

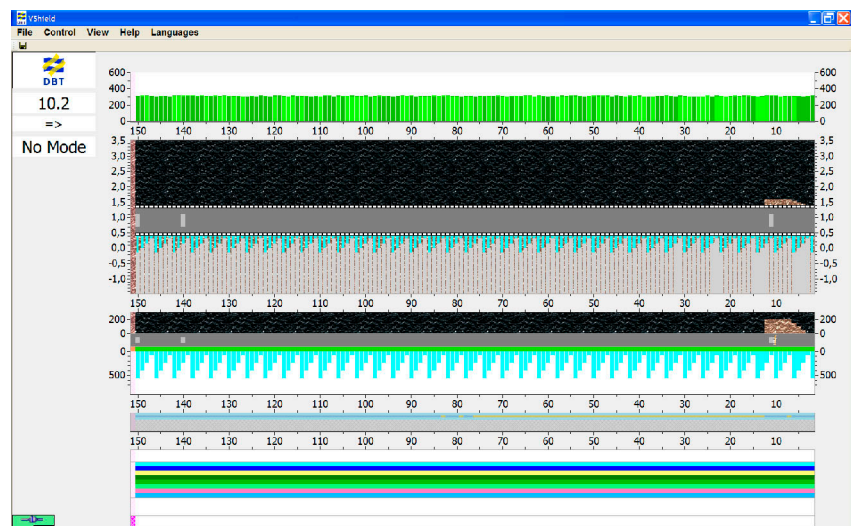
Reliability at work



Operating manual

**DBT - PMC[®]-R system
VShield central control
Version 10.56**

Doc. no.: 1999 001 013 BA 00



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2 Your safety





Storage and transport

This chapter contains important information on correct storage and secure transport of the PMC[®] components. Observance of the instructions and manuals will increase the service life and reliability of the system components. Reading this chapter thoroughly will help you to make your day-to-day work easier.



Notice!

Never store PMC[®] components and other electronic equipment outdoors under any circumstances.

In this operating manual, the storage of data storage media, the creation of backup copies and the archiving of software are specifically addressed.



Important!

Every data storage medium and the corresponding reading/writing device might have its own information material and operating manuals which should be read carefully. These instructions only provide a few general tips for storing data storage media.

Storage of data storage media

If software is not copied via data lines, the following types of data storage media are generally used:

- Diskettes
- CD or DVD
- Exchangeable disk media (for example, external USB hard disk)

Diskettes

The following damage diskettes or the stored data:

damaging effects

- Dirt and dust
- Magnetic fields
- Sunlight
- Heat (> 50 °C)
- Cold (< 10 °C)
- Moisture
- Bending the diskette

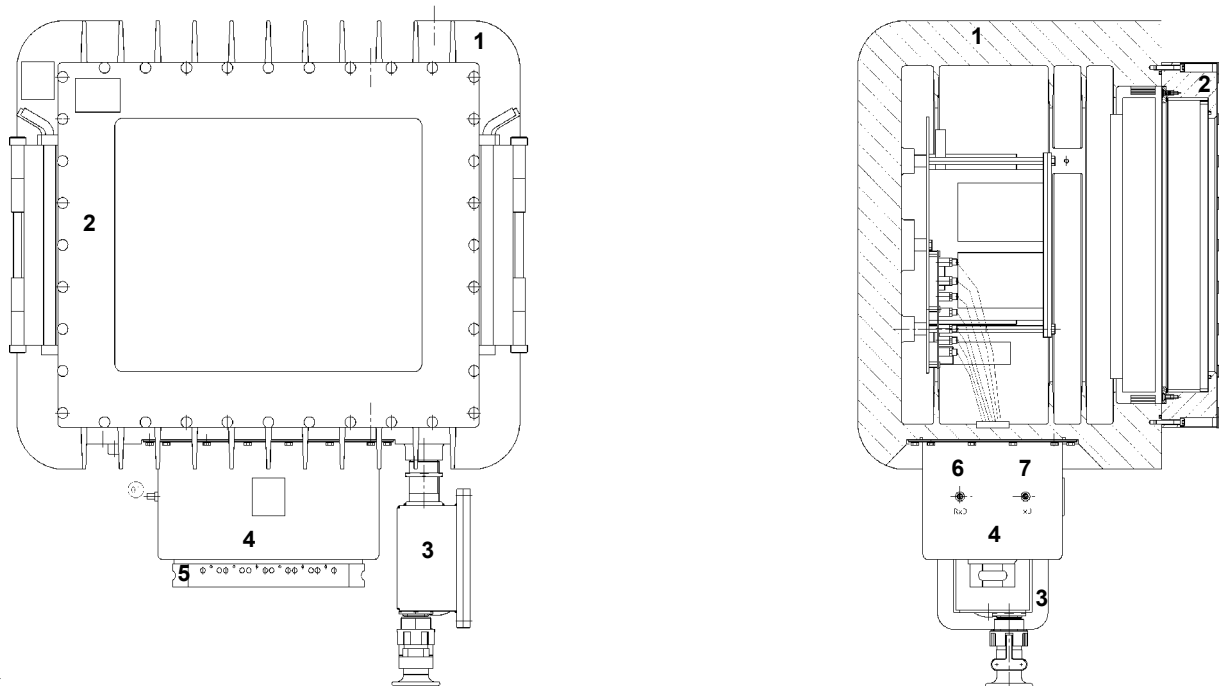
best storage place

The best place to store diskettes is in plastic or cardboard sleeves in a dust- and dirt-free, lockable metal cabinet in an air-conditioned room.

not a durable storage medium

Diskettes can be stored for up to 5 years, depending on the storage place, but they can be very easily damaged and are therefore not to be considered to be a durable storage medium.

Fig. 7: Explosion-proof central computer MCU2



- 1 = explosion-proof computer housing
- 2 = housing cover with viewing window
- 3 = terminal box
- 4 = ports for SKK24 connectors (mouse, keyboard, server,...)
- 5 = brass strip
- 6 = fiber-optic cable port Rx/D
- 7 = fiber-optic cable port Tx/D

The USB stick can then be connected to the ExPC underground. To do this, the cover of the terminal box (3) must be opened. Behind that there is a USB cable port to which the USB stick can be connected.



Important!
Before opening the terminal box, the PC must be shut off.
Before switching on again, the terminal box must be completely closed since otherwise there is no explosion protection.

The installation can be started by double-clicking on the file setup.exe.

Installation

The "VShield" program is installed by carrying out the following instructions one after another.

Procedure

☞ Copy the files included in the scope of delivery to a folder of your choice on the hard drive.

target folder for program file

☞ Start the "setup.exe" program.



- 1** Send data to the “VLongwall” program.
- Default value 0** Do not send any data.
- Example:
CheckVLongwall=0
- LoggingEnabled =** **Saving received data in a log file**
- The “VShield” program can save all received data in a log file. (see also SavePath parameter).
- The LoggingEnabled parameter can be assigned the following values:
- 1** Writing in the log file is switched on.
- default value 0** Writing in the log file is switched off.
- Example:
LoggingEnabled=0
- VShieldTrend** The program is notified here where the VShieldTrend program with which it communicates is stored.
- Example:
VShieldTrend =
C:\DBT\VCU\VShieldTrend\10_40__Build_2800\VShieldTrend.exe

[languages]section

The desired display language can be entered in the [languages] section by commenting in and out. This corresponds with the VShield###.dll files described in the scope of delivery section. Only those languages can be selected whose abbreviation appears as the place holder “###” in the file names.

Example:

Esp for Spanish: enable_spanish = 1

Deu for German: enable_german = 1

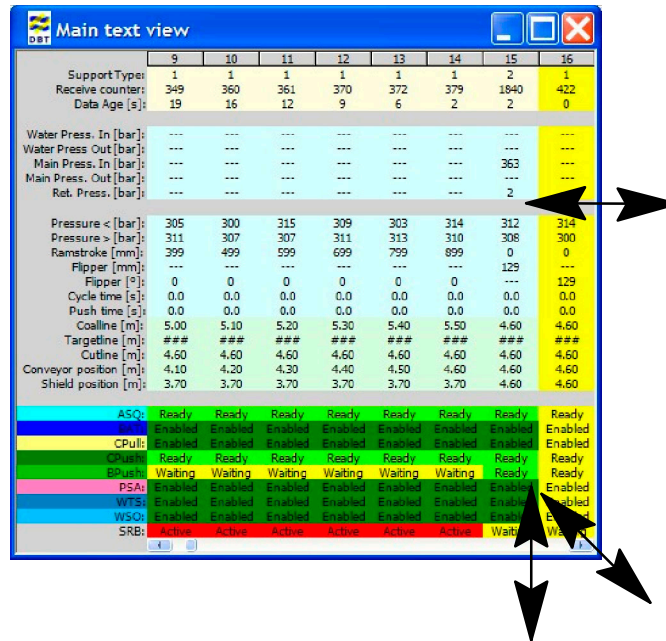
Enu for English: enable_english = 1

Further available options are:

- Russian
- Chinese
- Czech



Fig. 24: Changing the sizes of various windows

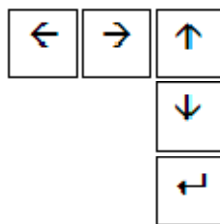


When the cursor changes form at the edge of the window, one can grab the edge of the window with the left mouse button and reduce or enlarge the size of the window.

Menu management without mouse connection

If no mouse should be present, the central control can also be operated completely using the keyboard.

Using the key combinations Alt together with the underlined letters in menu names, the corresponding menu is opened. For example:



The Control menu is opened with the key combination Alt+t.

The Data recording menu is opened with the key combination Alt+z.

With the up or down arrow keys, the blue cursor can be moved up or down.

With the left and right arrow keys, one can switch among the main menus.

Once a menu item is selected with the mouse or arrow keys, this can be opened by pressing the enter key.

Commands can also be directly executed by means of key combinations. For example. one can go directly into the menu "Input lines" with the key combination Ctrl+L. The key combinations can each be found after the respective submenu items.



SRB parameters

Fig. 41: SRB parameters

SRB PARAMETER							
Global							
S_Mode	BIDI	S_RoofSave #	3	S_TG push	65526	S_offset	10
S_RoofSave	OFF	S_save BP	7	S_autoseq #	10	S_pos_jump	3
S_flpext M>T	ON	S_BP type	1	S_enter MAIN	6	S_ref.dist	1
S_flpext T>M	ON	S_dist MAIN	7	S_enter TAIL	2	S_ref.perc.	875
S_flpret M>T	ON	S_dist TAIL	2	S_prev.off.	1	S_track [min]	5
S_flpret T>M	ON	S_ctd MAIN	4	S_flp.first	2	S_restart	5
S_ext T->M	500	S_ctd TAIL	4	S_flp.last	6	S_grp.mode MAIN	2
S_mode M->T	2	S_turn MAIN	5	S_flpret.dist	1	S_grp.mode TAIL	2
S_track		S_turn TAIL	5	S_flpext.dist	1		
S_first	1	S_push MAIN	16	S_abs	1		
S_last	8	S_push TAIL	65528	S_zone SER.	4		
S_save ASQ	8	S_MG push	18	S_zone MAN.	0		

Buttons: Send Global, Send Local, Cancel, Fetch Global, Fetch Local, Toggle selection

Fig. 41 shows the global SRB parameters. There is also a tab for local settings which can be selected analogously to the procedure described above. Here, generally applicable safety and type settings are made.



Important!

The shown parameters depend on the PMC®-R program to which the VShield program is linked.

Water spray parameters

WGB = Walzengassenbedüsung

WSP = Water Spray Parameters

Fig. 42 shows the dialog window for the water spray parameters.

Fig. 42: WSP parameters

WPS PARAMETER	
Global	
WSP_GRP	5
WSP_TMO	1000
WSP_SRB_TMO	1000
WSP drums	NONI
WSP offs.MDMS	1
WSP offs.MDTS	3
WSP offs.TDMS	2
WSP offs.TDTS	1

Buttons: Send Global, Send Local, Cancel, Fetch Global, Fetch Local, Toggle selection

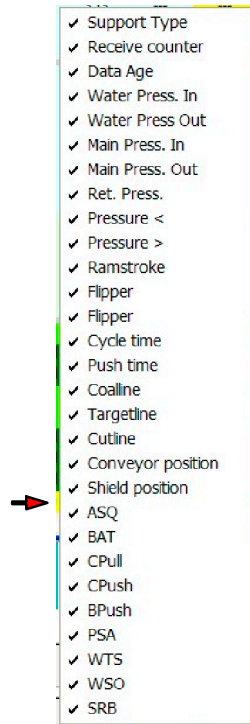
The individual parameters have different designations in the plow and shearer programs:



- Support type (1 for standard), other numbers for other support types, such as face edge shield, segment shield, etc.
- Receive counter for correctly received data telegrams
- Data age in seconds

These specifications are displayed in the white areas in the upper area of the screen. Underneath this follow a field for pressure and path displays.

Fig. 60: Pull-down menu in the “Main text view” window



The individual displays on the main text view can be activated/deactivated with the mouse pointer. The switching status (activated/deactivated) is indicated by a checkmark. A displayed checkmark indicates that it's activated. The “Flipper” parameter is listed twice. The first position switches the flipper display in [mm] on/off, and the second switches the display in degrees [°] on/off.

Starting with the list position “ASQ” (red arrow) a color-coded graphical display with text information about the automatic sequence is shown/hidden. Depending on the shearer position, the activated automatic functions are displayed in colors depending on the status.

The yellow area shown in Fig. 59, page 5.26 (vertical stripes) indicates the cursor position and can be changed with the “left” and “right” cursor keys. This way, the display for the entire face can be run through.

Color codes used for the automatic function displays:



- Autosequence
- Batch
- Pull conveyor
- Advance conveyor
- Backpush (advance conveyor group)
- PSA (positive set automatic)
- Water spraying device
- Shearer spraying
- Shearer running batch
- Automatic function ready
- Automatic function activated



Fig. 76: Feedback window for clearing error messages

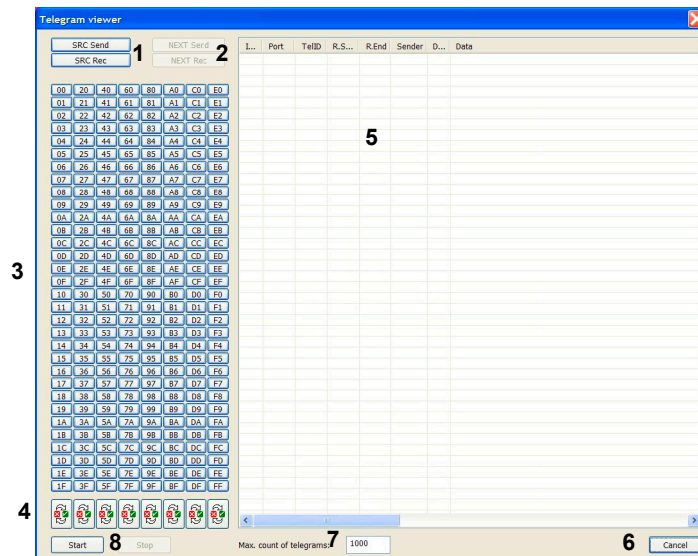


- 1 = confirmation of clearing error messages
- 2 = cancel and keep the error list

Telegram display

With the button (4), “T.View” (see Fig. 71 page 5.34), an information window is called up in which one can call up the communication data for every single PMC-R or groups of PMC-R control units.

Fig. 77: Telegram display



- 1 = selection button for sent or received telegrams for the face connection
- 2 = selection button for sent or received telegrams for the connection to another PC
- 3 = selection button for PMC-Rs
- 4 = group selection button (the respective column is selected via the selection button)
- 5 = list field for displayed telegrams
- 6 = close window
- 7 = maximum number
- 8 = start and stop buttons

The telegram types (sent or received) are selected with “1” or “2”.

In the button field (3), the PMC-R devices can be selected for which one wants to see the communication data (counting in hexadecimal numbers).

The individual devices can be selected by column with the group selection buttons (4).



Important!

If one first selected individual devices and then clicks on the group selection button, the previously selected devices are deselected and the non-selected devices selected (inversion function of group selection buttons).

The data of the activated devices are compiled in the list field (5) when the “Start” button (8) is clicked on.



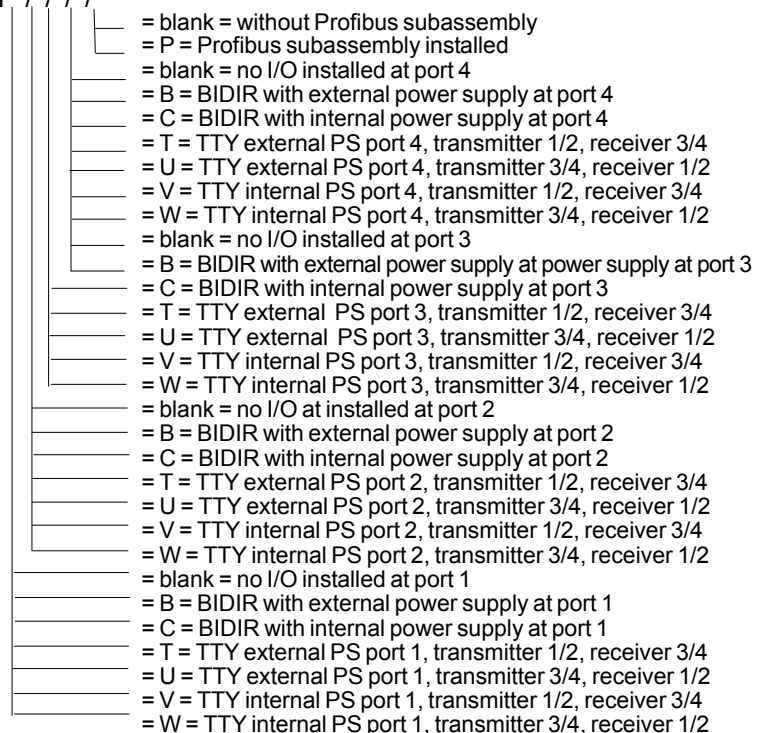
RAM memory 128 MB
 Data memory 1 GB Flash disk
 Hard disk 30 GB 2.5"
 Display 18"
 Resolution 1280:1024
 Operating system Windows 2000 PRO EN
 Input equipment keyboard with integrated mouse

Master Control Unit MCU-2I */*/*/*/*

Type key

The following type key is used:

MCU-2I */*/*/*/*



A few additional identification markings can be added without influencing the intrinsic safety.

Connections

The peripheral lines are electrically connected by clearly labeled connectors.

Commissioning, installation

- The device may be put into operation in Category M2.
- The power is connected via plug connectors. These may only be professionally installed.
- Unused connectors are to be sealed.
- The equipment is designed for the IP 54 protection type (when professionally attached to an external housing); in the event of harsh ambient conditions (e.g. sprayed water), the equipment must be additionally protected by the operator.

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