

UMS

DIN Rail

Made in Germany

Electronic DC Power Switch 600...2400W MOSFET Relais

Short Specification:

- Power supply: 24Vdc \pm 20%
- DIN-Rail 35mm mounting
- Screw terminal plugs for AWG16-AWG4
- Interference resistant
- High reliability
- Minimum heat emission
- High efficient
- Free air convection
- Mounting space only 50mm
- Up to 2400W signal switching capacity
- Control In-/outputs galvanic insulated
- Switching current up to 320A
- Switching voltage up to 120Vdc
- Sense control
- Power-MOSFET output
- Low RDS_{on}
- Unlimited operation switches
- Left/right operation mode
- Left/right control confirmation signal
- Safety : cUL60950/16950 IEC(EN)60950-1
- EMI/EMS: EN55022 class B



Intelligent Power Switch for Automation & Drives – replaces excessive conventional relay solutions

Applications:

Motor drives, Breaks, valves, slide feeds, magnet coils

Control functions:

The Camtec Power-Crash-Control circuit protects from short circuits while switching process. The sense polarity is reversed congruent to the outputs.

Control In-/Outputs:

Galvanic insulated with photo couplers

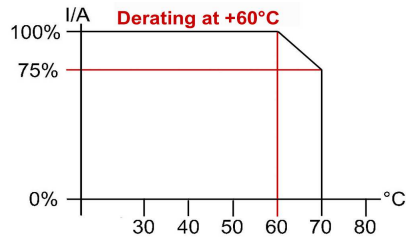


05.11C In accordance with IEC60950-1

DC-Input	24Vdc ± 20%					
Input Rating	typ. 100mA					
Type	UMS00025.10T	UMS00025.15T	UMS00025.20T	UMS00050.20T	UMS00050.30T	UMS00050.40T
Rated Voltage	60V	40V	30V	60V	40V	30V
Rated Current	10A	15A	20A	20A	30A	40A
Boost ≤ 10ms	40A	60A	80A	80A	120A	160A
Type	UMS00100.80T	UM00100.60T	UMS00100.40T	UMS00100.20T		
Rated Voltage	30Vdc	40Vdc	60Vdc	120Vdc		
Rated Current	80A	60A	40A	20A		
Boost ≤ 10ms	320A	240A	100A	80A		

Input-/output voltage error sequence: +20% for < 60 sec. (safety: >60Vdc we advise to use ADTW201 for galvanic insulation)

Cooling	Free air convection
Ambient Temperature	-20°C...+70°C
Storage Temperature	-40°C...+85°C
EMI	EN55022 classB
Safety	cUL60950/1950 EN60905-1
Safety Class 1	VDE0805, VDE0100
MTBF at full load	500.000h at 45°C
Connectors input/output	Screw terminal plugs 16-4AWG
Controller connector	SUB-D15 (IEC)
Dimensions (HxWxD)	124x65x96
Weight	990g



Technical information:

Right Input: A positive signal will connect the input (+) to DC-Out1 and input (-) to DC-out1. The control-LED RIGHT lights.

Left Input: A positive signal will connect the input (+) to DC-Out2 and input (-) to DC-out2. The control-LED LEFT lights.

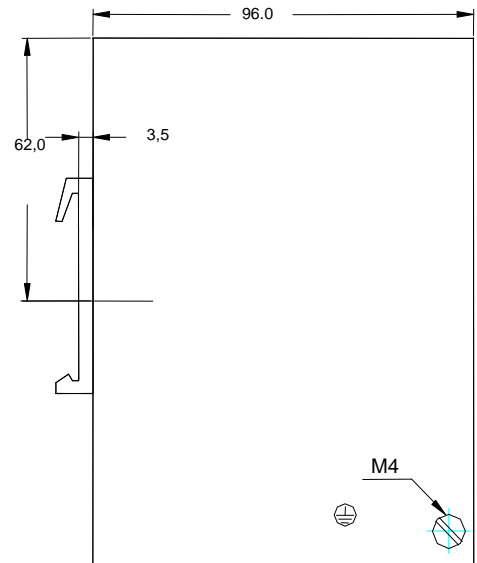
Left/Right Input: If a positive signal is emitted to both inputs at the same time or if no signal is emitted, the DC-Outputs are disabled and the Master-Stop-LED lights.

Stop Input: A positive signal must be emitted to the input to run all functions. The Stop-Input can also be used as an emergency stop switch. The output will be switched off either there is no signal emitted or it is at 0 volts; the Master-Stop-LED lights.

Sensing: While using the sense connections for line compensation the used wires must be twisted pair to avoid radiated emissions. The cables should be closed directly at the consumer load inputs. It is recommended to use a 100uF bipolar in combination with a 100nF ceramic capacitor.

- Terminal Connects:**
- Input: DC+, DC-
 - Output: DC-out 1, DC-out 2
 - Power supply: 24Vdc +, 24Vdc -
 - SubD pinout control I/O:
 - 1 = right input +24Vdc 5mA max.
 - 2 = left input +24Vdc 5mA max.
 - 3 = stop +24Vdc 5mA max.
 - 4 = GND of PIN 1,2,3
 - 5 = sense input +
 - 6 = sense input -
 - 7 = sense output +
 - 8 = sense output -
 - 9 = control right +24V 10mA typ.
 - 10 = control left +24V 10mA typ.
 - 11 = GND 9,10
 - 12 = not connected
 - 13 = not connected
 - 14 = not connected
 - 15 = not connected

Screw terminal order codes: SK2 Art.No.: 3520037
(each package = 10 pcs) (1pc needed for 24V supply)



Application Notes

Many tasks formerly performed by electromagnetic relays can now be in solution Camtec new UMS electronic semiconductor relay. In comparison to a mechanic relay the UMS features no locomotive parts. The UMS Power Switch is a full semiconductor relay with built in controller. Based on its wear-free construction the power switch provides more than 100 Mio. switch loops at full load. Under the same conditions a very good power relay is guaranteed to mostly feature around 10000 switch-loops before corrosion and aging pass to the device. The coil operating range provides earlier derating above 45°C. Our UMS works with no derating up to 60°C ambient temperature and although provides the a 100 Mio. switch-loops lifetime.

If your desideratum exceeds 120Vdc and 320A surge current just connect some UMS in parallel or in series. There is no external circuit recommended.

Advantages of the UMS100:

- no mechanical wear
- no electromagnetic influences
- no high-frequency distortions
- no acoustic distortions
- inured to high stress peaks
- no contact chatter
- extreme fast signal activation
- built in controller provides active monitoring of all operation status

Future-proof and flexible

The intelligent UMS executes different control and regulation feedings. Industrial control units open a wide field of applications to the power switch. For example new generation dc-drives increased standards are recommended. The testing of dc-drives works under extreme conditions and presetting. Therefore special test units are the standard use. The UMS with its variable impedance matching offers the most suitable choice of demand.

Power Crash Control (PCC)

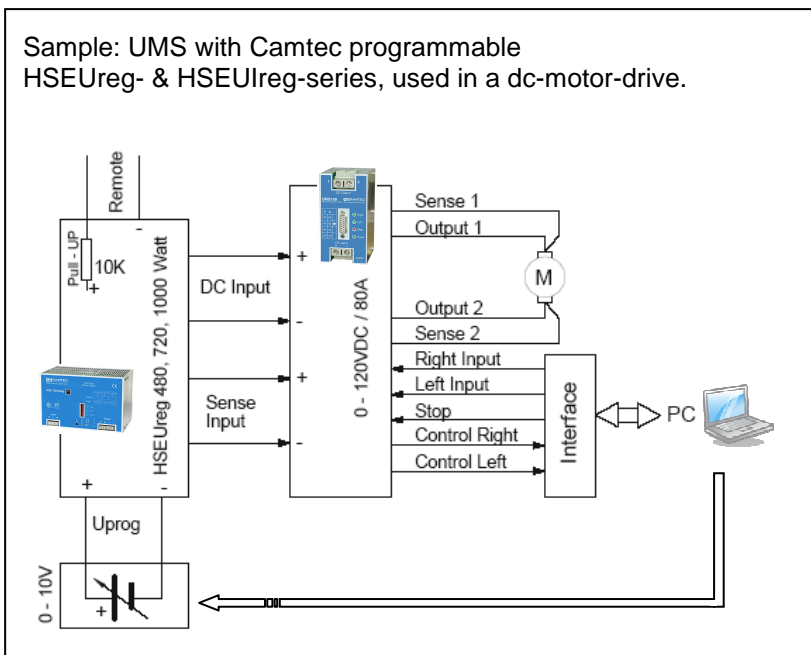
The UMS features a special temperature and a voltage control so that in switch over mode (e.g. rotating direction changes) no shortcut occurs (Power Crash Control). The turn-over of the sense control works automatically. All control inputs and outputs are galvanic insulated by photo couplers.

Special features list:

- big screw terminals for up to 4AWG cabling
- featuring up to 120Vdc and 80A with a 320A surge current
- MOSFET outputs offer an extreme low RDSon
- If you need more power – the UMS is designed to be connected in parallel or in series

Sample application:

Sample: UMS with Camtec programmable HSEUreg- & HSEUreg-series, used in a dc-motor-drive.



Application Area

- DC motor drives
- valve control systems
- magnetic coil
- feeder control systems
- brake systems
- battery backup systems