Optidrive Applications Support Library

Application Note	AN-ODV-3-004
Title	Locking Parameters to Prevent Changes
Related Products	Optidrive Eco
Level

1 | 1 – Fundamental - No previous experience necessary
2 – Basic – Some Basic drives knowledge recommended
3 – Advanced – Some Basic drives knowledge required
4 – Expert – Good experience in topic of subject matter recommended |

Overview

Optidrive Eco incorporates a feature to prevent unauthorised changing of parameters. Once activated, parameters may be viewed but not changed. This is useful in cases where the commissioning engineer wishes to ensure that unwanted changes are prevented.

For complete security, this function can also be used in conjunction with the parameter access code to prevent unauthorised access to the locking parameter (unauthorised unlocking of the drive parameters).

Parameter Access Overview

Optidrive Eco has three levels of parameter access that are restricted by the code entered into parameter P1-14.

These access levels and default access codes are defined as follows:

P1-14 = Any value except those shown below   Level 1: Access to parameter group 1 only

P1-14 = P2-40 (Default : 101)   Level 2: Access to extended menu groups 0-5, and group 8

P1-14 = P6-30 (Default : 201)   Level 3: Access to all menu groups 0-9

To gain access to extended parameters, the appropriate value must be entered into the access parameter P1-14.

If desired, the user can may set their own access codes for level 1 or level 2 access to any value between 1 and 30,000, by simply changing the appropriate access code definition parameter.

Changing the access code for Extended Parameter Access:

Level 1 Extended Menu Access code is set in parameter P2-40

Access to extended parameters will only be permitted if the value in P1-14 equals the value set in P2-40.

Level 2 Advanced Menu Access code is set in parameter P6-30

Access to advanced (all) parameters will only be permitted if the value in P1-14 equals the value set in P6-30.

| ⚠️ | **NOTE:** When either of the menu access codes (P2-40 or P6-30) is changed then it must be retained in a safe location for further reference to allow further configuration or service.

Forgotten access codes can be cleared by returning the drive back to default settings. A default is performed by pressing STOP, UP and DOWN buttons simultaneously for more than 2 seconds. This will clear **all drive parameters,** including the security codes back to default values. |
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Write protecting the parameters

Unwanted parameter changes can be prevented by setting P2-39 = 1

By default this Parameter Access Lock parameter is set to 0. This means that parameters can be changed, and they are automatically saved on exit. When set to 1, Parameters values are locked and may be viewed depending on the access level setting, but cannot be changed.

When P2-39 = 1, the only parameters that may be changed are

- P1-14
- P2-39

By combining the access code parameter and lock parameter, parameters may be locked by setting P2-39 = 1, then access to the lock parameter hidden by setting P1-14 = 0. This means that to make any parameter changes, the user must know the correct access code and enter it into P1-14, then unlock parameters by setting P2-39 = 0.

Example 1: Preventing access to extended menus

Assuming that the drive is in factory default settings:-

Change the value of P1-14 to 101; the extended parameter group access is now available.

Change the value of P2-40 from 101 to 1234, the "Access Code" is now 1234.

Now if the user wants to access the extended parameter groups (any menu other than menu 1) then value 1234 must be entered into parameter P1-14

The only way to reset the access code defined in P2-40 without knowing the correct value and entering it into P1-14 is to carry out a full factory parameter default operation, which will reset all user parameter settings in the drive.

Example 2: Locking parameters to prevent editing

Enter the parameter access code into parameter P1-14 to access extended parameters (default – 101)

Change P2-39 to 1, so that all the parameters are locked (except P1-14).

Change P1-14 to 0 so that all parameter groups except the basic parameter group (group 1) cannot be accessed.

The parameters of the drive are now locked, and cannot be unlocked without changing P2-39 to 0. If P2-40 has also been changed to the user's preferred access code then parameter access can only be unlocked if the extended menu access code is known (which allows access to P2-39).

Note

If there is a Remote keypad module connected with the drive, setting P2-39 to 1 prevents all parameter access through the remote keypad. To allow parameter access via the keypad, set P2-39 back to zero using the drive keypad.

Appendix

Revision History			
Issue	Comments	Author	Date
01	Document Creation	KB	31/03/15