Revision: 2021 10 25 - Draft	
Default CANbus Baud Rate	500 kbps
Default Term. Res. Status	Disabled
Base ID	0x72A

Kaizen Relay Control Module CANbus Specification

Byte	0	1	2	3	4	5	6	7
Output 1 Base ID + 0	Output 1 Status Bits	PWM Frequency	Duty Cycle	Reserved	Reserved	Reserved	Reserved	Reserved
	0x01 Output Active 0x02 PWM Mode 0x04 Digital Mode 0x08 0x10 0x20 0x40 0x80 Output Digital Status	0x01 10Hz 0x02 50Hz 0x04 100Hz 0x08 0x10 0x20 0x40 0x80	0 to 100 %	FF	FF	FF	FF	FF
Formulas	Bit Masks	Bit Masks	1% / bit	N/A	N/A	N/A	N/A	N/A

Byte	0	1	2	3	4	5	6	7
Output 2 Base ID + 1	Output 2 Status Bits	PWM Frequency	Duty Cycle	Reserved	Reserved	Reserved	Reserved	Reserved
	0x01 Output Active 0x02 PWM Mode 0x04 Digital Mode 0x08 0x10 0x20 0x40 0x80 Output Digital Status	0x01 10Hz 0x02 50Hz 0x04 100Hz 0x08 0x10 0x20 0x40 0x80	0 to 100 %	FF	FF	FF	FF	FF
Formulas	Bit Masks	Bit Masks	1% / bit	N/A	N/A	N/A	N/A	N/A

Byte	0	1	2	3	4	5	6	7
Output 3 Base ID + 2	Output 3 Status Bits	PWM Frequency	Duty Cycle	Reserved	Reserved	Reserved	Reserved	Reserved
	0x01 Output Active 0x02 PWM Mode 0x04 Digital Mode 0x08 0x10 0x20 0x40 0x80 Output Digital Status	0x01 10Hz 0x02 50Hz 0x04 100Hz 0x08 0x10 0x20 0x40 0x80	0 to 100 %	FF	FF	FF	FF	FF
Formulas	Bit Masks	Bit Masks	1% / bit	N/A	N/A	N/A	N/A	N/A

Byte	0	1	2	3	4	5	6	7
Input 1 Base ID + 3	Input 1 Status Bits	Input 1 Analog Voltage		Input 1 Analog Smoothing	Reserved	Reserved	Reserved	Reserved
	0x01 Analog Input Mode 0x02 Digital Input Mode 0x04 Pullup Resistor 0x08 Pulldown Resistor 0x10 Analog Smoothing 0x20 Digital Input Inverted 0x40 Digital Input Status 0x80 5V Supply Enabled	Analog Voltage MSB	Analog Voltage LSB	0 to 100 %	FF	FF	FF	FF
Formulas	Bit Masks	Voltage = ((MSB * 256) + LSB) / 100		1% / bit	N/A	N/A	N/A	N/A

Byte	0	1	2	3	4	5	6	7
Input 2 Base ID + 4	Input 2 Status Bits	Input 2 Analog Voltage		Input 2 Analog Smoothing	Reserved	Reserved	Reserved	Reserved
	0x01 Analog Input Mode 0x02 Digital Input Mode 0x04 Pullup Resistor 0x08 Pulldown Resistor 0x10 Analog Smoothing 0x20 Digital Input Inverted 0x40 Digital Input Status 0x80	Analog Voltage MSB	Analog Voltage LSB	0 to 100 %	FF	FF	FF	FF
Formulas	Bit Masks	Voltage = ((MSB * 256) + LSB) / 100		1% / bit	N/A	N/A	N/A	N/A

Byte	0	1	2	3	4	5	6	7
Input 3 Base ID + 5	Input 3 Status Bits	Input 3 Analog Voltage		Input 3 Analog Smoothing	Reserved	Reserved	Reserved	Reserved
	0x01 Analog Input Mode 0x02 Digital Input Mode 0x04 Pullup Resistor 0x08 Pulldown Resistor 0x10 Analog Smoothing 0x20 Digital Input Inverted 0x40 Digital Input Status 0x80	Analog Voltage MSB	Analog Voltage LSB	0 to 100 %	FF	FF	FF	FF
Formulas	Bit Masks	Voltage = ((MSB * 256) + LSB) / 100		1% / bit	N/A	N/A	N/A	N/A

Byte	0	1	2	3	4	5	6	7
Misc. Base ID + 6	Misc. Status Bits	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved
	0x01 CAN Term Resistor 0x02 Green LED 0x04 Red LED 0x08 0x10 0x20 0x40 0x80	FF	FF	FF	FF	FF	FF	FF
Formulas	Bit Masks	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Byte	0	1	2	3	4	5	6	7
Output 1 Command Base ID + 7	Output 1 Mode	Output 1 Control	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved
	0x01 Digital Mode 0x02 Analog Mode 10Hz 0x04 Analog Mode 50Hz 0x08 Analog Mode 100Hz 0x10 0x20 0x40 0x80	If Digital Mode 0x00 = Relay Off > 0x00 = Relay On If Analog Mode 0 to 100% Relay Duty Cycle	FF	FF	FF	FF	FF	FF
Formulas	Bit Masks	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Byte	0	1	2	3	4	5	6	7
Output 2 Command Base ID + 8	Output 2 Mode	Output 2 Control	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved
	0x01 Digital Mode 0x02 Analog Mode 10Hz 0x04 Analog Mode 50Hz 0x08 Analog Mode 100Hz 0x10 0x20 0x40 0x80	If Digital Mode 0x00 = Relay Off > 0x00 = Relay On If Analog Mode 0 to 100% Relay Duty Cycle	FF	FF	FF	FF	FF	FF
Formulas	Bit Masks	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Byte	0	1	2	3	4	5	6	7
Output 3 Command Base ID + 9	Output 2 Mode	Output 3 Control	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved
	0x01 Digital Mode 0x02 Analog Mode 10Hz 0x04 Analog Mode 50Hz 0x08 Analog Mode 100Hz 0x10 0x20 0x40 0x80	If Digital Mode 0x00 = Relay Off > 0x00 = Relay On If Analog Mode 0 to 100% Relay Duty Cycle	FF	FF	FF	FF	FF	FF
Formulas	Bit Masks	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Byte	0	1	2	3	4	5	6	7
Misc. Command Base ID + 10	Misc. Command Bits	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved
	0x01 CAN Term Resistor 0x02 Green LED 0x04 Red LED 0x08 0x10 0x20 0x40 0x80	FF	FF	FF	FF	FF	FF	FF
Formulas	Bit Masks	N/A	N/A	N/A	N/A	N/A	N/A	N/A