

Logging CANopen messages and sending relay values using Python.

Thonny Python 3 running on a PC WIN-10.

The node ID is 0x29. It reports it's NMT status once per second.

The Python program sends a PDO message once per second to flip relay #1 on and off.

There are no replies because the node isn't powered. Once powered it sends the NMT_RESET message, then that it's changed to PRE-OPERATIONAL. The Python program detects the 7F in that message and broadcasts a GO-OPERATIONAL command to everyone. Once the module receives that it changes it's heartbeat message to 05 to show that it's now OPERATIONAL.

Now that the module is operational it starts broadcasting its own PDO status messages. These are in the format of 0x180+NodeID 0x29 with 6 bytes , 0x380 + NodeID 0x29 with 8 bytes

```
Sent CAN message with relay value = t329101
Sent CAN message with relay value = t329100
Sent CAN message with relay value = t329101
Sent CAN message with relay value = t329100
Sent CAN message with relay value = t329101
Received CANopen Msg = 729100                                NMT_RESET STATUS
Sent CAN message with relay value = t329100
Sent CAN message with relay value = t329101
Received CANopen Msg = 72917F                                NMT_PRE-OPERATIONAL STATUS
Sent NMT_GO_OPERATIONAL Message = t00020100
Sent CAN message with relay value = t329100
Received CANopen Msg = 1A96000100000000
Received CANopen Msg = 3A98FFFFFFFFFFFFFFFF
Received CANopen Msg = 1A96000000000000
Received CANopen Msg = 729105                                NMT_OPERATIONAL STATUS
Received CANopen Msg = 1A96000000000000
Sent CAN message with relay value = t329101
Received CANopen Msg = 1A96000100000000
Received CANopen Msg = 729105
Sent CAN message with relay value = t329100
Received CANopen Msg = 1A96000100000000
Received CANopen Msg = 1A96000000000000
Received CANopen Msg = 729105
Sent CAN message with relay value = t329101
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Sent CAN message with relay value = t329100
Received CANopen Msg = 1A96000100000000
Received CANopen Msg = 1A96000000000000
Received CANopen Msg = 729105
Sent CAN message with relay value = t329101
Received CANopen Msg = 1A96000000000000
Received CANopen Msg = 3A98FFFFFFFFFFFFFFFF
Received CANopen Msg = 1A96000100000000
Received CANopen Msg = 729105
Received CANopen Msg = 1A96000100000000
Sent CAN message with relay value = t329100
```