Contents

SMS / text commands

Text commands can be issued by SMS, serial port (DIAG) or IP (App/Web/Perl). This overview does not cover all commands and details, please read the user guides for more info.

Notes:

- Disable automatic spelling correction.
- Ensure phone SMS encoding is set to 7 bit GSM (8 or 16 bit not supported).
- Use exactly one blank to separate arguments.
- Do not separate the „?“ from a query command (e.g. „SERVER?“).
- Case is irrelevant on commands (PASS = pass) but may be relevant on arguments (i.e. login, password, …).
- Wait for acknowledgement of each command sent before sending the next. If you get no reply, check spelling and try again.

OVMS configuration

Basic setup

Command	Function
`REGISTER` *`password`*	Register sending mobile phone as primary user (only SMS). Initial password is "OVMS".
`PASS` *`newpassword`*	Change `REGISTER` password (only from registered phone)
`MODULE` *`vehicleid units channels cartype`*	Set vehicle id (= server login), units ("M" / "K"), notification channels ("SMSIP") and car type

Command	Function
	("RT") *Note: vehicle password set by `SERVER` command*

IP setup (GPRS)

Command	Function
`GPRS` *`apn apnuser apnpassword [dnsip]`*	Set APN config; use "-" for empty user/password/DNS *Note: DNS normally not needed*
`SERVER` *`address vehiclepassword paranoidmode`*	Configure server connection; paranoidmode "-" or "P" (end-to-end encryption = server cannot decode data, no logs etc.) *Note: vehicle login set by `MODULE` command*

Troubleshooting

Command	Function
`VERSION`	Query firmware version
`DIAG`	Show LED and communication status (see "Network-State-Machine.pdf")
`MODULE?`	Query module config
`GPRS?`	Query APN config & GPRS status
`SERVER?`	Query server config & status
`PARAMS?`	Query all parameters
`FEATURES?`	Query all features
`RESET`	Restart the module

Twizy configuration

Range & charge alerts

Command	Function
`RANGE maxrange`	Set your max range (in user units) at 100% SOC & 20 °C
`CA range`	Set charge alert for sufficient range (in user units)
`CA soc%`	Set charge alert for sufficient SOC (note: "%" must be added)
`CA range soc%`	Set charge alert for sufficient range (in user units) and/or SOC
`CA`	Clear charge alerts

Feature map

Command	Function
`FEATURE 1 kickdownthreshold`	Kickdown sensitivity (default 35, lower value = faster activation)
`FEATURE 2 kickdowncompensation`	Kickdown pedal compensation point (default 120)
`FEATURE 8 gpsstreaming`	• 0 = no location streaming, GPS log entry once per minute • 1 = location streaming every 2 seconds, GPS log entry per minute • 2 = no location streaming, GPS logging every 5 seconds • 3 = location streaming every 2 seconds, GPS logging every 5 seconds If you don't need App streaming, mode 0 is perfect for normal resolution tracks, and mode 2 is perfect for high resolution track logging.
`FEATURE 9 minsoc`	Low SOC warning threshold (default: 0)
`FEATURE 10 sufficientsoc`	Charge notification by SOC (in %)
`FEATURE 11 sufficientrange`	Charge notification by range (in user unit)
`FEATURE 12 maxrange`	Range (in user units) at 100% SOC & 20 °C
`FEATURE 13 batterycapacity`	Running average (last 10 charges) capacity value

Command	Function
	(percentage), 0 = clear *Note: shown as integer, but stored as float*
`FEATURE 14 communicationflags`	Communication control: add... • 2 = suppress "Access Denied" SMS • 4 = suppress all outbound SMS • 8 = suppress vehicle alerts • 16 = suppress vehicle info notifies • 32 = suppress times in SMS responses • 64 = send charge start notifications
`FEATURE 15 canbusflags`	CAN bus access control: add… • 1 = enable CAN write access • 2 = disable emergency CFG RESET • 4 = disable kickdown • 8 = disable auto power adjustment

Twizy status

Command	Function
`STAT?`	Query battery state of charge (SOC) and capacity, range, charge status, odometer
`GPS?`	Query GPS position
`TEMPS?`	Query temperatures
`CA?`	Query charge alert setup (features 10+11), charge status & charge time estimations for alerts and full charge
`RANGE?`	Query max range setting in user units (feature 12)
`POWER`	Show power efficiency (trip report)
`POWER T`	Show power usage sums
`BATT`	Show battery alert and watch status
`BATT V`	Show battery voltage levels
`BATT VD`	Show battery cell voltage deviations
`BATT T`	Show battery temperatures
`BATT TD`	Show battery module temperature deviations

SEVCON tuning

Notes:

- You need to enable CAN write access (`FEATURE 15 1`).
- Some commands use the STOP mode, the Twizy may signal that and beep, that's normal.
- If stuck in STOP mode, restart Twizy without entering GO, wait for 10-15 seconds.
- 3 successive CAN bus errors (for example pushing button D/N/R before GO) will cause an emergency CFG RESET. If your Twizy has a component problem or is used by inexperienced drivers, you may want to disable this by `FEATURE 15 3`.

Macro settings

Macro commands automate the tuning process and can easily be reset.

Command	Function
`CFG SPEED` *`max_kph warn_kph`*	Set speed limit and warn level. max_kph: 6..111, default 80 (T45: 45) warn_kph: 6..111, default 89 (T45: 56) *Note: needs ON before GO*
`CFG POWER` *`torque power_low power_high current`*	Set torque, power and current levels. With current: torque: 10..254 (%), default 100 power_low: 10..254 (%), default 100 power_high: 10..254 (%), default 100 current: 10..123 (%), default none *Note: needs ON before GO*
`CFG DRIVE` *`powerlevel autopower_ref autopower_min kickdown_threshold kickdown_compensation`*	Set drive power level, optional auto power adjustment and kickdown parameters. powerlevel: 10..100 (%), default 100 autopower_ref: 0..250 (100 W), default 0/-1=off autopower_min: 0..100 (%), default 0/-1=none kickdown_threshold: 0..250, default 35 (= Feature #1) kickdown_compensation: 0..250, default 120 (= Feature #2)
`CFG RECUP` *`neutral brake autopower_ref autopower_min`*	Set recuperation power levels, optional auto power adjustment. neutral: 0..100 (%), default 18 (T45: 21) brake: 0..100 (%), default = neutral% autopower_ref: 0..250 (100 W), default 0/-1=off autopower_min: 0..100 (%), default 0/-1=none
`CFG RAMPS` *`start accel decel neutral brake`*	Set rates of torque demand changes (higher means faster). start: 1..250 (‰), default 40 (T45: 30) accel: 1..100 (%), default 25 (T45: 21) decel: 0..100 (%), default 20 neutral: 0..100 (%), default 40 brake: 0..100 (%), default 40
`CFG RAMPL` *`accel decel`*	Set rpm change limits for ramps.

Command	Function
	accel: 1..100 (%), default 30 = 6000 rpm/s decel: 0..100 (%), default 30 = 6000 rpm/s
`CFG SMOOTH` *`level`*	Set smoothing level. level: 0..100 (%), default 70
`CFG TSMAP` *`map trq1@spd1 trq2@spd2 trq3@spd3 trq4@spd4`*	Change torque/speed maps. map: D = Drive, N = Neutral braking, B = Footbraking trq1..4: torque 0..100 (%) spd1..4: speed 0..120 (kph) Defaults: D: 100@33 100@39 100@50 100@66 N,B: 100@33 80@39 50@50 20@66 *Note: needs ON before GO*
`CFG RESET`	Reset all macro settings to their default values. *Note: needs ON before GO (else partial)*
`CFG CLEAR`	Clear the SEVCON fault & min/max logs.

Profile management

A profile stores a combination of macro settings and can be loaded by command (or by button if using a SimpleConsole). The OVMS can store 3 custom profiles in EEPROM plus the current SEVCON working set in RAM.

Command	Function
`CFG INFO`	Output currently active profile slot# and working set parameters for these commands: SPEED, POWER, DRIVE, RECUP, RAMPS, SMOOTH
`CFG SAVE` *`slot`*	Save the current working set into an EEPROM slot. slot: 1..3
`CFG LOAD` *`slot`*	Load a profile slot into the current working set. slot: 0..3, 0=factory default config, 1..3=custom profile
`CFG RESET` *`slot`*	Reset a profile slot to the default values. slot: 1..3: reset EEPROM profile directly ...else: reset working set
`CFG GET` *`slot`*	Get (download) a complete profile base64 encoded. slot: 1..3: get EEPROM profile directly ...else: get working set
`CFG SET` *`slot base64data`*	Set (upload) a complete profile from a base64 encoded string (counterpart to CFG GET). slot: 1..3: set EEPROM profile directly, no SEVCON access ...else: set working set & try to apply changes to SEVCON

Command	Function
	base64data: encoded profile from CFG GET or cfgconv ...omit/empty = RESET profile

Base64 web utilities:

- http://dexters-web.de/cfgconv
- http://dexters-web.de/cfgedit

Temporary speed limits

Command	Function
`LOCK` *`kph`*	Immediately and persistently limit the maximum speed. If kph is lower than the default reverse speed (~10 kph), the reverse speed will also be limited.
`UNLOCK`	Clear the speed lock and reset maximum speed to the current profile configuration. If locked by valet mode, the valet trip length will be extended by 1 km but stay active.
`VALET` *`km`*	Activate valet mode and set the allowed trip length in km. Speed will be restricted to 6 kph when exceeding trip length. Default trip length = 1 km.
`UNVALET`	Clear valet mode trip length restriction. If a speed lock is currently active, also clears the lock.

Low level access

These commands provide direct access to the SEVCON configuration objects (SDO = service data object, see CANopen standard).

Att: no backup, no easy reset, note values or save logs!

Command	Function
`CFG PRE`	Enter pre-operational state ("STOP", needed for some SDOs). *Note: only necessary for few SDOs; see FAQ*
`CFG OP`	Enter operational state. As an alternative, just switch the Twizy off for 2-3 seconds, then on again & wait for 10-15 seconds.
`CFG READ` *`index_hex subindex_hex`*	Read CANopen SDO object numerical contents (displays hexadecimal and decimal value). index_hex: SDO address (hexadecimal)

Command	Function
	subindex_hex: SDO field (hexadecimal)
`CFG READS` *`index_hex subindex_hex`*	Read CANopen SDO object string contents. index_hex: SDO address (hexadecimal) subindex_hex: SDO field (hexadecimal)
`CFG WRITE` *`index_hex subindex_hex value_dec`*	Write CANopen SDO object. index_hex: SDO address (hexadecimal) subindex_hex: SDO field (hexadecimal) value_dec: new value (decimal)
`CFG WRITEO` *`index_hex subindex_hex value_dec`*	Write-only CANopen SDO object (i.e. no READ before write). index_hex: SDO address (hexadecimal) subindex_hex: SDO field (hexadecimal) value_dec: new value (decimal)

Low level examples

Command	Function
`CFG READS 1008 0`	Read SEVCON firmware name (string)
`CFG READS 1009 0`	Read SEVCON hardware version (string)
`CFG READS 100A 0`	Read SEVCON software version (string)
`CFG READ 1018 3`	Read SEVCON dictionary version (hex)
`CFG WRITE 4623 03 0`	Disable battery / BMS power protection (power limiter) *ATT: voids warranty on rented battery!* *Activate auto power on DRIVE & RECUP to protect battery!*
`CFG WRITE 3813 12 5000`	Disable SEVCON low SOC power cutback *Note: BMS protection still applies unless disabled, else use auto power on DRIVE to protect battery!*
`CFG READ 2870 06`	Read current BMS discharge (=drive) power limit: $power_{kW} = \frac{value_{dec}}{256}$
`CFG READ 2870 07`	Read current BMS charge (=recup) power limit: $power_{kW} = \frac{65536 - value_{dec}}{256}$

See "Twizy-SDO-List.pdf" for a selection of relevant SDOs or SEVCON DVT master dictionary spreadsheet for complete SDO list & documentation.