

# KOM Archive - properties

## Archive file

The KOM Archive file containing the saved values is named "**KOMARC.KCD**" and it is placed in the application subdirectory **KOMARC**. The **KOMARC** directory is created automatically if needed. The KOM Archive functions as a circular buffer so that values are saved in the buffer when the [D2000 KOM](#) process is in offline mode (to save disks - so it is not store-and-forward, but forward-or-store). The oldest values are rewritten by the new ones. The buffer is common for all objects, which means that it is not divided for the individual I/O tags, but all incoming values of I/O tags are written in the sequence as they came.

The archive file is divided into the header (at the beginning of the file) and blocks with saved values. The header contains information about blocks of values (number of written values, write times,...). Each block with data allows a saving of about 1500 values. The number of blocks is limited by the file size (parameter */KA*). Each block is protected by a checksum. Block writing onto the disk is performed only when it is full or after a timeout (1 minute) has elapsed. Values saved in offline mode are specially labeled and sent into the D2000 system after establishing a connection to the [D2000 Server](#) process.

## Data reading

Based on the value of */KM<ArchiveMode>* parameter of the [D2000 KOM](#) process, a mode of sending values from the buffer into the D2000 system will be determined. The value of the parameter *ArchivMode* may be:

- 1 - (implicit value) for automatic sending of values after starting the [D2000 KOM](#) process (if any values acquired in the offline mode are found in KOM Archive) or after reconnection to Server (values acquired while the [D2000 KOM](#) process operates in offline mode).
- 2 - values are sent only when requested by the Tell command [READKOMARC](#).

## Logfile

Together with "KOMARC.KCD", "**KOMARC.LOG**" will be created in the same directory. It is text-based and it contains the following information stored together with the time and date of creation:

- Information about the file creation,
- Information about errors during KOM Archive functioning (incorrect checksums, errors of system calls, ...).
- Information about performed data reading transactions (transaction type, read-out data interval, ...)

## Possible risks

Data writing into KOM Archive puts a minimal burden on the operating system (minimal disk operations, most operations are executed in the RAM). Sufficient free disk space is necessary to for the creation of the archive file. It is created immediately with the required size (parameter */KA*) and its size will not be changed later.

A problem may occur in *ArchivMode* mode 1, if too many values are sent into the D2000 system and the [D2000 Archiv](#) is consequently overloaded and its functioning is hindered. Another problem may occur when the [D2000 Archiv](#) process is not running while sending values from the [D2000 KOM](#) process. In such cases, we recommend switching the *ArchivMode* mode to 2 and to control the KOM Archive reading via a special event using the Tell command [READKOMARC](#). The event should handle the abovementioned problems, e.g. monitoring of the [D2000 Archiv](#) process, batch reading of the **KOM Archive**, the [D2000 Archiv](#) load monitoring, etc.



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