ABB Totalflow: All files CSV formats

File formats described include:

- Global Totalflow Applications Definitions
- EFM Periodic Mapping Files
- Array-Register Templates
  - INI Backed
  - Free Form

Global Totalflow Applications Definitions

An example of the Totalflow Application Definitions file can be found here: TotalflowApplicationsDefinitions.csv

These mappings are CSV files with the following values:

- Enumeration number
- Name
- Type
- An optional flag (SU) that indicates that this is a 'Selectable Unit' application
- Part number(s)

Below is the file example:

4, AGA3 Tube App,TUBE,, 2100779, 2100780, 2101305, 2101306, 2103845, 2100905,2100906, 2101786, 2101787, 2102418, 2103155
5, AGA7 Tube App, TUBE, , 2100781, 2101307
7, Trend, SYSTEM,, 2100787, 2101309
20, SU Gas Orifice Tube App, TUBE, SU, 2100877, 2101426, 2102078, 2103741, 2104483, 2104484, 2104485, 2104508, 2104509
21, SU Turbine Tube App,TUBE,SU,2100878,2102079,2103262, 2103742,2104486
100, Simulated I/O, SIM, , 2101301

EFM Periodic Mapping Files

The Cirrus Link default EFM Periodic Mapping file can be used as a reference point for configuring the EFM ABB Totalflow module.

The periodic mapping files are used for building up EFM Periodic and Daily History Records.

Each row of such file maps specific field of LOG_PERIOD or DAILY records to a database column name. It also allows user to turn a database column off. In other words if column is disabled, respective filed will not be 'recordized'.

These mappings are CSV files with the following values:

- Array Number
  - Array number (i.e. 250 for the LOG_PERIOD_RECORD and 251 for DAILY_RECORD)
- Application Enumeration
  - List of application enumerations this mapping entry should be applied. If empty, the mapping entry is applicable to any application.
- Record Field Offset
  - Field offset within the record
- Data Type
  - Field data type
- Description
  - Field description
- Column Name
  - Column name to use
- Enabled
  - A flag that turns this field 'on/off'. In other words it defines if this field should be recordized.

Below is a mapping example for the LOG_PERIOD_RECORD:

```
# arrayNum, appEnum, offset, data type, description, column name, enabled
250,4|20,6,FLOAT,Average Differential Pressure,dp_avg,enabled
250,5|21,6,FLOAT,Pulse Counts,pulses,enabled
250,,10,FLOAT,Average Static Pressure,sp_avg,enabled
250,,14,FLOAT,Average Temperature,temp_avg,enabled
250,5|21,18,FLOAT,Uncorrected Volume,raw_vol,enabled
250,,22,FLOAT,Volume,volume,enabled
250,,26,FLOAT,Heating Value,heating_value,enabled
250,,30,UINT16,Flow Time,flo,enabled
250,,32,UINT16,Period Time,flo_rate,enabled
```

Array-Register Templates

INI Backed Array-Register Templates

INI-backed_ArrayRegisterTemplates.csv file example

```
Custom AGA3 Tube App[4_2101306]!
3,0,Static Pressure,enabled
3,3,Temperature,enabled
3,17,Ft for NX19 Fpv,enabled
3,18,Fp for NX19 Fpv,enabled
3,19,Heating Value at Tb and Pb,enabled
3,20,Real Relative Density at Tb and Pb,enabled
3,21,N2,enabled
3,22,CO2,enabled
3,23,H2S,enabled
3,24,H2O,enabled
3,25,Helium,enabled
3,26,Methane,enabled
3,27,Ethane,enabled
3,28,Propane,enabled
3,29,N-Butane,enabled
3,30,I-Butane,enabled
3,31,N-Pentane,enabled
3,32,I-Pentane,enabled
3,33,N-Hexane,enabled
3,34,N-Heptane,enabled
3,35,N-Octane,enabled
3,36,N-Nonane,enabled
3,37,N-Decane,enabled
3,38,Oxygen,enabled
3,39,Carbon Monoxide,enabled
3,40,Hydrogen,enabled
3,41,Argon,enabled
3,71,Energy,enabled
3,72,Energy 3_72,enabled
3,73,Energy Rate,enabled
3,84,Energy 3_84,enabled
7,0,Diff Pressure,enabled
7,19,Flow Rate,enabled
7,20,Volume,enabled
7,21,Volume 7_21,enabled
7,22,Volume 7_22,enabled
7,23,Volume 7_23,enabled
7,62,Energy 7_62,enabled
7,68,Mass Rate,enabled
7,69,Mass,enabled
7,70,Mass 7_70,enabled
7,72,Mass 7_72,enabled
7,73,Mass 7_73,enabled
```

Free Form Array-Register Templates

Free-Form_ArrayRegisterTemplates.csv file example

Custom AGA3 Tube App[-1_-1]!
3,0,Static Pressure,enabled,R/O,FLOAT,Current Values
3,3,Temperature,enabled,R/O,FLOAT,Current Values
3,17,Ft for NX19 Fpv,enabled,R/W,FLOAT,Fixed Analysis Data
3,18,Fp for NX19 Fpv,enabled,R/W,FLOAT,Fixed Analysis Data
3,19,Heating Value at Tb and Pb,enabled,R/W,FLOAT,Fixed Analysis Data
3,20,Real Relative Density at Tb and Pb,enabled,R/W,FLOAT,Fixed Analysis Data
3,21,N2,enabled,R/W,FLOAT,Fixed Analysis Data
3,22,CO2,enabled,R/W,FLOAT,Fixed Analysis Data
3,23,H2S,enabled,R/W,FLOAT,Fixed Analysis Data
3,24,H2O,enabled,R/W,FLOAT,Fixed Analysis Data
3,25,Helium,enabled,R/W,FLOAT,Fixed Analysis Data
3,26,Methane,enabled,R/W,FLOAT,Fixed Analysis Data
3,27,Ethane,enabled,R/W,FLOAT,Fixed Analysis Data
3,28,Propane,enabled,R/W,FLOAT,Fixed Analysis Data
3,29,N-Butane,enabled,R/W,FLOAT,Fixed Analysis Data
3,30,I-Butane,enabled,R/W,FLOAT,Fixed Analysis Data
3,31,N-Pentane,enabled,R/W,FLOAT,Fixed Analysis Data
3,32,I-Pentane,enabled,R/W,FLOAT,Fixed Analysis Data
3,33,N-Hexane,enabled,R/W,FLOAT,Fixed Analysis Data
3,34,N-Heptane,enabled,R/W,FLOAT,Fixed Analysis Data
3,35,N-Octane,enabled,R/W,FLOAT,Fixed Analysis Data
3,36,N-Nonane,enabled,R/W,FLOAT,Fixed Analysis Data
3,37,N-Decane,enabled,R/W,FLOAT,Fixed Analysis Data
3,38,Oxygen,enabled,R/W,FLOAT,Fixed Analysis Data
3,39,Carbon Monoxide,enabled,R/W,FLOAT,Fixed Analysis Data
3,40,Hydrogen,enabled,R/W,FLOAT,Fixed Analysis Data
3,41,Argon,enabled,R/W,FLOAT,Fixed Analysis Data
3,71,Energy,enabled,R/O,FLOAT,Current Values
3,72,Energy 3_72,enabled,R/O,FLOAT,Current Values
3,73,Energy Rate,enabled,R/O,FLOAT,Current Values
3,84,Energy 3_84,enabled,R/O,FLOAT,Current Values
7,0,Diff Pressure,enabled,R/O,FLOAT,Current Values
7,19,Flow Rate,enabled,R/O,FLOAT,Current Values
7,20,Volume,enabled,R/O,FLOAT,Current Values
7,21,Volume 7_21,enabled,R/O,FLOAT,Current Values
7,22,Volume 7_22,enabled,R/O,FLOAT,Current Values
7,23,Volume 7_23,enabled,R/O,FLOAT,Current Values
7,62,Energy 7_62,enabled,R/O,FLOAT,Current Values
7,68,Mass Rate,enabled,R/O,FLOAT,Current Values
7,69,Mass,enabled,R/O,FLOAT,Current Values
7,70,Mass 7_70,enabled,R/O,FLOAT,Current Values
7,72,Mass 7_72,enabled,R/O,FLOAT,Current Values
7,73,Mass 7_73,enabled,R/O,FLOAT,Current Values