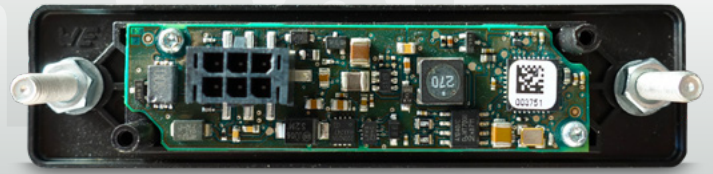




# LED Symbol Cluster

Intelligent HMI Solutions from Würth Elektronik ICS



## 6 Way Symbol Cluster CAN

The **6 Way Symbol Cluster CAN** is a compact and easy to install symbol cluster with customisable front-end design developed by Würth Elektronik ICS.

The module offers 6 LEDs, a digital 'low side' output and a digital input, all are freely addressable from the CAN bus. **Thanks to the use of polyester membrane as front layer, the symbols and colors can be customized, on demand.**

### Applications

- Add-on features indicators
- Standard symbol cluster based on CAN communication
- Vehicle functions visualization

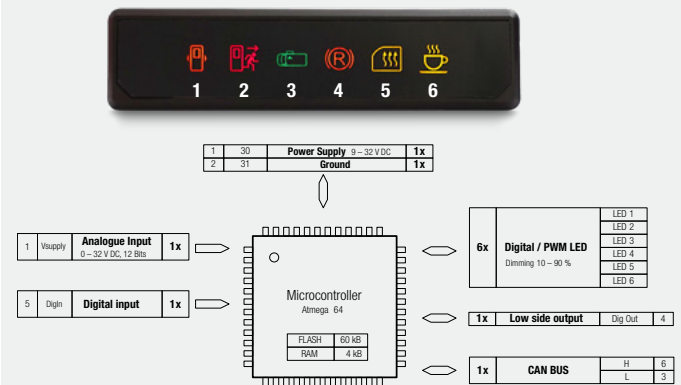
### Technical data

General information	
Connector	Micro Fit 6 Ways MPC3
Dimensions	24 x 97 x 20 mm
Weight	21 g
Operating temperature	-30 °C to 80 °C
Storage temperature	-40 °C to 85 °C
Ingress protection	Front face IP54 / rear IP00
Operating voltage	8 V to 32 VDC
Pre-fusing	1 A (recommended)
Current consumption	All LEDs off: 25 mA All LEDs on: 100 mA
Controller type	Automotive

CAN Bus	
acc. ISO 11898-2	High speed
acc. CAN 2.0B	29 Bits extended address identifier
acc. CAN 2.0A	11 Bits address identifier
Reserved IDs (UDS)	0x7DF, 0x7E0 & 0x7E8 (configurable)
Baud rate	100 / 125 / 250 / 500 / 1000 kbps default setting: 500 kbps

Inputs / outputs overview		
1	Digital input	Digital input high active
1	V supply monitoring	Analogue input for measuring supply voltage
1	Digital output	Low side output

### LED position / Hardware map



### Inputs / outputs details

<b>Digital input</b>		
Input voltage	up to Vsupply	
Switch-on level	> 7.5 VDC	
Switch-off level	< 4 VDC	
Input resistance	> 60 kΩ	
<b>Vsupply measurement</b>		
Voltage range	0 – 33 V (see op. volt.)	
<b>Digital output Low Side</b>		
Load current	Max 2 W / 150 mA	
Active residual voltage	1.1 VDC Reverse polarity protected	
<b>LED dimming</b>		
PWM frequency	1 kHz	
Duty cycle	10 % to 90 %	
Adjustment steps	10 %	

### Standard Compliances

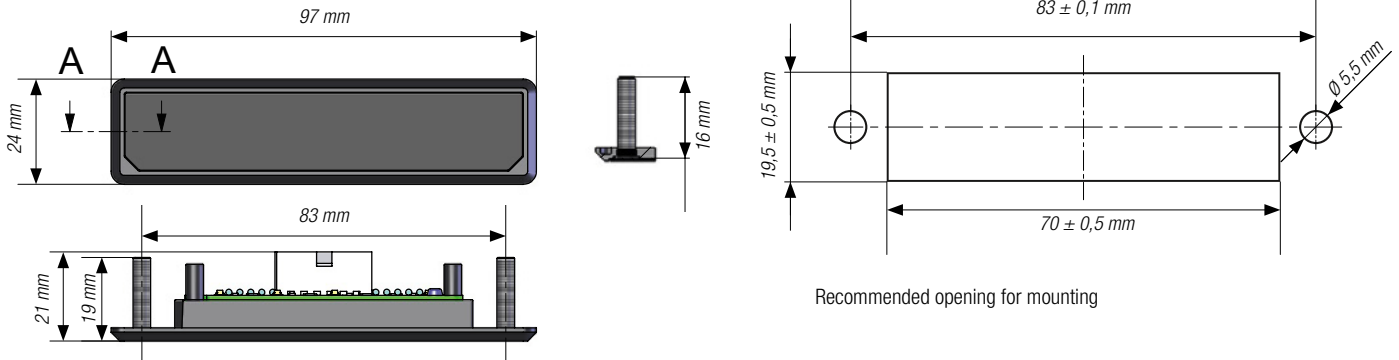
ECE-R10 R.05	E1 10R-05 8351
ISO-7637-1to -3	Passed (restart)
ISO-16750-1to -5	Passed (restart)
ISO-10605	Cat 2 (±8 kV) Passed

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## Dimensions



## Features and configuration tool

With the help of our WE Flasher tool you can configure your 6 Way Symbol Cluster CAN. Following features are available in the standard application:

## Foil and Icons creation

The 6 Way Symbol Cluster CAN is using a white LED to illuminate a colored foil. The icons and colors can be defined individually based on your drawings or on our icon library, which is based on ISO 2575.

## Configurable features

Boot up behavior	All LED's get turned on for 2 seconds, or there is no activation at startup.
CAN timeout handler	Either not activated (the device keeps the last received orders), or it is based on CAN traffic (specific / global). On CAN loss, the LEDs are either turned off, or are flashing with a 2 Hz frequency. Timeout parameter can be set up to 65 seconds.
Supply voltage	The value of the supply voltage can be sent on the CAN bus over 2 bytes. This feature can be activated on a configurable frame and byte position, or deactivated.
Digital input broadcast	The status can either be broadcasted over a configurable CAN frame or deactivated.
LED dimming	One LED dimming value can be set between 10 % and 90 % and activated through a configurable CAN command.
LED activation	Each LED can be activated through a configurable CAN message, where the digital information can be set independently (independent frame for every LED possible).

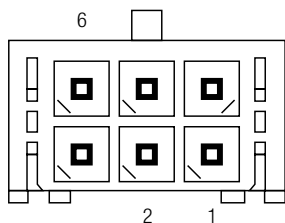
All digital CAN information are based on the J1939 2 bits logic (00 : Off, 01 : On, 10 and 11 : N/A or do nothing)

## Pin assignment

X1 Connector		
PIN	Description	Function
1	KL30	Power supply 8 – 32 V
2	GND	Ground
3	CAN L	CAN low
4	Dig Out	Open drain output 150 mA / 2 W
5	Dig In	Digital input
6	CAN H	CAN high

Mating connectors	Würth Elektronik eISos Part Number
6 pins WR-MPC3 3.00 mm Female Dual Row Receptacle	662006113322
WR-MPC3 3.00 mm Female Crimp Contact AWG 20-24	66200113722
WR-MPC3 3.00 mm Female Crimp Contact AWG 26-30	66200413722

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



6 Way Symbol Cluster CAN – Demo version

## Order information

Available references	Part number WE ICS
6 Way Symbol Cluster CAN – Demo version	F80838
6 Way Symbol Cluster CAN – Customised with specific symbols	on demand

For more information visit us at [www.we-online.com](http://www.we-online.com) or call +49 7940 9810-0.

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