MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

ABB

MFDT-01

HANDHELD DRIVE CONFIGURATION TOOL

Used with the applicable ABB FlashDrop MFDT-01 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: ABB FlashDrop User manual, technical data pp.51 to 52

Compatibility

The FlashDrop base unit is compatible with:

- **ACS150, drive firmware version 1.31b or later**
- **ACS350, drive firmware version 2.41a or later**
- **ACS550-01 and ACH550-01, drive firmware version 3.10b or later. There needs to be a FlashDrop connector in the drive under the control panel.**
- **DrivePM version 1.1 or later**

FlashDrop is non-compatible with older drive firmware versions. The use with older firmware is not allowed.

To find out the firmware version of your drive, see page *27*, or check the value of parameter 3301 FW VERSION in the drive.

To find out the firmware and hardware versions of your FlashDrop, see page *44*.

To create and edit FlashDrop parameter sets with the DrivePM PC tool or FlashDrop, correct templates are needed. Both DrivePM and FlashDrop templates can be downloaded from the ABB Internet site.

Safety instructions

Follow these safety instructions when using the FlashDrop.



WARNING! Ignoring the following instructions can cause physical injury or death, or damage to the equipment.

- Use the FlashDrop only with an unpowered drive.
- Do not use the FlashDrop if the cable is broken.

Installation and commissioning flowchart

Task	See/note
Unpack and check the units. Check the type code indicated on the type designation label against the original order.	*Unpacking*, page *12* *Type designation label*, page *12*
Charge the FlashDrop base unit.	*Charging*, page *15*
Specify clock settings for the FlashDrop. Adjust the display contrast, if necessary.	*How to set the date and time*, page *25* *How to adjust the display contrast*, page *26*
Check the compatibility. Check parameter table version and other properties.	*Safety instructions*, page *13* *Checking the properties and compatibility*, page *24*
Install the DrivePM tool. Confirm that your computer meets the minimum system requirements to install DrivePM tool. See DrivePM CD-ROM cover for requirements or readme.txt file in the root directory of the CD-ROM.	*How to install DrivePM tool, version 1.1 or later*, page *16* Note: Parameter templates supplied by DrivePM CD-ROM are also installed in dedicated DrivePM subfolders for ACS150, ACS350, ACS550 and ACH550 products.
Download the FlashDrop base unit parameter templates from the DrivePM to the FlashDrop.	How to download templates from the DrivePM to FlashDrop base unit, page *28*. Note: The delivered FlashDrop base unit does not include any parameter templates as default. The necessary templates need to be downloaded to FlashDrop. The editing of parameter set in FlashDrop base unit requires that appropriate parameter template is saved in FlashDrop base unit.
If necessary, download templates from the Internet and download to the FlashDrop.	*Checking the properties and compatibility*, page *24* *How to download templates from the Internet*, page *28*. Note: The downloading of templates from the Internet is necessary only when an appropriate template cannot be found in DrivePM subfolder.

Technical data

What this chapter contains

The chapter contains the technical specifications of the FlashDrop: weight, time of use with one charge, charge time, ambient conditions, materials, applicable standards and markings.

Weight

Approximately 0.4 kg (0.88 lb).

Time of use with one charge

Approximately four hours with typical use.

Charge time

Approximately 1.5 hours.

Ambient conditions

Temperature -10 to +40°C (14 to 104°F). No frost allowed.

Materials

Base unit and programming tip enclosure	PC/ABS 1.5…2.0 mm and PA66+25%GF 1.0 mm, all in colour NCS 1502-Y (RAL 9002 / PMS 420 C)
Panel	PC/ABS 1.5…2.0 mm, colour NCS 1502-Y (RAL 9002 / PMS 420 C) and PC 1.2 mm, clear
Package	Corrugated cardboard.
Disposal	The FlashDrop contains raw materials that should be recycled to preserve energy and natural resources. The package materials are environmentally compatible and recyclable. All metal parts can be recycled. The plastic parts can either be recycled or burned under controlled circumstances, according to local regulations. Most recyclable parts are marked with recycling marks. If recycling is not feasible, all parts excluding electrolytic capacitors and printed circuit boards can be landfilled. The DC capacitors contain electrolyte and the printed circuit boards contain lead, both of which are classified as hazardous waste within the EU. They, as well as batteries, must be removed and handled according to local regulations. For further information on environmental aspects and more detailed recycling instructions, please contact your local ABB distributor.

Applicable standards

The FlashDrop complies with the following standard:

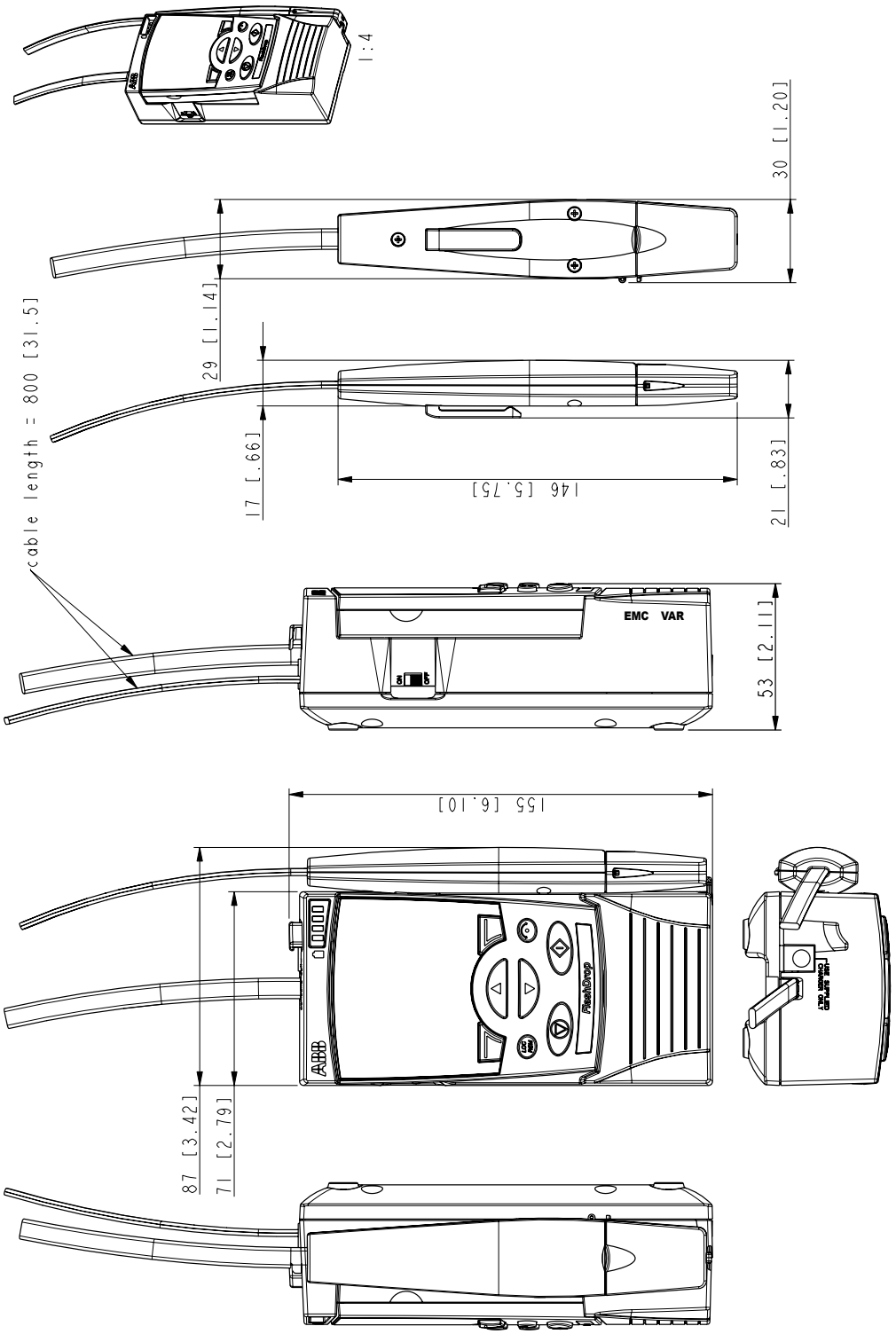
• IEC/EN 61800-3 (2004)	Adjustable speed electrical power drive systems. Part 3: EMC requirements and specific test methods

CE marking

The FlashDrop carries the CE marking.

Dimensions

The dimensional drawing of the FlashDrop is shown below. The dimensions are given in millimetres and [inches].



FlashDrop dimensions

Glossary

Parameter table

The parameter table is the feature of drive's firmware. The parameter table provides the parameters needed to define the user interface to a drive. The drive's parameters and their indexes, types, descriptive names, options, value ranges and selections, default values, dependencies on each other and action flags are defined in the drive firmware. All this data together is called as parameter table.

Parameter table version

The parameter table has version number (P3305) which has the same format as the drive firmware version (P3301). Whenever there is added new parameter in the parameter table or there are made other changes in attributes of the parameter table, the parameter table version is changed. Typically the parameter table version is changed when new drive firmware version is released.

Parameter template

The idea of parameter template is the same as with Power Point templates that are turned into presentations by adding more information to them. The template is the description of drive's parameter table for offline data processing purposes. For instance, the template makes it possible to edit the values of parameters in offline mode which is always the case when operating with FlashDrop base unit or DrivePM tool. The templates define all required parameter table attributes (e.g. descriptive names, value ranges and default values of parameters) in a form which is supported by both FlashDrop base unit and DrivePM tool.

The templates are parameter table version specific binary and ASCII files. When installing the DrivePM tool, the templates supplied by DrivePM CD-ROM are installed automatically in dedicated DrivePM subfolders. The template file name includes the parameter table version number. The templates supported by DrivePM tool have the file extension .par and the templates supported by FlashDrop base unit have the file extension .fdt. For example, the template file 251A_EUR_400V_Scalar_Industrial_En.par describes the parameter table of European version of 400V ACS350 drive when used in scalar control mode in a form that is supported by DrivePM tool and the file ACS350_251A_Eur_Scalar.fdt describes the same content in a form that is supported by FlashDrop base unit.

To ensure that FlashDrop parameter sets are always 100% compatible with the drive firmware, it is required that the target drive and the parameter set have exactly the same parameter table version. The parameter template is the base for the parameter set. Without template the creating and editing of a parameter set is not possible.

Parameter set

The parameter set stores the parameter values and visibility information together with header and template related information (e.g. set's name, author, creation date and time, drive type and rating, localization and control mode). Based on the use of selected template the FlashDrop parameter set is created with FlashDrop base unit or with DrivePM PC tool (and then downloaded to the base unit). The parameter set

can be downloaded from the FlashDrop base unit to a drive. During the next power up of a drive, the downloaded parameter set comes over to active parameter set, customizes drive's control panel view and updates the content of user sets and override set.

Size dependent / Size independent

The drive size dependent parameter set is compatible only with drives which size (rating) complies with the size of the set in question. The drive size independent parameter set can be downloaded in a drive without rating limitation.