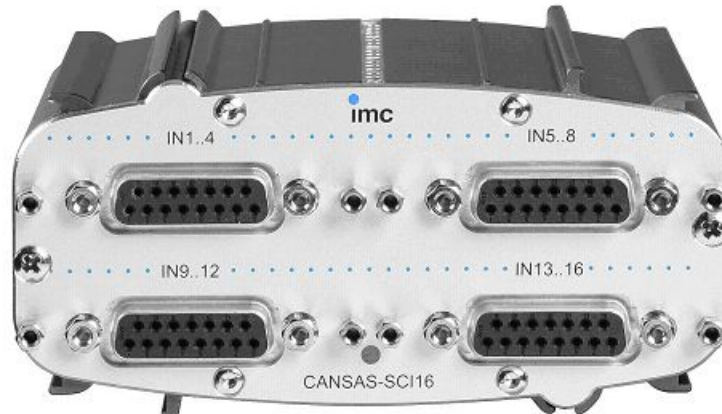


CANSAS-SCI8, SCI16

8- or 16-channel module for isolated measurement of voltage,
current and temperature

Datasheet Version 1.6



The **SCI16** and **SCI8** measurement modules are especially affordable analog input modules with 8 and 16 multiplexed isolated inputs, respectively. Voltage signals of up to 60 V, current signals of up to 20 mA, Pt100 sensors and any commercially available thermocouples can be connected directly. Special noise suppression functionality makes highly sensitive voltage and thermocouple measurements in difficult environments possible despite the multiplexer. The noise suppression provided is most effective at low sampling rates and decreasingly effective as the sampling rate is raised.

Modern, intelligent TEDS sensors are completely supported. Conventional sensors can be retrofitted with sensor recognition in the connector pod or in the cable (*imc Plug & Measure*).

Order code:

Article number

CANSAS-SCI8 / -SCI16	1050128 / 1050127
CANSAS-L-SCI8 / -SCI16	1050150 / 1050149
CANSAS-L-SCI8-SUPPLY / -SCI16-SUPPLY	1050210 / 1050184
CANSAS-L-SCI8-2T / -SCI8-2T-Y / -SCI16-2T	1050167 / - / 1050187
CANSAS-K-SCI8 / -SCI16	1050125 / 1050124
CANSAS-K-SCI8-SUPPLY / -SCI16-SUPPLY	1050240 / 1050295
CANSAS-K-SCI8-BNC / -SCI16-BNC	- / 1050175
CANSAS-K-SCI8-2T / -SCI16-2T	1050168 / 1050188
CANSAS-SL-SCI8-D / -SCI16-D	1150006 / 1150008
CANSAS-SL-SCI8-D-SUPPLY / -SCI16-D-SUPPLY	1150025 / 1150034
CANSAS-SL-SCI8-L / -SCI16-L	1150005 / 1150007
CANSAS-SL-SCI8-L-SUPPLY / -SCI16-L-SUPPLY	-
CANSAS-SL-SCI8-2T	1150018

12 different models available:

CANSAS-SCI8, CANSAS-SCI16

Fan-less extruded aluminum housing (Short model)
 SC8I: 35 x 111 x 90 (W x H x D in mm) (2x DSUB signal terminals)
 SCI16: 55 x 111 x 90 (W x H x D in mm) (4x DSUB signal terminals)
 Weight ca. 330 g (CANSAS-SCI8)

CANSAS-L-SCI8, CANSAS-L-SCI16

Fan-less extruded aluminum housing (Long model)
 SCI8: 35 x 111 x 145 (W x H x D in mm) (2x DSUB signal terminals)
 SCI16: 55 x 111 x 145 (W x H x D in mm) (4x DSUB signal terminals)

CANSAS-L-SCI8-SUPPLY, CANSAS-L-SCI16-SUPPLY

Fan-less extruded aluminum housing (Long model)
SCI8: 55 x 111 x 145 (W x H x D in mm) (2x DSUB signal terminals)
SCI16: 75 x 111 x 145 (W x H x D in mm) (4x DSUB signal terminals)
with built-in sensor supply

CANSAS-L-SCI8-2T, CANSAS-L-SCI8-2T-Y, CANSAS-L-SCI16-2T

Fan-less extruded aluminum housing (Long model)
like CANSAS-L-SCI8, CANSAS-L-SCI16 (Long model)
Signal connection 8x or 16x 2-pin TK socket per IEC 584 (green)
only appropriate for temperature measurement with Type K thermocouple
CANSAS-L-SCI8-2T-Y like CANSAS-L-SCI8-2T: TK socket (yellow)

CANSAS-K-SCI8, CANSAS-K-SCI16

Fan-less cassette,
CANSAS-K-SCI8 3U/8HP (2x DSUB signal terminals)
CANSAS-K-SCI16 3U/8HP (4x DSUB signal terminals)
for insertion into the imc 19"-subrack. CAN-Bus and supply are connected to the module
via the 19" subrack Weight typ. 900 g

CANSAS-K-SCI8-SUPPLY, CANSAS-K-SCI16-SUPPLY

Fan-less cassette
CANSAS-K-SCI8 3U/8HP (2x DSUB signal terminals)
CANSAS-K-SCI16 3U/8HP (4x DSUB signal terminals)
for insertion into the imc 19"-subrack. CAN-Bus and supply are connected to the module
via the 19" subrack with built-in sensor supply

CANSAS-K-SCI8-BNC, CANSAS-K-SCI16-BNC

like CANSAS-K-SCI8, CANSAS-K-SCI16 (Cassette model)
Signal connection 8x or 16x BNC
only appropriate for voltage measurement

CANSAS-K-SCI8-2T, CANSAS-K-SCI16-2T

like CANSAS-K-SCI8, CANSAS-K-SCI16 (Cassette model)
Signal connection 8x or 16x 2-pin TK socket per IEC 584 (green)
only appropriate for temperature measurement with Type K thermocouple
SCI8: 41 x 128 x 145 (W x H x D in mm)
SCI16: 81 x 128 x 145 (W x H x D in mm)

CANSAS-SL-SCI8-L, CANSAS-SL-SCI16-L

Fan-less IP65 extruded aluminum housing (SL model, Lemo signal terminals)
SCI8: 58 x 112.5 x 152 (W x H x D in mm)
SCI16: 78 x 112.5 x 152 (W x H x D in mm)

CANSAS-SL-SCI8-D, CANSAS-SL-SCI16-D

Fan-less IP65 extruded aluminum housing (SL model, DSUB-15 signal terminals)
SCI8: 38 x 112.5 x 152 (W x H x D in mm)
SCI16: 58 x 112.5 x 152 (W x H x D in mm)

CANSAS-SL-SCI8-L-SUPPLY, CANSAS-SL-SCI16-L-SUPPLY

Fan-less IP65 extruded aluminum housing (SL model, Lemo signal terminals)
SCI8: 58 x 112.5 x 152 (W x H x D in mm)
SCI16: 78 x 112.5 x 152 (W x H x D in mm)
with built-in sensor supply

CANSAS-SL-SCI8-D-SUPPLY, CANSAS-SL-SCI16-D-SUPPLY

Fan-less IP65 extruded aluminum housing (SL model, DSUB-15 signal terminals)
SCI8: 38 x 112.5 x 152 (W x H x D in mm)
SCI16: 58 x 112.5 x 152 (W x H x D in mm)
with built-in sensor supply

CANSAS-SL-SCI8-2T

- Fan-less IP65 extruded aluminum housing (SL model)
- SCI8: 58 x 112.5 x 152 (W x H x D in mm)
- Signal connection 8x 2-pin TK socket per IEC 584 (green)
- only appropriate for temperature measurement with Type K thermocouple

Refer also to the document "CANSAS Installation and Assembly" for information on the models and racks.

Connections at standard L extruded aluminum housing and cassette modules

- CAN-Bus connected via 2 DSUB-9 terminals; CAN IN (male), CAN OUT (female) ¹
CAN-Bus Interface for sending measurements on the CAN-Bus at rates of up to 1Mbit/s, (equipped in accordance with the CiA[®] Draft Standard 102 Version 2.0, CAN Physical Layer for Industrial Applications)
- Signal terminals on the module:
 - 2x or 4x 15-pin DSUB-screw terminal blocks (for 4 channels per terminal)
 - 8x or 16x BNC connectors for **CANSAS-K-SCI8/SCI16-BNC**
 - 8x or 16x 2-pin TK socket per IEC 584 Type K thermocouple for **CANSAS-L/K-SCI8/SCI16-2T(-Y)**
- Power supply via Phoenix (MC1, 5/4STF-3,81) socket ¹

Connections at SL extruded aluminum housing

- CAN-Bus Interface for sending measurement channel signals on the CAN-Bus at up to 1Mbit/s, (equipped according to the CiA[®] Draft Standard 102 Version 2.0, CAN Physical Layer for Industrial Applications)
 - CAN-Bus connected via 2x DSUB-9 connectors, CAN IN and CAN OUT for **CANSAS-SL-SCI8-D**, **SL-SCI16-D(-SUPPLY)**, **-SL-SCI8-2T**
 - CAN-Bus connected via 2x 10-pin LEMO 1B (HGA.1B.310) connectors, CAN IN and CAN OUT for **CANSAS-SL-SCI8-L**, **-SL-SCI16-L(-SUPPLY)**
- Voltage supply via 6-pin LEMO 1B (HGA.1B.306) connector
- Signal terminal at module:
 - 2x or 4x DSUB-15 with 4 channels per DSUB-15 connector for **CANSAS-SL-SCI8/SCI16-D**, **(-SUPPLY)**
 - 8x or 16x 7 pin LEMO 1B (HGG.1B.307) connectors for **CANSAS-SL-SCI8/SCI16-L(-SUPPLY)**
With LEMO connectors temperature measurement with thermocouples is not supported.
 - 8x 2-pin TK socket per IEC 584 (green) Type K thermocouple for **-SL-SCI8-2T**

Power supply for standard L extruded aluminum housing and cassette modules

- Supply voltage: 10 V to 50 V DC ² via (4-pin) Phoenix plug or via CAN-Bus plug ¹
- Automatic independent start upon application of supply voltage
- Power consumption: CANSAS-SCI8: 2.8 W (typ.) maximal 3.3 W
CANSAS-SCI16: 9.0 W (typ.) maximal 10.5 W

Power supply for SL extruded aluminum housing

- Supply voltage: -30°C to 85°C via 6-pin LEMO connector or via CAN-Bus plug
- Automatic startup upon applying supply voltage

¹ Not with Cassette model

² modules build before April 2011: 9 V to 32 V see specification label

Operating conditions for standard L extruded aluminum housing and cassette modules

- Operating temperature: -30°C to 85°C condensation allowed
- Shock resistance 50 g pk over 5 ms (without plug)
- With extruded aluminum housing: voltage supply connected via Phoenix socket

Operating conditions for SL extruded aluminum housing

- Operating temperature: -30°C to 85°C condensation allowed
- Shock resistance: MIL STD810F (without plug)
- Protection class : IP65
- With extruded aluminum housing: voltage supply connected via LEMO socket

Included accessories

- Calibration certificate as per DIN EN ISO 9001
- Instruction manual
- With extruded aluminum housing: Connection terminal for power supply via Phoenix socket or via LEMO socket with gum sealing ring at SL models

Plug & Measure

- The SCI8 module and SCI16 is fully equipped with *imc Plug & Measure* technology.
- Support of TEDS for storing and exporting sensor information
- Parameterization of a measurement channel at the click of a mouse

Measurement characteristics

- Sampling rates selectable in steps of 1-, 2-, 5
for 8-channel module: max 1 kHz
for 16-channel module: max 500 Hz
- Bandwidth: 8-channel module: 42 Hz or sampling rate/7 (with compensation filter, rf. table in appendix)
16-channel module: 23 Hz or sampling rate/7 (with compensation filter, rf. table in appendix)
- 16-bit resolution (with internal 24-bit processing)
- Synchronized acquisition of all measurement channels
- Synchronized sampling with measurement systems or other appropriate modules is possible both with extra synchronization line and also simply via the CAN-Bus.
- Built-in DSP for online signal processing:
data reduction, filtering, scaling, statistics etc.

Measurement channels

- 16 or 8 differential, analog inputs for your choice of:
voltage, current, temperature
See technical specs in appended table.
- The multiplexer for channel rotation can, under certain circumstances, compromise the calibrator's operation

Special characteristics

- The module can send a CAN-Bus message at intervals ("heartbeat"). This periodic message can serve the purpose of monitoring whether the correct module is being used with the correct configuration.
- The module's configuration can be exported by the software; this makes it possible to transfer configurations made by others by means of just the module.
- With the Long and Cassette models, the module can import slot data from the rack and pass it to automation software.
- It supports the **CANopen**[®] protocol according "CiA[®] DS 301 V4.0.2" and "CiA[®] DS 404V1.2"; 4 PDO (Process Data Objects) in INT16, INT32, and FLOAT³. The supported capabilities, more standards and the settings which can be edited via CANopen[®] are described in "CANSAS CANopen[®]".

³ CANopen[®] mode does not support virtual channels and controlling the LEDs

Optional accessories

Sensor supply:

- A sensor supply unit for installing in a SCI8 is always available. A sensor supply unit for SCI16 is only in Long and Cassette models available. The supply voltages are provided at the DSUB connection terminals.

Connectors:

- **ACC/DSUB-U4**, 15-pin DSUB connection terminal for each 4-channel group: voltage measurement
- **ACC/DSUB-I4**, 15-pin DSUB connection terminals for each 4-channel group (50 Ω shunt). For measurement of currents of up to 50 mA
- **ACC/DSUB-T4**, 15-pin DSUB connection terminal for each 4-channel group for measurement of voltages as well as temperatures with Pt100 and thermocouples (with integrated cold-junction compensation)
- **ACC/DSUB-TEDS-U4**, 15-pin DSUB connection terminal for each 4-channel group: voltage measurement, according to IEEE 1451.4 for use with *imc Plug & Measure*
- **ACC/DSUB-TEDS-T4**, 15-pin DSUB connection terminal for each 4-channel group for measurement of voltages as well as temperatures with Pt100 and thermocouples (with integrated cold-junction compensation), according to IEEE 1451.4 for use with *imc Plug & Measure*.
- **ACC/DSUB-TEDS-I4**, 15-pin DSUB connection terminals for each 4-channel group (50 Ω shunt). For measurement of currents of up to 50 mA, according to IEEE 1451.4 for use with *imc Plug & Measure*
- **ACC/DSUB-U4-IP65**, 15-pin DSUB connection terminal for each 4-channel group: voltage measurement adapted for CANSAS-SL.
- **ACC/DSUB-T4-IP65**, 15-pin DSUB connection terminal for each 4-channel group for measurement of voltages as well as temperatures with Pt100 and thermocouples adapted for CANSAS-SL. Inside of the terminal pod, there is an isothermal plate and a Pt1000 unit for cold-junction compensation.
- **ACC/DSUB-I4-IP65**, 15-pin DSUB connection terminals for each 4-channel group (50 Ω shunt). For measurement of currents of up to 50 mA adapted for CANSAS-SL.
- **ACC/DSUB-TEDS-U4-IP65**, 15-pin DSUB connection terminal for each 4-channel group: voltage measurement adapted for CANSAS-SL, according to IEEE 1451.4 for use with *imc Plug & Measure*.
- **ACC/DSUB-TEDS-T4-IP65**, 15-pin DSUB connection terminal for each 4-channel group for measurement of voltages as well as temperatures with Pt100 and thermocouples (with integrated cold-junction compensation) adapted for CANSAS-SL. According to IEEE 1451.4 for use with *imc Plug & Measure*.
- **ACC/DSUB-TEDS-I4-IP65**, 15-pin DSUB connection terminals for each 4-channel group (50 Ω shunt). For measurement of currents of up to 50 mA adapted for CANSAS-SL. According to IEEE 1451.4 for use with *imc Plug & Measure*

Additional options and accessories

- Depending on the model, the modules can be either attached together to form stacks or installed in racks; see the document "*CANSAS Installation and Assembly*" for more on these options.
- The connectors necessary for the signals are described in "*Signal Connection Terminals*".
- The modules can be configured for CAN-network applications either -by order- at factory, or by the customer using appropriate configuration software. The necessary software as well as cables and additional accessories are presented in the documentation "*Integrating CANSAS in CAN Networks*"

SCI8, SCI16

Datasheet Version 1.6 (16/8 differential analog inputs)

Parameter	Value (typ. / max)	Remarks
Channels CANSAS-SCI16 CANSAS-SCI8	16 8	4-channel groups on 4x DSUB-15 4-channel groups on 2x DSUB-15
Measurement mode (DSUB) CANSAS-SCI8, SCI16	voltage ≤ 60 V thermocouple, RTD (Pt100) current	standard-plug (ACC/DSUB-U4) thermo-plug (ACC/DSUB-T4) shunt-plug (ACC/DSUB-I4)
Meas. mode (SL DSUB) CANSAS-SL-SCI8-D -SL-SCI16-D	voltage ≤ 60 V thermocouple, RTD (Pt100) current	ACC/DSUB-U4-IP65 ACC/DSUB-T4-IP65 ACC/DSUB-I4-IP65
Meas. mode (SL LEMO) CANSAS-SL-SCI8-L, -SL-SCI16-L	voltage ≤ 60 V RTD (Pt100) current	with external shunt
Meas. mode (TK-Buchse) CANSAS-L-SCI8(16)-2T, -L-SCI8-2T, -L-SCI8-2T-Y, -K-SCI8(16)-2T	thermocouple type-K	
Meas. mode (BNC) CANSAS-SCI8(16)-BNC	voltage ≤ 60 V	
TEDS - Transducer Electronic DataSheets	conform IEEE 1451.4 Class II MMI	ACC/DSUB-TEDS-U4, TEDS-UD4 ACC/DSUB-TEDS-U4-IP65 ACC/DSUB-TEDS-T4, -TEDS-T4-IP65 ACC/DSUB-TEDS-I4, -TEDS-I4-IP65
CANopen® mode	"CiA® DS 301 V4.0.2" and "CiA® DS 404V1.2" supports 4 PDOs in INT16, INT32, and FLOAT	
Sampling rate CANSAS-SCI16 CANSAS-SCI8 Sampling rate, temperature CANSAS-SCI16 CANSAS-SCI8	max. 500 Hz (2 ms) / channel max. 1 kHz (1 ms) / channel max. 1 Hz (1 s) / channel max. 2 Hz (500 ms) / channel	maximum allowable input signal frequency: 100 Hz 150 Hz recommended maximum for optimized noise reduction; filter: 12 Hz(-3 dB); -60 dB @ 50 Hz no restrictions for input noise frequency (except for narrow band 0.5 Hz to 12 Hz)
Bandwidth CANSAS-SCI16 CANSAS-SCI8	with compensation filter 23 Hz sampling rate / 7 42 Hz sampling rate / 7	at sampling rate 500 Hz (2 ms), 200 Hz (5 ms) 100 Hz (10 ms) to 2 Hz (500 ms) 1 kHz (1 ms), 500 Hz (2 ms) 200 Hz (5 ms) to 5 Hz (200 ms)
Resolution	16 bit	

Voltage			
Parameter	Value (typ. / max)		Remarks
Range	$\pm 60\text{ V}, \pm 20\text{ V}, \pm 10\text{ V}, \pm 5\text{ V}, \pm 2\text{ V}, \pm 1\text{ V}, \pm 500\text{ mV}, \pm 200\text{ mV}, \pm 100\text{ mV}$		
Gain uncertainty	$<0.025\%$ $<0.075\%$	$<0.05\%$ $<0.15\%$	23°C with standard connector shunt connector
Gain drift	30 ppm/K (typ.) 50 ppm/K (typ.)	60 ppm/K (max.) 90 ppm/K (max.)	range $\leq \pm 50\text{ V}$ range $\geq \pm 10\text{ V}$
Offset	$<0.02\%$		over entire temperature range
Linearity uncertainty	$<50\text{ ppm}$		range $\pm 10\text{ V}$
Current mode			
Range	$\pm 40\text{ mA}, \pm 20\text{ mA}, \pm 10\text{ mA}, \pm 4\text{ mA}, \pm 2\text{ mA}$		with shunt connector (50 Ω)

Temperature			
Thermocouples	-200°C to $+1200^\circ\text{C}$		Typ: R, S, B, J, T, E, K, L, N (max. one type per configuration)
Temperature uncertainty	$\pm 0.2\text{ K}$	$< \pm 0.5\text{ K}$	Typ: J, T, K, E, L (other types: uncertainties of voltage measurements) @ 20°C over entire input range sample rate SCI16: $\geq 1\text{ s}$ and SCI8 $\geq 0.5\text{ s}$ with imc plug ACC/DSUB-T4
Drift	$\pm 0.02\text{ K/K} \cdot \Delta T_a$		$\Delta T_a = T_a - 25^\circ\text{C} $; ambient temp: T_a
Uncertainty of cold junction compensation		$< \pm 0.15\text{ K}$	with imc plug ACC/DSUB-T4
Drift of cold junction	$\pm 0.001\text{ K/K} \cdot \Delta T_j$		$\Delta T_j = T_j - 25^\circ\text{C} $ cold junction T_j
RTD mode (Pt100)			
Range	-200°C to $+850^\circ\text{C}$		(reference current: 410 μA , int. calibrated) Use of thermo-plug provides complete set of terminals for full 4-wire connection scheme; mixed configuration with thermocouples supported
Uncertainty		$< \pm 0.2\text{ K}$ $< \pm 0.05\%$	-200°C to 850°C , four-wire connection plus percentage of reading
Drift		$\pm 0.01\text{ K/K} \cdot \Delta T_a$	$\Delta T_a = T_a - 25^\circ\text{C} $; ambient temp: T_a

General			
Parameter	Value (typ. / max)		Remarks
Block isolation:			each function block to case (CHASSIS)
CAN-bus DC supply input	± 60 V ± 60 V		nominal; testing: 300 V (10 s) nominal; testing: 300 V (10 s)
Max. common-mode input Voltage CANSAS-SCI8, SCI16	± 60 V		analog input to case (CHASSIS) nominal rating; testing: 300 V (10 s)
Channel isolation:			max. voltage between any two arbitrary input pins of different channels;
CANSAS-SCI8, SCI16	± 60 V		for specified accuracy nominal rating testing: 300 V (10 s)
Overvoltage protection CANSAS- SCI8, SCI16	± 60 V		differential channel input voltage (long-term)
Input configuration	DC, differential		isolated to: case, supply and CAN-bus
Input impedance (static)	10 M Ω 1 M Ω 50 Ω		voltage mode ≤ 10 V voltage mode ≥ 20 V (divider) current mode (Shunt plug)
Input current : CANSAS- SCI8, SCI16			dynamic input currents: scanner-device!
static	1.5 nA (typ.)	15 nA (max.)	settled current at time of sampling
dynamic	0.1 mA (typ.)	1.5 mA (max.)	peak dynamic input current (typ. @100 mV, max. @10 V)
on overvoltage condition	10 nA (typ.)	1 μ A (max.)	average dynamic input current (typ. @100 mV, max. @10 V)
		1.5 mA	$ V_{in} > 17$ V in range $\leq \pm 10$ V
Noise	25 μ V pk-pk 10 mV pk-pk 0.5 K pk_pk 6 μ V pk-pk	5 μ V rms 2 mV rms 0.08 K rms	sample-rate: 2 ms, R_s = 50 Ω range ± 100 mV range ± 20 V temperature mode: Thermocouple Type K sample-rate: 1s, R_s = 50 Ω
Source impedance	5 k Ω (max.)		of sensor or signal source
Cable length (signal-input)	200 m (max.)		100 pF / m
Crosstalk (channel to channel SCI8, SCI16)	<-105 dB		60 Hz, 100 Ω source impedance, range ± 100 mV
CMRR / IMR	100 dB (50 Hz)		Common-Mode reference: frame (CHASSIS) all other channels: CHASSIS

General			
Parameter	Value (typ. / max)		Remarks
Supply voltage	10 V to 50 V DC		
sensor supply voltage (optional)	2.5 V to 24 V		
Power requirements: CANSAS-SCI8 CANSAS-SCI16	2.8 W (typ.) 9.0 W (typ.)	<3.3 W (max.) <10.5 W (max.)	12 V DC, over full temperature range
Operating temperature	-30°C to 85°C		
Dimensions (W x H x D), weight	55 x 111 x 90 mm, ca. 500 g 35 x 111 x 90 mm, ca. 330 g 55 x 111 x 145 mm, ca. 850 g 35 x 111 x 145 mm 41 x 128 x 145 mm, ca. 500 g 81 x 128 x 145 mm 58 x 112.5 x 152 mm 78 x 112.5 x 152 mm 38 x 112.5 x 152 mm 58 x 112.5 x 152 mm 55 x 111 x 90 mm 55 x 111 x 90 mm 55 x 111 x 145 mm 55 x 111 x 145 mm 41 x 128 x 145 mm, ca. 500 g 58 x 112.5 x 152 mm 78 x 112.5 x 152 mm 58 x 112.5 x 152 mm 78 x 112.5 x 152 mm		CANSAS-SCI16 CANSAS-SCI8 CANSAS-L-SCI16, L-SCI16-2T CANSAS-L-SCI8 CANSAS-K-SCI8(16), K-SCI8-2T, -K-SCI8-BNC (=3HE/8TE) CANSAS-K-SCI16-2T -K-SCI16-BNC (=3HE/16TE) CANSAS-SL-SCI8-L CANSAS-SL-SCI16-L CANSAS-SL-SCI8-D CANSAS-SL-SCI16-D with optional sensor supply CANSAS-SCI16-SUPPLY CANSAS-SCI8-SUPPLY CANSAS-L-SCI16-SUPPLY CANSAS-L-SCI8-SUPPLY CANSAS-K-SCI8(16)-SUPPLY (=3HE/8TE) CANSAS-SL-SCI8-L-SUPPLY CANSAS-SL-SCI16-L-SUPPLY CANSAS-SL-SCI8-D-SUPPLY CANSAS-SL-SCI16-D-SUPPLY
Connection terminals	4x DSUB-15 2x DSUB-15		inputs (CANSAS-SCI16) inputs (CANSAS-SCI8)
	8(16)x 2 TK plug 8(16)x BNC		thermocouples type-K (CANSAS-X-2T) inputs (CANSAS-K-SCI8(16)-BNC)
	2x DSUB-9		CAN (in / out), power supply (alternatively)
	PHOENIX (MC 1,5 /4STF-3,81)		DC power supply
Connection terminals for SL	2(4)x DSUB-15 8(16)x LEMO (HGG.1B.307)		inputs CANSAS-SL-SCI8(16)-D(-SUPPLY) CANSAS-SL-SCI8(16)-L(-SUPPLY)
	2x DSUB-9 2x 10-pin LEMO (HGA.1B.310)		CAN (in / out) power supply (alternatively) CANSAS-SL-SCI8(16)-D(-SUPPLY) CANSAS-SL-SCI8(16)-L(-SUPPLY)
	1x 6-pin LEMO (HGA.1B.306)		DC power supply

Sensor SUPPLY module

Version 1.1

For CANSAS C8, CI8, SCI8, SC16, SCI16 and INC4-V-SUPPLY optional

(Optional for model long and cassette CANSAS-SC16)

Order code: CAN/SEN-SUPPLY

The sensor supply module always makes only 7 of 8 selectable voltage ranges available:

- default case: all voltage ranges not isolated (standard ranges: +2.5 V to +24 V; ± 15 V optional)
- upon request: all voltage ranges isolated, but only if the range ± 15 V is not included (only for SL with LEMO connectors)
- upon request: with range ± 15 V instead of one other range, however all voltage ranges not isolated (only for C8, CI8, not for SL with LEMO-connectors)

Parameter	Value (typ. / max.)			Remarks
Configuration options	8 ranges			
Output voltage	voltage	current	net power	globally selected, isolated on request (not for LEMO)
	+2.5 V	580 mA	1.5 W	
	+5.0 V	580 mA	2.9 W	
	+7.5 V	400 mA	3.0 W	
	+10 V	300 mA	3.0 W	
	+12 V	250 mA	3.0 W	
	+15 V	200 mA	3.0 W	
	+24 V	120 mA	2.9 W	
	± 15 V	190 mA	3.0 W	available on request for C8, CI8 (then only non isolated; not for LEMO)
Short-circuit protection	unlimited duration			to output voltage reference ground
Output voltage accuracy	<0.25 % (typical) <0.5 % (max.) < 0.9 % (max.) <1 % (max.)			at terminal plugs, no load 25°C; 2.5 V to 24 V 25°C; 2.5 V to 24 V full temperature range ± 15 V
Deviation control of lead impedance	3-wire control: SENSE lead as feedback (-VB is supply ground)			available for 5V and 10V requirements: 1) balanced cables 2) identical cables on all channels 3) representative measurement with channel 1
Efficiency	typ. 55 % typ. 50 % typ. 70 % min. 40 %			5V, to 15 V 24 V ± 15 V 2.5 V
Capacitive load (max.)	>4000 μ F >1000 μ F >400 μ F			2,5 V, 10 V, ± 15 V 12 V, 15 V 24 V
Operating temperature	-30°C to 85°C			