



UCVT

universal signal converter

The UCVT-UCVP-DR universal signal converter offers three-way isolation and is designed to convert standard process input/output signals. For example current inputs of 0/4-20 mA can be converted into voltage outputs of 0-10 V, PWM inputs (250 Hz–10 kHz at 5 V) can be converted to current outputs and etc.

Four DIP switches allow to select the desired input and output: PWM signal (250 Hz-10 kHz, 0-100 % duty cycle) for input and open collector output with frequency 1 kHz, 0-20 mA, 4-20 mA, or 0-10 V.

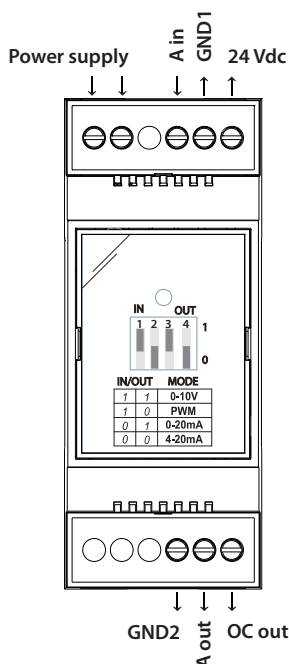
A rugged power supply interface accepts 18-32 VDC/12-18 VAC and is appropriate for machine applications. Galvanic isolation is made at the same time with the conversion. This cuts noise signals which may exist when using in specific applications. The circuitry has conformal coating and is mounted in a DIN rail enclosure designed for installation in a control panel.

The CVT-UCVP-DR signal converter provides precise signal conversion and isolation between sensors, PLC's and other controls. Applications include: industrial automation, test equipment and machine automation. For demanding environments, the module should be mounted in a protective control panel. Three-way isolation is used to eliminate ground loops causing signal errors. Also, control systems with limited channels can use the converter when each channel requires a different configuration, e.g. the three-way isolation permits the device to provide a sinking input and sourcing output.

SPECIFICATIONS

- 0-10 VDC/0-20 mA/4-20 mA/PWM input, selectable by switch
- 0-10 VDC/0-20 mA/4-20 mA/PWM output, selectable by switch
- Three-way galvanic isolation (input, output, supply)
- DIN rail mounting
- Power supply: 18-32 VDC/12-18 VAC with transient and surge protection
- Input impedance in voltage and PWM mode: 140 KOhm
- Input impedance in current mode: 250 Ohm
- Load impedance in voltage mode: 500 Ohm minimum
- Load impedance in current mode: 500 Ohm maximum
- Isolation: >1000 VDC
- Accuracy: +/- 0.05 %FSD
- Red LED indication for power supply status (ON = OK)
- Terminal blocks: suitable for 0.5-2.5 mm² cable (3x2.5 mm²)
- Ambient temperature range: -10...40 °C
- Storage temperature: -20...70 °C
- Iload (PWM open collector) < 150 mA
- Open collector PWM output frequency: 1 kHz

WIRING DIAGRAM



Power	supply 18-32 VDC/12-18 VAC
A in	analog input
GND1	ground
24 VDC	output 24 VDC power supply
GND2	ground
A out	analog output
OC out	open collector output

Dip switch selection

Input	Output	Pos. 1	Pos. 2	Pos. 3	Pos. 4
0-10V	0-10V	1	1	1	1
0-10V	PWM	1	1	1	0
0-10V	0-20mA	1	1	0	1
0-10V	4-20mA	1	1	0	0
PWM	0-10V	1	0	1	1
PWM	PWM	1	0	1	0
PWM	0-20mA	1	0	0	1
PWM	4-20mA	1	0	0	0
0-20mA	0-10V	0	1	1	1
0-20mA	PWM	0	1	1	0
0-20mA	0-20mA	0	1	0	1
0-20mA	4-20mA	0	1	0	0
4-20mA	0-10V	0	0	1	1
4-20mA	PWM	0	0	1	0
4-20mA	0-20mA	0	0	0	1
4-20mA	4-20mA	0	0	0	0

DIMENSIONS & WEIGHT

	width	height	depth	weight
UCVT-UCVP-DR	35	90	58	95 g