I.   REMOTE METER GROUP TURN ON/OFF RELAY PROCESS 0xB2/0xB1

Diagrama EneriBox - Coordinador

Comando Conexión/Desconexión

(Command Id: 0xB2/0xB1

Parameter1: Cantidad de medidores

Parameter2: Números de serie de medidores)

Coordinador Status == BUSY (0x08)

OR

EneriBox Timeout == NOT EXPIRED

Por el momento se fija a 20 segundos

El valor del timeout

Comando Obtener Status del Coordinador

(Command Id: 0x90)

Coordinador Status == DATA_ARRIVED (0x13)

Comando Solicita Data Arrived

(Command Id: 0xC3)

Ejemplo conectar 3 medidores en grupo de forma remota (Command Id 0xB2):

   1. **Comando enviado desde EneriBox hacia Coordinador**

Sending: [55 cc 3a 00 79 08 09 01 0a b6 da 24 B2 03 36 33 38 30 32 30 30
30 30 30 30 30 30 30 30 30 37 33 38 30 32 30 30 30 30 30 30 30 30 30 30
30 38 33 38 30 32 30 30 30 30 30 30 30 30 30 30 30 03 9f 33 cc]

Start Of Frame: 55 cc
Frame Len: 3A 00
Coordinator MAC Address: 79 08 09 01 0a b6 da 24
Command Id: B2 = Command id solicita conexión en grupo de medidores
Number of Meters: 03 (Desde 1 hasta N Siempre y cuando pertenezcan al
mismo gabinete)
Meter Serial Number 1: 36 33 38 30 32 30 30 30 30 30 30 30 30 30 30 30
Meter Serial Number 2: 37 33 38 30 32 30 30 30 30 30 30 30 30 30 30 30
Meter Serial Number 3: 38 33 38 30 32 30 30 30 30 30 30 30 30 30 30 30
.
.
.

CRC of Frame: 03 9f (Necesita ser calculado, el valor de este ejemplo es representativo)
End of Frame: 33 cc

2. Comando enviado desde Coordinador hacia EneriBox

Receiving: 19 bytes-> [55 cc 0a 00 79 08 09 01 0a b6 da 24 B2 01 8a 2f 33 cc]

Start Of Frame: 55 cc
Frame Len: 0a 00
Coordinator MAC Address: 79 08 09 01 0a b6 da 24
Command Id: B2 = Command id solicita conexión en grupo de medidores
Response: 01 Comando se ha recibido satisfactoriamente (Cualquier valor diferente es ERROR)
CRC of Frame: 8a 2f (Necesita ser calculado, el valor de este ejemplo es representativo)
End of Frame: 33 cc

3. Comando enviado desde EneriBox hacia Coordinador

Sending: [55 cc 09 00 79 08 09 01 0a b6 da 24 90 18 cb 33 cc]

Start Of Frame: 55 cc
Frame Len: 09 00
Coordinator MAC Address: 79 08 09 01 0a b6 da 24
Command Id: 90 = Command id solicita el status de coordinador
CRC of Frame: 18 cb
End of Frame: 33 cc

4. Comando enviado desde Coordinador hacia EneriBox

Receiving: 18 bytes-> [55 cc 0a 00 79 08 09 01 0a b6 da 24 90 13 8b 0b 33 cc]

Start Of Frame: 55 cc
Frame Len: 0a 00
Coordinator MAC Address: 79 08 09 01 0a b6 da 24
Command Id: 90 = Command id solicita el status de coordinador
Response: 13 = DATA_ARRIVED (0x08 COORDINATOR IS BUSY)
CRC of Frame: 8b 0b
End of Frame: 33 cc

5. Comando enviado desde EneriBox hacia Coordinador

Sending: [55 cc 09 00 79 08 09 01 0a b6 da 24 C3 58 b2 33 cc]

Start Of Frame: 55 cc
Frame Len: 09 00
Coordinator MAC Address: 79 08 09 01 0a b6 da 24
Command Id: C3 = Command id solicita data arrived
CRC of Frame: 58 b2
End of Frame: 33 cc

6. Comando enviado desde Coordinador hacia EneriBox

```
Receiving: 98 bytes-> [ 55 cc 5a 00 79 08 09 01 0a b6 da 24 C3 01 03 36
33 38 30 32 30 30 30 30 30 30 30 30 30 30 ff ff ff ff ff ff ff ff 6b
00 00 00 00 00 00 00 80 18 00 00 ff ff ff ff ff ff ff ff ff ff ff ff
ff ff ff 20 00 ff ff ff ff 1a 2f ff ff 7d 8e 70 1d ff ff ff ff ff ff ff
ff 79 00 00 00 48 51 37 33 38 30 32 30 30 30 30 30 30 30 30 30 30 ff
ff ff ff ff ff ff 6b 00 00 00 00 00 00 00 80 18 00 00 ff ff ff ff ff
ff ff ff ff ff ff ff ff ff ff 20 00 ff ff ff ff 1a 2f ff ff 7d 8e 70
1d ff ff ff ff ff ff ff ff 79 00 00 00 48 51 38 33 38 30 32 30 30 30 30
30 30 30 30 30 30 30 ff ff ff ff ff ff ff ff 6b 00 00 00 00 00 00 80
18 00 00 ff ff ff ff ff ff ff ff ff ff ff ff ff ff 20 00 ff ff ff
ff 1a 2f ff ff 7d 8e 70 1d ff ff ff ff ff ff ff 79 00 00 00 48 51 c9
2b 33 cc ]

Start Of Frame: 55 cc
Frame Len: 5a 00
Coordinator MAC Address: 79 08 09 01 0a b6 da 24
Command Id: C3
Error Code Response: 01  Satisfactorio (Cualquier valor diferente es
error)
Data Response: 03 36 33 38 30 32 30 30 30 30 30 30 30 30 30 30 ff ff
ff ff ff ff ff ff 6b 00 00 00 00 00 00 00 80 18 00 00 ff ff ff ff ff ff
ff ff ff ff ff ff ff ff ff ff 20 00 ff ff ff ff 1a 2f ff ff 7d 8e 70 1d
ff ff ff ff ff ff ff ff 79 00 00 00 48 51 37 33 38 30 32 30 30 30 30 30
30 30 30 30 30 ff ff ff ff ff ff ff ff 6b 00 00 00 00 00 00 00 80 18
00 00 ff ff ff ff ff ff ff ff ff ff ff ff ff ff 20 00 ff ff ff ff
1a 2f ff ff 7d 8e 70 1d ff ff ff ff ff ff ff ff 79 00 00 00 48 51 38 33
38 30 32 30 30 30 30 30 30 30 30 30 30 ff ff ff ff ff ff ff ff 6b 00
00 00 00 00 00 80 18 00 00 ff ff ff ff ff ff ff ff ff ff ff ff ff ff
ff ff 20 00 ff ff ff ff 1a 2f ff ff 7d 8e 70 1d ff ff ff ff ff ff ff ff
79 00 00 00 48 51
CRC of Frame: c9 2b
End of Frame: 33 cc
```

Observación: Data Response es un cast de cada DataReading por medidor en este ejemplo se conectaron 3 medidores.

```
Number of Meters: 03

Meter Serial Number: 36 33 38 30 32 30 30 30 30 30 30 30 30 30 30 30
Active Energy C:     ff ff ff ff
Active Energy B:     ff ff ff ff
Active Energy A:     6b 00 00 00
Active Power:        00 00 00 00
FLAG:                80 18 00 00
DELTA Reactive:      ff ff
DELTA Active:        ff ff
Index Con:           ff ff
Roller Demand:       ff ff ff ff
Power Factor:        ff ff
Current C:           ff ff
Current B:           ff ff
Current A:           20 00
Voltage C:           ff ff
Voltage B:           ff ff
Voltage A:           1a 2f
Frequency:           ff ff
Timestamp:           7d 8e 70 1d
Total Negative Active Energy:    ff ff ff ff
```

```
Total Negative Reactive Energy: ff ff ff ff
Total Reactive Energy:          79 00 00 00
Meter CRC Frame:48 51

Meter Serial Number: 37 33 38 30 32 30 30 30 30 30 30 30 30 30 30 30
Active Energy C:     ff ff ff ff
Active Energy B:     ff ff ff ff
Active Energy A:     6b 00 00 00
Active Power:        00 00 00 00
FLAG:                80 18 00 00
DELTA Reactive:      ff ff
DELTA Active:        ff ff
Index Con:           ff ff
Roller Demand:       ff ff ff ff
Power Factor:        ff ff
Current C:           ff ff
Current B:           ff ff
Current A:           20 00
Voltage C:           ff ff
Voltage B:           ff ff
Voltage A:           1a 2f
Frequency:           ff ff
Timestamp:           7d 8e 70 1d
Total Negative Active Energy:   ff ff ff ff
Total Negative Reactive Energy: ff ff ff ff
Total Reactive Energy:          79 00 00 00
Meter CRC Frame:48 51

Meter Serial Number: 38 33 38 30 32 30 30 30 30 30 30 30 30 30 30 30
Active Energy C:     ff ff ff ff
Active Energy B:     ff ff ff ff
Active Energy A:     6b 00 00 00
Active Power:        00 00 00 00
FLAG:                80 18 00 00
DELTA Reactive:      ff ff
DELTA Active:        ff ff
Index Con:           ff ff
Roller Demand:       ff ff ff ff
Power Factor:        ff ff
Current C:           ff ff
Current B:           ff ff
Current A:           20 00
Voltage C:           ff ff
Voltage B:           ff ff
Voltage A:           1a 2f
Frequency:           ff ff
Timestamp:           7d 8e 70 1d
Total Negative Active Energy:   ff ff ff ff
Total Negative Reactive Energy: ff ff ff ff
Total Reactive Energy:          79 00 00 00
Meter CRC Frame:48 51
```

Ejemplo desconectar 3 medidores en grupo de forma remota (Command Id 0xB1):

Se utiliza command id 0xB1 en los puntos 1 y 2 del ejemplo anterior.