

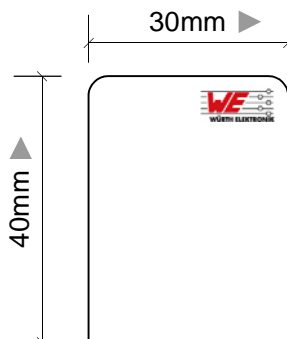
# ICCS Micro CAN

**ICCS Micro CAN** is part of the Intelligent Control and Command Systems (ICCS) product range. The **ICCS Micro CAN** can either be used as a stand alone module or as an extension module to an existing CAN system.

## Features

- 9 pin DIN pluggable relay socket
- 30 mm x 30 mm x 40 mm compact module
- Lower consumption, complete sleep mode available
- High side or relay output
- Optional open collector (2W max.)

## Housing



## Application Examples

- CAN to output extension module
- Input to CAN extension module
- Door management device
- User presence sensor management
- Sensors to CAN module

# ICCS Micro CAN

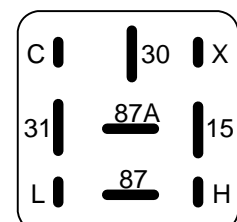
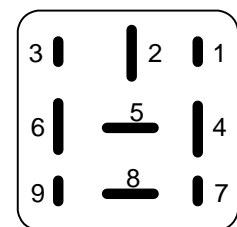
## Technical Data

- Temperature range : -40°C to 85°C (no full load at 85°C)
- Voltage range : 9 to 30V (high side version)
- Ingress protection : IP 53
- EMC : 2009/28/EG; DIN 40839 (under validation)
- E1 certification (in process)
- Up to 3 digital outputs 87, 87A, C (when C set as OC output)
- Up to 3 analogue input 15, X , C ( when C set as input)
- Current output capacity :
  - High side : 2 x 5 A (limited at 2,5A when T° > 80°C)
  - Relay : 10/15A
- Typical high side output: 60W at 12V, 75W at 24V
- Freescale HCS08 processor with 60KB flash memory
- 1KB EEPROM available to backup data
- CAN high speed, SAE J1939 and CAN open compatible

## Pin Assignment

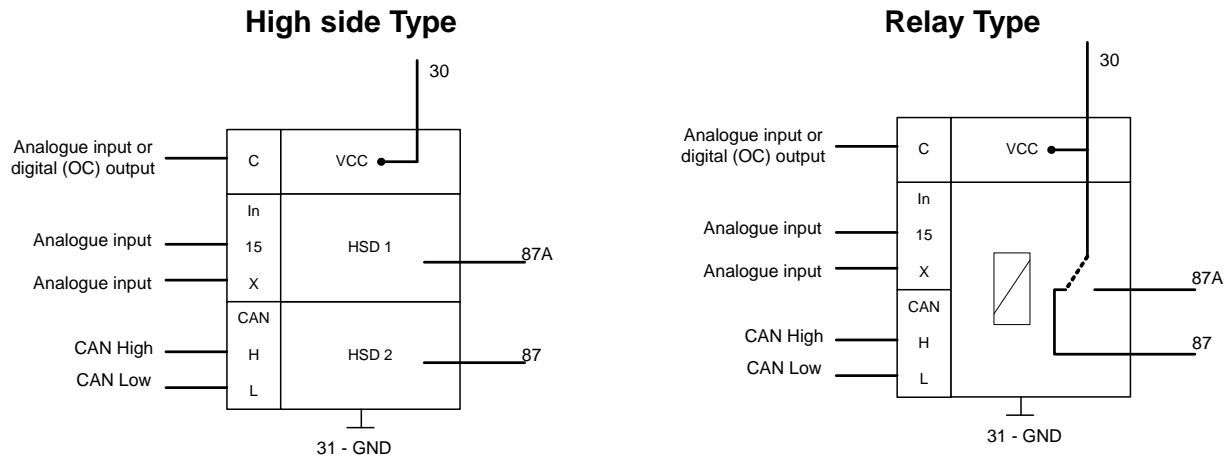
ConnectorPpin	Pin Description	Function Description
1	X	Analogue Input 0-11V
2	30	Vcc Main Power Supply 9-30V / 12V / 24V
3	C	Analogue Input 0-11V or Open Collector Output
4	15	Analogue Input 0-11V
5	87A	Digital Output (High Side) / Relay Output N.C.
6	31	Ground
7	H	CAN bus HIGH
8	87	Digital Output (High Side) / Relay Output N.O.
9	L	CAN bus LOW

Bottom View



# ICCS Micro CAN

## Schematics



## Electrical Specifications

### Voltage:

- High side module can be used from 9V to 30V
- Relay version is available in 12V or 24V

### Current:

- Standby (sleep) mode 250 $\mu$ A
- On mode (without active output) 30mA
- High side module (Type BTS436) is protected against overload and shortage
- Open collector output is capable of a max. 2W load

# ICCS Micro CAN

## Programming

The Freescale HCS08 processor used in this product has 60KB of flash memory.

There are 2 methods to set your own program

1. Visual programming using the ICCS SDK Plus  
This exclusive software is the easiest way to create your own application software.
2. Programming with the C IDE from Freescale : Codewarrior

## Advantages of Visual Programming

- No specific knowledge about microprocessor is required
- Introducing quick and easy application software modification

**Notice** : With the use of the visual programming, the CAN bus and microprocessor possibility are reduced due to foreseen programming blocks.

## Advantages of C Programming

- No limitation in applications and use of peripherals (EEPROM, CAN bus, etc.)

**Notice** : An in depth knowledge of Freescale HCS08 programming language is needed to use and set all possible functions.

### Available References

ICCS Micro CAN 2x Highside + OC	ICS-100078
ICCS Micro CAN Relay 12V	On Request
ICCS Micro CAN Relay 12V + OC + Wake Up on Pin 15	ICS-95850
ICCS Micro CAN Relay 12V + OC	ICS-100513
ICCS Micro CAN Relay 24V	On Request
ICCS Micro CAN Relay 24V + OC	ICS-100478

# History of changes

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Revision number	Date	Author	Description
1.4	21-08-2013	S. Herter	Insert of the change history