MUSASHI ENGINEERING,INC.

Fully digital controlled dispenser

SuperΣCMIV

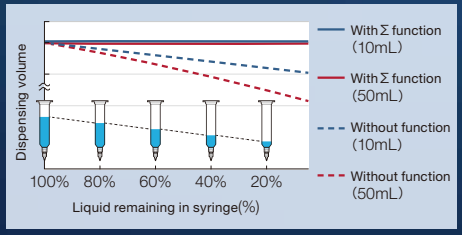
The pinnacle of Air Pulse dispenser, NEW soaring to further height.

Σ 3 major functions equipped !

1. Automatic correction of volume reduction

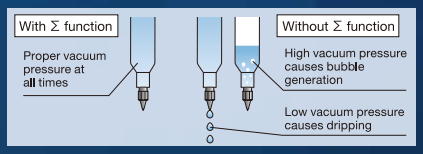
Compensates for the decrease in dispensing volume due to the effect of the difference in hydraulic head. Stable, high-precision dispensing is achieved through a single syringe.

UP Improved detection accuracy of the hydraulic head difference, enabling more precise corrections.



2. Automatic vacuum correction

Constantly adjusting to the optimal vacuum pressure to prevent dripping and enhance dispensing accuracy stability.

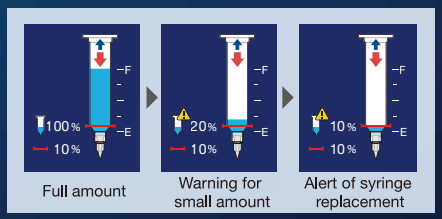


UP Improved stability and responsiveness of the vacuum pressure, reducing the effect of interval time.

3. Automatic low liquid remaining alarm

High-precision detection and monitoring of liquid remaining in the syringe.

UP Improved detection accuracy just before material depletion. Enabling two-stage remaining amount warnings.



User-friendly

NEW Equipped with a 4.3 inch touch panel

Intuitive understanding of more information through an excellent user interface. Easy configuration through touchscreen.

Compact and energy-saving

NEW ECO mode

ECO

Reducing air consumption during operation.
Over 90% reduction in air consumption during standby (when vacuum is off).

NEW Sleep mode

Reducing power and air consumption during temporary machine suspension.
Up to 25% reduction in standby power consumption
(screen darkens, SHOT not available).

Compact design 30% reduction in the volume of the casing (compared to our previous models).

NEW

Contribution to smart factory integration

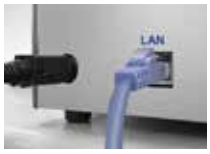
Quality and production status visualization and troubleshooting analysis through remote operation.

Production control

Equipped with log, self-diagnosis, emergency stop

Network connection compatible

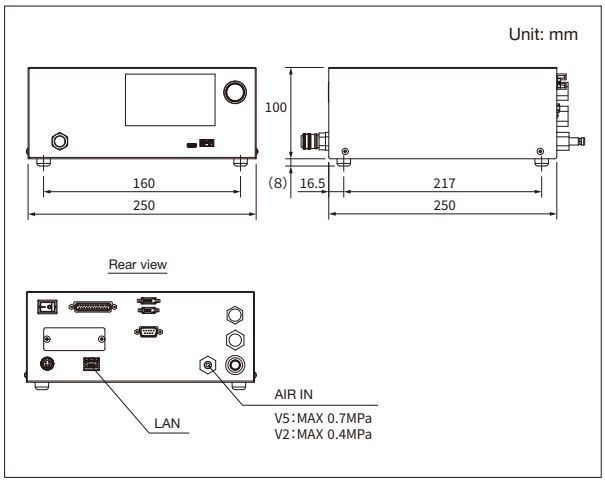
Equipped with LAN port
(Ethernet compatible)



PC communication

Equipped with USB ports
(Type-C and Type-A compatible)

External dimensions



High-precision Peltier type temperature control system

PELTIER mini
TCU-05MINI

Dispenser operation screen

Centralized management through cooperation with temperature controller

Centralized management of operations and control through cooperation with SuperΣCMIV.

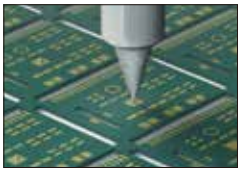
Specifications

Product name		Fully digital controlled dispenser			
Model		S-SIGMA-CM4-CTR			
		-V5-N	-V5-P	-V2-N	-V2-P
Dispensing system		Air-pulse system			
Control system		Micro-computer controlled electro/pneumatic type			
Pneumatic control circuit		Air-pulse stabilization circuit PAT.			
Display		4.3-inch color touchscreen (Japanese/English/Chinese)			
Dispensing modes		Timed mode, manual mode			
Dispensing pressure regulating range		30.0 to 500.0 kPa		5.0 to 200.0 kPa	
Dispensing time setting range		0.001 to 9999.999 s			
Vacuum pressure setting range		0.00 to -5.00 kPa			
Major functions		Automatic correction of volume reduction, Automatic prevention of dripping, Automatic remaining volume warning, Alpha correction, Delta correction, Remaining volume display correction, Vacuum pressure correction, Dispensing counter, Stopwatch, Interval dispensing, Dispensing condition correction, Auto-increment, Auto-slope, Express shot, Date and time∗1, Operation history, Dispensing pressure monitoring, Self-diagnosis, ECO mode, Sleep mode, I/O function allocation, Password lock, Unit switching (kPa/bar), Solenoid valve alarm, Solenoid valve error, Supply air pressure error, Exhaust error, Vacuum pressure error, Channel copy, Parameter backup			
Channel number		400 CH			
Expandability	USB host	Type-A ×1 port (for mass storage device connection)			
	USB device	Type-C ×1 port (for PC connection)			
	LAN	RJ45 ×1 port (10BASE-T/100BASE-TX)			
	RS-232C	D-Sub9-pin (plug) ×1 port			
	Equipment integration	e-CON (4-pin socket) ×1 port (temperature controller)			
External input/output signal D-Sub	Connector	D-Sub25-pin (socket)			
	Rated	24V, 10mA or less			
	Input (Photo coupler)	24V common	GND common	24V common	GND common
		Dispensing, Channel switching, Dispensing mode switching, Channel selection, Active dispensing (Channel preset, Channel step, Sleep, Counter clear, Other allocation possible)			
	Output (Open Collector)	GND common	24V common	GND common	24V common
		Power-on, Ready, Dispensing, Dispensing cycle, Remaining amount warning, Solenoid valve alarm, Errors (Dispensing completed, Alarm, Pressure switch, Auto-increment completed, Other allocation possible)			
Supply pressure range		200 to 700 kPa		200 to 400 kPa	
Supply power ∗2	Connector	ACAT-4 dedicated connector, e-CON (3-pin socket)			
	Rated voltage	DC 24V ±10%			
	Power consumption	26 W			
Usage environment (indoor use only)	Temp	Operating: 15 to 35°C, Non-operating: 1 to 60°C			
	Humidity	Operating: 30 to 75%, Non-operating: 30 to 80% (no condensation in either state)			
	Altitude	2,000 m or below			
External dimensions (excluding protrusions)		W250×D250×H108 mm			
Weight		4.0 kg			
Compatible standards		EU RoHS2, CE marking (EMC directive)			
Other options		AC Adapter (ACAT-4), Hand Switch (LS-2T-DSUB25-1.5M, LS-3T-DSUB25-1.5M), Foot Switch (FS/W-2-DSUB25-2.0M), various connection cables, etc.			

∗1 Date/time data is saved by built-in lithium coin battery (primary battery)

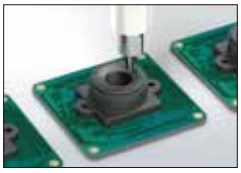
∗2 The AC adapter is not included in the product. Power should be supplied by one of the following methods.
・Using our ACAT-4 (input rating AC100-240V 50/60Hz).
・Using SELV power supply compliant with the LVD conformity standard of CE marking. (Applicable plug: e-CON 3-pin)

Application



Ag paste dispensing for die bonding

Solder paste dispensing to lead frame



UV dispensing for fixing the automotive camera lens.

Safety precautions
Please read the instruction manual carefully before use to ensure correct and safe usage.

MUSASHI ENGINEERING, INC. (headquarters) is certified and registered according to the ISO 9001 Quality Management System and the ISO 14001 Environmental Management System.

JQA-QMA16398
JQA-EM7704

World Leading Dispenser
MUSASHI ENGINEERING, INC.

MUSASHI ENGINEERING EUROPE GMBH
Marcel-Breuer-Str. 15, 80807 Munich, Germany
TEL: +49 (89) 321 996 06 / FAX: +49 (89) 321 996 07
info@musashi-engineering.com

http://www.musashi-engineering.com

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