

# MICRO ICCS

Controllers



**Micro ICCS** are small and programmable control units shaped as a relay with 9 pins, which can be connected to the circuit board over the 9 pin relay sockets. Thanks to the MSP430 16 Bit microprocessor with flash memory, they can be used for functions such as voltage or frequency monitoring with:

- One analogue input
- Three digital inputs
- Up to two high side power outputs (alternative one relay output)
- Open collector output for signals with max 2 W

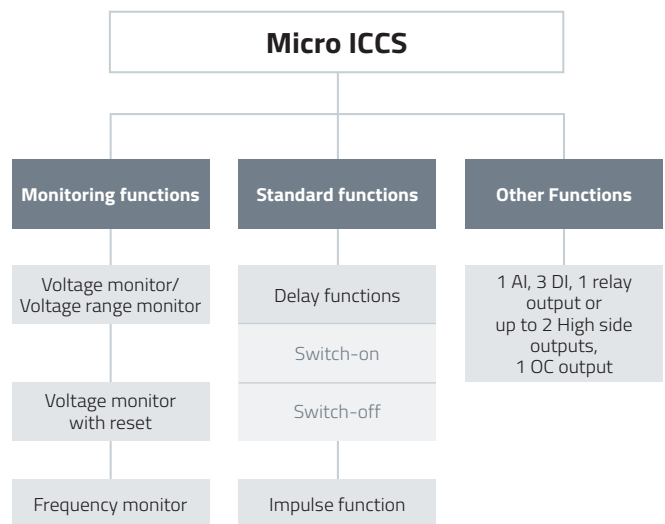
## Programming

- Programming through Würth Elektronik ICS
- Micro ICCS can be configured, parameterised and programmed individually:
  - Standard functions can be set via potentiometer such delay or pulse function
  - Other functions such as monitoring function or functions, which can be realised with the available in- and outputs
  - Combination of all the functions with each other
- Creation of special programs on demand

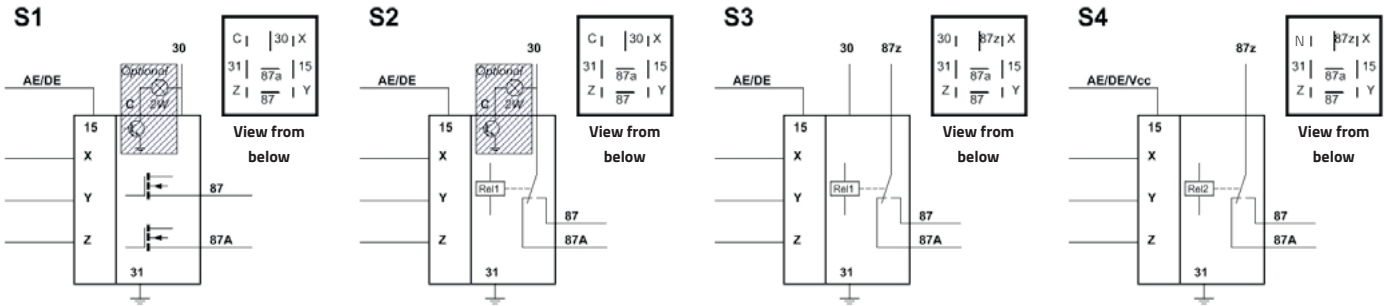
## Housing



| General information                           |  |
|---|--|
| Processor type                                | MSP430 16 Bit with memory flash                                      |
| Dimension                                     | 30 x 30 x 40 mm  |
| Operating temperature                         | -40 °C to 85 °C  |
| Limiting continuous current (relay output)    | 10 / 15 A (NC/NO)  |
| Semiconductor output nominal load at 87 / 87a | High side-output: 5 A (12 V); 3 A (24 V) or 60 W (12 V); 75 W (24 V) |
| Status output C                               | max 2 W  |
| Quiescent current                             | 250 µA   |
| EMC   | 95 / 54 EG; DIN 40839  |
| Ingress protection                            | IP 53 (without potentiometer) IP 65 achievable with specific socket  |
| e1-approval                                   | 03 3218  |



**Diagrams**



- Diagrams S3/S4: Relay contact is potential free and able to switch any DC voltage
- On some versions the analogue input is replaced by a build in potentiometer (pin 15 can still be used as a digital input)
- Connection: 5 male 6.3 mm faston  
4 male 2.8 mm faston

| Description       | Diagram | Outputs   | VCC    | SDK number | Part number |
|-------------------|---------|---|--------|------------|-------------|
| Micro ICCS 9–30 V | S1      | 1 High side   | pin 30 | X08112     | ICS-94830   |
| Micro ICCS 9–30 V | S1      | 2 High side   | pin 30 | X08113     | ICS-94831   |
| Micro ICCS 9–30 V | S1      | 1 High side and 1 Open collector                    | pin 30 | X08232     | ICS-95918   |
| Micro ICCS 9–30 V | S1      | 2 High side and 1 Open collector                    | pin 30 | X08114     | ICS-94832   |
| Micro ICCS 9–30 V | S1      | 2 High side and 1 Open collector with potentiometer | pin 30 | X08221     | ICS-95882   |
| Micro ICCS 12 V   | S2      | 1 Relay   | pin 30 | X08108     | ICS-94826   |
| Micro ICCS 12 V   | S2      | 1 Relay and 1 Open collector                        | pin 30 | X08115     | ICS-94833   |
| Micro ICCS 24 V   | S2      | 1 Relay   | pin 30 | X08109     | ICS-94827   |
| Micro ICCS 24 V   | S2      | 1 Relay and 1 Open collector                        | pin 30 | X08116     | ICS-94834   |
| Micro ICCS 12 V   | S3      | 1 Relay   | pin 30 | X08230     | ICS-95916   |
| Micro ICCS 24 V   | S3      | 1 Relay   | pin 30 | X08231     | ICS-95917   |
| Micro ICCS 24 V   | S3      | 1 Relay with potentiometer                          | pin 30 | X08297     | ICS-95945   |
| Micro ICCS 12 V   | S4      | 1 Relay   | pin 15 | X08110     | ICS-94828   |
| Micro ICCS 12 V   | S4      | 1 Relay and 1 Open collector                        | pin 15 | X08228     | ICS-95914   |
| Micro ICCS 24 V   | S4      | 1 Relay   | pin 15 | X08111     | ICS-94829   |
| Micro ICCS 24 V   | S4      | 1 Relay and 1 Open collector                        | pin 15 | X08229     | ICS-95915   |

**IP65 Socket: ICS-102300**

- Specially made relay socket for Nano / Micro series
- Efficient mounting solution for harsh environments up to IP65



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. Technical content may be modified and changed by Würth Elektronik ICS GmbH & Co. KG without any notice.

For more information write us an e-mail [ics@we-online.com](mailto:ics@we-online.com), call +49 7940 9810-0 or visit us at [www.we-online.com/ics](http://www.we-online.com/ics)

**Würth Elektronik ICS GmbH & Co. KG**  
Intelligent Power & Control Systems  
Gewerbepark Waldzimmern · Würthstraße 1  
74676 Niedernhall · Germany  
Tel.: +49 7940 9810-0 · Fax +49 7940 9810-1099  
[ics@we-online.com](mailto:ics@we-online.com) · [www.we-online.com/ics](http://www.we-online.com/ics)