CANSAS-DO8R, DO16R

8 or 16-channel module, respectively, with digital outputs as relays

The **CANSAS-DO8R** or **CANSAS DO16R** module provides 8 or 16 relays, respectively, each with an opener and a closer contact. The switching state after starting is defined permanently ("ON") [1].

Order code:	Article #
CANSAS-DO8R	1050014
CANSAS-L-DO8R-V	1050144
CANSAS-L-DO16R-Ph	1050226
CANSAS-L-DO16R	1050057
CANSAS-K-DO16R	1050093

4 different models available:

CANSAS-DO8R

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-DO16R

Unventilated strand-cast aluminum housing (Long model, 4 x DSUB signal terminals)
75 x 111 x 145 (W x H x D in mm)

CANSAS-L-DO16R-Ph (Long model)

Unventilated strand-cast aluminum housing
75 x 111 x 145 (W x H x D in mm)
with signal connections via Phoenix spring cage terminal block

CANSAS-L-DO8R-V (Long model)

Unventilated strand-cast aluminum housing
75 x 111 x 145 (W x H x D in mm)
8 x ITT Veam signal connectors

CANSAS-K-DO16R (Cassette model)

Unventilated cassette, 3U/16HP for installation in the imc 19" subrack
CAN-Bus and supply are connected to the module via the 19" subrack
with signal connections via Phoenix spring cage terminal block
Weight typ. 900 g

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

[1] By interchanging the contacts, any desired initial configuration is possible.

Interconnections

- CAN-Bus connection via 2 DSUB-9 terminals, CAN IN (male), CAN OUT (female) [2]
  CAN-Bus interface for sending measurement channels on the CAN-Bus at up to 1Mbit/s, (equipped according to CiA® Draft Standard 102 Version 2.0, CAN Physical Layer for Industrial Applications)
- Signal connection to module: 15-pin DSUB screw terminal (4 relay outputs on a connector)
  2 x for CANSAS-DO8R or 4 x for CANSAS-L-DO16R
  With CANSAS-L-DO8R-V: signal connected via ITT Veam connector (1 output per connector)
  With CANSAS-K-DO16R and CANSAS-L-DO16R-Ph: signal connected via Phoenix spring cage terminal block (0.14 mm² -1 mm²)
- Power supply via Phoenix (MC1, 5/4STF-3,81) socket (CAN/Power-Plug) [2]

Power supply

- Supply voltage: 9..32 V DC via (4-pin) Phoenix plug or via CAN-Bus plug[2]
- Automatic independent start upon application of supply voltage
- Power consumption: <4,0 W (typ.)

Operating conditions

- Operating temperature: -30°C...85°C condensation allowed
- Shock resistance 50 g pk over 5ms (without plug)

Included accessories

- Calibration certificate as per DIN EN ISO 9001
- Instruction manual
- With strand-cast aluminum housing: connection of supply voltage via Phoenix socket

Signal properties:

- Built-in DSP for controlling signal output:
  Output control by means of CAN message (configurable by software)
  Output of calculated states; the calculation algorithm is specified by means of the configuration software.
- Outputs have defined state upon activation
- The relays are selector switches

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 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.
- 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*"; 1 RPDO (Receive Process Data Objects) in INT16, INT32, and FLOAT[3] can be received; only with DO8R. 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-REL4** connector for 4 digital relay outputs
- **M.1050059** ITT Veam connection terminal for 1 channel; cable diameter: 3 mm
- **M.1050060** ITT Veam connection terminal for 1 channel; cable diameter: 6 mm

[2] not for the Cassette model

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

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"*.

DO8R, DO16R

Parameter	Value (typ./max.)	Remarks
Relays	8 16	DO8R DO16R
Relay specs: Switching current Switching power Switching voltage Switching time	 1 A @ 30 VDC (max.) 10 µA @ 10 mVDC (min.) 0,3 A @ 125 VAC (max.) 30 W (max.) 37,5 W (max.) 110 VDC 125 VAC < 8 ms	
Power-up default	all deactivated	
CAN-Bus	defined by ISO 11898	
CANopen® mode	"CiA® DS 301 V4.0.2" and "CiA® DS 404V1.2" supports 1 RPDO in INT16, INT32, and FLOAT	only with DO8R
isolation: CAN-Bus power supply input	 ±60 V ±60 V	to CHASSIS nominal; testing: 300 V(10 s) nominal; testing: 300 V(10 s)
Supply voltages	9..32 V DC	
Power consumption	4 W (typ.)	12 V supply, 23 °C
operating temperature	-30°C...85°C	
Dimensions (W x H x D)	35 x 111 x 90 mm 35 x 111 x 145 mm 75 x 111 x 145 mm 81 x 128 x 145 mm 75 x 111 x 145 mm	CANSAS-DO8R CANSAS-L-DO16R CANSAS-L-DO16R-Ph CANSAS-K-DO16R (8TE) CANSAS-L-DO8R-V
Weight	300 g	
Connection terminals	2 x DSUB-15 4 x DSUB-15 8 x ITT VEAM Phoenix terminal block 2 x DSUB-9 PHOENIX (MC 1,5/4STF-3,81)	outputs : DO8R -L-DO16R -L-DO8R-V -L-DO16R-Ph, K-DO16R CAN (in/out) supply