CANopen Profile Position Mode for S300

Object 607A: Target Position: This will set the target position just like O_P for motion task 0. The value can be read with PTARGET after the control word bit 4 is set (start move). The value can be read any time with O_P. In user position units; scaled by Object 6093: Position Factor: Set by PGEARI, PGEARO, PRBASE, and a gear ratio (Object 6091: Gear Ratio: default=1).

Object 607F: Max Profile Velocity: This is same as VLIMP (and I think VLIMN). In user velocity units.

Object 6080: Max Motor Speed: This is set by the motor database. In rpm.

Object 6081: Profile Velocity: This will set the speed for the position move. Same as O_V. This can be set and/or read using O_V for motion task 0. In user velocity units.

Object 6083: Profile Acceleration: Same as O_ACC. In user acceleration units.

Object 6084: Profile Deceleration: Same as O_DEC. In user acceleration units.

Object 6085: Quick Stop Deceleration: Same as DECSTOP. In user acceleration units.

Object 6086: Motion Profile Type: This is NOT O_C. This only sets whether to use trapezoidal or sine^2 accel/decel profile.

Object 60C5: Max Acceleration: Same as PTMIN. In user acceleration units.

Process Sequence:

Setup:
601h 2Fh 60h 60h 00h 01h 00h 00h 00h   Opmode = 1 Profile Position
601h 40h 7Fh 60h 00h 00h 00h 00h 00h   check/read VLIMP
601h 23h 81h 60h 00h F4h 01h 00h 00h   set O_V=500 rpm
601h 23h 83h 60h 00h 0Ah 00h 00h 00h   set O_ACC=10 ms
601h 23h 84h 60h 00h 0Ah 00h 00h 00h   set O_DEC=10 ms
601h 40h 85h 60h 00h 00h 00h 00h 00h   check/read DECSTOP
601h 2Bh 86h 60h 00h 00h 00h 00h 00h   set to 0 for trap profile
601h 40h C5h 60h 00h 00h 00h 00h 00h   check/read PTMIN

Run the move (absolute position move):
601h 2Bh 40h 60h 00h 0Fh 00h 00h 00h   set control word to operation enabled
601h 23h 7Ah 60h 00h 10h 27h 00h 00h   set target position to 10000 counts (one rev
for me)

601h 2Bh 40h 60h 00h 1Fh 00h 00h 00h   set control word bit 4 to start the move
601h 23h 7Ah 60h 00h 14h 00h 00h 00h   set target position to 20 counts
601h 2Bh 40h 60h 00h 0Fh 00h 00h 00h   turn off bit 4
601h 2Bh 40h 60h 00h 1Fh 00h 00h 00h   start the move

Run the move (incremental position move):
601h 2Bh 40h 60h 00h 0Fh 00h 00h 00h   set control word to operation enabled
601h 23h 7Ah 60h 00h 10h 27h 00h 00h   set target position to 10000 counts (one rev
for me)
601h 2Bh 40h 60h 00h 5Fh 00h 00h 00h   set control word bit 4 to start the move (bit 6
high for incremental move)
601h 23h 7Ah 60h 00h 14h 00h 00h 00h   set target position to 20 counts
601h 2Bh 40h 60h 00h 4Fh 00h 00h 00h   turn off bit 4
601h 2Bh 40h 60h 00h 5Fh 00h 00h 00h   start the move