

## Description

The BMS01 is a battery master switch designed for dangerous goods road vehicles complying with international ADR regulations. Environmental protection and the intrinsically safe control circuitry of the BMS01 are in accordance with ADR 2005. The battery switch must be installed between the battery and the vehicle's electrical system. It is operated on and off by means of a control switch in the driver's cab, additional control switches can be sited around the vehicle as required. The BMS01 is available in single pole and double pole versions. An integral safety barrier permits siting of the BMS01 in hazardous areas. Additional auxiliary contacts are provided for disconnection of the ignition circuit, de-energisation of the alternator field winding, or a controlled shutdown of the CANBUS system followed after a delay by disconnection of the battery.

## Typical applications

Utility vehicles for hazardous goods.

## Ordering information

### Type number

**BMS01** Battery Master Switch (to ADR 2005)

#### Number of poles

**2** 2-pole (for 1-pole please see connection diagram)

#### Rated voltage

**0** DC 12 V

**1** DC 24 V

#### Control function: delay time between auxiliary contact K13 and main contacts

**1** 1 sec

**2** 9.5 sec

#### Control function: low voltage monitoring

**0** without

**1** with low voltage monitoring function

#### Version

**0** neutral

**BMS01- 2 - 1 - 2 - 1 - 0** ordering example

Accessories (e.g. ADR control switch, 7-pole and 4-pole connectors) should be ordered separately.

## Approvals

(e1)	EC directive 72/245/EWG
(CE)	EMC directive 89/336/EWG
(ATEX)	EC directive 94/9

## Protection Class

IP69K



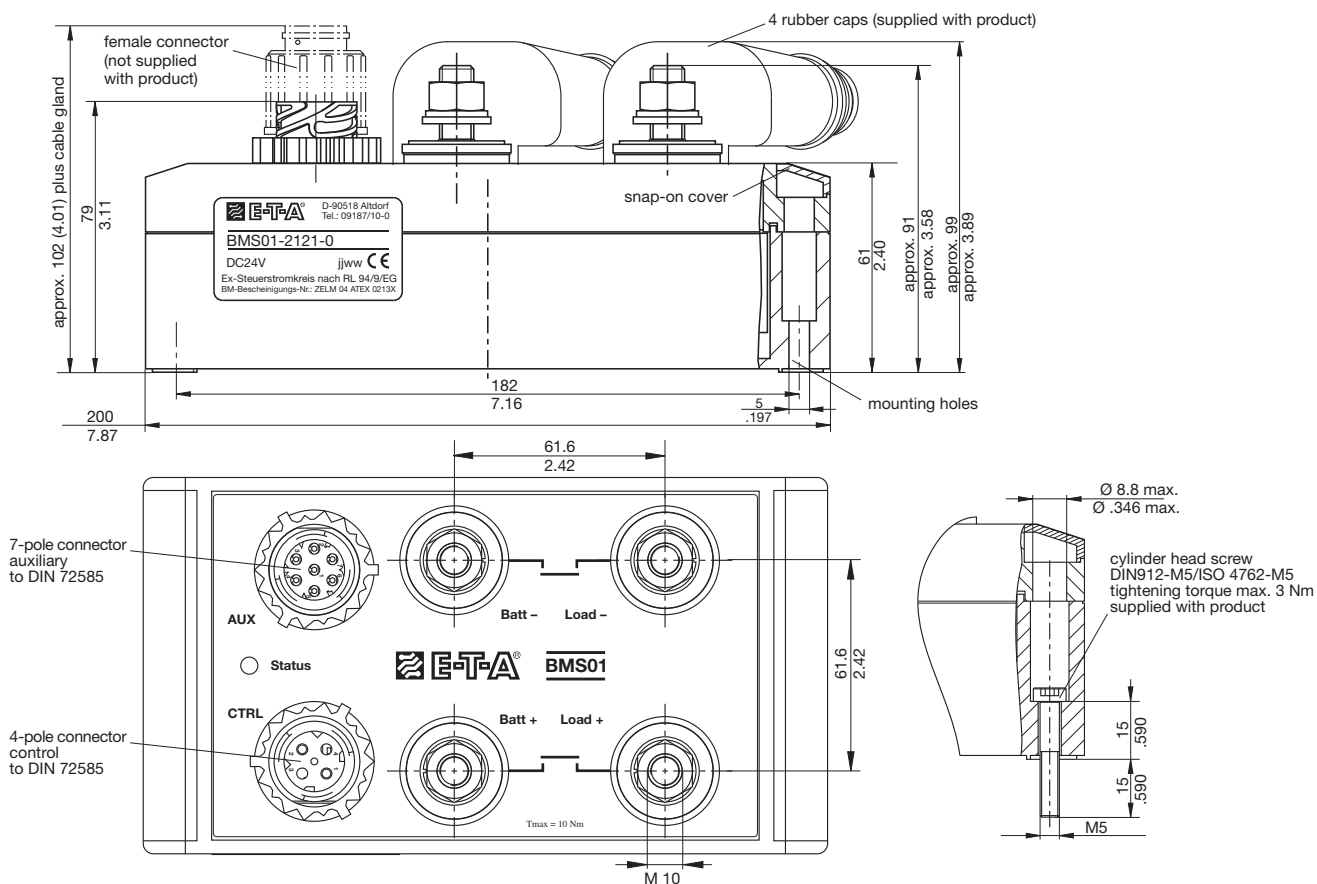
**BMS01**

## Technical data

### Operating data

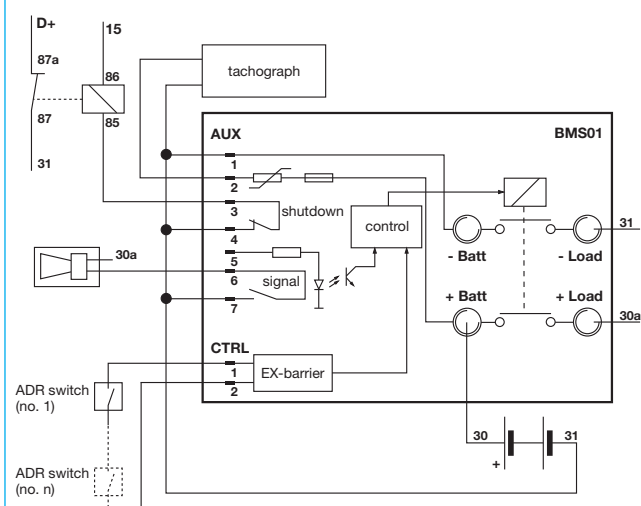
Voltage rating	DC 24 V	DC 12 V
Voltage range	18...32 V	9...16 V
Rated current	200 A	
Max. overload current	2,400 A 1 s, 600 A 20 s	
Quiescent load electronic module	≤ 5 mA	
Current required to operate	typically 1 A / for 50 ms	
Control circuit (EX)	ZELM 04 ATEX 0213X Ex II (2) G [Ex ib] II C	
Temperature range	-40...+70 °C (-40...+158 °F)	
Reverse polarity protection	integral (in the event of reverse polarity the master switch will disconnect instantaneously)	
Low voltage monitoring	switching thresholds: 22.8 V ± 0.3 V hysteresis: typically 0.5 V trip time: typically 60 sec	
Typical life	10,000 cycles at rated current 100,000 cycles mechanically	
Protection class: housing	IP69k	
Protection class: terminals	IP54 terminal stud with moulded cover	
Vibration	5 g (57-200 Hz), ± 0.38mm (10-57 Hz), test to IEC 60068-2-6, test Fc, 10 frequency cycles / axis	
Shock	10 g, test to IEC 60068-2-27, test Ea	
Corrosion	96 hrs 5 % salt mist, test to IEC 60068-2-11, test Ka	
Humidity	240 hrs. 95 % RH, test to IEC 60068-2-3, test Ca	
Terminals	battery terminals: M10 terminal studs control terminals: AUX connectors to DIN 72 585, 7-pole CTRL connectors to DIN 72 585, 2-pole	
Auxiliary contact	max. 10 A (circuit unprotected)	
Mass	approx. 1,700 g	

## Dimensions

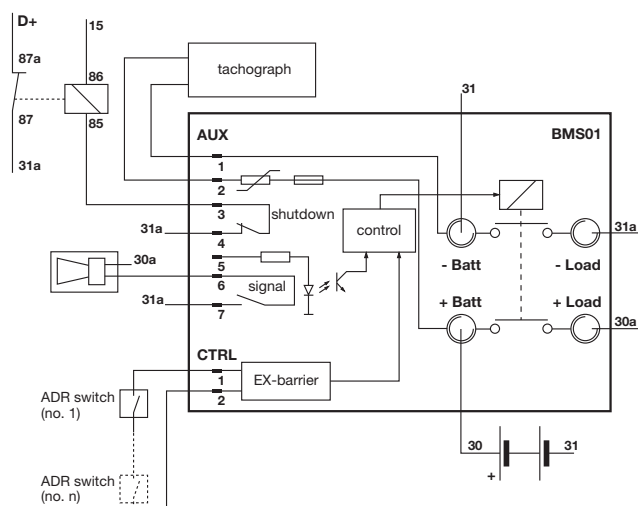


This is a metric design and millimeter dimensions take precedence ( $\frac{\text{mm}}{\text{inch}}$ )

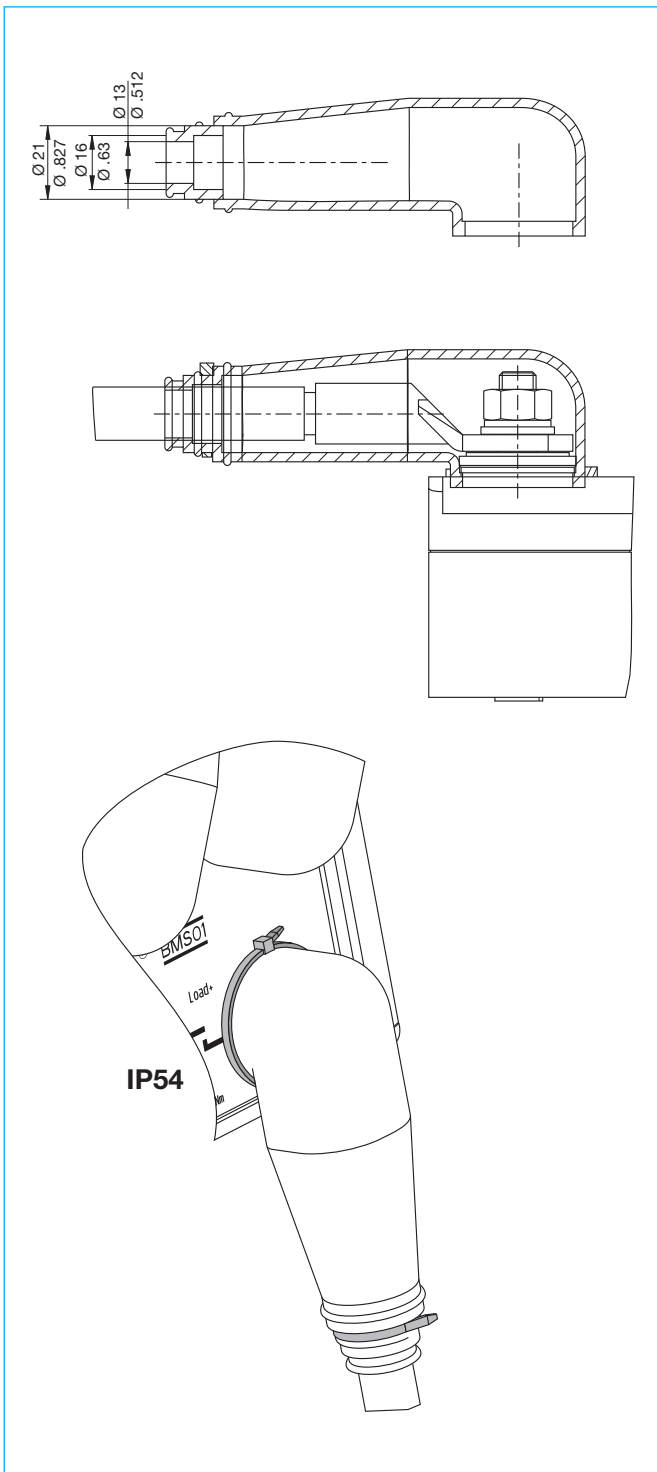
### Connection diagram 1-pole



### Connection diagram 2-pole



## Terminal design



This is a metric design and millimeter dimensions take precedence ( $\frac{\text{mm}}{\text{inch}}$ )

All dimensions without tolerances are for reference only. In the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved. Product markings may not be exactly as the ordering codes. Errors and omissions excepted.

