eWon drivers - Driver Details
Kaco

Summary

1. KACO Driver Details

1.1. TAG list

postfix eWon TagName	Description	eWon Type
Status	Inverter Status	Floating point
Vout	Generator Voltage [V]	Floating point
Iout	Generator Currrent [A]	Floating point
Pout	Generator Power [W]	Floating point
GridVoltage	Grid Voltage [V]	Floating point
GridCurrent	Grid-feeding current [A]	Floating point
GridPower	Delivered (fed-in) power [W]	Floating point
Temp	Device temperature [°C]	Floating point
DailyEnergy	Daily Energy [Wh]	Floating point
TotalYeld	Total yield [KWh]	Floating point

1.2. Slave configuration

For each device (inverter) must be defined a tag named INVn (e.g. : INV1) where n is the number of device starting from 1.

Description of INVn tag is used by the driver to read some parameters, as described below :
*commname**address**timeoutMs**type**unitNumber*

Example : COM0**10**2000**1**3
commname = COM0 ; eWon serial port
address = 10 ; bus address
timeoutMS = 2000 ; 2s timeout for serial read
type = 1 ; type of device : 0 = Series 00xi/ 00/ 01xi/ 02
1 = Series 000xi
2 = Series XP with type 100k till MMI 1.31
3 = Series XP with new types from MMI 1.32
unit number = 3 ; 1, 2 or 3 only for 000xi inverter series

1.3. Default serial port configuration

9600 8-N-1

Serial port configuration tag description

```
KacoPort**Serial**comm:com0;baudrate=9600;blocking=off;halfduplex=on;bitsperchar=8
;stopbits=1;parity=none
```

1.4. Decoding of the status codes

1.4.1. Status TAG

Value	Explanation	Comments
0	Inverter has just switched on	Only after the first startup in the morning
1	Waiting for start	The self-test is complete; Powador changes to grid-feeding operation.
2	Waiting for shut-down	Insufficient generator voltage and generator power. Condition that precedes the night shutdown.
3	Constant voltage regulator	Short-term grid-feeding at constant generator voltage at the start of the gridfeeding process (80% of the measured no-load voltage).
4	MPP- tracker, permanent tracking	At times of low insolation the MPP tracker is used for grid feeding.
5	MPP- tracker, without tracking movement	At times of high insolation the patented MPP tracker is used to ensure
6	Wait mode before grid feeding.	Test of i idf di it grid and solar voltage The inverter waits until the generator voltage is higher than the switching-on threshold 410V) and starts the grid-feeding process after approx. 3 minutes. Test of grid voltages.
7	Wait mode before self test.	Test of grid and solar voltage The inverter waits until the generator voltage is higher than the switching-on threshold (410V) and then starts the selftest of the relays after approx. 3 minutes. Test of grid voltages.
8	Self-test relays	Test of grid relays prior to the start of the gridfeeding process.
10	Overtemperature shut-off	If the inverter is overheated (heat sink temperature >80 °C) due to continuous overload and lacking air circulation, the inverter will shut-off. Cause: solar generator too large; ambient temperature too high; inverter defect.
11	Power limitation	Protective function of the inverter, e.g. if excessive generator power is delivered or the heat sink of the device exceeds 75°C.
12	Overload shut-off	Protective function of the inverter, e.g. if excessive generator power is delivered.
13	Overvoltage shut-off	Protective function of the inverter, e.g. if the grid voltage L1 is too high.
14	Grid failure (3-phase monitoring)	Protective function of the inverter, e.g. if one of the three grid phases has failed or the voltage is out of tolerance.
15	Transition to night shut-down	Inverter goes to sleep.
18	Shut-down of RCD module	Fault-current is too high.
19	Insufficient insulation resistance	Insufficient insulation resistance from PV-/PV+ to PE.
30	Measuring error	Current and voltage measurements in the solar inverter are not plausible.
31	RCD module error	An error occurred in the RCD module.
32	Self-test error	An error occurred when testing the grid isolation relay.
33	DC grid-feeding error	Excessive amount of DC grid-feeding power.
34	Communication error	An error occurred in the internal data
35	Protection shutdown	Protection shutdown, Software
36	Protection shutdown	Protection shutdown, Hardware
38	Error PV overvoltage	
41	Line failure Undervoltage L1	
42	Line failure Overvoltage L1	
43	Line failure Undervoltage L2	
44	Line failure Overvoltage L2	
44	Line failure Undervoltage L3	
46	Line failure Overvoltage L3	
47	Line failure Phase conductor	
48	Line failure Underfrequency	
49	Line failure Overfrequency	
50	Line failure Average voltage	
51	Line failure Overvoltage L1	
52	Line failure Undervoltage L1	

53	Line failure Overvoltage L2	
54	Line failure Undervoltage L2	
55	Error DC link	
57	Waiting for reconnect	
58	Overtemperature Control card	
59	Error Self test	
65	Error ROCOF (Rate of change of frequency)	
66	Fault in voltage transformer	

1.5. Tested devices

- Kaco Powador Series 000xi.