


oMux.22x24S


Multiplexer


oMux.22x24S, a part of the Multiplexer product family, is a Body Control Unit that fulfills essential control functions such as door control, signaling, lamp operation, wiper motor control, air conditioner motor control, and window raising/lowering in vehicles. It can be installed in different parts of the vehicle and provide real time information via CAN-Bus communication interface.


Due to its capability to execute simultaneous operations, it provides the most cost-effective and economical solution for the vehicle. It can operate 15 oMux devices on the same CAN-Bus with identical embedded software due to its master/slave operation capability. This allows seamless integration and efficient management of multiple oMux units within the vehicle system.


With the user-friendly oMux.Designer development GUI application one can effortlessly create user-defined scenarios using functional block diagrams. Real-time software updates, diagnostics, and software retrieval processes can be performed via CAN-Bus, ensuring efficient operations and hassle-free maintenance. With the ability of the CAN-Bus communication interface, embedded software updates can be transmitted to all devices concurrently without uninstalling them from the vehicle.


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9-36VDC Operating Voltage
(Applicable to 12/24 V Systems)
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22 Input (8 Analog (0-500r / 0-5V / NTC), 12 Active High, 2 Active Low)
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24 Output
21 high side (10A)
3 half bridge (-2,5/10A)
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5V and 12V Sensor Supply
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3xCAN Interface (Protocol SAE J1939)
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Wake Up via CAN and Digital Input
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-40 °C ~ +85 °C Operating Temperature

Supply Characteristics

Input Voltage Range	9-36 V
Oversvoltage	36 V
Current (24 V Operation Mode)	30 mA
Current (24 V Sleep Mode)	3 mA
Oversvoltage (5 minutes)	36 V
Vbb_Logic Current (For every connector)	0.05 - 1 A
Vbb_G1 Current (For every connector)	15 A
Vbb_G2 Current (For every connector)	15 A
Vbb_G3 Current (For every connector)	15 A
Vbb_G4 Current (For every connector)	15 A

5V Supply Characteristics

Input Voltage Range (5 V Output)	9-36 V
Oversvoltage	36 V
Output Voltage Range (5 V Output)	5 V
Output Voltage Accuracy	6 %
Output Current	250 mA

12V Supply Characteristics

Input Voltage Range (12 V Output)	14-36 V
Oversvoltage	36 V
Output Voltage Range (12 V Output)	12 V
Output Voltage Accuracy	6 %
Output Current	250 mA

Digital Input Characteristics

Input Voltage Range	0-Vbat V
Oversvoltage	36 V
Inductive Load Protection	Available
Pull-up/down Resistor	47 K Ω
Pin's Capacitance	0.1 μ F
Pull-up/down (When Active)	10 ms

Analog Inputs Characteristics

Input Voltage Range	0-Vbat V
Oversvoltage	36 V
Inductive load Protection	Available
Pin's Capacitance	0.1 μ F
Resolution	8 Bit

10A "High-Side PWM" Output Features with Current Measurement

Switchable Voltage Range	0 - 36 V
Output Current	10 A
ON state Output Resistance	16 mΩ
Overvoltage	36 V
PWM Frequency	100 Hz
PWM Resolution	1 %
Internal Flyback Diode	Available
Inductive Impact Protection	750 V (Peak)

2.5A/10A "Half-Bridge" Output Characteristics

Switchable Voltage Range	9 - 36 V
Output Current	-2.5 ~ +10 A
"High-Side" Output ON Resistor	16 mΩ
"Low-Side" Output ON Resistance	50 mΩ
Overvoltage	36 V
PWM Frequency (for HS)	100 Hz
PWM Resolution	1 %
Internal Flyback Diode	Unavailable
Inductive Impact Protection	750 V (Peak)

CAN Characteristics

Overvoltage protection	-58 ~ +58 V
Bit Rate	50 - 1000 kbps
J1939 Compatibility	Available
Internal programmable termination resistor (120Ω)	Available

Sensor Supply Fault Responses

Battery Short Circuit (Sensor Supply =Battery Voltage)	When the short circuit is over, the Sensor Supply Voltage returns.
Ground Short Circuit (Sensor Supply =Ground)	When the short circuit is over, the Sensor Supply Voltage returns.
Overcurrent (Sensor Supply =Ground)	When the overcurrent condition is over, the Sensor Supply Voltage returns.

Environmental Conditions

Operating Temperature	-40 °C ~ +85 °C
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