

Project ARS 2000	Appl. Note 89 CANopen – Tunneling of communication objects	Page 1 of 4
Originator MTX		Date 22.11.2006

1 Index

1	Index	1
2	Introduction	1
3	Tunneling of communication objects (KO)	2
3.1	Object 2200 _h : read_write_ko	2
3.2	Object 2204 _h : read_ko	2
3.3	Object 2214 _h : write_ko	3
4	Example: Torque limiting in set point selection for „fixed value 1“	4

2 Introduction


The commands listed in this application note are covered by the servo positioning controllers of the ARS 2000 product line with the following product layer of standard firmware:

3.3.0.1.2

If necessary please contact your supplier for updates or visit Metronix's homepage at <http://www.metronix.de>.

Project ARS 2000	Appl. Note 89 CANopen – Tunneling of communication objects	Page 2 of 4
Originator MTX		Date 22.11.2006

3 Tunneling of communication objects (KO)

 In electronic data procession a tunnel identifies the data transfer of a network protocol (here: communication object of the RS232 protocol) embedded into another network protocol (here: CANopen protocol).

3.1 Object 2200_h: read_write_ko

With this object the address for access to a user-defined communication object is written.

Index	2200_h
Name	read_write_ko
Object Code	VAR
Data Type	UINT32

Access	rw
PDO Mapping	no
Units	-
Value Range	-
Default Value	0

3.2 Object 2204_h: read_ko

With this object the address for access to a user-defined object is read.

Index	2204_h
Name	read_ko
Object Code	VAR
Data Type	UINT32

Access	ro
PDO Mapping	no
Units	-
Value Range	-
Default Value	-

Project ARS 2000	Appl. Note 89 CANopen – Tunneling of communication objects	Page 3 of 4
Originator MTX		Date 22.11.2006

3.3 Object 2214_h: write_ko

With this object the data of a user-defined communication object are written.

Index	2214_h
Name	write_ko
Object Code	VAR
Data Type	UINT32

Access	wo
PDO Mapping	no
Units	-
Value Range	-
Default Value	-

Project ARS 2000	Appl. Note 89 CANopen – Tunneling of communication objects	Page 4 of 4
Originator MTX		Date 22.11.2006

4 Example: Torque limiting in set point selection for „fixed value 1“

Procedure:

- First of all write access to CANopen-Object 2200_h with the address of the communication object takes place.
- The write access to the CANopen-Object 2214_h changes the contents of the communication objects stated value.
- The read access to the CANopen-Object 2204_h returns the contents of the communication object.

Example:

Direct access of torque limiting in set point selection for „fixed value 1“ takes place by access to the communication objects 0x0158 (torque limiting in 1/2¹⁶ A as peak value; i.e. 1A = 65536_{dec} = 0x00010000_h).

In the transfer window the parameterisation with an simulated SDO access looks like the following:

```

> =220000:00000158      (Torque limiting in menue "parametrising of targets")
> =220000:00000158      (Feedback)
> =221400:00010000      (1A = 65536dec = 0x00010000h; in the display below the
                        ServoCommander™ of the menue „parametrising of
                        targets“ the rms-value = 0,71 A is indicated!)
> =221400:00010000      (Feedback)
> ?220400                (Value monitoring of torque limiting)
> =220400:00010000      (Feedback)

```



Where applicable the torque limiting needs to be activated in ServoCommander™.