

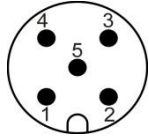
Versionshistorie

Version	Bearbeiter	Datum	Bemerkung/Änderung
00-01	M.Zimmermann	19.08.08	draft
00-02	M.Zimmermann	21.06.10	review, translation
00-03	M.Zimmermann	04.10.12	Draft for SCFT turbine flow meter
00-04	M.Zimmermann	13.09.16	Update for SCFTT turbine flow meter with temperature
00-05	M.Zimmermann	18.06.18	Storage Function



1 Electrical connection

1.1 connector pin assignment

Anschluss		
Steckverbindung	5-pol., M12x1, male	connector following IEC 60947-5-2 bzw. CiA Draft Recommendation 303 Part 1 Cabling and connector pin assignment
assignment	Pin 1 = Shield Pin 2 = +Ub Pin 3 = GND Pin 4 = CAN H Pin 5 = CAN L	

Titel:	Datei: CANopen Communication SCFTT-C2-05_20180618.docx	Version: 00-04
Autor: Marc Zimmermann	Datum: 18.06.2018	Status: draft
Geprüft :	Seite: 1/16	

1.2 power supply

power supply		
Voltage	8...40 VDC	
max. current	65 mA	@ 8 VDC
	25 mA	@ 24 VDC
	16 mA	@ 40 VDC

1.3 CAN-Bus

1.3.1 Bus-Topology

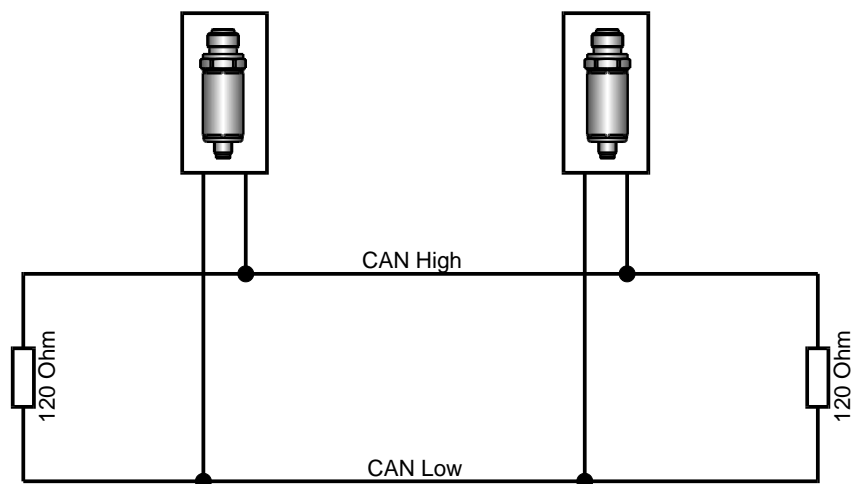


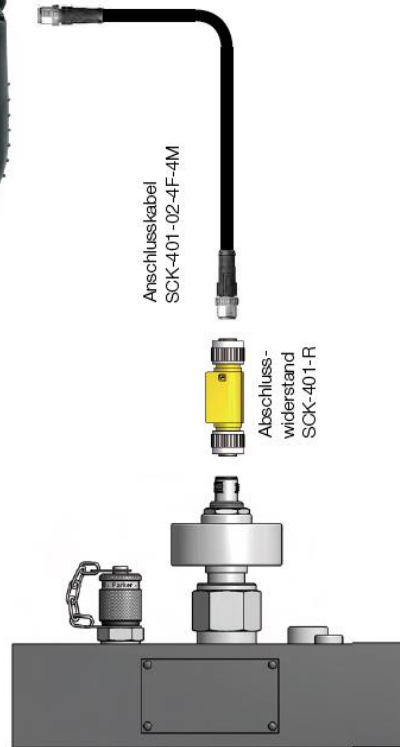
figure 1 : Bus Topology, Example

The topology of the CAN-bus is linear. Terminator-Resistors (120 Ohms) have to be connected to the end of the bus lines.

Titel:	Datei: CANOpen Communication SCFTT-C2-05_20180618.docx	Version: 00-04
Autor: Marc Zimmermann	Datum: 18.06.2018	Status: draft
Geprüft :	Seite: 2/16	



The Parker Service Master Plus
 SCM-500-xx-xx oder
 The Parker Serviceman Plus
 SCM-155-02-05



Durchflussmessturbinen SCFTT-xxx-C2-05

The Parker Service Master Plus has an internal terminating resistor. An additional terminating resistor (C, yellow) has to be attached to the last CAN Sensor.

1.3.2 stub-lines

- Stub-lines must not be longer than 0,3m.

Titel:	Datei: CANopen Communication SCFTT-C2-05_20180618.docx	Version: 00-04
Autor: Marc Zimmermann	Datum: 18.06.2018	Status: draft
Geprüft :	Seite: 3/16	



2 Initial operation

2.1 Factory settings

- Baudrate : 500kBit/s
- Node-ID : 78h (120d)

2.2 CAN Configuration

2.2.1 Node-ID

- The node-ID can be changed through the Layer Setting Services (LSS)

2.2.2 Baudrate

Baudrate	1000kBit/s	800kBit/s	500kBit/s	250kBit/s	125kBit/s	50kBit/s	20kBit/s
max. Bus length	25m	50m	100m	250m	500m	1000m	2500m
Bit-Timing	0	1	2	3	4	5	6

- The baudrate can be changed through the Layer Setting Services (LSS)

2.2.3 Layer setting services

- The Layer Setting Service following CiA DS 305 is supported
- The LSS-Address (**Vendor-ID, Product Code, Revision Number** and **Serial Number**) can be found on the label of the sensor.

Titel:		Datei:	CANopen Communication SCFTT-C2-05_20180618.docx	Version:	00-04
Autor:	Marc Zimmermann	Datum:	18.06.2018	Status:	draft
Geprüft :		Seite:	4/16		



3 Communication objects

3.1 Overview communication objects and priority

Prio	Object	Identifier	Function	Remarks
	NMT	0h	Network-Management	Broadcast or directed
	SYNC	80h	Sync-Message	System-wide Synchronization-objects for PDO transmission, Broadcast
	EMCY	80h + Node-ID	Emergency-Message	Indication of Alarm and error conditions
	TPDO1	180h + Node-ID	Pressure value, Process value	IEEE-754-Format, active, Identifier changeable
	TPDO5	changeable	Temperature value, Process value	IEEE-754-Format, not active, Identifier changeable
	TPDO6	changeable	Pressure value, Fieldvalue	Integer-16 Format, not active, Identifier changeable
	TPDO7	changeable	Temperature value, Field value	Integer-16 Format, not active, Identifier changeable
	SDO (tx)	580h + Node-ID	Service Data Object Transmit	Slave -> Master
	SDO (rx)	600h + Node-ID	Service Data Object Receive	Master -> Slave
	Bootup	700h + Node-ID	Bootup-Message	at power-up
	Heartbeat	700h + Node-ID	Heartbeat-Message	cyclic, period adjustable
	LSS (tx)	7E4h	Layer setting service Transmit	Slave -> Master
	LSS (rx)	7E5h	Layer setting service Receive	Master -> Slave

Titel:	Datei: CANopen Communication SCFTT-C2-05_20180618.docx	Version: 00-04
Autor: Marc Zimmermann	Datum: 18.06.2018	Status: draft
Geprüft :	Seite: 5/16	

3.2 NMT-Commandos

3.2.1 State machine

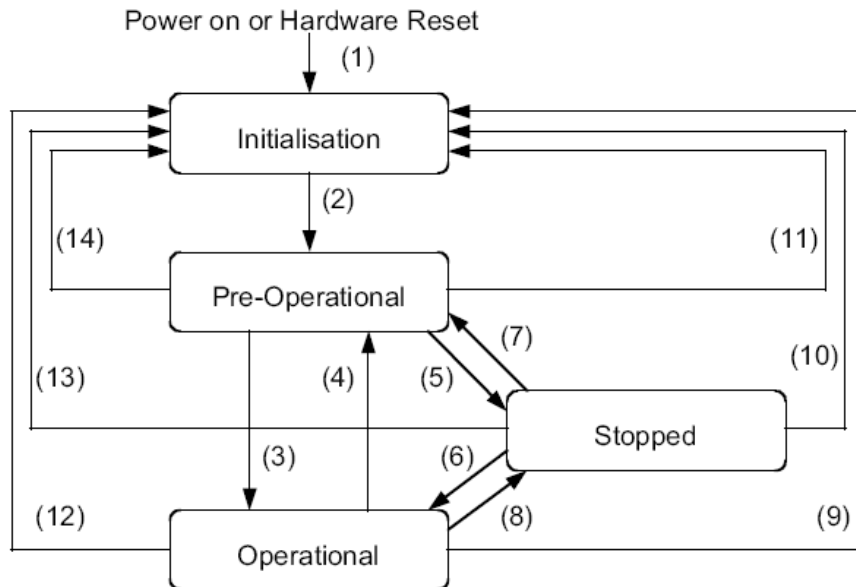


Table 31: Trigger for State Transition

(1)	At Power on the initialisation state is entered autonomously
(2)	Initialisation finished - enter PRE-OPERATIONAL automatically
(3),(6)	Start_Remote_Node indication
(4),(7)	Enter_PRE-OPERATIONAL_State indication
(5),(8)	Stop_Remote_Node indication
(9),(10),(11)	Reset_Node indication
(12),(13),(14)	Reset_Communication indication

NMT-Kommando	Identifier	Command	Node-ID
Operational (3)(6)	0h	01h	0...7fh (0 : Broadcast)
Pre-Operational (4)(7)	0h	80h	
Stop (5)(8)	0h	02h	
Reset Node (9)(10)(11)	0h	81h	
Reset Communication (12)(13)(14)	0h	82h	

Titel:	Datei: CANopen Communication SCFTT-C2-05_20180618.docx	Version: 00-04
Autor: Marc Zimmermann	Datum: 18.06.2018	Status: draft
Geprüft :	Seite: 6/16	



3.3 SYNC

The Sync-message is needed to synchronize the measured values of different CANopen devices. Each PDO, which is configured as synchronous is transmitted after receiving a Sync-message.

3.4 EMCY

Identifier	Datenbytes							Bemerkung
	0	1	2	3	4	5	6	
80h+NodeID	1000h	01h	Status-register		0h	0h	0h	generic error
80h+NodeID	3050h	01h	0h	0h	0h	0h	0h	broken wire or short-circuit
80h+NodeID	6100h	01h	0h	0h	0h	0h	0h	Software error
80h+NodeID	6200h	01h	0h	0h	0h	0h	0h	CRC error User data
80h+NodeID	6300h	01h	0h	0h	0h	0h	0h	CRC error Applikation data
80h+NodeID	F011h	01h	number of events					pressure limit exceeded

Each EMCY-Message is transmitted once after occurrence.

3.5 PDO

3.5.1 TPDO Mapping

TPDO1, Flow						
Identifier	Datenbytes					Bemerkung
	0	1	2	3	4	
180h+Node-ID	flow value				Status	IEEE-754-Format
Example						
1D0h	9Ah	D9h	87h	43h	0h	271.7 lpm, flow value ok

TPDO1 contains the current flow value (process value) and the status.

TPDO5						
Identifier	Datenbytes					Bemerkung
	0	1	2	3	4	
1D0h+Node-ID	temperature value				Status	IEEE-754-Format
Example						
2200h	9Ah	99h	A9h	40h	0h	5,3 °C, temperature value ok

TPDO5 contains the current temperature value (process value) and the status.

Status: see AI status 6150h for details.

TPDO6			
Identifier	Datenbytes		Bemerkung
	0	1	
180h+Node-ID	flow value		Integer-16 Format (-32000 ... 32000)
Example			
1D0h	35h	03h	Field value : 821

Titel:	Datei:	CANopen Communication SCFTT-C2-05_20180618.docx	Version:	00-04	
Autor:	Marc Zimmermann	Datum:	18.06.2018	Status:	draft
Geprüft :		Seite:	7/16		



TPDO6 contains the current flow value (field value).

TPDO7			
Identifier	Datenbytes		Bemerkung
	0	1	
180h+Node-ID	temperature value		Integer-16 Format (-32000 bis 32000)
Example			
1D0h	97h	12h	Feldwert : 4759

TPDO7 contains the current temperature value (field value)

NOTE: PDO configuration is volatile.

3.6 SDO access

read access :

Identifier	Datenbytes								Bemerkung
	0	1	2	3	4	5	6	7	
	CS	Index		Sub Index	0	1	2	3	
600h + Node-ID									SDO Request Master -> Slave
Example									
650h	40h	18h	10h	04h	00h	00h	00h	00h	request serial number of CAN node 50h

write access :

Identifier	Datenbytes								Bemerkung
	0	1	2	3	4	5	6	7	
	CS	Index		Sub Index	0	1	2	3	
600h + Node-ID									SDO Response Slave -> Master
Example									
650h	43h	18h	10h	04h	06h	03h	08h	20h	Answer serial number: 20080306h

In case of access to non-existing or password-protected object entries the SDO access is aborted with an error code.

Error message :

Identifier	Datenbytes								Bemerkung
	0	1	2	3	4	5	6	7	
	CS	Index		Sub Index	0	1	2	3	
600h + Node-ID					Abort-Code				SDO Request Master -> Slave erroneous
Beispiel									
650h	80h	18h	10h	05h	11h	00h	09h	06h	Abort-Code : Sub-Index not existing

Further possible Abort-Codes are listed in CiA DS30.

Titel:	Datei:	CANopen Communication SCFTT-C2-05_20180618.docx	Version:	00-04	
Autor:	Marc Zimmermann	Datum:	18.06.2018	Status:	draft
Geprüft :		Seite:	8/16		

3.7 Heartbeat

The Heartbeat-Message is used for system monitoring. If configured, the CAN node transmits a heartbeat-message periodically. The heartbeat-message contains the current NMT-Status

Heartbeat		
Identifier	Datenbyte	Bemerkung
	0	
700h+Node-ID		Heartbeat-Message
Example		
750h	05h	CAN-Knoten 50h is in operational state

3.8 Layer Setting Services (LSS)

See CiA DS305 for details.

4 Data flow

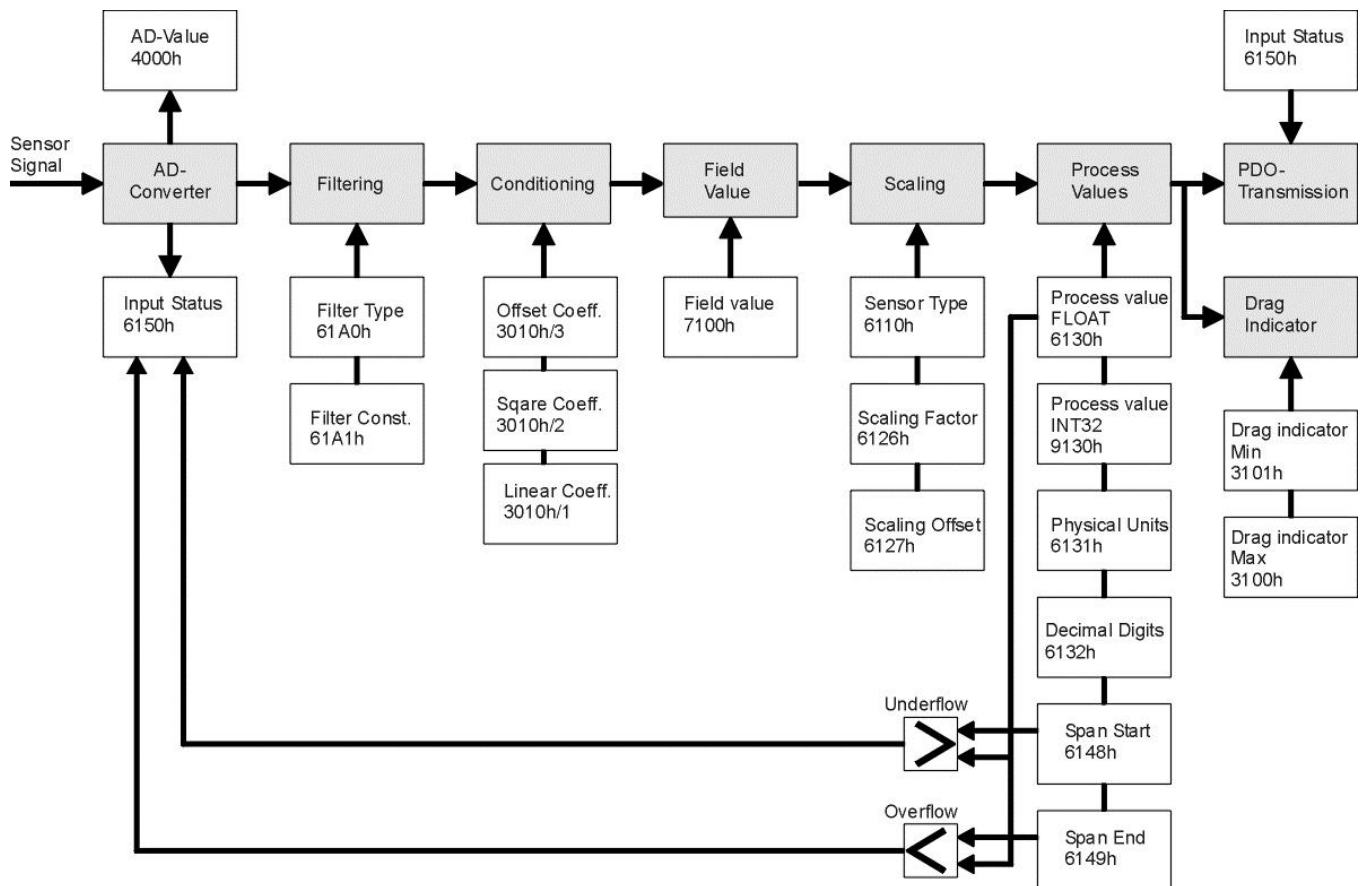


figure 2 : data flow

Titel:	Datei: CANopen Communication SCFTT-C2-05_20180618.docx	Version: 00-04
Autor: Marc Zimmermann	Datum: 18.06.2018	Status: draft
Geprüft :	Seite: 9/16	

5 relationship field value – process value

The SCFT-XXX-C2-05 follows the “Device profile measuring devices and closed-loop controllers“, which is described in CiA Draft Standard 404.

The conversion from field value to process value is generally described as a linear transformation.

The field value is the adjusted standardised and has no unit. It ranges from -20000 ... +20000. 5% *transgression range* in both directions lead to 22000 ... +22000.

Values below -22000 and above +22000 are located in the *overflow range* and can reach -32000 or +32000. Values beyond the cut-off borders are not taken into account for calculation of pressure or temperature values.

If this limit is exceeded for more than one second, an EMCY-Message is sent a counter in the non-volatile memory is incremented.

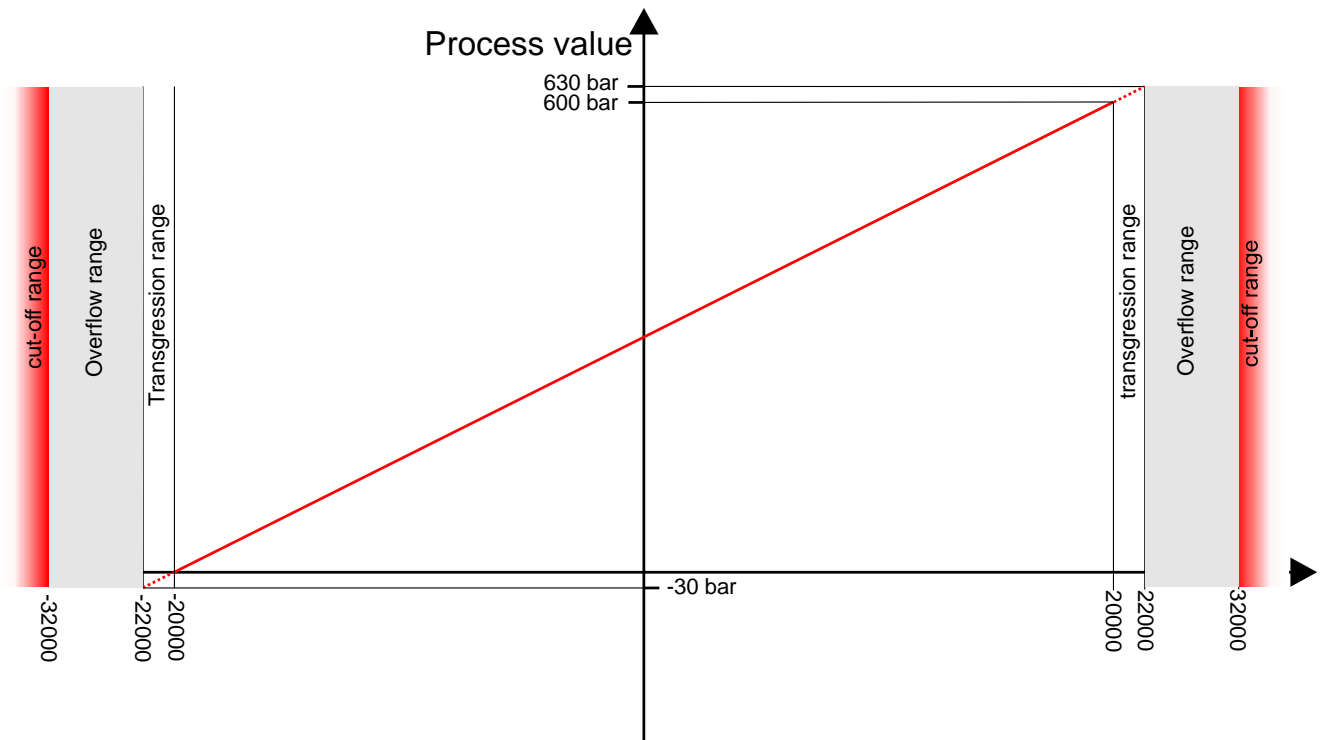


figure 3 : relationship field value - process value, borders

This figure has been drawn for pressure sensors, but the process value can be flow as well.

Titel:	Datei: CANopen Communication SCFTT-C2-05_20180618.docx	Version: 00-04
Autor: Marc Zimmermann	Datum: 18.06.2018	Status: draft
Geprüft :	Seite: 10/16	



6 Object dictionary

6.1 Communication Segment

Index [hex]	Sub-Index	Name	Typ	Attri but	Default Wert	Description
Device Type						
1000	0	Gerätetyp	uint32	ro	0x00020194	DS 404 Norm 0002 = Analog Input 0x0194= Profil ID (DS 404)
Error register						
1001	0	Errorregister	uint8	ro	0x00	Bits: 0 generic error 1 current 2 voltage 3 temperature 4 communication 5 device profile specific 6 reserved 7 manufacturer specific
COB-ID Sync						
1005	0	COB-ID Sync (Consumer)	uint32	rw	0x00000080	COB-ID of Sync-Message
Manufacturer Device Name						
1008	0	Manufacturer Device Name	visible String	ro	→	S C F T - C A N 53,43,50,54,2D,43,41,4E
Store Parameter Field						
1010	0	Store Parameter Field	uint32	ro		Number of entries
	1	Save all Parameters	uint32	rw		save User-Data , write signature „save“ (0x65766173) (Note: PDO configuration is NOT stored)
	2	Save Communication Parameters	uint32	rw		not used
	3	Save Application Parameters	uint32	rw		not used
	4	Save Calibration Parameters	uint32	rw		save Adjustment data, Signature „save“ (0x65766173)
Restore default parameters						
1011	0	restore default parameters	uint8	ro		Number of entries
	1	Restore all Parameters	uint32	rw		restore User-Data, Signature „load“ (0x64616f6c)
	2	Restore Communication Parameters	uint32	rw		not used
	3	Restore Application Parameters	uint32	rw		not used
	4	Restore Calibration Parameters	uint32	rw		restore Adjustment-Data, Signature „load“ (0x64616f6c)

Titel:	Datei:	CANopen Communication SCFTT-C2-05_20180618.docx	Version:	00-04	
Autor:	Marc Zimmermann	Datum:	18.06.2018	Status:	draft
Geprüft :		Seite:	11/16		



Parker Hannifin GmbH
Tube Fittings Division Europe
 Am Metallwerk 9, 33659 Bielefeld
 Postfach 120206, 33652 Bielefeld
 Phone ++49-521-4048-0
 Fax ++49-521-4048-4421

®
SensoControl

Index [hex]	Sub-Index	Name	Typ	Attribut	Default Wert	Description
COB-ID Emergency message						
1014	0	COB-ID Emergency message	uint32	ro	0x 00000080	80h + Node-ID
Inhibit Time Emergency						
1015	0	Inhibit Time Emergency	uint16	rw	0x0000	Inhibit time for EMCY-Message, x 100ms
Producer heartbeat time						
1017	0	producer heartbeat time	uint16	rw	0x0	x 1ms 0...65535ms 0 : aus
Identity object						
1018	0	identity object	uint8	ro	0x04	Number of entries
	1	Vendor-ID	uint32	ro	0x03000089	Parker Hannifin / SensoControl = "03000089" → Vendor ID bei CiA
	2	Product code	uint32	ro	0x 0103	
	3	Revision number	uint32	ro	0x 10000	
	4	Serial number	uint32	ro		
TPDO 1, Communication Parameter, flow measurement						
1800	0	Transmit PDO 1	uint8	ro	0x05	Number of entries
	1	COB-ID TPDO 1	uint32	rw	0x 0000180	COB-ID TPDO1 + Node-ID fixed COB-ID, see Device Profile
	2	transmission type	uint8	rw	0xFE	0x01 = synchron 0xFE = event timer
	3	inhibit time	uint16	rw	0x000A (1ms)	0...65535 (x 0,1ms)
	4	reserved				
	5	event timer	uint16	rw	0x1F4 (500ms)	0...65535 (x 1ms)
TPDO 5, Communication Parameter, temperature measurement						
1804	0	Transmit PDO 5	uint8	ro	0x05	Number of entries
	1	COB-ID TPDO 5	uint32	rw	0x80000000 (inaktiv)	COB-ID TPDO5
	2	transmission type	uint8	rw	0xFE	0x01 = synchron 0xFE = event timer
	3	inhibit time	uint16	rw	0x0BB8 (300ms)	0...65535 (x 0,1ms)
	4	Reserved				
	5	event timer	uint16	rw	0x03E8 (1000ms)	0...65535 (x 1ms)
TPDO 6, Communication Parameter, flow measurement, synchron						
1805	0	Transmit PDO 6	uint8	ro	0x05	Number of entries
	1	COB-ID TPDO 5	uint32	rw	0x80000000 (inaktiv)	COB-ID TPDO6
	2	transmission type	uint8	rw	0x01	0x01 = synchron 0xFE = event timer
	3	inhibit time	uint16	rw	0x000A (1ms)	0...65535 (x 0,1ms)
	4	Reserved				
	5	event timer	uint16	rw	0x0000 (inaktiv)	0...65535 (x 1ms)
TPDO 7, Communication Parameter, temperature measurement, synchron						
1806	0	Transmit PDO 7	uint8	ro	0x05	Number of entries
	1	COB-ID TPDO 5	uint32	rw	0x80000000 (inaktiv)	COB-ID TPDO7
	2	transmission type	uint8	rw	0x01	0x01 = synchron 0xFE = event timer
	3	inhibit time	uint16	rw	0x0BB8 (300ms)	0...65535 (x 0,1ms)
	4	Reserved				
	5	event timer	uint16	rw	0x0000 (inaktiv)	0...65535 (x 1ms)

Titel:	Datei: CANopen Communication SCFTT-C2-05_20180618.docx	Version: 00-04
Autor: Marc Zimmermann	Datum: 18.06.2018	Status: draft
Geprüft :	Seite: 12/16	



Parker Hannifin GmbH
Tube Fittings Division Europe
Am Metallwerk 9, 33659 Bielefeld
Postfach 120206, 33652 Bielefeld
Phone ++49-521-4048-0
Fax ++49-521-4048-4421



SensoControl

Index [hex]	Sub-Index	Name	Typ	Attribut	Default Wert	Description
TPDO1 Mapping Parameter						
1A00	0	TPDO mapping parameter	uint8	ro	0x02	Number of entries
	1	Mapping Entry 1	unit32	ro	0x61300120	AI Input PV (FLOAT), Pressure measurement
	2	Mapping Entry 2	unit32	ro	0x61500108	AI Status , Pressure measurement
TPDO5 Mapping Parameter						
1A04	0	TPD5 mapping parameter	uint8	ro	0x02	Number of entries
	1	Mapping Entry 1	unit32	ro	0x61300220	AI Input PV (FLOAT), temperature measurement
	2	Mapping Entry 2	unit32	ro	0x61500208	AI Status , temperature measurement
TPDO6 Mapping Parameter						
1A05	0	TPD5 mapping parameter	uint8	ro	0x02	Number of entries
	1	Mapping Entry 1	unit32	ro	0x71000110	AI Input FV (INT16), Pressure measurement
	2	Mapping Entry 2	unit32	ro	0x61500108	AI Status , Pressure measurement
TPDO7 Mapping Parameter						
1A06	0	TPD5 mapping parameter	uint8	ro	0x02	Number of entries
	1	Mapping Entry 1	unit32	ro	0x71000210	AI Input FV (INT16), temperature measurement
	2	Mapping Entry 2	unit32	ro	0x61500208	AI Status , temperature measurement

Titel:		Datei: CANopen Communication SCFTT-C2-05_20180618.docx	Version: 00-04
Autor: Marc Zimmermann		Datum: 18.06.2018	Status: draft
Geprüft :		Seite: 13/16	



Parker Hannifin GmbH
Tube Fittings Division Europe
 Am Metallwerk 9, 33659 Bielefeld
 Postfach 120206, 33652 Bielefeld
 Phone ++49-521-4048-0
 Fax ++49-521-4048-4421



SensoControl

6.2 Manufacturer Segment

Index [hex]	Sub-Index	Name	Typ	Attribut	Default Wert	Description
Node Configuration						
2000	0	Node configuration	uint8	ro	0x02	Number of entries
	1	Node - ID	uint8	rw	0x0070	0xFF = not configured 1...126 valid Addresses Parker SC = 120 = 78 _n (for all Sensors, P, T, PT....)
	2	Bit timing	uint8	rw	0x00000002	0...6 0 = 1000 kBit/s 1 = 800 kBit/s 2 = 500 kBit/s 3 = 250 kBit/s 4 = 125 kBit/s 5 = 50 kBit/s 6 = 20 kBit/s
Adjustment information						
3030	0	Adjustment information	uint16	ro	0x0002	Number of entries
	1	Date of last adjustment	uint16	ro*	0x0000	see attachment
	2	Inspector	uint16	ro*	0x0000	
Mode of operation						
3050	0	Mode of operation	uint8	rw	0x00	
Drag indicator maximum						
3100	0	Drag indicator maximum	real32	ro	0x00000002	Number of entries
	1	Drag indicator max P	real32	ro	0x00000000	Drag indicator Maximum, Pressure measurement
	2	Drag indicator max T	real32	ro	0x00000000	Drag indicator Maximum, Temperaturmessung
Drag indicator minimum						
3101	0	Adjustment information	real32	ro	0x0002	Number of entries
	1	Drag indicator min P	real32	ro	0x00000000	Drag indicator Minimum, Pressure measurement
	2	Drag indicator min T	real32	ro	0x00000000	Drag indicator Minimum, Temperature measurement
Drag indicator reset						
3110	0	Drag indicator reset	uint32	rw	0x00000000	Drag indicator reset, Signatur „kill“ (0x6C6C696B)

Titel:	Datei:	CANopen Communication SCFTT-C2-05_20180618.docx	Version:	00-04	
Autor:	Marc Zimmermann	Datum:	18.06.2018	Status:	draft
Geprüft :		Seite:	14/16		



6.3 Device Profile Segment

Index [hex]	Sub-Index	Name	Typ	Attribut	Default Wert	Description
AI Sensor type						
6110	0	AI Sensor type	uint8	ro	0x02	Number of entries
	1	AI Sensor Q	uint16	ro	0x005A	Flow
	2	AI Sensor T	uint16	Ro	0x64	Temperature
	3	AI Sensor f	uint16	ro	0x0064	Frequency
AI Scaling Factor						
6126	0	number of entries	real32	ro	0x00000002	Number of entries
	1	AI Scaling Factor Q	real32	ro*	0x00000000	Scaling factor flow
	2	AI Scaling Factor T	real32	Ro*	0x00000000	Scaling factor Temperature
	3	AI Scaling Factor f	real32	ro*	0x00000000	Scaling factor frequency
AI Scaling Offset						
6126	0	number of entries	real32	ro	0x00000002	Number of entries
	1	AI Scaling offset Q	real32	ro*	0x00000000	Scaling offset flow
	2	AI Scaling offset T	real32	ro*	0x00000000	Scaling offset Temperature
	3	AI Scaling offset f	real32	ro*	0x00000000	Scaling offset frequency
AI Input PV (FLOAT)						
6130	0	Number of entries	real32	ro	0x00000002	Number of entries
	1	AI Input PV Q	real32	ro	0x00000000	Process value flow measurement
	2	AI Input PV T	real32	ro	0x00000000	Process value Temperature measurement
	3	AI Input PV f	real32	ro	0x00000000	Process value frequency measurement
AI Physical unit PV						
6131	0	Number of entries	unit32	ro	0x00000001	Number of entries
	1	AI Physical unit PV Q	unit32	ro	0x004E0000 (bar)	physical unit Process value flow measurement
	2	AI Physical unit PV T	unit32	ro	0x002D0000 (°C)	physical unit Process value flow measurement
	3	AI Physical unit PV f	unit32	ro	0x00200000 (Hz)	physical unit Process value frequency measurement
AI Decimal digits PV						
6132	0	Number of entries	uint8	ro	0x02	Decimal digits for Index 0x9130
	1	AI Decimal digits PV Q	uint8	rw	0x01	0...2
	2	AI Decimal digits PV T	uint8	rw	0x01	0...2
	3	AI Decimal digits PV f	uint8	rw	0x01	0...2
AI Span Start						
6148	0	Number of entries	real32	ro	0x00000002	Number of entries
	1	AI Span Start Q	real32	rw	0x00000000	Span Start Process value Flow (0x6130,1)
	2	AI Span Start T	real32	rw	0x00000000	Span Start Process value Temperature (0x6130,2)
	3	AI Span Start f	real32	rw	0x00000000	Span Start Process value Frequency (0x6130,3)
AI Span End						
6149	0	Number of entries	real32	ro	0x00000002	Number of entries
	1	AI Span end Q	real32	rw	0x00000000	Span End Process value Flow (0x6130,1)
	2	AI Span end Q	real32	rw	0x00000000	Span End Process value Temperature (0x6130,2)
	3	AI Span end f	real32	rw	0x00000000	Span End Process value Frequency (0x6130,3)
AI Status						
6150	0	Number of entries	uint8	ro	0x02	Number of entries
	1	AI Status Q	uint8	rw	0x00	Bitfield 0x00: valid value 0x01: broken wire/Short circuit 0x02: range exceeded 0x04: range exceeded
	2	AI Status T	uint8	rw	0x00	Bitfield 0x00: valid value 0x01: broken wire/Short circuit 0x02: range exceeded

Titel:	Datei: CANopen Communication SCFTT-C2-05_20180618.docx	Version: 00-04
Autor: Marc Zimmermann	Datum: 18.06.2018	Status: draft
Geprüft :	Seite: 15/16	



Parker Hannifin GmbH
Tube Fittings Division Europe
 Am Metallwerk 9, 33659 Bielefeld
 Postfach 120206, 33652 Bielefeld
 Phone ++49-521-4048-0
 Fax ++49-521-4048-4421



SensoControl

	2	AI Status f	uint8	rw	0x00	0x04: range exceeded Bitfield 0x00: valid value 0x01: broken wire/Short circuit 0x02: range exceeded 0x04: range exceeded
AI Filter P Type						
61A0	0	AI Filter P Type	uint8	rw	0x00	0 : no Filter 1 : Moving average Filter
AI Filter constant P						
61A1	0	AI Filter constant P	uint8	rw	0x00	0 : Filter not active 1...255 : Filter value $Value_n = Value_{n-1} + \frac{ADC - Value_n}{Filterconst}$
AI Input FV (INT16)						
7100	0	Number of entries	uint16	ro	0x0002	Number of entries
	1	AI Input FV Q	uint16	ro	0x0000	Field value flow measurement
	2	AI Input FV T	uint16	ro	0x0000	Field value Temperature measurement
	3	AI Input FV f	uint16	ro	0x0000	Field value frequency measurement
AI Input PV (INT32)						
9130	0	Number of entries	uint32	ro	0x00000002	Number of entries
	1	AI Input PV Q	uint32	ro	0x00000000	Process value flow measurement
	2	AI Input PV T	uint32	ro	0x00000000	Process value Temperature measurement
	3	AI Input PV f	uint32	ro	0x00000000	Process value frequency measurement

7 Further information

CiA 301: CANopen – Application layer and communication profile

CiA 305: CANopen – Layer setting services and protocol (LSS)

CiA 301, Part 1: Cabling and connector pin assignment

CiA 301, Part 2: Representation of SI units and prefix

CiA 301, Part 3: Indicator specification

CiA 404: Device Profile Measuring Devices and Closed-Loop Controllers

Titel:		Datei:	CANopen Communication SCFTT-C2-05_20180618.docx	Version:	00-04
Autor:	Marc Zimmermann	Datum:	18.06.2018	Status:	draft
Geprüft :		Seite:	16/16		