

Shortform Object Dictionary ELOTECH R1140

for controller series: R1140

CiA DS – 404

Revision: V2004/15

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2. References

- /1/: ISO 7498, 1984, Information Processing Systems - Open Systems Interconnection - Basic Reference Model
- /2/: ISO/DIS 11898, 1992, Road Vehicles, Interchange of Digital Information - Controller Area Network (CAN) for high-speed Communication
- /3/: Robert Bosch GmbH, CAN Specification 2.0 Part B, September 1991
- /4/: CiA/DS 102, CAN Physical Layer for Industrial Applications
- /5/: CiA/DS 201, CAN Reference Model, April 1994
- /6/: CiA/DS 202-1, CMS Service Specification, April 1994
- /7/: CiA/DS 202-2, CMS Protocol Specification, April 1994
- /8/: CiA/DS 202-3, CMS Encoding Rules, April 1994
- /9/: CiA/DS 203-1, NMT Service Specification, April 1994
- /10/: CiA/DS 203-2, NMT Protocol Specification, April 1994
- /11/: CiA/DS 204-1, DBT Service Specification, April 1994
- /12/: CiA/DS 204-2, DBT Protocol Specification, April 1994
- /13/: CiA/DS 207, Application Layer Naming Specification, April 1994
- /14/: CiA/DS 205-1, LMT Service Specification, April 1994
- /15/: CiA/DS 205-2, LMT Protocol Specification, April 1994
- /16/: CiA/DS 206, Application Specific Data Types, April 1995
- /17/: CiA/DS 301, CAL-based Communication Profile, October 1996
- /18/: CIA/DS 401, Device Profile for I/O Modules, December 1996
- /19/: CIA/WD 404, Device Profile for Measuring Devices and Closed-Loop Controllers, 2. November 1998

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3. Survey Object Dictionary

3.1 Analogue Input Function Block

Index (hex)	Object (Symbolic Name)	Name	Type	Attr.	M/O
		Sensor:			
6110	ARRAY	AI_Sensor_Type	Unsigned16	ro	O
		Process Value Reading:			
7124	ARRAY	AI_Input_Offset "OFSt"	spec. by index	rw	O
7130	ARRAY	AI_Input_Process_Value	spec. by index	ro	M
6131	ARRAY	AI_Physical_Unit_Process_Value	Unsigned16	ro	M
6132	ARRAY	AI_Decimal_Digits_Process_Value	Unsigned8	ro	M
		Overflow Limits for Process Values			
7148	ARRAY	AI_Span_Start "Measuring range, bottom end"	spec. by index	ro	O
7149	ARRAY	AI_Span_End "Measuring range, top end"	spec. by index	ro	O

3.2 Controller Function Block

Index (hex)	Object (Symbolic Name)	Name	Type	Attr.	M/O
7400	ARRAY	CO_Effective Current Value Xeff "act. process value"	spec. by index	ro	M
7401	ARRAY	CO_Effective Set Point Weff "act. setpoint value"	spec. by index	ro	M
7402	ARRAY	CO_1st Set Point W "SP1"	spec. by index	rw	M
7403	ARRAY	CO_2nd Set Point W2 "SP2"	spec. by index	rw	M
7404	ARRAY	CO_Lower Set Point Limit W0 "SP.Lo"	spec. by index	rw	O
7405	ARRAY	CO_Upper Set Point Limit W100 "SP.Hi"	spec. by index	rw	O
6406	ARRAY	CO_Physical Unit Current Value / Set Point	Unsigned16	ro	M
6407	ARRAY	CO_Decimal Digits Current Value / Set Point	Unsigned8	ro	M
6410	ARRAY	CO_Effective Controller Output Y " Y"	Integer16	ro	M
6412	ARRAY	CO_Manual Controller Output	Integer16	rw	O
6413	ARRAY	CO_Lower Controller Output Limit Ymin (C) "2 LY"	Integer16	rw	O
6414	ARRAY	CO_Upper Controller Output Limit Ymax (H) "1 LY"	Integer16	rw	O
6420	ARRAY	CO_Set Point Switch W1/W2	Unsigned8	rw	M
6422	ARRAY	CO_Controller on / off "Cont"	Unsigned8	rw	M
6424	ARRAY	CO_Self Optimization on / off " OPt"	Unsigned8	rw	O
6425	ARRAY	CO_control byte	Unsigned8	rw	M
7440	ARRAY	CO_Neutral Zone XSH (switch point difference) " Sh"	spec. by index	rw	O
7450	ARRAY	CO_Proportional Band Xp1 (H) "1 P"	spec. by index	rw	O
7451	ARRAY	CO_Proportional Band Xp2 (C) "2 P"	spec. by index	rw	O
7452	ARRAY	CO_Integral Action Time Tn1 (H) "1 I"	spec. by index	rw	O
7453	ARRAY	CO_Integral Action Time Tn2 (C) "2 I"	spec. by index	rw	O
7454	ARRAY	CO_Derivative Action Time Tv1 (H) "1 d"	spec. by index	rw	O
7455	ARRAY	CO_Derivative Action Time Tv2 (C) "2 d"	spec. by index	rw	O
7456	ARRAY	CO_Cycle Time T1 (H) "1 CY"	spec. by index	rw	O
7457	ARRAY	CO_Cycle Time T2 (C) "2 CY"	spec. by index	rw	O
6458	ARRAY	CO_Physical Unit PID Timing	Unsigned16	ro	O
6459	ARRAY	CO_Decimal Digits PID Timing	Unsigned8	ro	O

3.3 Alarm Function Block

Index	Object	Name	Type	R/W	MO
6509	ARRAY	AL_1 Action	Unsigned8	rw	M
750A	ARRAY	AL_1 Level	spec. by index	rw	M
650D	ARRAY	AL_1 State	Boolean	ro	M
6519	ARRAY	AL_2 Action	Unsigned8	rw	M
751A	ARRAY	AL_2 Level	spec. by index	rw	M
651D	ARRAY	AL_2 State	Boolean	ro	M
6600	ARRAY	AL_1...8 State	Unsigned8	ro	M

3.4 Device Function Block

Index	Object	Name	Type	R/W	MO
6F00	ARRAY	Transmission_Rate (x0.1ms) transmit PDOs	Unsigned32	rw	M
6F01	ARRAY	Channel enable transmit PDO	Unsigned8	rw	M

3.5 ELOTECH Extensions

Index	Object	Name	Type	R/W	MO
2000	ARRAY	Ident-Object	Integer16	ro	O
2110	ARRAY	Sensor (Measuring range)	Integer16	rw	O
2408	ARRAY	Setpoint ramp, rising	Integer16	rw	O
2409	ARRAY	Setpoint ramp, falling	Integer16	rw	O
2421	ARRAY	Manual mode configuration	Integer16	rw	O
2423	ARRAY	CO_Controller mode	Unsigned8	rw	O
2508	ARRAY	Alarm 1 Configuration	Integer16	rw	O
2509	ARRAY	Switching behaviour Alarm1 (direct/invers)	Integer16	rw	O
2600	ARRAY	Control sensitivity	Integer16	rw	O
2601	ARRAY	Control sensitivity	Integer16	rw	O
2518	ARRAY	Alarm 2 Configuration	Integer16	rw	O
2519	ARRAY	Switching behaviour Alarm 2 (direct/invers)	Integer16	rw	O
2700	ARRAY	Softstart off/on	Unsigned8	rw	O
2701	ARRAY	Softstart output ratio	Integer16	rw	O
2702	ARRAY	Softstart setpoint	Integer16	rw	O
2703	ARRAY	Softstart duration time	Integer16	rw	O
2F11	ARRAY	LOC Configuration	Integer16	rw	O
2F12	ARRAY	Configuration Out 4	Integer 16	rw	O
2F21	ARRAY	Zone offset Configuration	Integer16	rw	O

4. Static PDO-Mapping

4.1 2nd transmit PDO mapping (Controller)

Index	Subindex	Comment	Default Value
1801 _h	0	number of entries	4
	1	COB-ID used by PDO	280H+NodeID
	2	transmission type	255
	3	inhibit time	300
	4	CMS priority group	3

Index	Subindex	Comment	Default Value
1A01 _h	0	number of mapped objects	5
	1	Channel_No	0000 00 08H
	2	CO_Effective Controller Output Y	6410 FD 10H
	3	CO_Effective Current Value Xeff	7400 FD 10H
	4	CO_control byte	6425 FD 08H
	5	AL_1..8 State	6600 FD 08H