巴勒斯坦AMI项目Push功能说明文档

## 一、电表Push报文分析

### 1、报文结构

电能表push报文例子如下：

00 01 00 01 00 66 00 3D 0F 00 00 00 03 0C 07 E2 05 11 04 0D 38 36 00 80 00 00 02 06 09 06 00 04 19 09 00 FF 09 0B 32 34 30 30 30 30 30 35 30 31 37 06 00 00 20 00 06 00 00 00 00 06 00 00 00 26 06 00 00 00 00

解析如下：

00 01 00 01 00 66 00 3D --47链路层

0F 00 00 00 03 –特殊标识

0C 07 E2 05 11 04 0D 38 36 00 80 00 00 --推送日期、时间

02 06 -- 2结构类型 6个结构成员

09 06 00 04 19 09 00 FF --OBIS码

09 0B 32 34 30 30 30 30 30 35 30 31 37 --Logical device number

06 00 00 20 00 --Alarm descriptor1

06 00 00 00 00 --Alarm descriptor2

06 00 00 00 26 --Manufacturer Specific Alarm Descriptor

06 00 00 00 00 -- Alarm descriptor3

01 00 00 00

### 2、Descriptor对象位定义

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| **Alarm descriptor1** | |
| **Bit No** | **event name** |
| (Byte0)Bit0 | Clock Invalid |
| (Byte0)Bit1 | Battery replace |
| (Byte0)Bit2 | not used |
| (Byte0)Bit3 | not used |
| (Byte0)Bit4 | not used |
| (Byte0)Bit5 | not used |
| (Byte0)Bit6 | not used |
| (Byte0)Bit7 | not used |
| (Byte1)Bit0 | Program memory error |
| (Byte1)Bit1 | RAM Error |
| (Byte1)Bit2 | NV memory Error |
| (Byte1)Bit3 | Measurement System Error |
| (Byte1)Bit4 | Watchdog Error |
| (Byte1)Bit5 | Fraud Attempt |
| (Byte1)Bit6 | not used |
| (Byte1)Bit7 | not used |
| (Byte2)Bit0 | not used |
| (Byte2)Bit1 | not used |
| (Byte2)Bit2 | not used |
| (Byte2)Bit3 | not used |
| (Byte2)Bit4 | not used |
| (Byte2)Bit5 | not used |
| (Byte2)Bit6 | not used |
| (Byte2)Bit7 | not used |
| (Byte3)Bit0 | not used |
| (Byte3)Bit1 | not used |
| (Byte3)Bit2 | not used |
| (Byte3)Bit3 | not used |
| (Byte3)Bit4 | not used |
| (Byte3)Bit5 | not used |
| (Byte3)Bit6 | not used |
| (Byte3)Bit7 | not used |

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| **Alarm descriptor2** | |
| **Bit No** | **event name** |
| (Byte0)Bit0 | Total power failure |
| (Byte0)Bit1 | Power Resume |
| (Byte0)Bit2 | Voltage Missing phase L1 |
| (Byte0)Bit3 | Voltage Missing phase L2 |
| (Byte0)Bit4 | Voltage Missing phase L3 |
| (Byte0)Bit5 | Voltage Normal phase L1 |
| (Byte0)Bit6 | Voltage Normal phase L2 |
| (Byte0)Bit7 | Voltage Normal phase L3 |
| (Byte1)Bit0 | Missing Neutral |
| (Byte1)Bit1 | Phase Asymmetry |
| (Byte1)Bit2 | Current Reversal |
| (Byte1)Bit3 | Wrong Phase Sequence |
| (Byte1)Bit4 | not used |
| (Byte1)Bit5 | not used |
| (Byte1)Bit6 | not used |
| (Byte1)Bit7 | not used |
| (Byte2)Bit0 | not used |
| (Byte2)Bit1 | External Alert |
| (Byte2)Bit2 | Local communication attempt |
| (Byte2)Bit3 | not used |
| (Byte2)Bit4 | not used |
| (Byte2)Bit5 | not used |
| (Byte2)Bit6 | not used |
| (Byte2)Bit7 | under voltage |
| (Byte3)Bit0 | over voltage |
| (Byte3)Bit1 | current bypass |
| (Byte3)Bit2 | current cut |
| (Byte3)Bit3 | not used |
| (Byte3)Bit4 | not used |
| (Byte3)Bit5 | not used |
| (Byte3)Bit6 | not used |
| (Byte3)Bit7 | not used |

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| **Manufacturer Specific Error Register** | |
| **Bit No** | **event name** |
| (Byte0)Bit0 | Parameter change |
| (Byte0)Bit1 | Open meter cover |
| (Byte0)Bit2 | Open terminal cover |
| (Byte0)Bit3 | magnatic tamper |
| (Byte0)Bit4 | falsify data |
| (Byte0)Bit5 | Open top terminal cover |
| (Byte0)Bit6 | Move meter position |
| (Byte0)Bit7 | not used |
| (Byte1)Bit0 | High low level input |
| (Byte1)Bit1 | Voltage detect input |
| (Byte1)Bit2 | not used |
| (Byte1)Bit3 | not used |
| (Byte1)Bit4 | not used |
| (Byte1)Bit5 | not used |
| (Byte1)Bit6 | not used |
| (Byte1)Bit7 | not used |
| (Byte2)Bit0 | not used |
| (Byte2)Bit1 | not used |
| (Byte2)Bit2 | not used |
| (Byte2)Bit3 | not used |
| (Byte2)Bit4 | not used |
| (Byte2)Bit5 | not used |
| (Byte2)Bit6 | not used |
| (Byte2)Bit7 | not used |
| (Byte3)Bit0 | not used |
| (Byte3)Bit1 | not used |
| (Byte3)Bit2 | not used |
| (Byte3)Bit3 | not used |
| (Byte3)Bit4 | not used |
| (Byte3)Bit5 | not used |
| (Byte3)Bit6 | not used |
| (Byte3)Bit7 | not used |

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| **Alarm descriptor3** | |
| **Bit No** | **event name** |
| (Byte0)Bit0 | Remain credit alarm 1 |
| (Byte0)Bit1 | Remain credit alarm 2 |
| (Byte0)Bit2 | Remain credit alarm 3 |
| (Byte0)Bit3 | Remain credit is zero and disconnect |
| (Byte0)Bit4 | Start using overdraft credit |
| (Byte0)Bit5 | Used off overdraft credit and disconnect |
| (Byte0)Bit6 | Credit finished and enter friendly time |
| (Byte0)Bit7 | Used off friend overdraft credit and disconnect |
| (Byte1)Bit0 | not used |
| (Byte1)Bit1 | not used |
| (Byte1)Bit2 | not used |
| (Byte1)Bit3 | not used |
| (Byte1)Bit4 | not used |
| (Byte1)Bit5 | not used |
| (Byte1)Bit6 | not used |
| (Byte1)Bit7 | not used |
| (Byte2)Bit0 | not used |
| (Byte2)Bit1 | not used |
| (Byte2)Bit2 | not used |
| (Byte2)Bit3 | not used |
| (Byte2)Bit4 | not used |
| (Byte2)Bit5 | not used |
| (Byte2)Bit6 | not used |
| (Byte2)Bit7 | not used |
| (Byte3)Bit0 | not used |
| (Byte3)Bit1 | not used |
| (Byte3)Bit2 | not used |
| (Byte3)Bit3 | not used |
| (Byte3)Bit4 | not used |
| (Byte3)Bit5 | not used |
| (Byte3)Bit6 | not used |
| (Byte3)Bit7 | not used |

## 二、触发事件抄读

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| **Alarm descriptor1** | | **抄读事件名称及OBIS** | **事件代码** |
| (Byte0)Bit0 | Clock Invalid | Standard event log （0.0.99.98.0.255） | 6 |
| (Byte0)Bit1 | Battery replace | 同上 | 8 |
| (Byte1)Bit0 | Program memory error | 同上 | 12 |
| (Byte1)Bit1 | RAM Error | 同上 | 13 |
| (Byte1)Bit2 | NV memory Error | 同上 | 14 |
| (Byte1)Bit3 | Measurement System Error | 同上 | 16 |
| (Byte1)Bit4 | Watchdog Error | 同上 | 15 |
| (Byte1)Bit5 | Fraud Attempt | Fraud detection log（0.0.99.98.1.255） | 40-45、216-219 |

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| --- | --- | --- | --- |
| **Alarm descriptor2** | | **抄读事件名称及OBIS** | **事件代码** |
| (Byte0)Bit0 | Total power failure | Standard event log （0.0.99.98.0.255） | 1 |
| (Byte0)Bit1 | Power Resume | 同上 | 2 |
| (Byte0)Bit2 | Voltage Missing phase L1 | Quailty of supply event log（1.0.99.98.41.255） | 82 |
| (Byte0)Bit3 | Voltage Missing phase L2 | 同上 | 83 |
| (Byte0)Bit4 | Voltage Missing phase L3 | 同上 | 84 |
| (Byte0)Bit5 | Voltage Normal phase L1 | 同上 | 85 |
| (Byte0)Bit6 | Voltage Normal phase L2 | 同上 | 86 |
| (Byte0)Bit7 | Voltage Normal phase L3 | 同上 | 87 |
| (Byte1)Bit0 | Missing Neutral | Standard event log （0.0.99.98.0.255） | 89 |
| (Byte1)Bit1 | Phase Asymmetry | Quailty of supply event log（1.0.99.98.41.255） | 90 |
| (Byte1)Bit2 | Current Reversal | Tamper event log（1.0.99.98.21.255） | 91 、211 |
| (Byte1)Bit3 | Wrong Phase Sequence | Quailty of supply event log（1.0.99.98.41.255） | 88 |
| (Byte2)Bit1 | External Alert | 无 |  |
| (Byte2)Bit2 | Local communication attempt | Fraud detection log（0.0.99.98.1.255） | 46 |
| (Byte2)Bit7 | under voltage | Quailty of supply event log（1.0.99.98.41.255） | 76、77、78 |
| (Byte3)Bit0 | over voltage | 同上 | 79、80、81 |
| (Byte3)Bit1 | current bypass | 同上 | 200 |
| (Byte3)Bit2 | current cut | Current cut event log（1.0.99.98.44.255） | 不捕获相关事件代码 |

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| --- | --- | --- | --- |
| **Manufacturer Specific Error Register** | | **抄读事件名称及OBIS** | **事件代码** |
| (Byte0)Bit0 | Parameter change | Standard event log （0.0.99.98.0.255） | 47 |
| (Byte0)Bit1 | Open meter cover | Tamper event log（1.0.99.98.21.255） | 44、45 |
| (Byte0)Bit2 | Open terminal cover | Tamper event log（1.0.99.98.21.255） | 40、 41 |
| (Byte0)Bit3 | magnatic tamper | Tamper event log（1.0.99.98.21.255） | 42、43 |
| (Byte0)Bit4 | falsify data | Standard event log （0.0.99.98.0.255） | 47 |
| (Byte0)Bit5 | Open top terminal cover | Tamper event log（1.0.99.98.21.255） | 216、 217 |
| (Byte0)Bit6 | Move meter position | Tamper event log（1.0.99.98.21.255） | 218、 219 |
| (Byte1)Bit0 | High low level input | Standard event log （0.0.99.98.0.255） | 220 、221 |
| (Byte1)Bit1 | Voltage detect input | Standard event log （0.0.99.98.0.255） | 222 、223 |

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| **Alarm descriptor3** | | **抄读事件名称及OBIS** | **事件代码** |
| (Byte0)Bit0 | Remain credit alarm 1 | Payment event log（0.0.99.98.10.25） | 202 |
| (Byte0)Bit1 | Remain credit alarm 2 | 同上 | 203 |
| (Byte0)Bit2 | Remain credit alarm 3 | 同上 | 204 |
| (Byte0)Bit3 | Remain credit is zero and disconnect | 同上 | 205 |
| (Byte0)Bit4 | Start using overdraft credit | 同上 | 205 |
| (Byte0)Bit5 | Used off overdraft credit and disconnect | 同上 | 206 |
| (Byte0)Bit6 | Credit finished and enter friendly time | 无 |  |
| (Byte0)Bit7 | Used off friend overdraft credit and disconnect | 同上 | 208 |

预付费相关的推送主要用于提示客户充值，也可抄读事件，有一个无记录。

## 三、事件代码对应解释

1、所有事件代码IDIS有明确定义的都按IDIS规范执行，请参考规范。

2、其他的为制造商扩展范围，巴勒斯坦表按以下执行。

|  |  |
| --- | --- |
| 200 | Neutral Current Bypass |
| 201 | Payment mode switch |
| 202 | Remain credit alarm 1 |
| 203 | Remain credit alarm 2 |
| 204 | Remain credit alarm 3 |
| 205 | Remain credit is zero |
| 206 | Overdraft credit alarm |
| 207 | Own credit alarm |
| 208 | Friendly credit alarm |
| 209 | Grace deadline |
| 210 | Credit overflow |
| 211 | Current Reverse end |
| 212 | Neutral Current Imbalance begin |
| 213 | Neutral Current Imbalance end |
| 214 | Voltage missing begin |
| 215 | Voltage missing end |
| 216 | Top terminal cover removed |
| 217 | Top terminal cover closed |
| 218 | Move meter position start |
| 219 | Move meter position end |
| 220 | High low level input start |
| 221 | High low level input end |
| 222 | Voltage detect input start |
| 223 | Voltage detect input end |
| 230 | Pulse over |
| 231 | Integration battery Low |
| 232 | RTC hardware error |
| 236 | Relay remote not close |
| 237 | Relay manual not close |
| 238 | Ralay local not close |
| 239 | Relay Maintain disconnect |
| 240 | Astrcal disconnect |
| 241 | Astrcal reconnect |
| 242 | Success login |