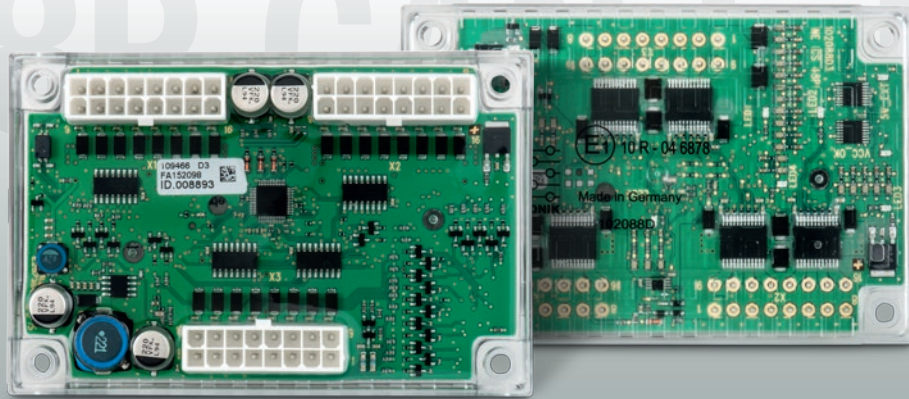


ICCS – Intelligent Control and Command Systems



48P CAN Interface

ICCS 48P CAN Interface – Use as standalone unit or as an extension to existing CAN systems. Optimally suited for mounting on central electrical units. Digital information, analogue voltages, currents and signal frequencies can be collected and processed, analogue-controlled actuators can be controlled via four pulse width modulated outputs (PWM).

Through a large number of configurable inputs / outputs, the ICCS 48P Interface is suitable as an expansion module for existing CAN bus systems.

Applications

- Graphically programmable control unit for mobile applications
- Control unit for central electrical distribution
- Monitoring of fuses and switching of relay
- Input and output extensions for CAN bus systems
- Connection of binary and analog sensors via the CAN bus

Technical data

| General information | |
|------------------------|--|
| Housing | Transparent |
| Connector | 3 x Molex Mini Fit 16 Ways |
| Dimensions | 76 x 116 x 15 mm |
| Weight | ~155 g |
| Operating temperature | -40 °C to 85 °C (no full load at 85 °C) |
| Storage temperature | -40 °C to 85 °C |
| Ingress protection | IP 54 |
| EMC | E1 |
| Operating voltage | 9 to 30 V DC |
| Pre-fusing | 10 A / Supply block |
| Current consumption | max 40 mA |
| Sleep mode consumption | 500 µA |
| Processor type | Freescale HCS08 |
| Clock frequency | 40 MHz |
| Flash memory | 60 kB (48P) / 128 kB (48P+) |
| RAM | 4 kB (48P) / 8 kB (48P+) |
| EEPROM | 1 kB available for graphical programming |

CAN Bus

| | |
|------------------|--|
| acc. ISO 11898-5 | High speed wake on CAN |
| acc. CAN 2.0 B | 29 Bits extended address identifier |
| acc. CAN 2.0 A | 11 Bits address identifier |
| Baud rate | 20 kBit/s to 1000 kBit/s (250 kBit/s default value) |

Inputs/outputs overview

| | | |
|----|------------------------------------|---|
| 10 | Analogue inputs | 8 x 0-11.034 V DC 12 bits 2x 0-11.034 V DC 12 bits / 0-20 mA |
| 3 | Digital inputs | Switch on/switch off level: 7 V / 4 V DC |
| 1 | Digital input | KL15 Wake-up Input |
| 6 | Digital outputs | High side outputs max 2 A |
| 4 | PWM outputs | High side outputs max 1 A / 1 kHz |
| 14 | Analogue inputs or Digital outputs | 0-11.034V DC 12 Bit High side outputs max 2 A |

Inputs/outputs details

Analogue inputs

| | |
|-------------------|------------------------------------|
| Input voltage max | Vsupply |
| Measuring range | 0-11.034 V DC |
| Resolution | 12 bits |
| Input resistance | 220.68 kΩ |
| Refresh rate | max 120 ms (with cycle time 10 ms) |

Digital inputs

| | |
|------------------|-------------------|
| Input voltage | 0 V DC to Vsupply |
| Switch-on level | 7 V DC |
| Switch-off level | 4 V DC |
| Input resistance | 22.68 kΩ |

Digital outputs

| | |
|--------------|----------------------------------|
| Load current | max 2 A Diagnostic current sense |
|--------------|----------------------------------|

PWM outputs

| | |
|---------------|------------|
| PWM frequency | max 1 kHz |
| Duty cycle | 0 to 100 % |
| Resolution | 0.1 % |
| Load current | max 1 A |

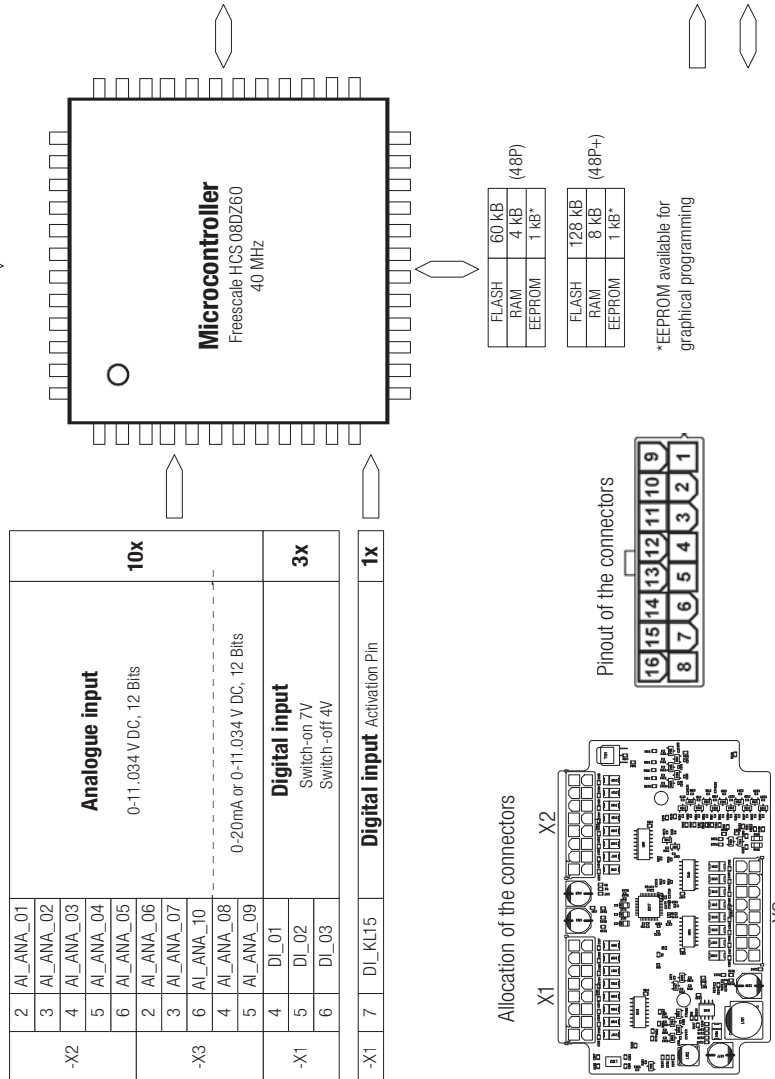
ICCS 48P CAN Interface



Hardware Map

| | | | | |
|------------|---|------------|----|-----|
| 6x | Digital output max 2A/output | DOM_OUT_01 | 12 | |
| | | DOM_OUT_02 | 11 | |
| | | DOM_OUT_03 | 10 | |
| | | DOM_OUT_04 | 9 | |
| 4x | PWM output or Digital output 1A max 1kHz max max 2A/output | DOM_OUT_09 | 16 | |
| | | DOM_OUT_10 | 15 | |
| | | PWM_OUT_05 | 16 | |
| | | PWM_OUT_06 | 15 | |
| 14x | Analogue input or Digital output 0-11.034 VDC, 12 Bits max 2A/output | PWM_OUT_07 | 14 | |
| | | PWM_OUT_08 | 13 | |
| | | AI_OUT_11 | 14 | |
| | | DOM_OUT_11 | 13 | |
| | | AI_OUT_12 | 13 | |
| | | DOM_OUT_12 | 13 | |
| | | AI_OUT_13 | 12 | |
| | | DOM_OUT_13 | 12 | |
| | | AI_OUT_14 | 11 | |
| | | DOM_OUT_14 | 11 | |
| | | AI_OUT_15 | 10 | |
| | | DOM_OUT_15 | 10 | |
| | | AI_OUT_16 | 9 | |
| | | DOM_OUT_16 | 9 | |
| AI_OUT_17 | 16 | | | |
| DOM_OUT_17 | 16 | | | |
| AI_OUT_18 | 15 | | | |
| DOM_OUT_18 | 15 | | | |
| AI_OUT_19 | 14 | | | |
| DOM_OUT_19 | 14 | | | |
| AI_OUT_20 | 13 | | | |
| DOM_OUT_20 | 13 | | | |
| AI_OUT_21 | 12 | | | |
| DOM_OUT_21 | 12 | | | |
| AI_OUT_22 | 11 | | | |
| DOM_OUT_22 | 11 | | | |
| AI_OUT_23 | 10 | | | |
| DOM_OUT_23 | 10 | | | |
| AI_OUT_24 | 9 | | | |
| DOM_OUT_24 | 9 | | | |
| 1x | Reference Voltage 5V, max 500 mA | VDD5V | 7 | -X3 |
| 1x | CAN BUS wake on CAN | CAN_H | 3 | -X1 |
| | | CAN_L | 2 | -X1 |

| | | | | |
|-----|---|---------|----------------------------------|-----------|
| -X1 | 1 | KL_30_1 | Power Supply HS-D outputs | 6x |
| -X1 | 8 | KL_30_2 | | |
| -X2 | 1 | KL_30_3 | | |
| -X2 | 8 | KL_30_4 | | |
| -X3 | 1 | KL_30_5 | | |
| -X3 | 8 | KL_30_6 | | |
| -X2 | 7 | AGND | Ground | 1x |





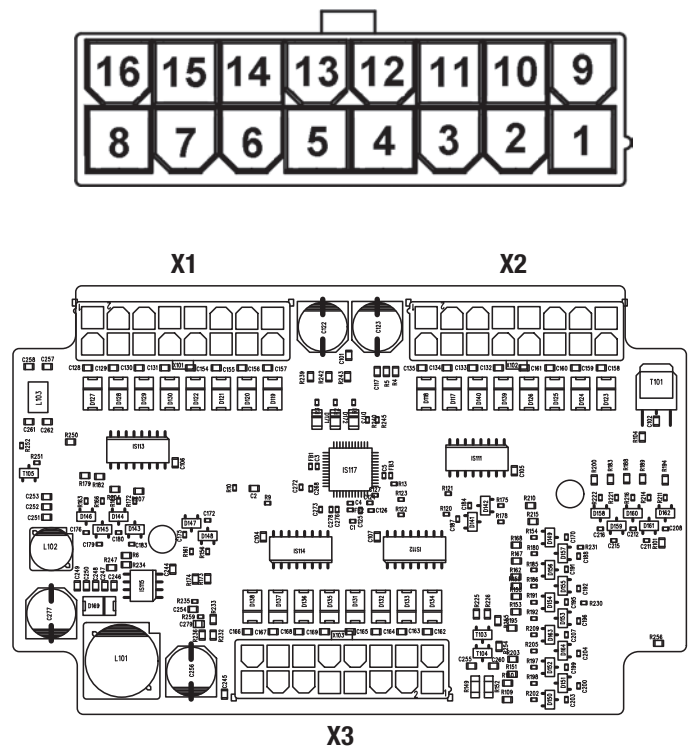
ICCS 48P CAN Interface

Pin assignment

| X1 Connector | | |
|--------------|-------------|--------------------------------|
| Pin | Description | Function |
| 1 | KL30_1 | Power Supply HSD outputs 13-16 |
| 2 | CAN L | CAN Bus Low |
| 3 | CAN H | CAN Bus High |
| 4 | DI_01 | Digital input |
| 5 | DI_02 | Digital input |
| 6 | DI_03 | Digital input |
| 7 | DI_KL15 | Activation Pin |
| 8 | KL30_2 | Power Supply HSD outputs 5-8 |
| 9 | AI_OUT_16 | Analogue input 0-10 V DC |
| | DOM_OUT_16 | Digital output |
| 10 | AI_OUT_15 | Analogue input 0-10 V DC |
| | DOM_OUT_15 | Digital output |
| 11 | AI_OUT_14 | Analogue input 0-10 V DC |
| | DOM_OUT_14 | Digital output |
| 12 | AI_OUT_13 | Analogue input 0-10 V DC |
| | DOM_OUT_13 | Digital output |
| 13 | PWM_OUT_08 | PWM output |
| 14 | PWM_OUT_07 | PWM output |
| 15 | PWM_OUT_06 | PWM output |
| 16 | PWM_OUT_05 | PWM output |

| X2 Connector | | |
|--------------|-------------|-------------------------------|
| Pin | Description | Function |
| 1 | KL30_3 | Power Supply HSD outputs 1-4 |
| 2 | AI_ANA_01 | Analogue input 0-10 V DC |
| 3 | AI_ANA_02 | Analogue input 0-10 V DC |
| 4 | AI_ANA_03 | Analogue input 0-10 V DC |
| 5 | AI_ANA_04 | Analogue input 0-10 V DC |
| 6 | AI_ANA_05 | Analogue input 0-10 V DC |
| 7 | AGND | Ground |
| 8 | KL30_4 | Power Supply HSD outputs 9-12 |
| 9 | DOM_OUT_04 | Digital output |
| 10 | DOM_OUT_03 | Digital output |
| 11 | DOM_OUT_02 | Digital output |
| 12 | DOM_OUT_01 | Digital output |
| 13 | DOM_OUT_12 | Digital output |
| | AI_OUT_12 | Analogue input 0-10 V DC |
| 14 | DOM_OUT_11 | Digital output |
| | AI_OUT_11 | Analogue input 0-10 V DC |
| 15 | DOM_OUT_10 | Digital output |
| 16 | DOM_OUT_09 | Digital output |

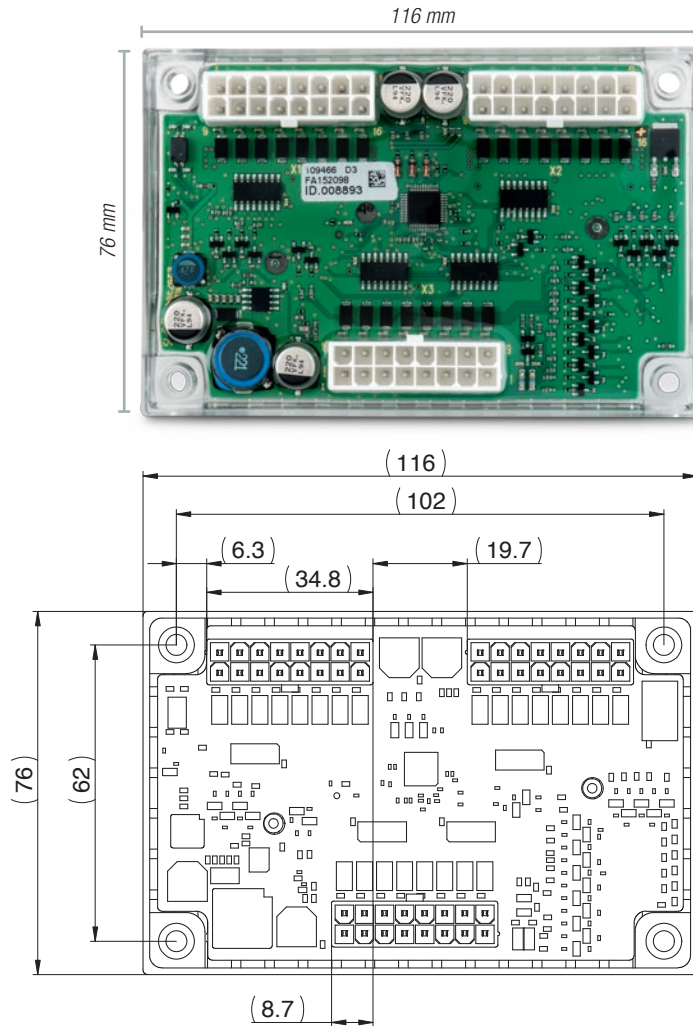
| X3 Connector | | |
|--------------|-------------|--------------------------------|
| Pin | Description | Function |
| 1 | KL30_5 | Power Supply HSD outputs 21-24 |
| 2 | AI_ANA_06 | Analogue input 0-10 V DC |
| 3 | AI_ANA_07 | Analogue input 0-10 V DC |
| 4 | AI_ANA_08 | Analogue input 0-10 V DC |
| 5 | AI_ANA_09 | Analogue input 0-10 V DC |
| 6 | AI_ANA_10 | Analogue input 0-10 V DC |
| 7 | VDD5V | 5 V Ref. max 500 mA |
| 8 | KL30_6 | Power Supply HSD outputs 17-20 |
| 9 | AI_OUT_24 | Analogue input 0-10 V DC |
| | DOM_OUT_24 | Digital output |
| 10 | AI_OUT_23 | Analogue input 0-10 V DC |
| | DOM_OUT_23 | Digital output |
| 11 | AI_OUT_22 | Analogue input 0-10 V DC |
| | DOM_OUT_22 | Digital output |
| 12 | AI_OUT_21 | Analogue input 0-10 V DC |
| | DOM_OUT_21 | Digital output |
| 13 | AI_OUT_20 | Analogue input 0-10 V DC |
| | DOM_OUT_20 | Digital output |
| 14 | AI_OUT_19 | Analogue input 0-10 V DC |
| | DOM_OUT_19 | Digital output |
| 15 | AI_OUT_18 | Analogue input 0-10 V DC |
| | DOM_OUT_18 | Digital output |
| 16 | AI_OUT_17 | Analogue input 0-10 V DC |
| | DOM_OUT_17 | Digital output |



ICCS 48P CAN Interface



Dimensions in mm



Order information

| Available references | Part number WE ICS |
|--|-----------------------|
| ICCS CAN Interface 48P (unprogrammed) With software bootloader | ICS-100596 |
| ICCS CAN Interface 48P+ (unprogrammed) With software bootloader | ICS-102013 |

| Mating connector | Part number WE eiSos |
|--|-------------------------|
| Housing: 16 pin mini fit housing | 649 016 113 322 |
| Crimp contact: AWG 16 (1.31 mm ²) | 649 005 137 22 |
| Crimp contact: AWG 24-18 (0.2 to 0.82 mm ²) | 649 006 137 22 |
| Crimp contact: AWG 28-22 (0.08 to 0.33 mm ²) | 649 007 137 22 |

For 100 pieces packages, please add „DEC“ at the end of the reference.

This item is a standard product, please consider the relevant datasheet notes.
The user is responsible for the product's functionality in its purposed system environment.

For more information visit us
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