

**Manufacturing and development of engines, motors and other products and the measurement of vibration of devices installed in power generating facilities or manufacturing plants**



**Example of 6-channel configuration**  
(3 UV-16 units and BP-17 battery unit)

2-channel Charge Amplifier

# UV-16

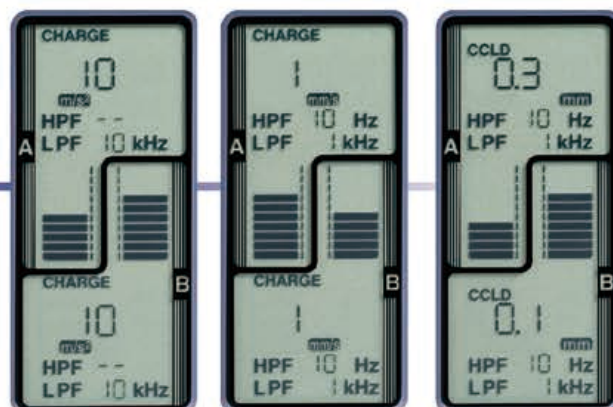


Front View

Rear View

The UV-16 is a 2-channel charge amplifier that is compatible with the input of piezoelectric accelerometers and accelerometers with built-in preamplifier. A multi-channel charge amplifier can be configured by coupling together a maximum of 16 units and 32 channels.

- Equipped with LCD display, overload indicator LED, operating switch, input/output terminals, power input terminals and coupling connectors
- It can be mounted on JIS standard racks even with a small number of channels (max. 12 units, 24 channels)
- AC adapter or battery unit BP-17 can be used as the power source



Acceleration

Velocity

Displacement

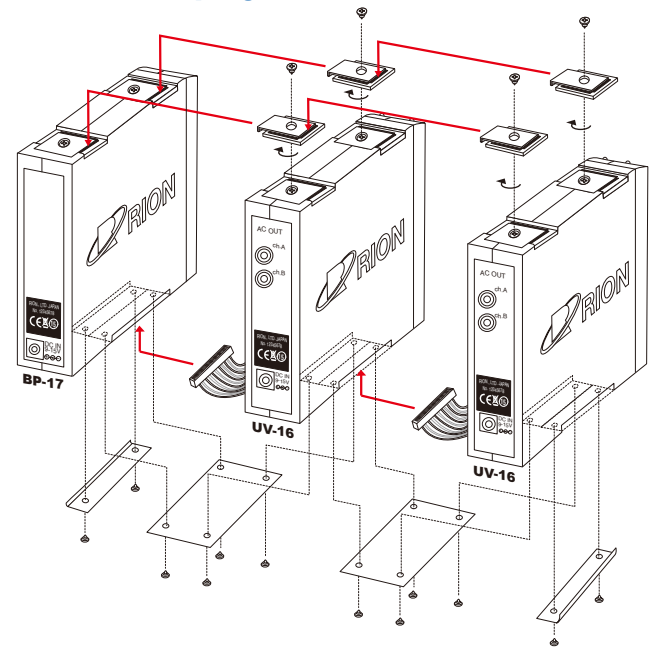
## Specifications

Input	
Channels	2
Connector	Microdot connector
Types	Piezoelectric accelerometer Accelerometer with built-in preamplifier 24 V, 4 mA
Measurement modes and units	ACC (acceleration): m/s <sup>2</sup> , VEL (velocity): mm/s, DISP (displacement): mm
Sensitivity setting	
Setting range	0.100 to 0.999 in 0.001 intervals 1.00 to 9.99 in 0.01 intervals 10.0 to 99.9 in 0.1 intervals
Units	pC/(m/s <sup>2</sup> ) (piezoelectric accelerometer) mV/(m/s <sup>2</sup> ) (accelerometer with built-in preamplifier)
Range	7 stages (selected value range differs with the sensitivity setting)
In the case of 0.100 to 0.999 sensitivity	
ACC (acceleration)	10, 30, 100, 300, 1 000, 3 000, 10 000
VEL (velocity)	10, 30, 100, 300, 1 000, 3 000, 10 000
DISP (displacement)	1, 3, 10, 30, 100, 300, 1 000
In the case of 1.00 to 9.99 sensitivity	
ACC (acceleration)	1, 3, 10, 30, 100, 300, 1 000
VEL (velocity)	1, 3, 10, 30, 100, 300, 1 000
DISP (displacement)	0.1, 0.3, 1, 3, 10, 30, 100
In the case of 10.0 to 99.9 sensitivity	
ACC (acceleration)	0.1, 0.3, 1, 3, 10, 30, 100
VEL (velocity)	0.1, 0.3, 1, 3, 10, 30, 100
DISP (displacement)	0.01, 0.03, 0.1, 0.3, 1, 3, 10
Frequency range	
ACC (acceleration)	1 Hz to 15 kHz (current AC output tolerance $\pm 5\%$ ) 0.5 Hz to 30 kHz (current AC output tolerance $\pm 10\%$ )
VEL (velocity)	3 Hz to 3 kHz (current AC output tolerance $\pm 5\%$ )
DISP (displacement)	3 Hz to 500 Hz (current AC output tolerance $\pm 10\%$ )
Filter	Settable to HPF or LPF by channel
HPF	OFF, 10 Hz, 20 Hz, 50 Hz
LPF	1 kHz, 3 kHz, 10 kHz, OFF
Display	Segment LCD with backlight
Display content	Settings, bar graph (100 ms cycles)
Warning display	LED x2 Overload indication: red (by channel)
Output signal for calibration	Sine wave, 80 Hz $\pm 5\%$ , output signal 1 V (peak) $\pm 2\%$
Output (current output)	
Output terminals	BNC connector x 2
Output impedance	50 $\Omega$ (load resistance 10 k $\Omega$ or more)
Output voltage precision	80 Hz full scale
ACC (acceleration)	1 V (Peak) $\pm 2\%$
VEL (velocity)	1 V (Peak) $\pm 3\%$
DISP (displacement)	1 V (Peak) $\pm 5\%$
Max. output voltage	$\pm 10$ V (Peak) or more
Cross talk	-80 dB or less
between channels	(Both channels: sensitivity: 5.00, range: 100, acceleration, input signal: 10 kHz)
Inherent noise	When input capacitance: 1 000 pF, sensitivity: 5.00, piezoelectric accelerometer, HPF: off, LPF: off, minimum range
ACC (acceleration)	0.01 m/s <sup>2</sup> (RMS) or less
VEL (velocity)	0.1 mm/s(RMS) or less
DISP (displacement)	0.0015 mm(RMS) or less
Power requirements	DC9 V to 15 V Compatible AC adapters: NC-99A Special battery unit: BP-17
Resume function	Settings are retained in memory when the power requirement is turned off and are restored when the power requirement is turned on again
Ambient conditions for operation	-10 °C to +50 °C, 90 % RH or less (no condensation)
Dimensions and weight	150 (H) x 36 (W) x 179 (D) mm, Approx. 500 g
Accessories	Coupling plate x 1

## Optional accessories

Name	Model
Battery unit	BP-17
AC adapter	NC-99A
Accelerometers	Various
BNC-BNC cable	NC-39A
Rack mount	CF-27
Cigar plug cable	CC-82
Coupling plate	UV160070

## Method for coupling UV-16 and BP-17



### Options

#### Battery unit BP-17 €

Used by connecting to UV-16  
When using dry batteries, the BP-17 can power three UV-16 units. (for one unit up to sixteen UV-16 units can be powered by using the BP-17 and AC adapter)



- IEC R14 (size C) batteries x 8
- Operating time: (when providing power to three UV-16 units)  
17 hours (LR14 Alkaline batteries),  
5 hours (R14PU Manganese batteries)  
\*CHARGE-setting, normal operating conditions, 25 °C  
8 hours (LR14 Alkaline batteries),  
2.5 hours (R14PU Manganese batteries)  
\*CCLD-setting, normal operating conditions, 25 °C

#### AC adapter NC-99A €

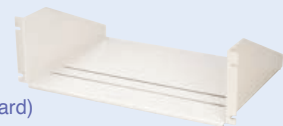
Used when operating the unit with AC electrical power

- NC-99A : AC100 V to 240 V, 12 V DC



#### Rack mount CF-27 (JIS standard)

- Dimensions : 149 (H) x 480 (W) x 320 (D) mm



RIION CO., LTD. is recognized by the JCSS which uses ISO/IEC 17025 as an accreditation standard and bases its accreditation scheme on ISO/IEC 17011. JCSS is operated by the accreditation body (IA Japan) which is a signatory to the Asia Pacific Accreditation Cooperation (APAC) as well as the International Laboratory Accreditation Cooperation (ILAC). The Quality Assurance Section of RIION CO., LTD. is an international MRA compliant JCSS operator with the accreditation number JCSS 0197.



ISO 14001 RIION CO., LTD.  
ISO 9001 RIION CO., LTD.

\* Specifications subject to change without notice.

Distributed by:

**RIION CO., LTD.**  
<https://riion-sv.com/>

3-20-41, Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan  
Tel: +81-42-359-7888 Fax: +81-42-359-7442