

### Address claiming

Default setting: rotary coding switch in position "0". Address Claiming is always executed, starting address is "234". If two bus sharing units with the same address are in the bus, the bus sharing unit with the smaller serial number receives this address.

### Offset for static addresses

Using the rotary coding switch, an offset can be added to the start address ([address] = [start address] + [offset]). If an offset other than zero is set, the address claiming is deactivated. If the set static address has not yet been claimed by another bus sharing unit, the interface retains this address.

However, if there is already a bus sharing unit with the same address in the bus, the new bus sharing unit with the static address gets the J1939 zero address "254".

The bus sharing unit with the J1939 zero address "254" must stop the transmission.

### Reserved static addresses on the FP-CAN-Bus

| Start address | Offset | Address claiming | Bus address                                                                                          |
|---------------|--------|------------------|------------------------------------------------------------------------------------------------------|
| 234           | 0      | yes              | is negotiated, in case of conflicts, the participant with the smaller serial number gets the address |
|               | 1      | no               | static, 235<br>or J1939 zero address if the static address is already assigned                       |
|               | 2      | no               | static, 236<br>or J1939 zero address if the static address is already assigned                       |
|               | 3      | no               | static, 237<br>or J1939 zero address if the static address is already assigned                       |

## Test Cases using two Communication Interfaces

### 1. Both interfaces perform an address claiming

The rotary coding switches of both interfaces are in position "0". The trace shows that one bus sharing unit in the claiming process retains the start address "234" and the second bus sharing unit has to change to the address "235".

| Time   | Bus | Type | ID/Symbol | Prio | PGN   | SA  | DA  | DLC | Data                    |
|--------|-----|------|-----------|------|-------|-----|-----|-----|-------------------------|
| 6,0386 | 1   | Rx   | ACM       | 6    | 60928 | 234 | 255 | 8   | 47 00 20 62 00 81 00 50 |
| 6,0410 | 1   | Rx   | ACM       | 6    | 60928 | 234 | 255 | 8   | 63 11 2C 62 00 81 00 50 |
| 6,0421 | 1   | RX   | ACM       | 6    | 60928 | 234 | 255 | 8   | 47 00 20 62 00 81 00 50 |
| 6,0433 | 1   | RX   | ACM       | 6    | 60928 | 235 | 255 | 8   | 63 11 2C 62 00 81 00 50 |

### 2. One interface gets the static address "235"

The rotary coding switch of interface "1" remains in position "0" (address claiming with starting address "234"), the rotary coding switch of interface "2" is changed to position "1" (static address "235"). The trace shows that one interface uses the address "234". The second bus sharing unit takes part on the bus with its static address "235".

| Time   | Bus | Type | ID/Symbol | Prio | PGN   | SA  | DA  | DLC | Data                    |
|--------|-----|------|-----------|------|-------|-----|-----|-----|-------------------------|
| 4,8454 | 1   | Rx   | ACM       | 6    | 60928 | 234 | 255 | 8   | 47 00 20 62 00 81 00 50 |
| 4,8484 | 1   | Rx   | ACM       | 6    | 60928 | 235 | 255 | 8   | 63 11 2C 62 00 81 00 50 |

### 3. Both interfaces are getting the static address "235"

The rotary coding switches of both interfaces are in position "1". As the trace shows, one of the bus sharing units retains its static address "235". The second unit receives the **J1939 zero address "254"** and it must stop the transmission.

| Time    | Bus | Type | ID/Symbol | Prio | PGN   | SA         | DA  | DLC | Data                    |
|---------|-----|------|-----------|------|-------|------------|-----|-----|-------------------------|
| 14,9782 | 1   | Rx   | ACM       | 6    | 60928 | 235        | 255 | 8   | 47 00 20 62 00 81 00 50 |
| 14,9812 | 1   | Rx   | ACM       | 6    | 60928 | 235        | 255 | 8   | 63 11 2C 62 00 81 00 50 |
| 14,9824 | 1   | RX   | ACM       | 6    | 60928 | 235        | 255 | 8   | 47 00 20 62 00 81 00 50 |
| 14,9835 | 1   | RX   | ACM       | 6    | 60928 | <b>254</b> | 255 | 8   | 63 11 2C 62 00 81 00 50 |

### 4. Both interfaces have different static addresses: "235" and "236"

The rotary coding switch of interface "1" is in position "1", the rotary coding switch of interface "2" is in position "2". The trace shows that both interfaces take part with their static address on the bus.

| Time   | Bus | Type | ID/Symbol | Prio | PGN   | SA  | DA  | DLC | Data                    |
|--------|-----|------|-----------|------|-------|-----|-----|-----|-------------------------|
| 7,2204 | 1   | Rx   | ACM       | 6    | 60928 | 236 | 255 | 8   | 47 00 20 62 00 81 00 50 |
| 7,2241 | 1   | Rx   | ACM       | 6    | 60928 | 235 | 255 | 8   | 63 11 2C 62 00 81 00 50 |