

CANSAS-DAC8

8-channel analog output module for voltage and current signals



CANSAS-DAC8 outputs the user's choice of current or voltage signals on 8 analog outputs. The desired output signals can either be extracted directly from a CAN message or derived from received CAN-messages or specified functions (e.g. squarewave, sawtooth etc.) by means of the module's computational capacities.

Order code:	Artikel #
CANSAS-DAC8	1050016
CANSAS-L-DAC8	1050055
CANSAS-L-DAC8-V	1050142
CANSAS-K-DAC8	1050075
CANSAS-K-DAC8-BNC	1050075
CANSAS-K-DAC8-V	-
CANSAS-SL-DAC8-D	1150017

7 different models available:

CANSAS-DAC8

Unventilated strand-cast aluminum housing (Short model, 2 x DSUB signal terminals)
35 x 111 x 90 (W x H x D in mm)
Weight typ. 300 g

CANSAS-L-DAC8

Unventilated strand-cast aluminum housing (Long model, 2 x DSUB signal terminals)
35 x 111 x 145 (W x H x D in mm)

CANSAS-L-DAC8-V

Unventilated strand-cast aluminum housing (Long model)
Signal connection: 8 x ITT Veam plugs
75 x 111 x 145 (W x H x D in mm)

CANSAS-K-DAC8

Unventilated cassette, 3U/8HP (Cassette model, 2 x DSUB signal terminals)
for installation in the imc 19" subrack
CAN-Bus and supply connected to the module via the 19" subrack
Weight typ. 900 g

CANSAS-K-DAC8-BNC

Like CANSAS-K-DAC8 (Cassette model)
Signal connection 8 x BNC socket

CANSAS-K-DAC8-V

Unventilated cassette, like CANSAS-K-DAC8 (Cassette model)
Signal connection: 8 x ITT Veam plugs

CANSAS-SL-DAC8-D

Unventilated IP65 strand-cast aluminum housing (Long model; signal terminals DSUB)
Refer also to the document "CANSAS *Installation and Assembly*" for information on the models and module racks.

Connections at standard strand-cast aluminum housing and cassette modules

- CAN-Bus connection via 2 DSUB-9 terminals; CAN IN (male), CAN OUT (female)¹
CAN-Bus Interface up to 1 Mbit/s,
(Equipped according to CiA[®] Draft Standard 102 Version 2.0, CAN Physical Layer for Industrial Applications)
- Signal connection to module: 2 x 15-pin DSUB clamp terminal (4 channels per terminal)
In the version CANSAS-L-DAC8-V: signal connection via 8 x ITT VEAM plugs
In the version CANSAS-K-DAC8-BNC: signal connection via 8 x BNC sockets
- Voltage supply via Phoenix (MC1, 5/4STF-3,81) socket (CAN/Power-Plug)¹

Connections at SL strand-cast aluminum housing

- CANSAS-SL-DAC8-D(-SUPPLY)
- CAN-Bus connected via 2 x DSUB-9 terminals, CAN IN and CAN OUT
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)
- Voltage supply via 6-pin LEMO 1B (HGA.1B.306) connector
- Signal terminal at module:
 - 2 x DSUB-15 with 4 channels per DSUB-15 connector for CANSAS-SL-DAC8-D(-SUPPLY)

Power supply for standard L strand-cast aluminum housing and cassette modules

- Supply voltage: 9..32 V DC via (4-pin) PHOENIX plug or via CAN-Bus plug¹
- Automatic independent start upon application of supply voltage
- Power consumption 6,0 W (typ.)

Power supply for SL strand-cast aluminum housing

- Supply voltage: 9..32 V DC via 6-pin LEMO connector or via CAN-Bus plug
- Automatic startup upon applying supply voltage
- Power consumption 6,0 W (typ.)

Operating conditions for standard L strand-cast aluminum housing and cassette modules

- Operating temperature: -20°C...85°C condensation allowed
- Shock resistance 50 g pk over 5 ms (without plug)
- With strand-cast aluminum housing: voltage supply connected via Phoenix socket

Operating conditions for SL strand-cast aluminum housing

- Operating temperature: -20°C...85°C condensation allowed
- Shock resistance: MIL STD810F (without plug)
- Protection class : IP65
 - With strand-cast aluminum housing: voltage supply connected via LEMO socket

¹ not with Cassette model

Operating conditions

- Operating temperature: -20°C...85°C; condensation allowed
- Shock resistance 50 g pk over 5ms (without plug)

Included accessories

- Calibration certificate as per DIN EN ISO 9001
- Instructions manual
- With strand-cast aluminum housing: power supply terminal connected via Phoenix socket

Signal properties:

- Integrated DSP for control of the signal output:
Output control by CAN-message (software-configurable)
Output of calculated signal plots; calculation instructions provided by the configuration software.
- Configurable output value at power-on
- Output clock rate: 5 kHz
- Voltage output: ± 10 V
- Current output: 0..20 mA

Special properties

- 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.
- The module can wait for periodic reception of a message having a particular identifier, and assume a configurable state if this message fails to appear when expected ("guarding"). This provides protection against failure of the control signal sender.
- With the Long and Cassette models, the module can import slot data from the rack and pass it to automation software. ²
- It supports the **CANopen**[®] protocol according "CiA[®] DS 301 V4.0.2" and "CiA[®] DS 404V1.2"; 4 RPDO (Receive Process Data Objects) in INT16, INT32, and FLOAT ³. The supported capabilities, more standards and the settings which can be edited via CANopen[®] are described in "CANSAS CANopen[®]".

Optional accessories

Connection terminals:

- **ACC/DSUB-DAC8** connection terminal for 4 analog outputs
- **M.1050059** ITT VEAM type connection terminal for 1 channel; cable cross-section: 3 mm
- **M.1050060** ITT VEAM type connection terminal for 1 channel; cable cross-section: 6 mm

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 "CANSAS 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".

² available upon request

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

DAC8

Technical Specs (8 analog outputs)

Parameter	Value (typ./max.)	Remarks
Channels	8	
Configuration options	voltage source current source	each channel configurable separately
Output range	-10 to +10 V 0..20 mA	(connected to min. 1 k Ω for voltage mode) (connected to max. 250 Ω for current mode)
Output frequency	5 kHz (max.)	
Analog bandwidth	5 kHz	-3 dB
Resolution	16 bit 15 bit	as voltage source as current source
Accuracy deviation	<0,1 %	
Output value upon power-up	0 V	
CAN-Bus	defined as per ISO 11898	
Isolation: CAN-Bus power supply analog outputs	± 60 V ± 60 V no isolation	to CHASSIS nominal; testing voltage: 300 V (10 s) nominal; testing voltage: 300 V (10 s) analog reference ground: CHASSIS
Supply voltage	9..32 V DC	
Power consumption	6 W (typ.)	12 V supply, 23°C
Operating temperature	-20°C...85°C	
CANopen® mode	"CiA® DS 301 V4.0.2" and "CiA® DS 404V1.2" supports 4 RPDOs in INT16, INT32, and FLOAT	
Dimensions (W x H x D)	35 x 111 x 90 mm 35 x 111 x 145 mm 41 x 128 x 145 mm 75 x 111 x 145 mm	CANSAS-DAC8 CANSAS-L-DAC8 CANSAS-K-DAC8, -K-DAC8-BNC (8TE) CANSAS-L-DAC8-V
Weight	300 g	for CANSAS-DAC8
Connection terminals	2 x DSUB-15 8 x BNC 2 x DSUB-9 PHOENIX (MC 1.5/4STF-3.81)	outputs DAC8, -L-DAC8 -K-DAC8 CAN (in/out) supply
Connection terminals for SL	2 x DSUB-15 / 4 channels 2 x DSUB-9 1 x 6-pin LEMO (HGA.1B.306)	CANSAS-SL-DAC8-D CAN (in/out), power supply (alternatively) DC supply for all SL models