

16.2 Reloading individual parameters

The parameters **P 97 - PARA_DataSetLdCfg**, **P 98 - PARA_DataSetLdID** and **P 99 - PARA_DataSetLdVal** provide the option of adapting individual parameter values as needed.

The parameters and values to be loaded can be defined by means of special character strings and assigned to an associated data set ID. Determination of the data set ID can be accomplished by means of digital inputs, for example. One possible application would be storing two motor data sets in one device which can be switched over in dependence on a certain event.

16.2.1 Parameters used

P 97 - PARA_DataSetLdCfg

The parameter **P 97 - PARA_DataSetLdCfg** is used to activate the function and to make the general settings for the generation of the data set ID.

P 98 - PARA_DataSetLdID

The desired data set IDs are entered in **P 98 - PARA_DataSetLdID**. Up to 100 entries can be made (subindex 099).

P 99 - PARA_DataSetLdVal

The character strings associated with the respective data set IDs (linked via the subindex with P 98) which define the parameters and values to be loaded are entered in **P 99 - PARA_DataSetLdVal**.

16.2.2 Parameter list

ID	Index	Name/Setting	Unit	Description
97		PARA_DataSetLdCfg		DataSet Loader Configuration configuration
	0	Opt		Configuration options
		OFF (0)		Function not active
		ON(1)		Activate function
	1	FS:		Function selector
		0 = OFF		No data set ID is determined.
		1 = TERM		Determination via digital inputs (MPRO_INPUT_STATE & PARA_DataSetLdCfg[1])
		2 = PARA		The data set ID is determined from a selectable parameter. The value of the parameter (Para_ID/ParaSubID) is used to generate the data set ID.
	2	Mask		Bitmask
	3	ActID		Currently selected data set ID
	4	Para_ID		Parameter index for generating the data set ID (if FS=PARA)
	5	Para_SubID		Parameter subindex for generating the data set ID (if FS=PARA)
	6	Para_Scale		The parameter value is scaled (multiplication) for the generation of the data set ID using the value indicated.
	7	Para_Offset		Parameter offset for generating the data set ID
98		PARA_DataSetLdID		
	0-99	PARA_DataSetLdID		List of the possible data set IDs
99		PARA_DataSetLdVal		
	0-99	PARA_DataSetLdVal		Associated character strings which describe parameters and values which are to be changed

Table 16.5: Parameter "Reloading individual parameters"

Activation

The function is activated by the setting of the parameter **P 97 - PARA_DataSetLdCfg** [0] Opt = 1.

Determining the data set ID

The parameter **P 97 - PARA_DataSetLdCfg[1] FS** is the function selector and specifies which source is used for determining the data set ID.

The parameter **P 97 - PARA_DataSetLdCfg[2]** (= PARA_DataSetLd_Mask) functions in this case as the bitmask for selecting (e.g. the desired digital inputs).

The currently determined data set ID is displayed in parameter **P 97 - PARA_DataSetLdCfg[3]** (= ActID).

Manual allocation of the data set ID

If parameter **P 97 - PARA_DataSetLd_FS = OFF(0)**, then the data set ID can be allocated “manually.”

Every imaginable data set ID should be entered in parameter **P 98 - PARA_DataSetLdID[x]** at least once under any subindex desired.

Automatic data set ID determination

Using parameter **P 97 - PARA_DataSetLd_FS = PARA(2)**, the data set ID is determined automatically from the current value of the parameter specified by **P 97 - PARA_DataSetLdCfg[4]** and **P 97 - PARA_DataSetLdCfg[5]** and is entered in **P 97 - PARA_DataSetLd [3] = ActID**.

Using **P 97 - PARA_DataSetLdCfg[6] - Para_Scale** and **P 97 - PARA_DataSetLdCfg[7] - Para_Offset**, the parameter value is now first multiplied by “Para_Scale” and then “Para_Offset” is added. The resulting value is rounded to the nearest integer to obtain the data set ID.



NOTE

- Currently, only float32 parameters are supported. If the specified parameter cannot be read or if it is not a float32 parameter, the data set ID generated is always “0”.

Configuring the data set for the determined data set ID

The settings in parameters **P 98** and **P 99** must now be made for the data set ID that has been determined.

P 97 - PARA_DataSetLd [3] = ActID shows the currently determined or entered data set ID.

Enter this data set ID under **P 98 - PARA_DataSetLdID - Index X** e.g. in Index 1.

Select parameter **P 99 - PARA_DataSetLdVal - Index X**. This must be the same index as the index selected under **P 98 - PARA_DataSetLdID - Index X**.

For the selected index, now enter the configuration data for the parameters under “Value.”

This must have the syntax

<INDEX>,<SUBINDEX>,<VALUE>;<INDEX>,<SUBINDEX>,<VALUE>;

16.2.3 Procedure

Activate the function using:

P 97 - PARA_DataSetLdCfg[0] = 1

Generate the data set ID using:

P 97 - PARA_DataSetLdCfg[1] = 2

Set Para_ID and Para_SubID using **97 - PARA_DataSetLdCfg[4]** and **P 97 - PARA_DataSetLdCfg[5]**.

Set Para_Scale and Para_Offset using **97 - PARA_DataSetLdCfg[6]** and **P 97 - PARA_DataSetLdCfg[7]**.

The data set ID is now displayed under **97 - PARA_DataSetLdCfg[2] = ActID**.

Enter the determined data set ID under **P 98 - PARA_DataSetLdID[x] = Subindex X**.

Now enter the configuration of the parameter under **P 99 - PARA_DataSetLdID[x] = Subindex X**.

Compare the data set ID with elements of P 98- PARA_DataSetLdID[x]

The parameter **P 98 - PARA_DataSetLdID[x]**, which consists of 100 elements (0 . . . 99), is run through completely and the values of the elements are compared to the determined data set ID (determination as described above).

If the data set ID in parameter **P 98- PARA_DataSetLdID[x]** was not found at least once, an error 15-21 is triggered (“Dataset to be loaded is not valid!”). This error can be acknowledged and the drive can subsequently be put into operation.

If the data set ID is found in element x, the string in the associated parameter **P 99 - PARA_DataSetLdVal[x]** is interpreted. This must have the format

<INDEX>,<SUBINDEX>,<VALUE>;<INDEX>,<SUBINDEX>,<VALUE>;...

(length: max 100 characters each). The consecutively specified parameter values are loaded accordingly. If the string cannot be interpreted due to input errors, an error message is generated.

It is possible to specify the same data set ID in several elements, x1, x2, x3.... In this case, all strings are interpreted from **P 99 - PARA_DataSetLdVal[x1]**, **P 99 - PARA_DataSetLdVal[x2]**.... If a parameter is written more than once here, the last value specified is valid.

Loading the data set

Loading of the parameters is initiated by:

- starting the device
- a change in data set ID.

Functional example:

P 98 - PARA_DataSetLdID[x]	SubID P 98		SubID P 99	P 99 - PARA_DataSetLdVal[x]
123	0	↔	0	456,0,300;451,0,Testmotor
456	1	↔	1	456,0,350; 451,0,Supermotor
456	2	↔	2	320,0,0.01;;; 321,0,20;
456	3	↔	3	
65535	4	↔	4	
65535	5	↔	5	
65535	6	↔	6	
456	7	↔	7	360,0,1e3
65535	8	↔	8	
123	9	↔	9	
789	10	↔	10	
65535	11	↔	11	
...	...	↔
..	...	↔	..	
	99	↔	99	

Table 16.6: Functional example

If, for example, a data set ID with the ID “123” is determined, the parameters 456 [0]=300 and 451[0]=“Testmotor” are written sequentially. For an ID “456” 456[0]=350, 451[0]=“Supermotor”, 320[0]=0.01, 321[0]=20 and 360[0]=1000. All aforementioned data sets are valid, i.e. leaving entries blank is permissible as is the insertion of any number of spaces or “,” separators. The string can be closed with “,” but this is not required.

If an entry needs to be disabled temporarily for test purposes, it is recommended that a data set ID which does not exist be entered (e.g. 4294967295).

If there is to be NO parameter loaded for a certain data set ID in use, it is STILL recommended that an entry be made in any element of PARA_DataSetLdID[x], to avoid triggering the error “No dataset available for given ID.” In this case, the associated element in PARA_DataSetLdVal[x] can simply be left blank (in the

example above, this is the case for the actuator of ID “789”). This means that every data set ID used must be listed explicitly in order to prevent an incorrect data set from being active “inadvertently.”

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