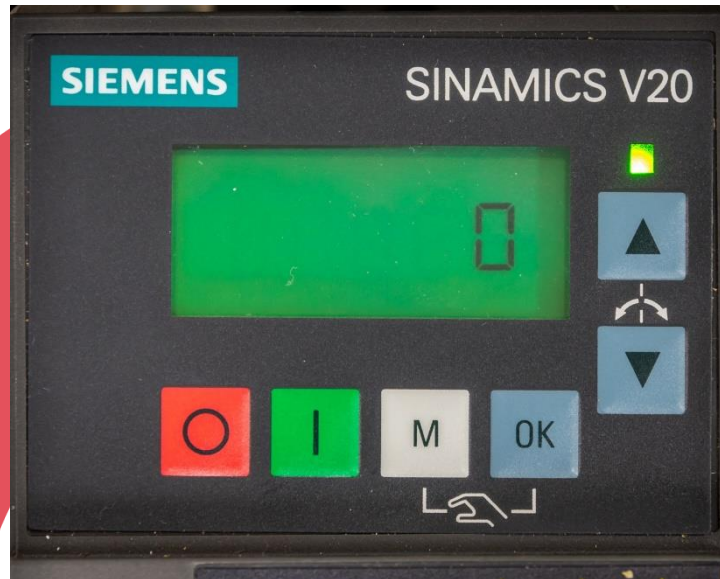
For out of the box drives, the display should say P0003. On the other hand, if the drive was previously configured, the display should say the last parameter that was opened.



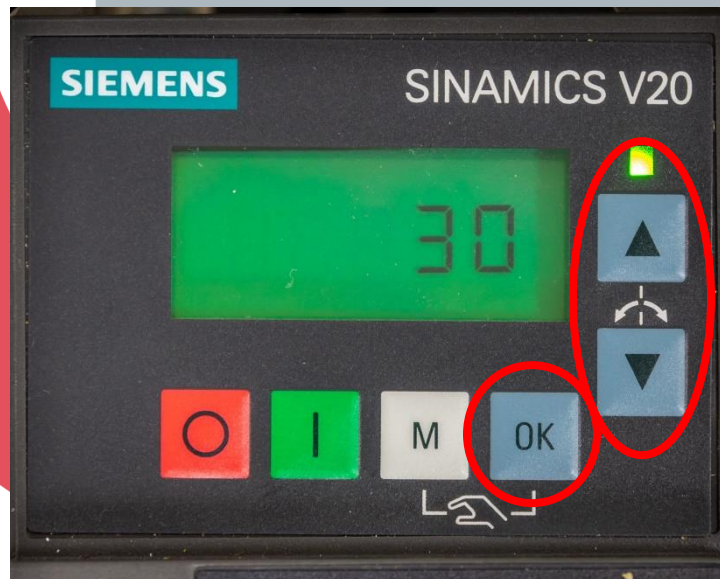
4. Use the up and down buttons to find P0010. Then, press OK.



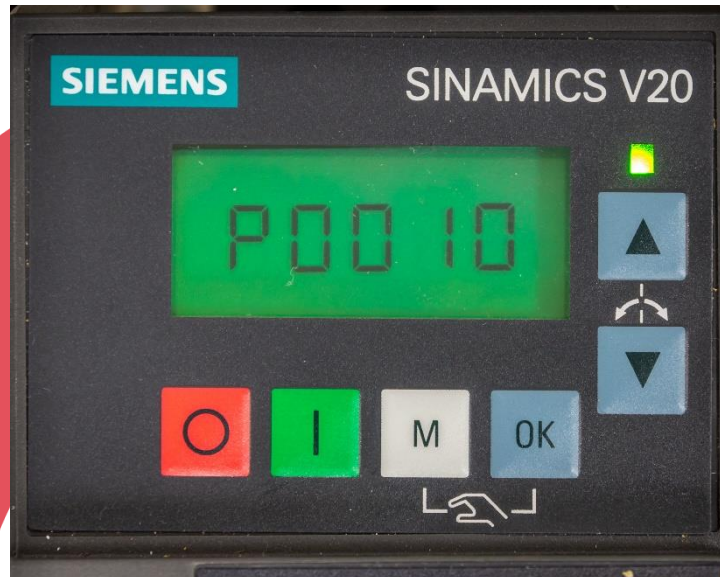
When this step is complete, the display should say 0 on it.



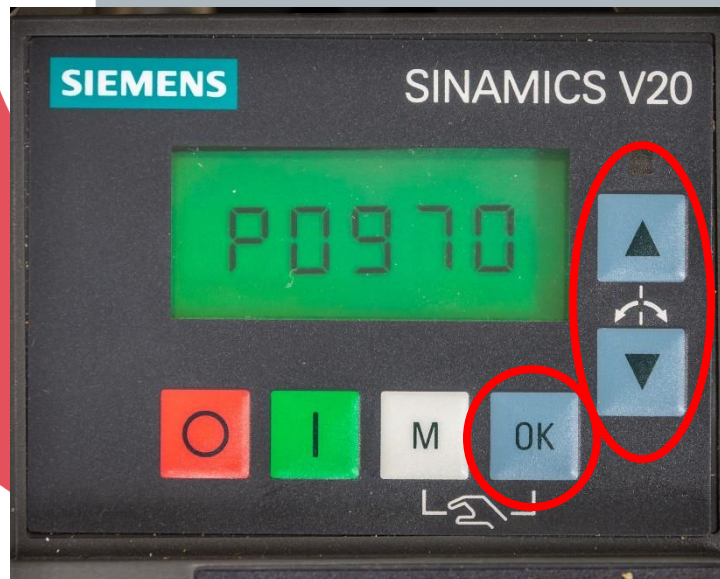
5. Change the value to 30 using up and down buttons. Then, press OK.



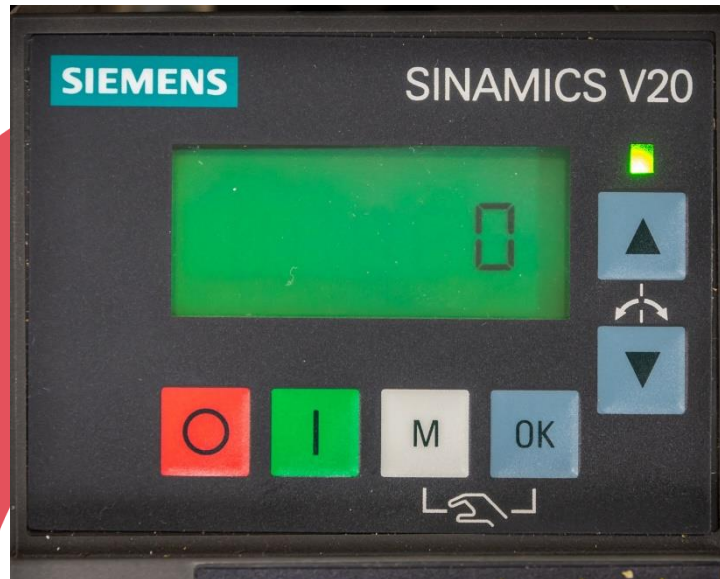
When this step is complete, the display should say P0010 on it.



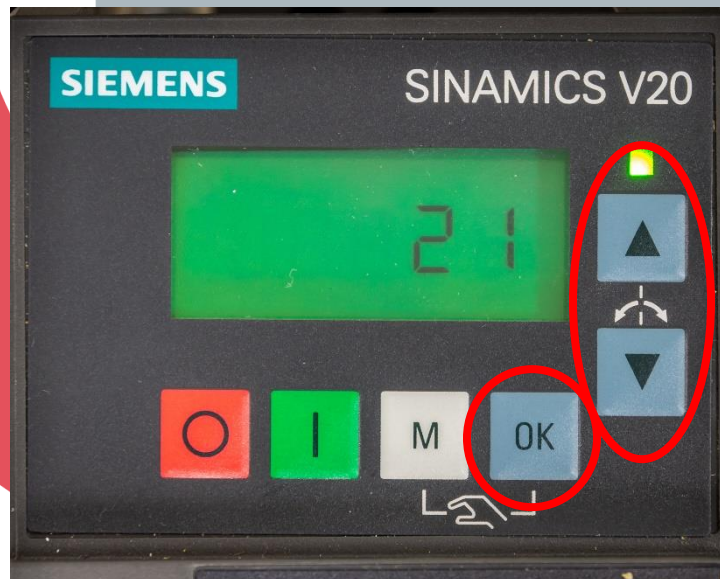
6. Use the up and down buttons to find P0970. Then, press OK.



When this step is complete, the display should say 0 on it.



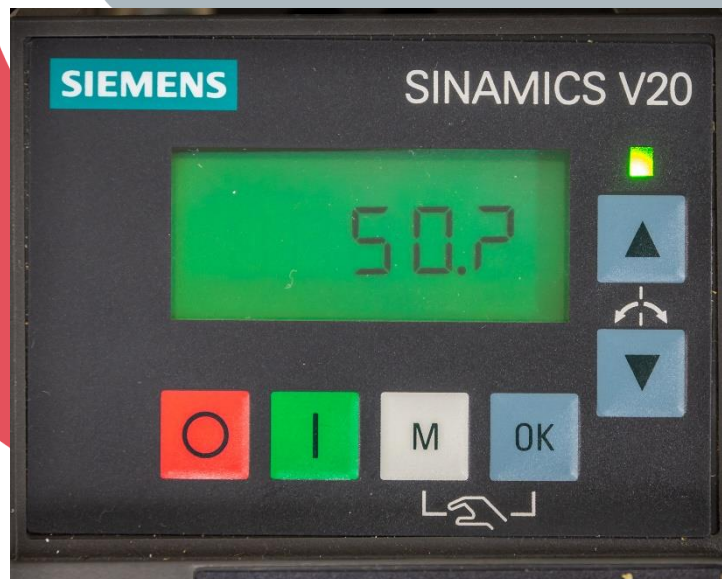
7. Use the up and down buttons to find 21. Then, press OK.



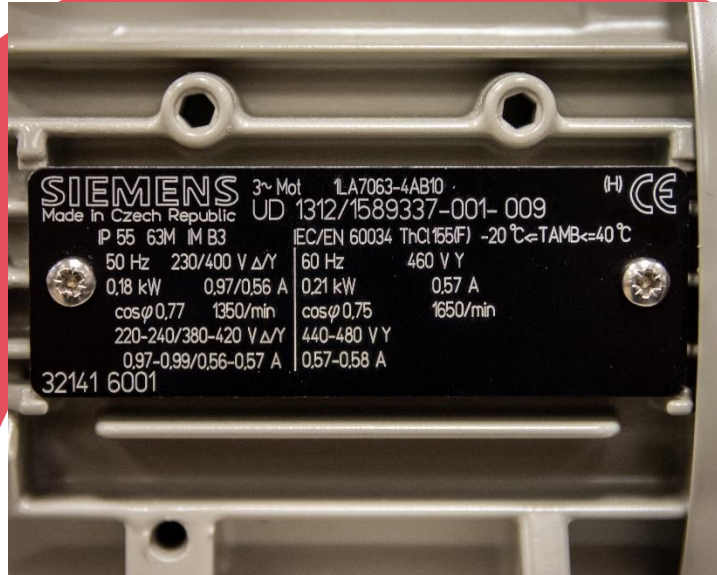
The display should briefly be filled with 88888 while the drive is factory defaulted. When complete the commissioning steps will begin.



Once the display is briefly filled. The display should say "50?".



This commissioning aid is based on the following motor data plate. The motor is wired for a delta configuration. Please replace all pertinent values for your motor data plate information.



1. The first step of the commissioning will begin with a prompt on the operator panel for the 50 / 60 Hz selection.

Your selection should be driven by the actual information on your motor's data plate and wiring configuration, the options are:

- 50?: The motor frequency is listed at 50Hz and motor power unit is in [kW].
- 60hP?: The motor frequency is 60Hz and motor power unit is in [hp].
- 60?: The motor frequency is 60Hz and motor power unit is in [kW].

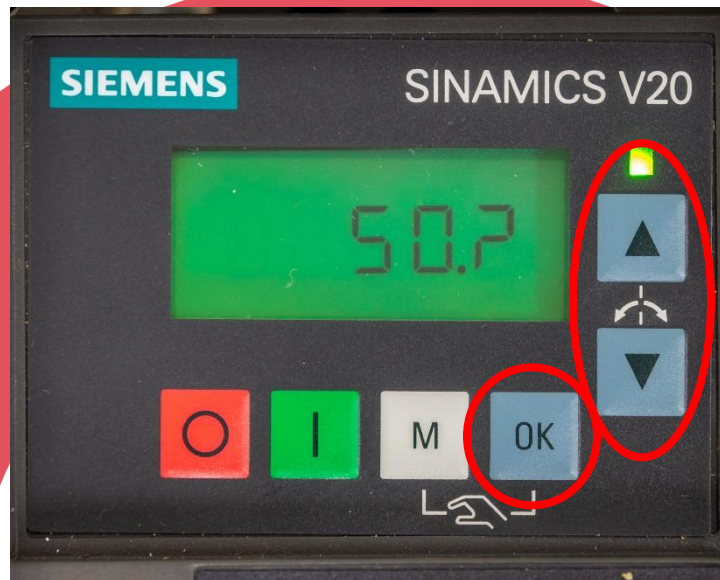
For example, the motor data plate above has two different options:

- A delta/Y configuration with 50Hz motor frequency and the power unit is in kW.
- A 'Y' configuration at 60Hz motor frequency and the power unit is in kW.

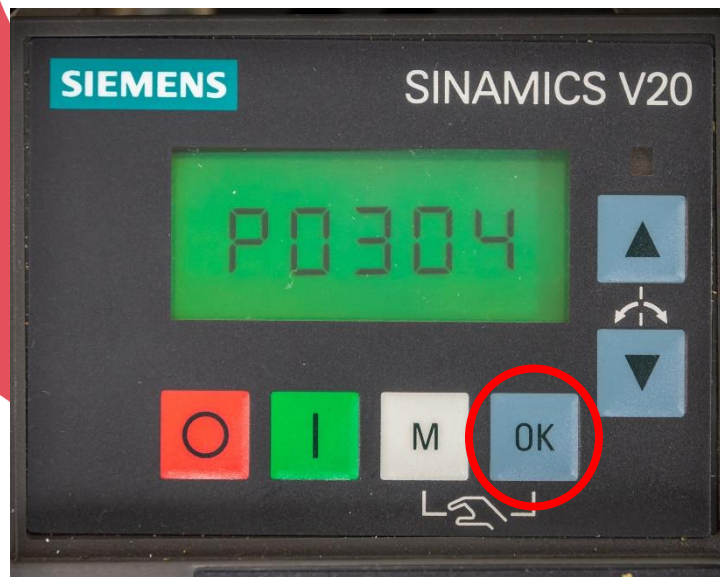
Since the motor is wired for delta with a supply of 230V, I will be selecting the "50?"

All preceding wizard steps depend on this initial selection. So, be thorough. If you pick the incorrect option, you will be prompted to fill parameters that you don't have values for.

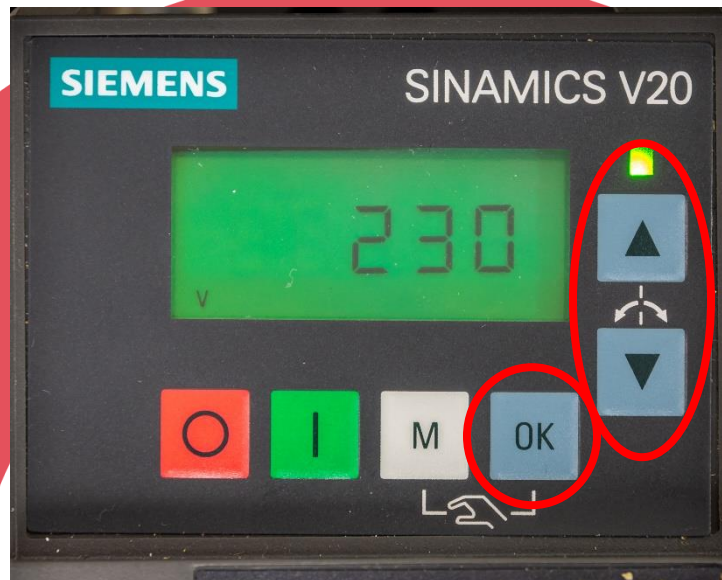
2. Find the value that match your wiring configuration and motor data plate. Using the up and down buttons. Press OK button.



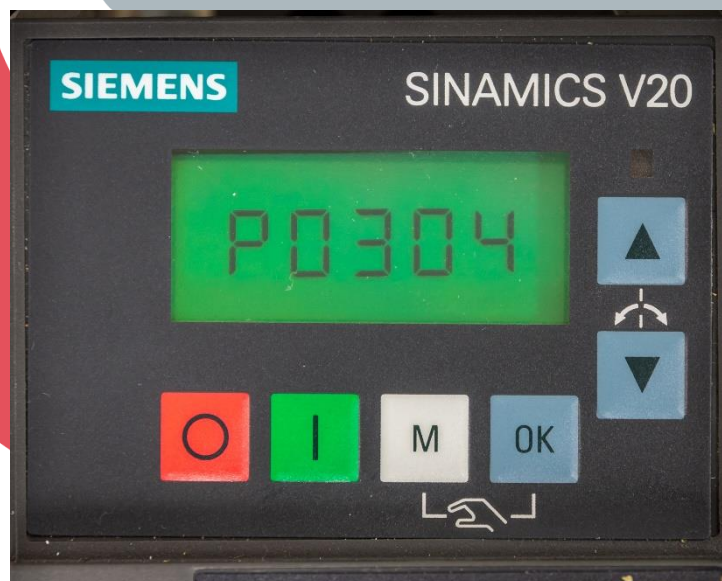
The display should have P0304 on it, this parameter is for the rated motor voltage. Press OK button.



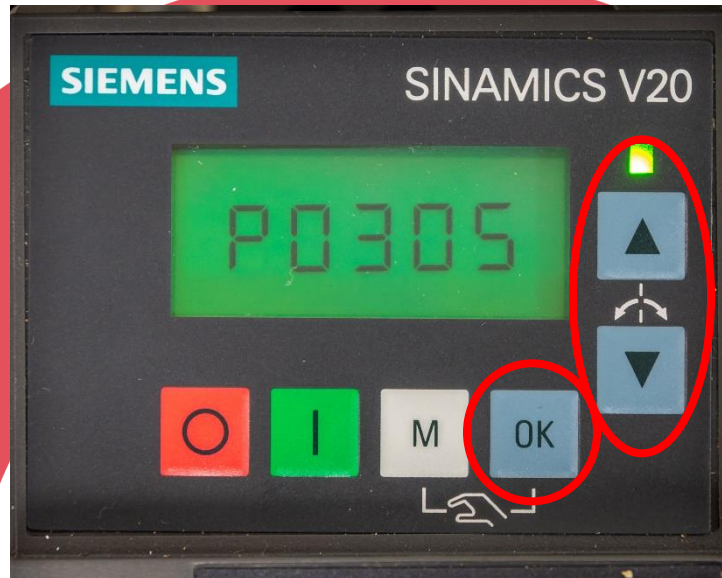
3. Change the Rated motor Voltage to the value on motor plate using the up and down buttons. Press OK button.



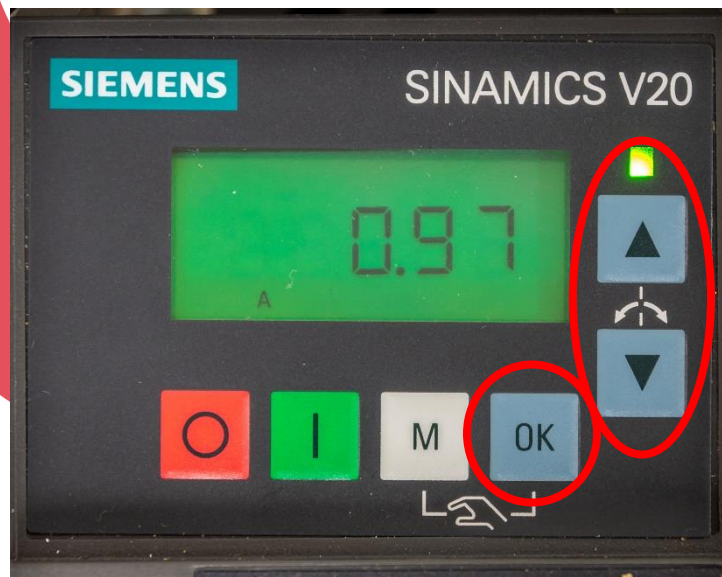
The display should say P0304.



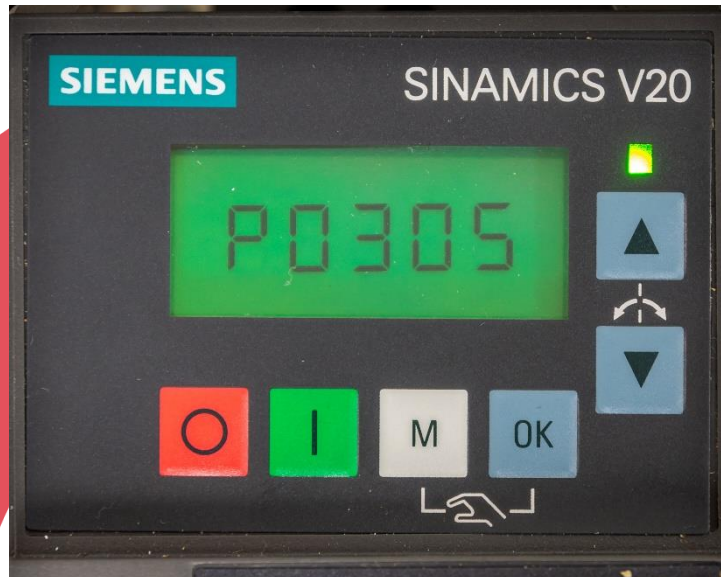
4. Find P0305 with the up and down buttons. This parameter is for the rated motor current. Press OK button.



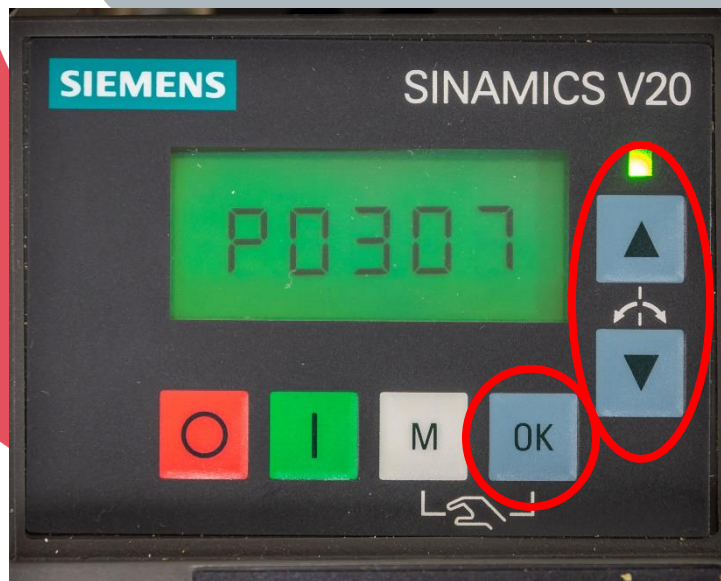
5. Change the rated motor current to the value on motor plate using the up and down buttons. Press OK button.



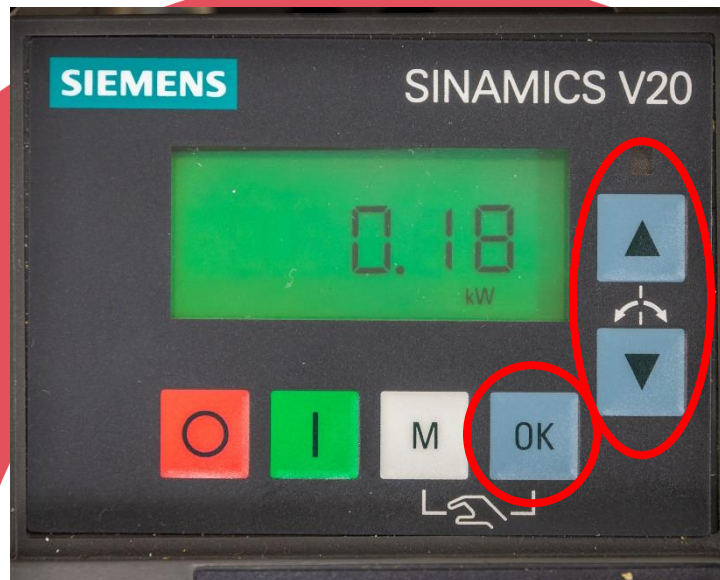
The display should say P0305.



6. Find P0307 with the up and down buttons. This parameter is for the rated motor power. Press OK button.



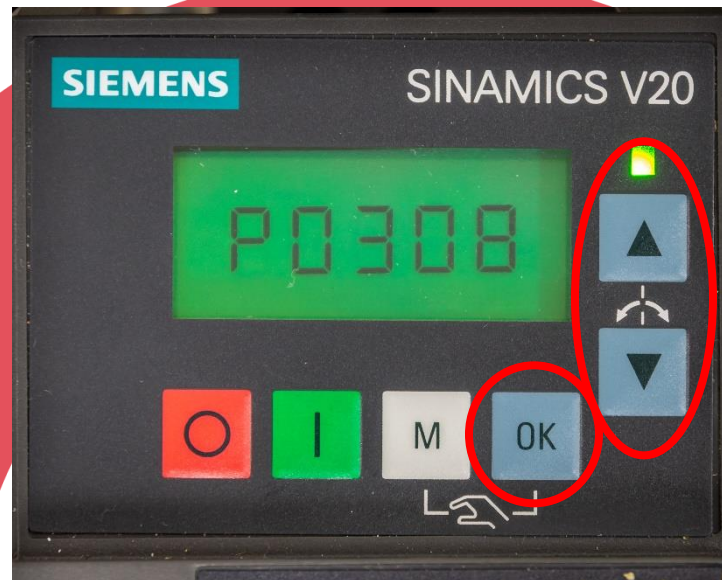
7. Change the rated motor power to the value on motor plate using the up and down buttons. Press OK button.



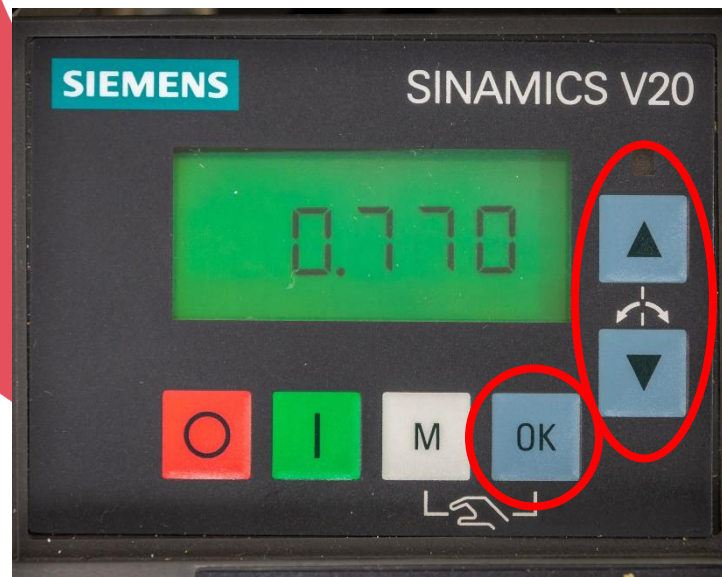
The display should say P0307.



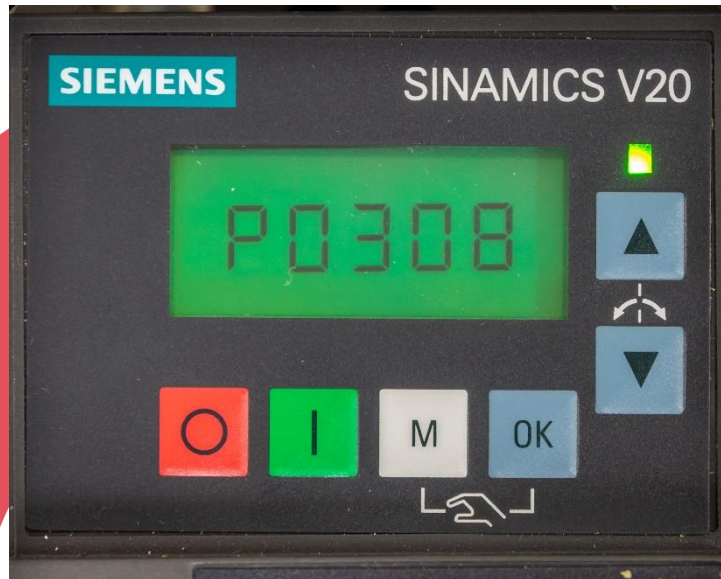
- Find P0308 with the up and down buttons. This parameter is for the rated motor $\cos\phi$ coefficient. Press OK button.



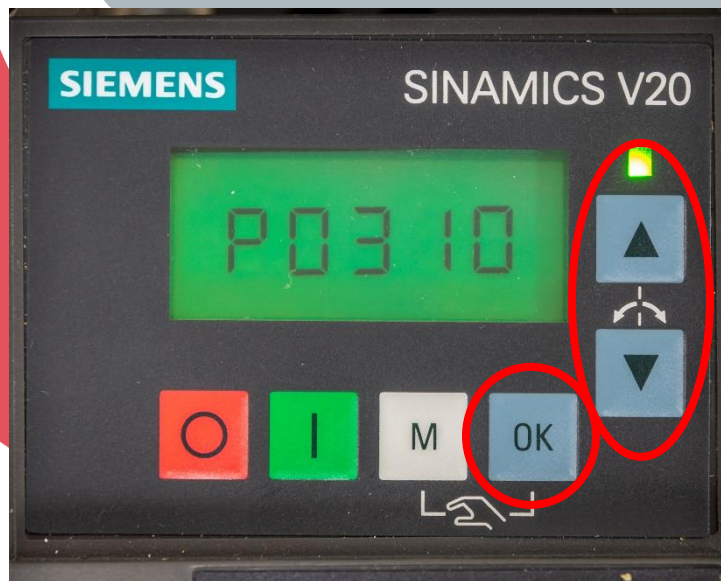
- Change the rated motor $\cos\phi$ coefficient to the value on motor plate using the up and down buttons. Press OK button.



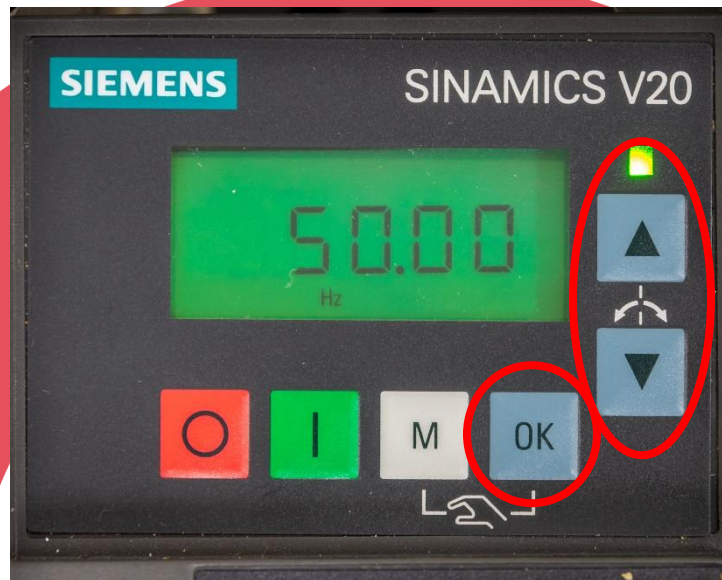
The display should say P0308.



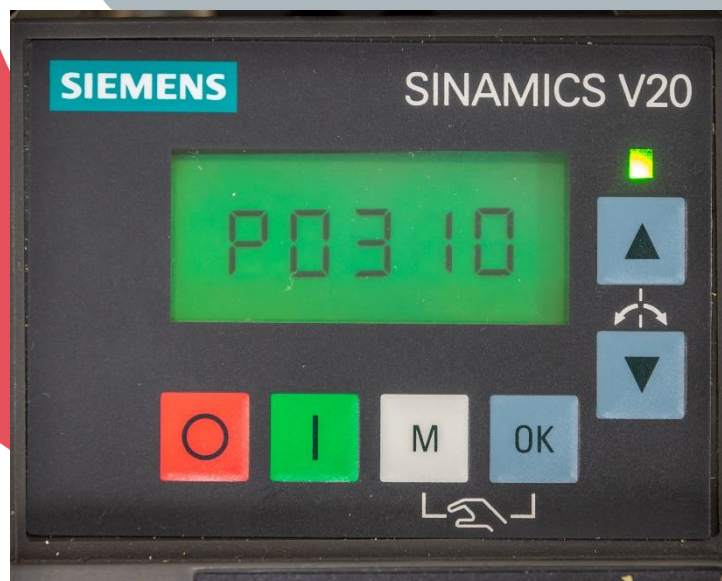
10. Find P0310 with the up and down buttons. This parameter is for the rated motor frequency. Press OK button.



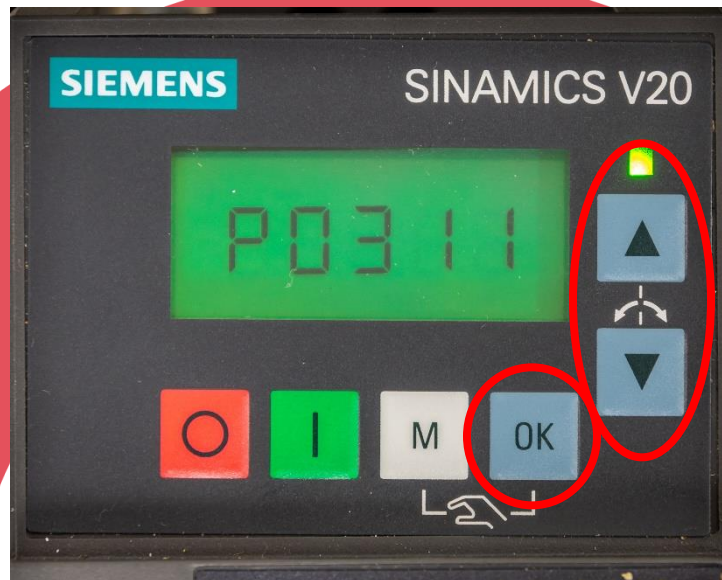
11. Change the rated motor frequency to the value on motor plate using the up and down buttons. Press OK button.



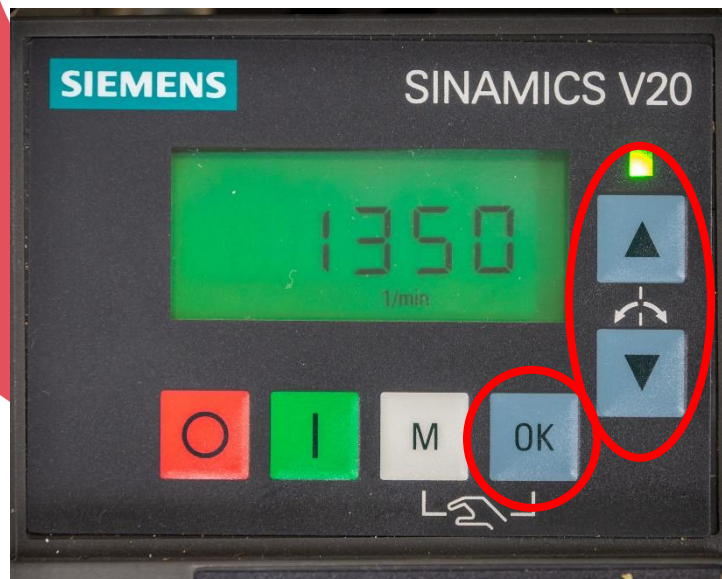
The display should say P0310.



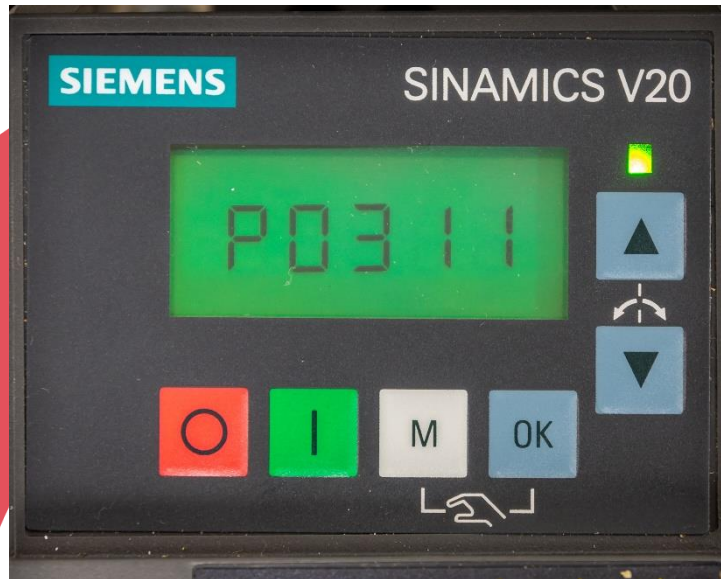
12. Find P0311 with the up and down buttons. This parameter is for the rated motor speed. Press OK button.



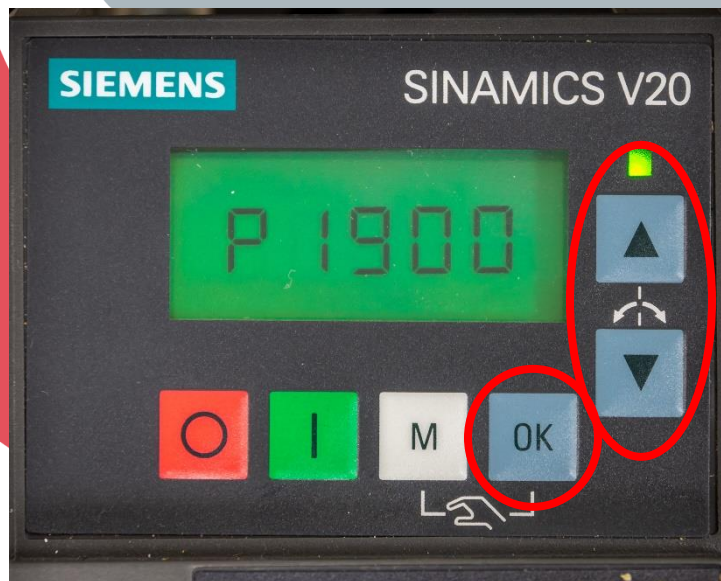
13. Change the rated motor speed to the value on motor plate using the up and down buttons. Press OK button.



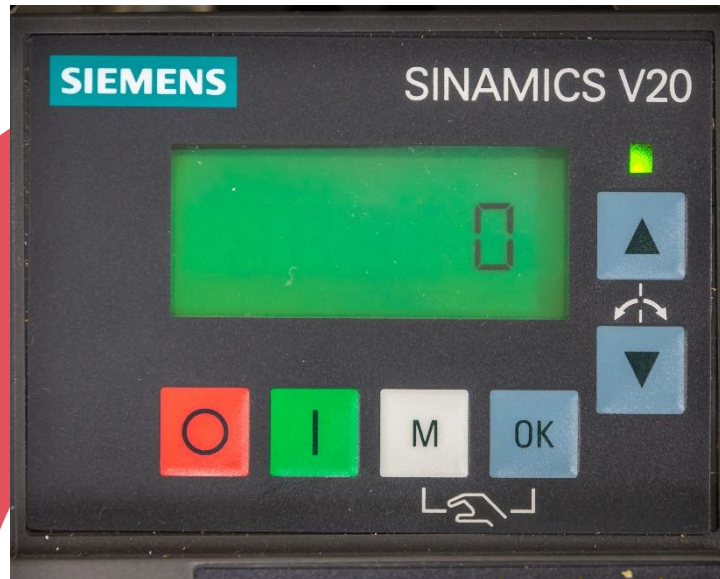
The display should say P0311.



14. Find P1900 with the up and down buttons. This parameter is used to select motor data identification. Press OK button.

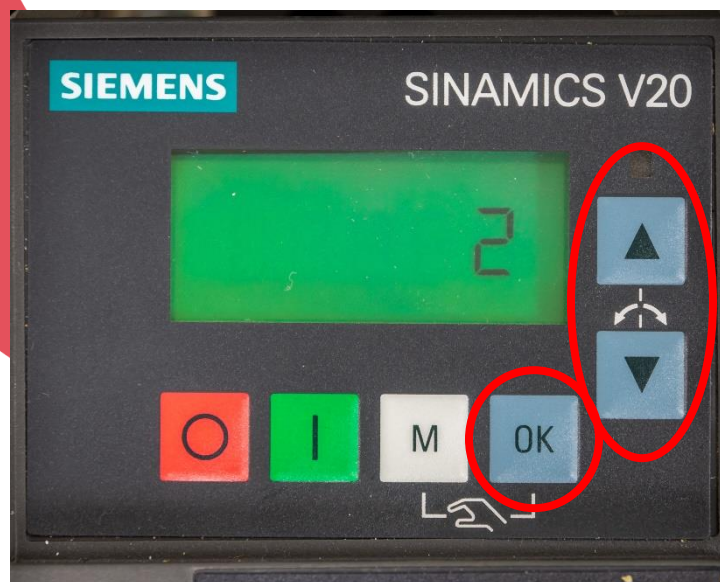


The display should say 0.

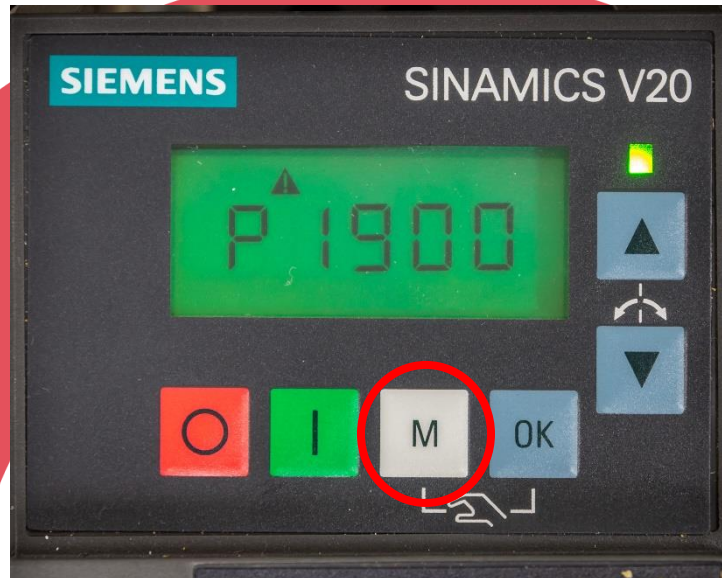


15. Change it to a "2" to select standstill identification. Then, press OK.

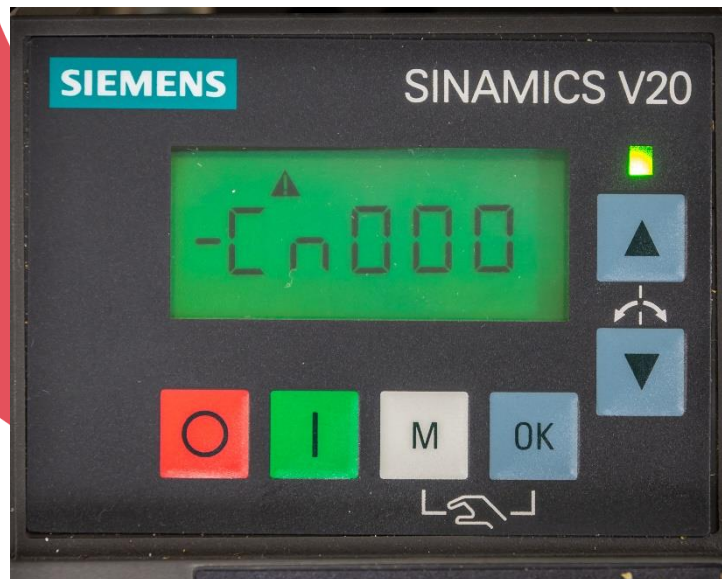
"0" would skip the identification but we highly recommend doing the standstill for optimal performance.



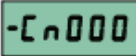
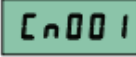
An alarm icon should appear on display. Press the M button once (<2 Sec) to select connection macros.

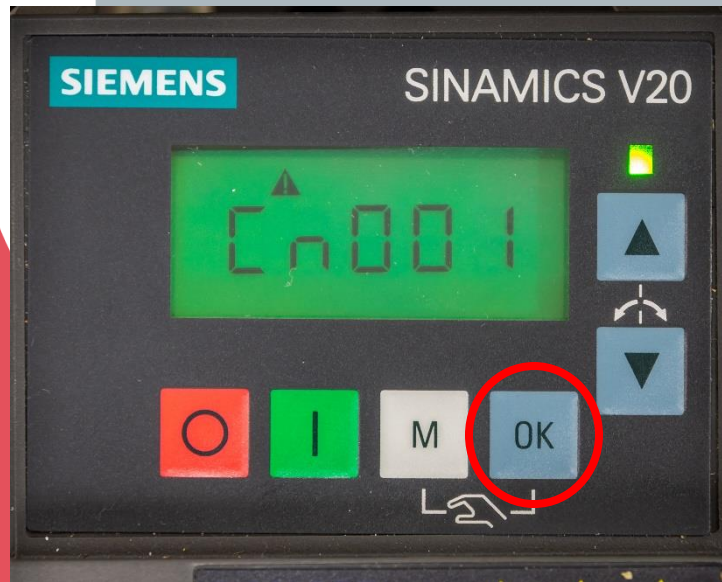


The display should say -Cn000 with an alarm icon.

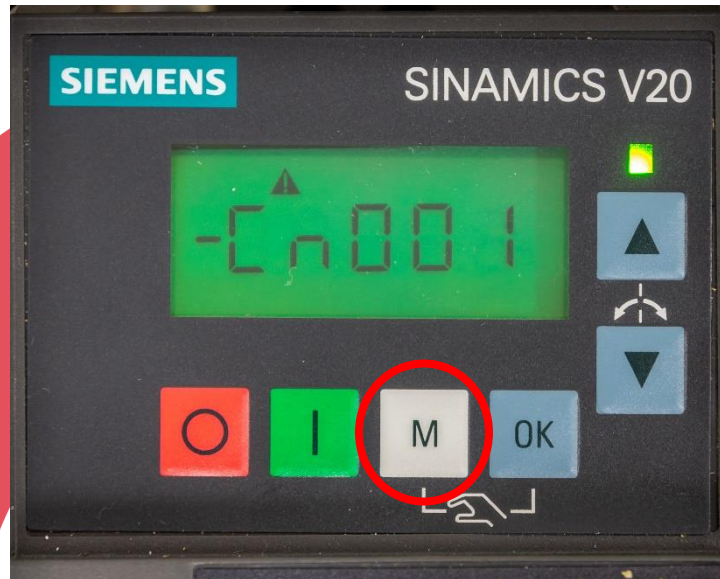


16. Select the connection macro that works with your application and wiring requirements. Then, press OK. There are 12 different option:

Connection macro	Description	Display example
Cn000	Factory default setting. Makes no parameter changes.	  The minus sign indicates that this macro is the currently selected macro.
Cn001	BOP as the only control source	
Cn002	Control from terminals (PNP / NPN)	
Cn003	Fixed speeds	
Cn004	Fixed speed binary mode	
Cn005	Analog input and fixed frequency	
Cn006	External push button control	
Cn007	External push button with analog setpoint	
Cn008	PID control with analog input reference	
Cn009	PID control with the fixed value reference	
Cn010	USS control	
Cn011	MODBUS RTU control	



17. Press the M button once (<2 Sec) to select application macros.

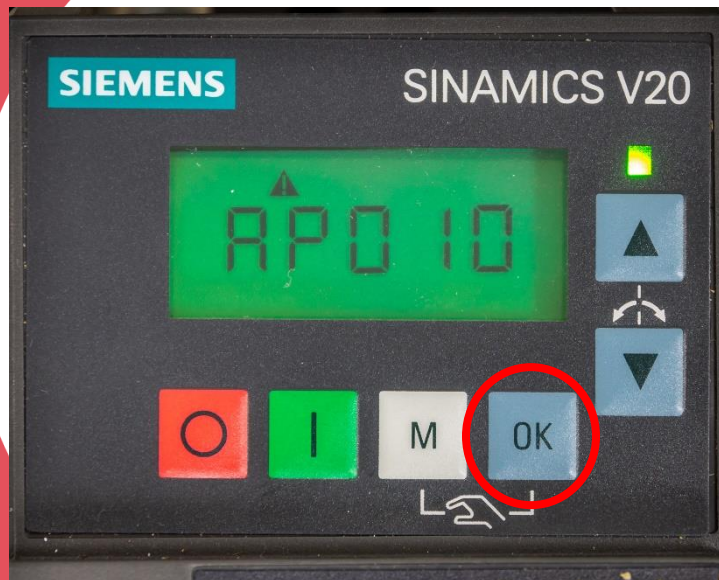


The display should say -AP000. The minus sign (-) indicated in front of the "A" shows the macro is the current selected.

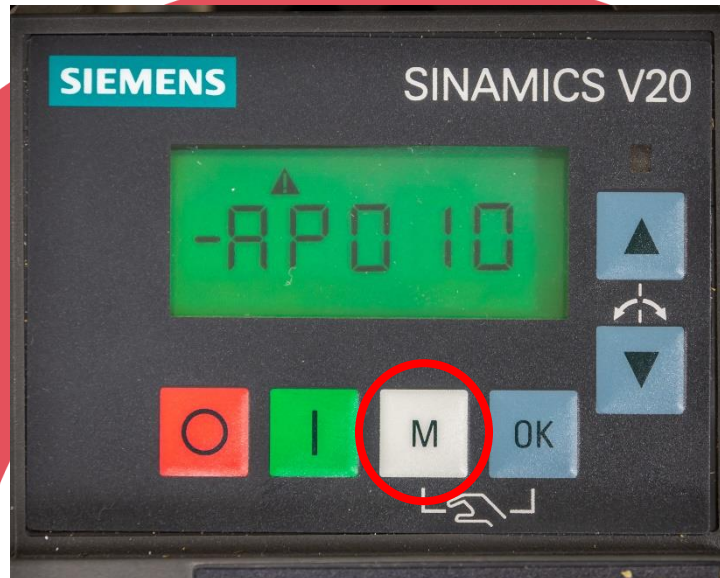


18. Select application most appropriate for the requirements. Then press OK. There are five different options:

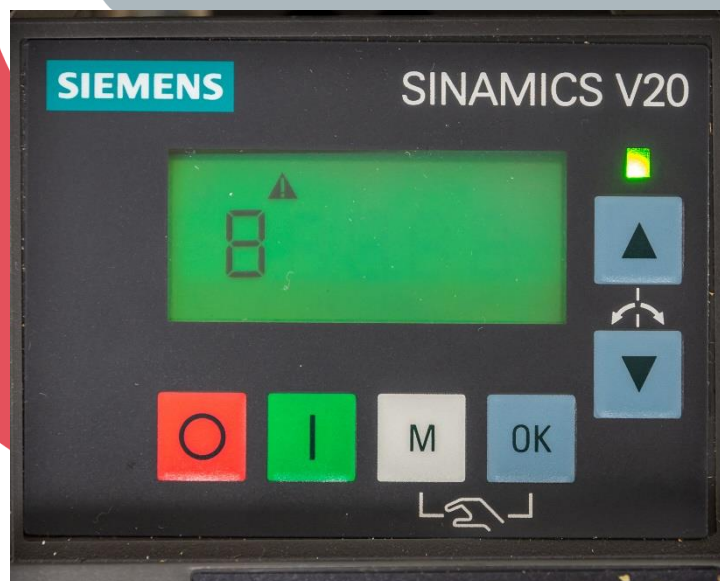
Application macro	Description	Display example
AP000	Factory default setting. Makes no parameter changes.	-AP000
AP010	Simple pump applications	
AP020	Simple fan applications	AP010
AP021	Compressor applications	
AP030	Conveyor applications	
		The minus sign indicates that this macro is the currently selected macro.



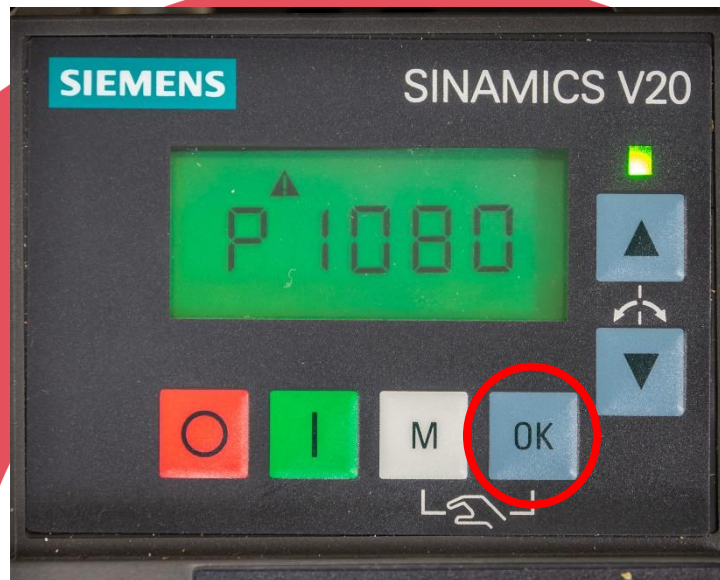
19. Press the M button once (<2 Sec) to set some common parameter for performance optimization.



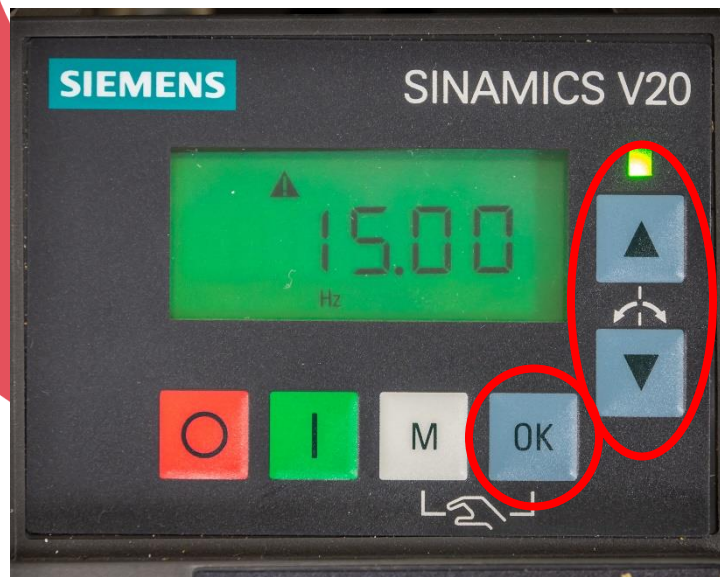
The display should briefly be filled with 88888.



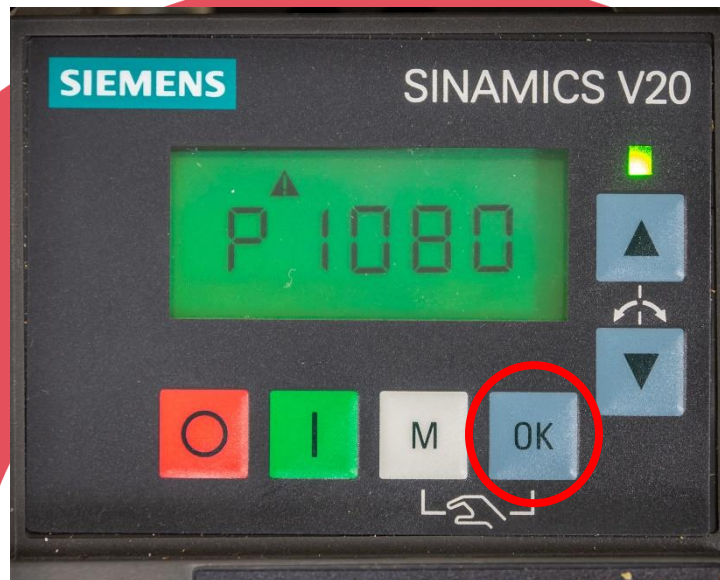
The display should have P1080 on it, this parameter is for the minimum motor frequency. Press OK button.



20. Change the minimum motor frequency to the value that works with your application using the up and down buttons. Press OK button.



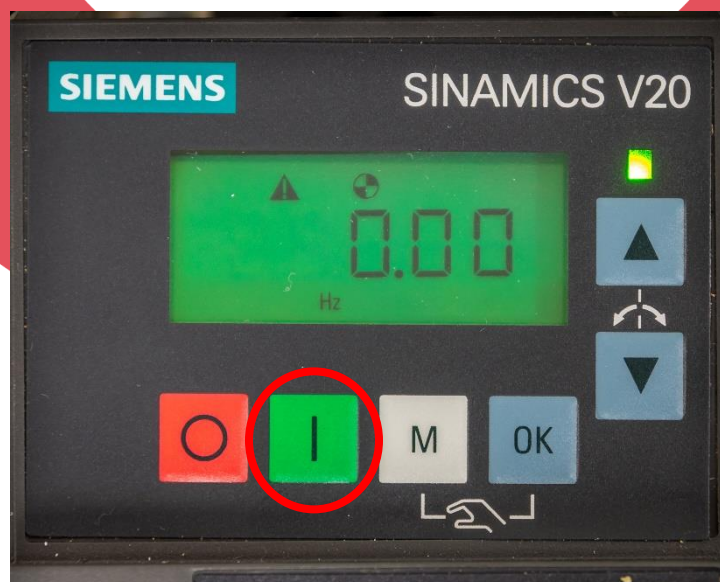
The display should say P1080. Press M button for more than two seconds to exit quick commissioning.



The Display should flash 5.00, 0.00, A541 with the alarm icon.

21. Press the green button once (<2 Sec) to initiate the motor ID tuning.

The drive will start making noise, and the display should have the alarm and running icon on it.



The motor ID tuning is done when the two icons disappear.



Your drive and motor are ready for operation.