Description of OBIS code for IEC 62056 standard protocol

The OBIS code identifies the corresponding device value. It is a text string composed according to the OBIS standard (see IEC 62056-61).

Older and simpler variant is the EDIS code. This code, for example, does not cover the groups A and B (see further).

This code is used in the PROMOTIC system for the PmIEC62056 communication driver. The driver, after receiving the message of the Readout - Values readout type, saves the large text string into the "ResultList" variable. The OBIS value code is located at the beginning of each row in the string.

The code consists of (up to) 6 group sub-identifiers marked by letters A to F. All these may or may not be present in the identifier (e.g. groups A and B are often omitted). In order to decide to which group the sub-identifier belongs, the groups are separated by unique separators:

A-B:C.D.E*F

- The A group specifies the medium (0=abstract objects, 1=electricity, 6=heat, 7=gas, 8=water ...)
- The B group specifies the channel. Each device with multiple channels generating measurement results, can separate the results into the channels.
- The C group specifies the physical value (current, voltage, energy, level, temperature, ...)
- The D group specifies the quantity computation result of specific algorythm
- The E group specifies the measurement type defined by groups A to D into individual measurements (e.g. switching ranges)
- The F group separates the results partly defined by groups A to E. The typical usage is the specification of individual time ranges.

Examples of code usage:

OBIS code	Description
Active energy registers:	
1.8.0	Positive active energy (A+) total [kWh]
1.8.1	Positive active energy (A+) in tariff T1 [kWh]
1.8.2	Positive active energy (A+) in tariff T2 [kWh]
1.8.3	Positive active energy (A+) in tariff T3 [kWh]
1.8.4	Positive active energy (A+) in tariff T4 [kWh]
2.8.0	Negative active energy (A+) total [kWh]
2.8.1	Negative active energy (A+) in tariff T1 [kWh]
2.8.2	Negative active energy (A+) in tariff T2 [kWh]
2.8.3	Negative active energy (A+) in tariff T3 [kWh]
2.8.4	Negative active energy (A+) in tariff T4 [kWh]
15.8.0	Absolute active energy (A+) total [kWh]
15.8.1	Absolute active energy (A+) in tariff T1 [kWh]
15.8.2	Absolute active energy (A+) in tariff T2 [kWh]
15.8.3	Absolute active energy (A+) in tariff T3 [kWh]
15.8.4	Absolute active energy (A+) in tariff T4 [kWh]
16.8.0	Sum active energy without reverse blockade (A+ - A-) total [kWh]
16.8.	Sum active energy without reverse blockade (A+ - A-) in tariff T1 [kWh]
16.8.2	Sum active energy without reverse blockade (A+ - A-) in tariff T2 [kWh]
16.8.3	Sum active energy without reverse blockade (A+ - A-) in tariff T3 [kWh]
16.8.4	Sum active energy without reverse blockade (A+ - A-) in tariff T4 [kWh]
2. Reactive energy registers	
3.8.0	Positive reactive energy (Q+) total [kvarh]
3.8.1	Positive reactive energy (Q+) in tariff T1 [kvarh]
3.8.2	Positive reactive energy (Q+) in tariff T2 [kvarh]
3.8.3	Positive reactive energy (Q+) in tariff T3 [kvarh]
3.8.4	Positive reactive energy (Q+) in tariff T4 [kvarh]
4.8.0	Negative reactive energy (Q-) total [kvarh]
4.8.1	Negative reactive energy (Q-) in tariff T1 [kvarh]
4.8.2	Negative reactive energy (Q-) in tariff T2 [kvarh]
4.8.3	Negative reactive energy (Q-) in tariff T3 [kvarh]
4.8.4	Negative reactive energy (Q-) in tariff T4 [kvarh]
5.8.0	Imported inductive reactive energy in 1-st quadrant (Q1) total [kvarh]
5.8.1	Imported inductive reactive energy in 1-st quadrant (Q1) in tariff T1 [kvarh]
5.8.2	Imported inductive reactive energy in 1-st quadrant (Q1) in tariff T2 [kvarh]
5.8.3	Imported inductive reactive energy in 1-st quadrant (Q1) in tariff T3 [kvarh]
5.8.4	Imported inductive reactive energy in 1-st quadrant (Q1) in tariff T4 [kvarh]
6.8.0	Imported capacitive reactive energy in 2-nd quadrant (Q2) total [kvarh]
6.8.1	Imported capacitive reactive energy in 2-nd quadr. (Q2) in tariff T1 [kvarh]
6.8.2	Imported capacitive reactive energy in 2-nd quadr. (Q2) in tariff T2 [kvarh]
6.8.3	Imported capacitive reactive energy in 2-nd quadr. (Q2) in tariff T3 [kvarh]
6.8.4	Imported capacitive reactive energy in 2-nd quadr. (Q2) in tariff T4 [kvarh]
7.8.0	Exported inductive reactive energy in 3-rd quadrant (Q3) total [kvarh]
7.8.1	Exported inductive reactive energy in 3-rd quadrant (Q3) in tariff T1 [kvarh]
7.8.2	Exported inductive reactive energy in 3-rd quadrant (Q3) in tariff T2 [kvarh]
7.8.3	Exported inductive reactive energy in 3-rd quadrant (Q3) in tariff T3 [kvarh]
7.8.4	Exported inductive reactive energy in 3-rd quadrant (Q3) in tariff T4 [kvarh]
8.8.0	Exported capacitive reactive energy in 4-th quadrant (Q4) total [kvarh]
8.8.1	Exported capacitive reactive energy in 4-th quadr. (Q4) in tariff T1 [kvarh]
8.8.2	Exported capacitive reactive energy in 4-th quadr. (Q4) in tariff T2 [kvarh]
8.8.3	Exported capacitive reactive energy in 4-th quadr. (Q4) in tariff T3 [kvarh]
8.8.4	Exported capacitive reactive energy in 4-th quadr. (Q4) in tariff T4 [kvarh]
3. Apparent energy registers	
9.8.0	Apparent energy (S+) total [kVAh]
9.8.1	Apparent energy (S+) in tariff T1 [kVAh]
9.8.2	Apparent energy (S+) in tariff T2 [kVAh]
9.8.3	Apparent energy (S+) in tariff T3 [kVAh]

9.8.4	Apparent energy (S+) in tariff T4 [kVAh]
4. Registers of active energy per phases	
21.8.0	Positive active energy (A+) in phase L1 total [kWh]
41.8.0	Positive active energy (A+) in phase L2 total [kWh]
61.8.0	Positive active energy (A+) in phase L3 total [kWh]
22.8.0	Negative active energy (A-) in phase L1 total [kWh]
42.8.0	Negative active energy (A-) in phase L2 total [kWh]
62.8.0	Negative active energy (A-) in phase L3 total [kWh]
35.8.0	Absolute active energy (|A|) in phase L1 total [kWh]
55.8.0	Absolute active energy (|A|) in phase L2 total [kWh]
75.8.0	Absolute active energy (|A|) in phase L3 total [kWh]
5. Maximum demand registers:	
1.6.0	Positive active maximum demand (A+) total [kW]
1.6.1	Positive active maximum demand (A+) in tariff T1 [kW]
1.6.2	Positive active maximum demand (A+) in tariff T2 [kW]
1.6.3	Positive active maximum demand (A+) in tariff T3 [kW]
1.6.4	Positive active maximum demand (A+) in tariff T4 [kW]
2.6.0	Negative active maximum demand (A-) total [kW]
2.6.1	Negative active maximum demand (A-) in tariff T1 [kW]
2.6.2	Negative active maximum demand (A-) in tariff T2 [kW]
2.6.3	Negative active maximum demand (A-) in tariff T3 [kW]
2.6.4	Negative active maximum demand (A-) in tariff T4 [kW]
15.6.0	Absolute active maximum demand (|A|) total [kW]
15.6.1	Absolute active maximum demand (|A|) in tariff T1 [kW]
15.6.2	Absolute active maximum demand (|A|) in tariff T2 [kW]
15.6.3	Absolute active maximum demand (|A|) in tariff T3 [kW]
15.6.4	Absolute active maximum demand (|A|) in tariff T4 [kW]
3.6.0	Positive reactive maximum demand (Q+) total [kvar]
4.6.0	Negative reactive maximum demand (Q-) total [kvar]
5.6.0	Reactive maximum demand in Q1 (Q1) total [kvar]
6.6.0	Reactive maximum demand in Q2 (Q2) total [kvar]
7.6.0	Reactive maximum demand in Q3 (Q3) total [kvar]
8.6.0	Reactive maximum demand in Q4 (Q4) total [kvar]
9.6.0	Apparent maximum demand (S+) total [kVA]
6. Cumulative maximum demand registers	
1.2.0	Positive active cumulative maximum demand (A+) total [kW]
1.2.1	Positive active cumulative maximum demand (A+) in tariff T1 [kW]
1.2.2	Positive active cumulative maximum demand (A+) in tariff T2 [kW]
1.2.3	Positive active cumulative maximum demand (A+) in tariff T3 [kW]
1.2.4	Positive active cumulative maximum demand (A+) in tariff T4 [kW]
2.2.0	Negative active cumulative maximum demand (A-) total [kW]
2.2.1	Negative active cumulative maximum demand (A-) in tariff T1 [kW]
2.2.2	Negative active cumulative maximum demand (A-) in tariff T2 [kW]
2.2.3	Negative active cumulative maximum demand (A-) in tariff T3 [kW]
2.2.4	Negative active cumulative maximum demand (A-) in tariff T4 [kW]
15.2.0	Absolute active cumulative maximum demand (|A|) total [kW]
15.2.1	Absolute active cumulative maximum demand (|A|) in tariff T1 [kW]
15.2.2	Absolute active cumulative maximum demand (|A|) in tariff T2 [kW]
15.2.3	Absolute active cumulative maximum demand (|A|) in tariff T3 [kW]
15.2.4	Absolute active cumulative maximum demand (|A|) in tariff T4 [kW]
3.2.0	Positive reactive cumulative maximum demand (Q+) total [kvar]
4.2.0	Negative reactive cumulative maximum demand (Q-) total [kvar]
5.2.0	Reactive cumulative maximum demand in Q1 (Q1) total [kvar]
6.2.0	Reactive cumulative maximum demand in Q2 (Q2) total [kvar]
7.2.0	Reactive cumulative maximum demand in Q3 (Q3) total [kvar]
8.2.0	Reactive cumulative maximum demand in Q4 (Q4) total [kvar]
9.2.0	Apparent cumulative maximum demand (S+) total [kVA]
7. Demands in a current demand period	
1.4.0	Positive active demand in a current demand period (A+) [kW]
2.4.0	Negative active demand in a current demand period (A-) [kW]
15.4.0	Absolute active demand in a current demand period (|A|) [kW]
3.4.0	Positive reactive demand in a current demand period (Q+) [kvar]
4.4.0	Negative reactive demand in a current demand period (Q-) [kvar]
5.4.0	Reactive demand in a current demand period in Q1 (Q1) [kvar]
6.4.0	Reactive demand in a current demand period in Q2 (Q2) [kvar]
7.4.0	Reactive demand in a current demand period in Q3 (Q3) [kvar]
8.4.0	Reactive demand in a current demand period in Q4 (Q4) [kvar]
9.4.0	Apparent demand in a current demand period (S+) [kVA]
8. Demands in the last completed demand period	
1.5.0	Positive active demand in the last completed demand period (A+) [kW]
2.5.0	Negative active demand in the last completed demand period (A-) [kW]
15.5.0	Absolute active demand in the last completed demand period (|A|) [kW]
3.5.0	Positive reactive demand in the last completed demand period (Q+) [kvar]
4.5.0	Negative reactive demand in the last completed demand period (Q-) [kvar]
5.5.0	Reactive demand in the last completed demand period in Q1 (Q1) [kvar]

6.5.0	Reactive demand in the last completed demand period in Q2 (Q2) [kvar]
7.5.0	Reactive demand in the last completed demand period in Q3 (Q3) [kvar]
8.5.0	Reactive demand in the last completed demand period in Q4 (Q4) [kvar]
9.5.0	Apparent demand in the last completed demand period (S+) [kVA]
9. Instantaneous power registers	
1.7.0	Positive active instantaneous power (A+) [kW]
21.7.0	Positive active instantaneous power (A+) in phase L1 [kW]
41.7.0	Positive active instantaneous power (A+) in phase L2 [kW]
61.7.0	Positive active instantaneous power (A+) in phase L3 [kW]
2.7.0	Negative active instantaneous power (A-) [kW]
22.7.0	Negative active instantaneous power (A-) in phase L1 [kW]
42.7.0	Negative active instantaneous power (A-) in phase L2 [kW]
62.7.0	Negative active instantaneous power (A-) in phase L3 [kW]
15.7.0	Absolute active instantaneous power (|A|) [kW]
35.7.0	Absolute active instantaneous power (|A|) in phase L1 [kW]
55.7.0	Absolute active instantaneous power (|A|) in phase L2 [kW]
75.7.0	Absolute active instantaneous power (|A|) in phase L3 [kW]
16.7.0	Sum active instantaneous power (A+ - A-) [kW]
36.7.0	Sum active instantaneous power (A+ - A-) in phase L1 [kW]
56.7.0	Sum active instantaneous power (A+ - A-) in phase L2 [kW]
76.7.0	Sum active instantaneous power (A+ - A-) in phase L3 [kW]
3.7.0	Positive reactive instantaneous power (Q+) [kvar]
23.7.0	Positive reactive instantaneous power (Q+) in phase L1 [kvar]
43.7.0	Positive reactive instantaneous power (Q+) in phase L2 [kvar]
63.7.0	Positive reactive instantaneous power (Q+) in phase L3 [kvar]
4.7.0	Negative reactive instantaneous power (Q-) [kvar]
24.7.0	Negative reactive instantaneous power (Q-) in phase L1 [kvar]
44.7.0	Negative reactive instantaneous power (Q-) in phase L2 [kvar]
64.7.0	Negative reactive instantaneous power (Q-) in phase L3 [kvar]
9.7.0	Apparent instantaneous power (S+) [kVA]
29.7.0	Apparent instantaneous power (S+) in phase L1 [kVA]
49.7.0	Apparent instantaneous power (S+) in phase L2 [kVA]
69.7.0	Apparent instantaneous power (S+) in phase L3 [kVA]
10. Electricity network quality registers	
11.7.0	Instantaneous current (I) [A]
31.7.0	Instantaneous current (I) in phase L1 [A]
51.7.0	Instantaneous current (I) in phase L2 [A]
71.7.0	Instantaneous current (I) in phase L3 [A]
91.7.0	Instantaneous current (I) in neutral [A]
11.6.0	Maximum current (I max) [A]
31.6.0	Maximum current (I max) in phase L1 [A]
51.6.0	Maximum current (I max) in phase L2 [A]
71.6.0	Maximum current (I max) in phase L3 [A]
91.6.0	Maximum current (I max) in neutral [A]
12.7.0	Instantaneous voltage (U) [V]
32.7.0	Instantaneous voltage (U) in phase L1 [V]
52.7.0	Instantaneous voltage (U) in phase L2 [V]
72.7.0	Instantaneous voltage (U) in phase L3 [V]
13.7.0	Instantaneous power factor
33.7.0	Instantaneous power factor in phase L1
53.7.0	Instantaneous power factor in phase L2
73.7.0	Instantaneous power factor in phase L3
14.7.0	Frequency [Hz]
11. Tamper registers (energy registers and registers of elapsed time)	
C.53.1	Tamper 1 energy register
C.53.2	Tamper 2 energy register
C.53.3	Tamper 3 energy register
C.53.4	Tamper 4 energy register
C.53.11	Tamper 5 energy register
C.53.5	Tamper 1 time counter register
C.53.6	Tamper 2 time counter register
C.53.7	Tamper 3 time counter register
C.53.9	Tamper 4 time counter register
C.53.10	Tamper 5 time counter register
12. Events registers (counters and time-stamps)	
C.2.0	Event parameters change - counter
C.2.1	Event parameters change - timestamp
C.51.1	Event terminal cover opened - counter
C.51.2	Event terminal cover opened - timestamp
C.51.3	Event main cover opened - counter
C.51.4	Event main cover opened - timestamp
C.51.5	Event magnetic field detection start - counter
C.51.6	Event magnetic field detection start - timestamp
C.51.7	Event reverse power flow - counter
C.51.8	Event reverse power flow - timestamp

C.7.0	Event power down - counter
C.7.10	Event power down - timestamp
C.51.13	Event power up - counter
C.51.14	Event power up – timestamp
C.51.15	Event RTC (Real Time Clock) set - counter
C.51.16	Event RTC (Real Time Clock) set - timestamp
C.51.21	Event terminal cover closed - counter
C.51.22	Event terminal cover closed - timestamp
C.51.23	Event main cover closed - counter
C.51.24	Event main cover closed - timestamp
C.51.25	Event log-book 1 erased - counter
C.51.26	Event log-book 1 erased - timestamp
C.51.27	Event fraud start - counter
C.51.28	Event fraud start - timestamp
C.51.29	Event fraud stop - counter
C.51.30	Event fraud stop - timestamp
13. Miscellaneous registers used in sequences	
0.9.1	Current time (hh:mm:ss)
0.9.2	Date (YY.MM.DD or DD.MM.YY)
0.9.4	Date and Time (YYMMDDhhmmss)
0.8.0	Demand period [min]
0.8.4	Load profile period [min] (option)
0.0.0	Device address 1
0.0.1	Device address 2
0.1.0	MD reset counter
0.1.2	MD reset timestamp
0.2.0	Firmware version
0.2.2	Tariff program ID
C.1.0	Meter serial number
C.1.2	Parameters file code
C.1.4	Parameters check sum
C.1.5	Firmware built date
C.1.6	Firmware check sum
C.6.0	Power down time counter
C.6.1	Battery remaining capacity
F.F.0	Fatal error meter status
C.87.0	Active tariff
0.2.1	Parameters scheme ID
C.60.9	Fraud flag
0.3.0	Active energy meter constant
0.4.2	Current transformer ratio
0.4.3	Voltage transformer ratio