

### 8.2.7.4 Process data monitoring

**NOTE**

Please note the different parameter numbers for the types of unit with the older function classes FC (CU1), VC (CU2) and SC (CU3).

In order to make these differences clear, these parameter numbers are either printed in dark gray or have a dark-gray background.

P722.x (CB/TB TIgOFF)	P695 (CB/TB TIgOFF)
With parameter P722. / P695, you can determine whether entering of process data into the dual-port RAM by the CBP is to be monitored by the converter. For parameter P722 <ul style="list-style-type: none"> <li>◆ Index 1 is applicable for the first CBP and</li> <li>◆ Index 2 is applicable for the second CBP.</li> </ul> To determine which CBP is the first one and which is the second one, see section 8.2.5 "Mounting methods / CBP slots".	

If process data monitoring has been activated, a fault in the DP master is followed by a reaction of the converter, irrespective of the reply-monitoring time in the CBP.

&	P722.x ≠ 0	P722.x = 0	P695 ≠ 0	P695 = 0
Response monitor active	Reaction Yes	Reaction No	Reaction Yes	Reaction No
Response monitor inactive	Reaction No	Reaction No	Reaction No	Reaction No

Table 8.2-10 Process data monitoring depending on P722.1/P695 and the response monitor  $t_{WD}$

When the DP master is being configured, it is specified whether telegram traffic with the master is to be monitored by the slave (CBP). If response-monitoring is active, the PROFIBUS-DP master passes on a time value  $t_{WD}$  (watchdog time) to the Slave when a connection is made.

If the response-monitoring time expires, the CBP ceases to write process data into the dual-port RAM. When this is combined with P722.x / P695, it is therefore possible to plan your process data monitoring.

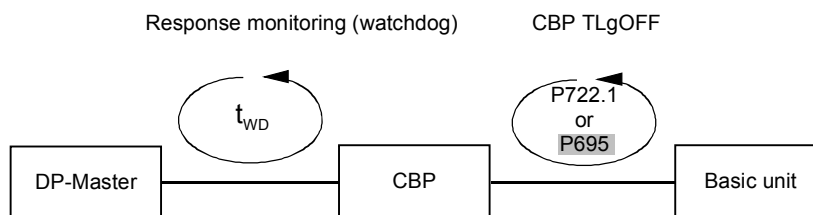


Fig. 8.2-23 Effect of  $t_{WD}$  and P722.1 / P695

		Response-monitoring time $t_{WD}$				
		Yes		No		
P722.x P695		CPU (AG) in STOP	IM308B/C in STOP or Simatic "Supply off"	CPU (AG) in STOP	IM 308B/C in STOP	Simatic "Supply off"
0 ms		Converter continues to run with the useful data last received. Alarm A083	Converter continues to run with the useful data last received. Alarm A083/A084	Converter continues to run with the useful data last received.	Converter continues to run with the useful data last received. Alarm A083	Converter continues to run with the useful data last received.
10 ms		Fault trip with F082 after: Watchdog time + 10 ms	Fault trip with F082 after: Watchdog time + 10 ms	Converter continues to run with the useful data last received. Fault trip with F082 after restart of CPU.	Fault trip with F082 after: 10 ms	Converter continues to run with the useful data last received.

Table 8.2-11 Interaction of P722 / P695 and response monitoring (watchdog)

Always set parameter P722 / P695 to the value of 10 for operation with the CBP. Monitoring of process data is thus activated/deactivated by the value of the response monitoring time solely by the PROFIBUS-DP master! The converter monitors the entering of process data in the dual-port RAM from the instant at which the CBP enters valid process data in the dual-port RAM for the first time. Fault F082 can only be tripped after this instant!

Process data whose complete control word (PZD1) has the value zero is not passed on to the dual-port RAM by the CBP (alarm A083)! From MASTERDRIVES MC V1.62 with CBP2  $V \geq 2.21$  and standard telegram 5 (PROFIdrive Profile V3 with equidistance) onwards, the process data can be transferred to the dual-port RAM irrespective of the content of the control word.

A fault is followed by a fault trip after

- ◆ Watchdog time + 10 ms
- ◆ The 10 ms correspond to the value 10 of parameter P722 / P695 and can be neglected with respect to the response-monitoring value.
- ◆ For additional operation with a Class II master, please bear in mind the information in the section "Diagnosis with the Class II master" of Chapter 8.2.10.5.

#### DANGER



If the "ON" command (bit 0) is interconnected with the dual-port RAM interface, the following must be done for safety reasons:

An "OFF2" or "OFF3" command must be additionally parameterized to the terminal strip/PMU as otherwise the converter cannot be powered down by means of a defined command when there is a communications breakdown!

### 8.2.8 Settings for the PROFIBUS-DP master (Class 1)

PROFIBUS units have different performance characteristics.

In order to ensure that all master systems can correctly communicate with the CBP in all the ways possible, the characteristic features of the CBP are summarized in the form of an electronic data sheet (data file).

These so-called master files describe the characteristic features of a type of unit clearly and completely in an exactly specified format.

For the different master systems, the characteristics are summarized in a standardized master file (GSD) and, for the SIMATIC, in a type-description file specific to the SIMATIC.

#### Master file (GSD)

The CBP2 from V2.21 onwards supports PROFIdrive version 3. The device master file (GSD) is stored as an ASCII file (SIO28045.GSD) on the floppy disk supplied with the CBP.

The GSD allows you to configure standard telegrams 1 to 6. It has been generated according to revision 4 for PROFIBUS DP-V2.

To ensure complete compatibility between CBP and CBP2 V2.10, PPO types can still be used for configuring purposes, as described below.

The CBP2 from V2.21 onwards can also be operated on the device master file for the CBP and CBP2 V2.1 (SIEM8045.GSD).

#### Type-description file

The type-description file is also available as an ASCII file (SI8045AX.200 and SI8045TD.200) on the floppy disk which accompanies the CBP.