10.5. CIP – Consumer Information Push

The E-meter supports a local interface for consumer information (H1)

The functionality and security definition is following the IDIS specification [D].

Please refer to the following chapter of the IDIS package 2 specifications [D]:
- 6.11.3 Security on the Consumer Information Interface

and
- 6.11.4 CIP System Title and Error Handling

Chapter 2.2 specifies the physical parameters and the data transport layer of the communication protocol.
The following objects support this functionality:

Object / Attribute Name	Class	Ver.	OBIS code
Push action scheduler - Consumer Information	22	0	0-4:15.0.4.255
Push setup - Consumer Information	40	0	0-6:25.9.0.255

Table 49: CIP Objects

Chapter 2.2 specifies the physical parameters and the data transport layer of the communication protocol.

Push action scheduler - Consumer Information
The action scheduler allows the configuration of the interval for the data push to the customer interface. This object allows up to 60 execution times in order to allow for an interval of down to 1 second.
An empty array represents the deactivation of this interface.

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Default value is 5 seconds

Push setup - Consumer Information

This object defines the data elements for pushing to the customer interface. It's specified as a configurable list with up to 20 possible entries.

The following data must be pushed to the customer by default:

- Clock, attribute 1 – OBIS code
- Clock, attribute 2 – time
- Device ID 1 manufacturing number, attribute 0 – OBIS code, serial number
- COSEM logical device name, attribute 0 – OBIS code, logical device number
- Instantaneous voltage L1, attribute 0 – OBIS code, value, scalar and unit
- Instantaneous voltage L2, attribute 0 – OBIS code, value, scalar and unit
- Instantaneous voltage L3, attribute 0 – OBIS code, value, scalar and unit
- Instantaneous current L1, attribute 0 – OBIS code, value, scalar and unit
- Instantaneous current L2, attribute 0 – OBIS code, value, scalar and unit
- Instantaneous current L3, attribute 0 – OBIS code, value, scalar and unit
- Instantaneous active import power (+P), attribute 0 – OBIS code, value, scalar and unit
- Instantaneous active export power (-P), attribute 0 – OBIS code, value, scalar and unit
- Active energy import (+A), attribute 0 – OBIS code, value, scalar and unit
- Active energy export (-A), attribute 0 – OBIS code, value, scalar and unit
- Reactive energy import (+R), attribute 0 – OBIS code, value, scalar and unit
- Reactive energy export (-R), attribute 0 – OBIS code, value, scalar and unit

The setup object allows as well the configuration of the destination and the sending method.
For the transmission via wired M-Bus, the following setting apply:

- transport_service: 201
  This number is manufacturer specific and here used for wired M-Bus transport service
- destination: 0-2:24.6.0.255:FF:00;
  - Contains the logical_name of the M-Bus master port setup - Consumer Information Interface, octet string (6)
  - The Link Layer Address (LLA), unsigned8
  - Transport Layer Address (CI TL), unsigned8

The individual fields are separated by (':'). The separators are ASCII coded

- Message: 0
  A-XDR encoded xDLMS APDU,

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