ASDU 252 Unival in IEC 870-5-104 and IEC 870-5-104 Server communication protocols

Since version D2000 v7.1.0, release A050525000, a new ASDU 252 has been implemented into the communication protocols IEC 870-5-104 and IEC 870-5-104 Server. The ASDU 252 allows data transfer between two D2000 Systems, one of them uses the protocol **IEC 870-5-104** and the other one uses **IEC 870-5-104 Server**.
ASDU 252 should be used if you need to transfer:

- values along with their user attributes (flags),
- values of *Text*, *Relative time,* and *Absolute time* type,
- analog values with 32-bit accuracy,
- values of basic object attributes *ValueLimitStatus* and/or ValueProcAlarmStatus (very rarely).

Required configuration

- the types of output I/O tag and respective input I/O tag must be the same (Ao-Ai, Dout-Di, TxtO-TxtI, ...)
- configuration of output I/O tag must be set to ASDU 252 (the tab Address, the parameter **ASDU type**)

Note for patches from 19.5.2023 and later: if the respective input and output I/O tags are not of the same type, the conversion will take place, and at the same time a warning will be saved in the line log.

Communication station parameters:

Keyword	Full name	Meaning	Unit	Default value
D2CLS	D2000 Copy Limit Status	The parameter is set on the station that is the parent of input I/O tags for which the partner station sends ASDU 252. Such I/O tag then ignores its defined limits and copies the *ValueLimitStatus* (basic object attribute) of its control object. If there are configured process alarms for input I/O tag, they will be evaluated according to the *ValueLimitStatus* copied from the control object. **Note:** The parameter ***D2VCO*** must be set on the partner station.	-	False
D2CPA	D2000 Copy Process Alarms	The parameter is set on the station that is the parent of input I/O tags for which the partner station sends ASDU 252. Such I/O tag then ignores its configuration and copies process alarms of the control object of partner output I/O tag. **Note:** The parameter ***D2VCO*** must be set on the partner station.	-	False
D2VCO	D2000 ASDU Value from Control Object	The parameter is set on the station that is the parent of output I/O tags with defined ASDU 252. If a control object is defined for such I/O tag, then the value of the control object is sent to communication as the output value (along with its basic object attributes - *ValueType*, *ValueTime*, *ValueStatus*, *ValueLimitStatus*, *ValueProcAlarmStatus*, ...). **Warning:** In this case, there are ignored all configuration of output I/O tag concerning process alarms, limits and value conversion ! Value of output I/O tag seems to be correct within D2000 system, but there is sent "raw" value of control object into communication. **Note:** To send "raw" value of control object, the value types of control object and output I/O tag must be the same, otherwise there is sent ordinary output value. This behavior was modified in patches from 19.5.2023 and later - the value is always sent.	-	False

Notes:

- The parameters **D2CLS** and **D2CPA** allow getting values of process alarms and *ValueLimitStatus* of control object only (not given I/O tag) - because process alarms and *ValueLimitStatus* of I/O tag are being set after its writing.
- Implemented functionality (combination of the parameters **D2CLS**, **D2CPA** and **D2VCO**) may cause the value of output I/O tag to be "inconsistent" (e.g. value is in IN_LIMIT status and there is the process alarm HL active at the same time). !!! WE RECOMMEND TO USE IT CAREFULLY !!!

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