

## Specifications

Wire size	AWG26~AWG10
Wire speed at camera shutter	2.5m/sec
Shutter speed	Max. 1/60000 second (0.0017ms)
Number of cameras	Up to 2 cameras
Camera CCD resolution	0.3 Mega pixels (color)
Judgment speed	40~100mmsec(shutter trigger to result output) Depending on PC performance, judgment speed is variable.
Items number for registration	Unlimited. It depends on the PC hard disc capacity. One item uses 100M bytes memory (approx.)

## Required PC specifications

	Recommended	Minimum
OS	Windows®7 32bit Windows®XP	
CPU	Intel® Core™i7 or higher	Intel® Core™i5 or higher
Memory	4GB or higher	2GB or higher
HDD	1TB or more	250GB or more
Input device	Mouse, Keyboard	
Resolution	1920 * 1080	1024 * 768
Slot	PCI Express 16 expansion slot & PCI expansion slot	

## I/O box specifications

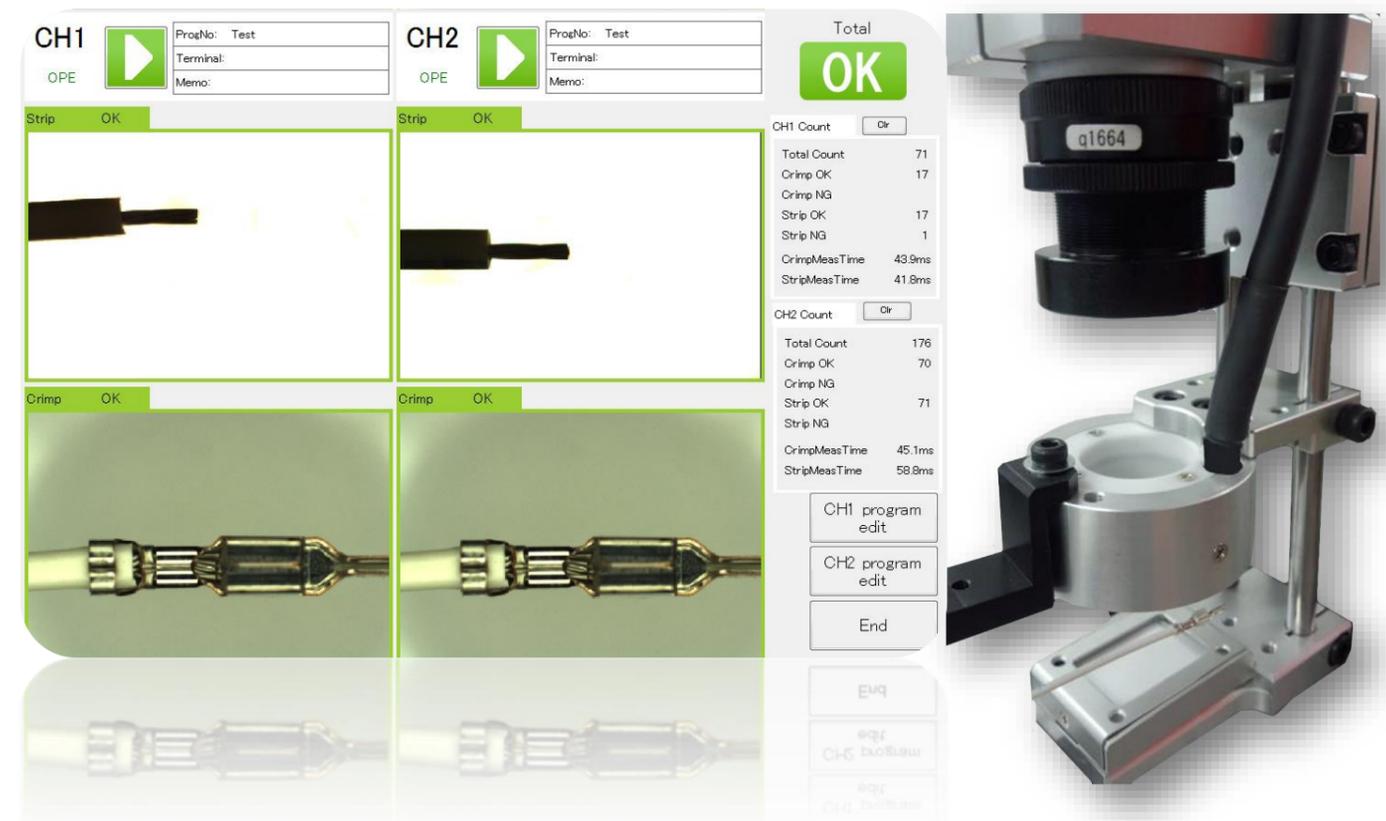
Dimensions (W·H·D)	320 x 67 x 272 mm
Weight	About 2.0kg
Power	AC100~240V, less than 2A
LED Output current	300mA~12A variable Upper and lower lights of CH1 & CH2 are individually controllable.
LED Output time	No longer than 2ms
LED lighting interval	Must be longer than 100ms
LED output limitation	Both upper and lower lights cannot be lightened simultaneously. Synchronized timing of CH1 and CH2 light emission

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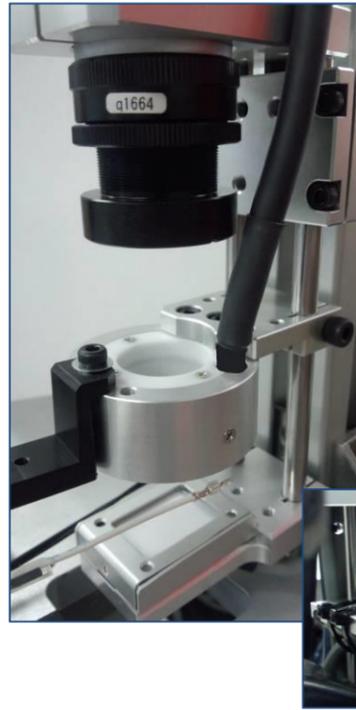
Post code: 350-1133, Suna9096-5, Kawagoe, Saitama, Japan  
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## CRIMP VISION MONITOR

# CVM-3

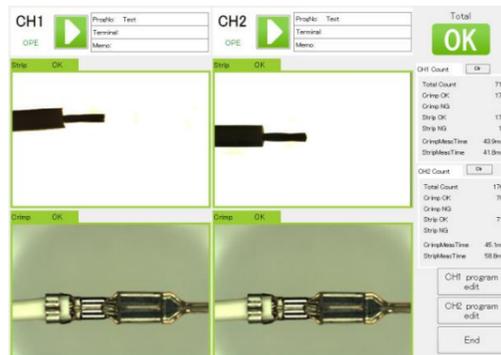


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## GENERAL

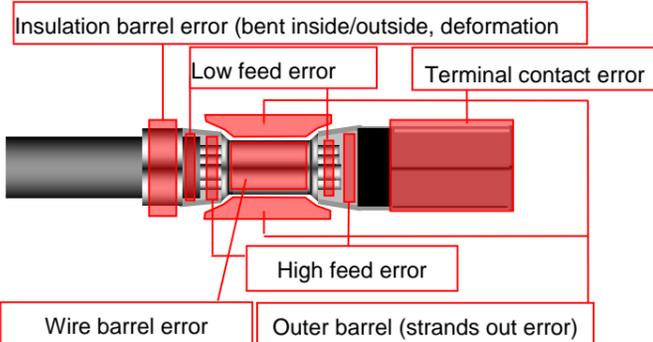
A compact LED strobe camera set in the automatic crimping machines checks both stripped wires (forward path) and crimped terminals (return path) of all production in real time, without stopping feeding. Compared with CFM, the camera system shows highly powerful inspection ability. Put frames on check points and inspection tools will function automatically in the background. Suitable tolerances are learned automatically, too.



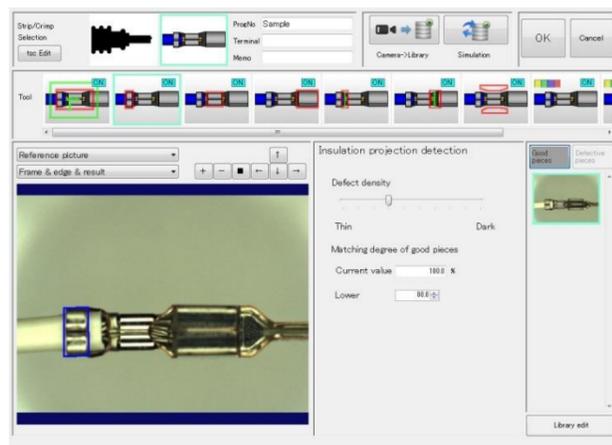
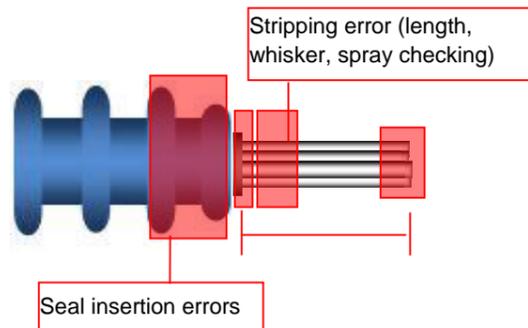
Operation screen image

## VISUAL CHECKING

### Crimped terminal



### Stripped wire (optional: backlight use)



Teaching screen image

## High-speed shuttering & accurate image position alignment

LED strobe shuttering by 1/60,000 sec allows clear image capturing of stripped wire and crimped terminal, being fed at very high speed, dynamically without stopping. Images are stable. Target' inclination and shift can be aligned with the master picture in a millisecond. Inspection result is output within 100msec.

## Easy & Smart parameters for operator

Programing of inspection tools is improved. It is now very user friendly. You do not have to learn difficult terms of vision system, which is normally required. Once measurement tools are place on the master picture, you can operate it smoothly. The user friendliness is another key-role of CVM-3.

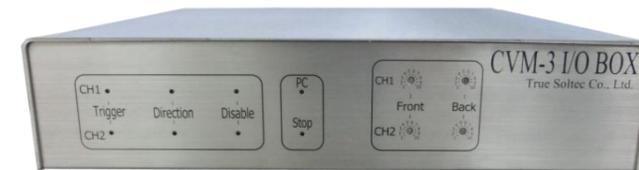
## Unique LED strobe light



A special and unique strobe light developed for crimped image capturing realizes reduced glaring at metal surface and homogenous lighting condition for all areas.

## Smart Control & I/O box

This box is designed for interlocking with the crimp machine, precise controlling of shutter timing and delicate lighting control. One unit can control two cameras and four lights.



I/O box image

## Camera units on new and existing

40mm wide space is required for installing the camera unit (camera + lens + LED light). It is almost free from outer light noises. There is no need to stop the machine for shuttering, therefore retrofitting on existing machines are possible.



## Simulation function equipped

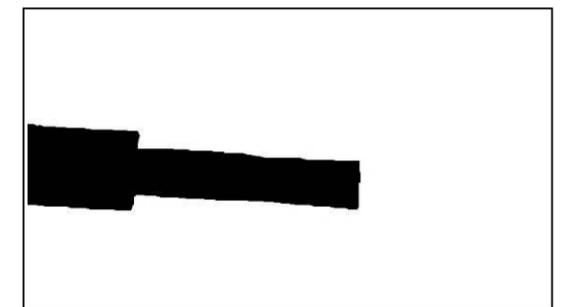
Good pieces and bad pieces are stored in the libraries individually. CVM-3 can run these pieces before operation to try set conditions and tolerances. Also, there is no need to stop the machine for shuttering, therefore retrofitting on existing machines are possible.

## Good pieces smart learning function

It learns up to 300 pictures and makes a master picture for dimensional reference. Learned good pieces make a teach-in picture. It absorbs variation of good pieces in smart way. It is adequate for checking the insulation barrel, wire barrel and terminal fitting section check.

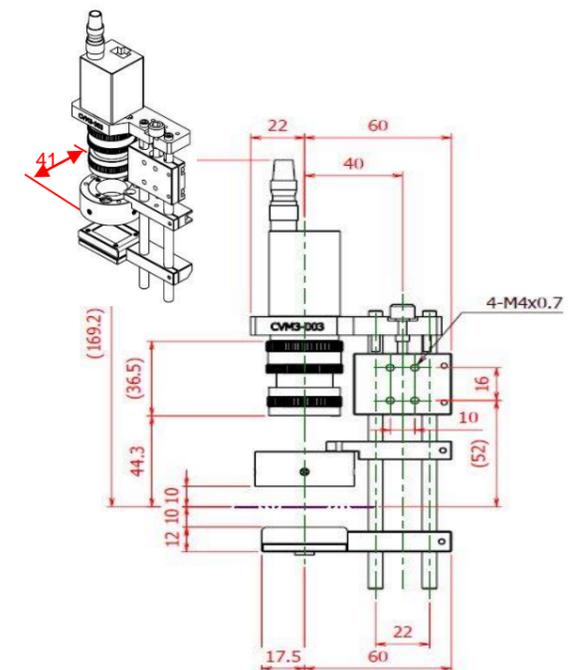
## Stripping mistake check (optional)

Automatic machines feeding wire in reciprocating motion allows strip check at forward and crimp check at return. The strip check monitors stripped strands length, strands quality, seal position and orientation. To do strip check effectively, wire feeding pass line will be adjusted.



Back light image of stripped wire

## Dimensions of Camera unit



Option : Back light LED