VS-Q Series HMI





VS-Q Series HMI

Powerful CPU

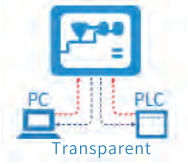
- Stable, efficient, safe, and reliable run in Linux.
- Industrial-grade high-performance processor.
- Cortex A7 CPU, with the main frequency up to 1.2GHz.

Diversified communication

- Multi-serial communication (RS232/422/485).
- Ethernet communication.
- Allowing one screen or multi-screen for one machine, or multi-screen for multi-machine.
- Optional IoT module, supporting remote monitoring, and remote program uploading and downloading.

Convenient configuration

- Multi-set recipes, multi-window function.
- Data acquisition, data alarm function.
- Macros are supported.
- Support for custom vector graphics.



Featured function

- PC can communicate directly with the PLC via the HMI.
- Online simulation function, PC can be directly connected to the PLC simulation configuration project.
- USB, Ethernet, U disk three ways to update the configuration of the project.

IoT operation and maintenance

- Supporting 4G/ WiFi networking method.
- Supporting remote upload and download, firmware update HMI/PLC.
- Supporting cloud platform data monitoring, historical data storage, and alarm push.
- Supporting cloud configuration, GIS mapping, and monitoring via the mobile app.

Safe and reliable

- Industrial-grade design, stable operation.
- High-capacity FLASH supports permanent storage of large capacity data without loss of power.
- Support USB flash drive data storage.
- New password mechanism, more secure and reliable to use.

Technical specifications






Material code		11026-00025	11026-00031	11026-00032	11026-00022	11026-00023	11026-00029	11026-00024	11026-00028	11026-00026
Model		VS-043QE	VS-043QS	VS-070QC	VS-070QE	VS-070QS	VS-070QS-G	VS-102QS	VS-102QS-G	VS-156QS
Display										
Display size		4.3"	4.3"	7"	7"	7"	7"	10.2"	10.2"	15.6"
Resolution		480×272	480×272	800×480	800×480	800×480	1024x600	1024x600	1024x600	1920x1080
Screen material		ITO								
Color depth		24bits								
Brightness(cd/ ㎡)		400		450						300
Backlight type		LED								
Backlight life (hr)		20000								15000
Touch panel type		4-wire high accuracy touch panel								
CPU and memory										
CPU		Cortex-A7 1GHz (dual core)								Cortex-A7 1.2GHz
memory		128MB DDR3								256MB DDR3
Flash		128MB FLASH								4G(EMMC)
Communication interface										
USB		USB Host×1,USB Client×1								USB Host×1
Serial interface	COM1	RS232	RS485	-	RS232	RS232	RS232	RS232	RS232	RS232
	COM2	RS485/422	-	-	RS485/422	RS485/422	RS485/422	RS485/422	RS485/422	RS485/422
	COM3	-	-	RS485	RS485	RS485	RS485	RS485	RS485	RS485
Ethernet		-	Support	-	-	Support	Support	Support	Support	Support
SD card slot		-								
4G/WiFi		-					Support	-	Support	Support
Power supply										
Rated voltage		12-24VDC(±15%)								
Rated power		3W	3W	4W	4W	4W	4W	7W	7W	10W
Environment										
Work temperature		-20 ~ 55° C								
Work humidity		5-95%RH(No condensation)								
Protection level		IP65 (Front panel)								
Certification										
CE		EN55032,EN55035								
FCC compatibility		FCC,Class A								
Dimensions and weight										
Physical dimension WHD (mm)		139×86×31	139×86×31	203×145×35	203×145×35	203×145×35	203×145×35	273×211×40	273×211×40	395×257×31
Hole dimension AB (mm)		132×80	132×80	192×138	192×138	192×138	192×138	259×201	259×201	383×246
Weight (g)		216	218	515	520	523	525	967	969	2492
configuration										
Configuration software		HMITOOL								

Note: - indicates not supported * In the serial interface, DB9 is a male socket.
Supported countries/regions for 4G module: Chinese Mainland, India, Vietnam, Thailand, Malaysia, Indonesia, Philippines, Bangladesh.

Module specifications



4G module



WIFI module

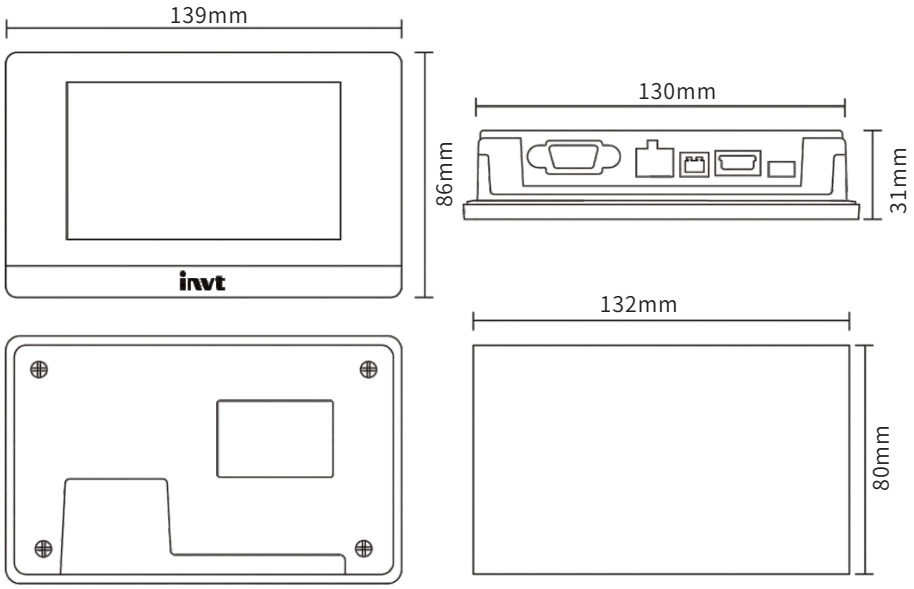


HMI combination method

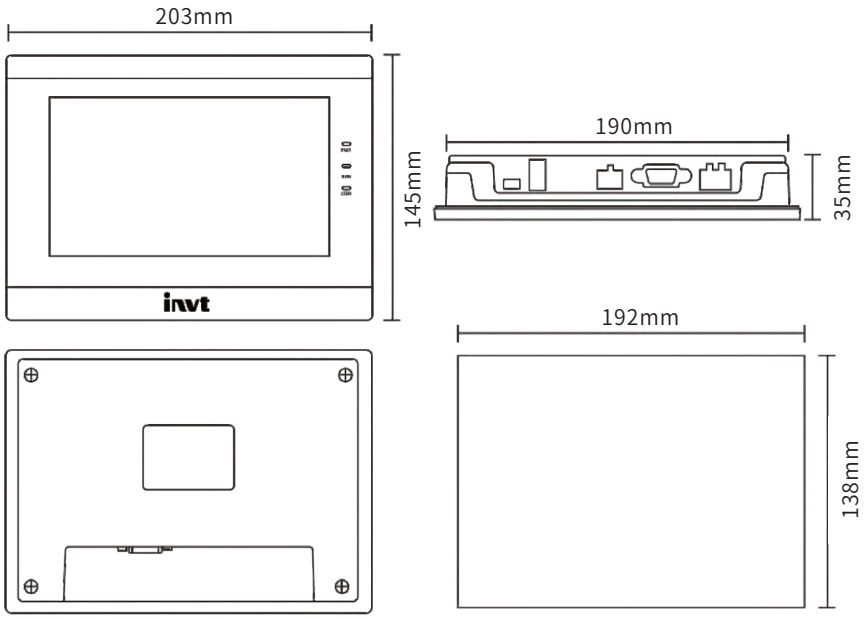
Order Code		11095-00024	11095-00023
Product Model		VS-Q-4G	VS-Q-WIFI
Hardware Parameters	Dimensions (mm)	40.5 × 56.0 × 27.5	40.5 × 56.0 × 27.5
	Weight (g)	29	26
	Operating Ambient Temperature	-20° C to 55° C (No freezing)	-20° C to 55° C (No freezing)
	Operating Ambient Humidity	5–95% RH (Non-condensing)	5–95% RH (Non-condensing)
	Vibration Resistance	10–25 Hz (XYZ directions, 2G/30 min)	10–25 Hz (XYZ directions, 2G/30 min)
	Enclosure Material	Engineering plastic ABS+PC	Engineering plastic ABS+PC
	Network Connection Method	4G (China Mobile, China Unicom, China Telecom)	Wi-Fi
	Network Bands	LTE-TDD: B34/B38/B39/B40/B41	IEEE 802.11b
		LTE-FDD: B1/B3/B5/B8	IEEE 802.11g
		Optional GSM: GSM900/DCS1800	IEEE 802.11n
	Auto Reconnect After Disconnection	Supported	Supported
	Offline Data Transfer	Supported	Supported
	API Interface	Supported	Supported
Software Parameters	VNC Function	Supported	Supported
	Data Monitoring	Supports up to 280 data points	Supports up to 280 data points
	Historical Data	Supports up to 20,000 records	Supports up to 20,000 records
	Alarm Push Notifications	Supports client push notifications and WeChat Official Account push notifications	Supports client push notifications and WeChat Official Account push notifications

Dimension

VS-043QE / VS-043QS

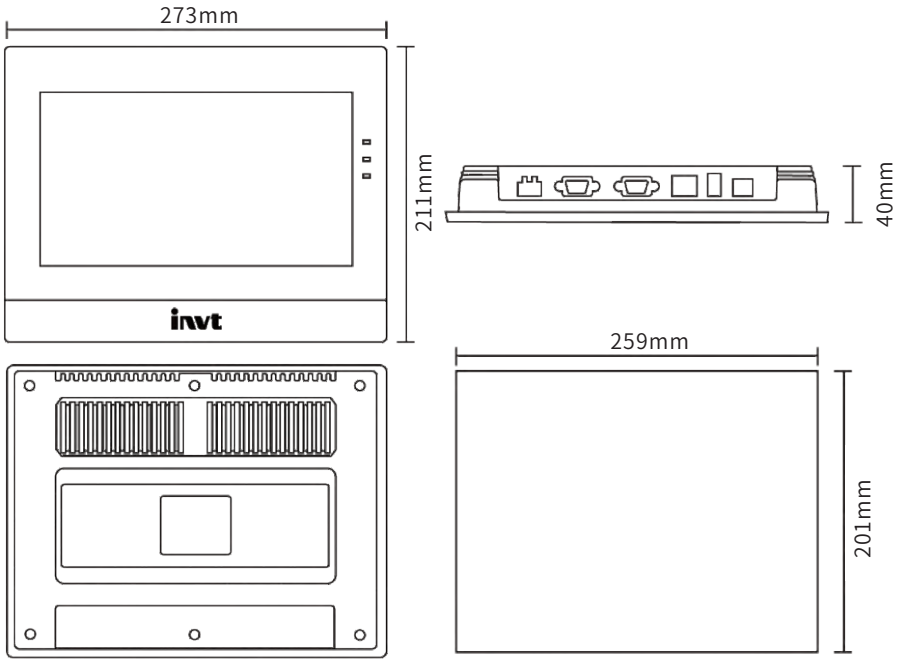


VS-070QC/VS-070QE/VS-070QS/VS-070QS-G

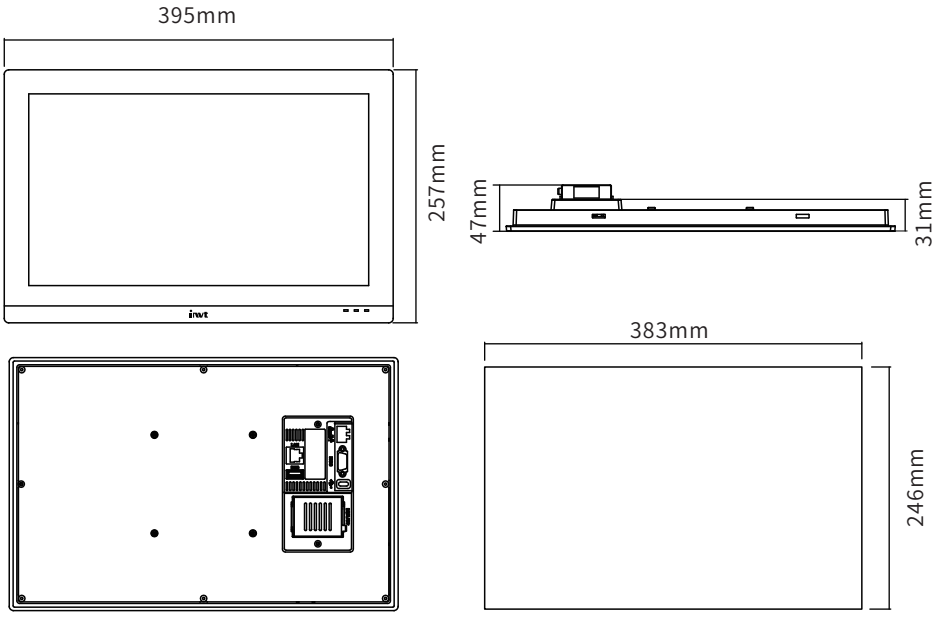


Dimension

VS-102QS/VS-102QS-G



VS-156QS



VS-Q Series handheld teaching pendant



Ergonomic grip structure

- Ergonomically designed structure, easy to grip with one hand or both hands

Easy to Use

- Features magnetic attraction function on the back, can be adsorbed on machine equipment or control cabinets

Safe & Reliable

- Industrial-grade protection rating, high reliability, sturdy and durable

High Performance

- Based on Linux system, stable, efficient, safe and reliable
- Equipped with industrial-grade high-performance Cortex-A7 processor, maximum frequency up to 1 GHz
- High capacity: 128MB FLASH + 128MB DDR3, supports external U disk storage

Flexible Configuration

- Compatible with HMITOOL configuration software, powerful and easy to use

Complete Functions

- Equipped with 24 function keys, customizable functions
- Equipped with U disk port, Type-C port, serial port and Ethernet port to meet various application scenarios

Handheld Teach Pendant Interface & Function Key Definition



Key Mapping Address Table

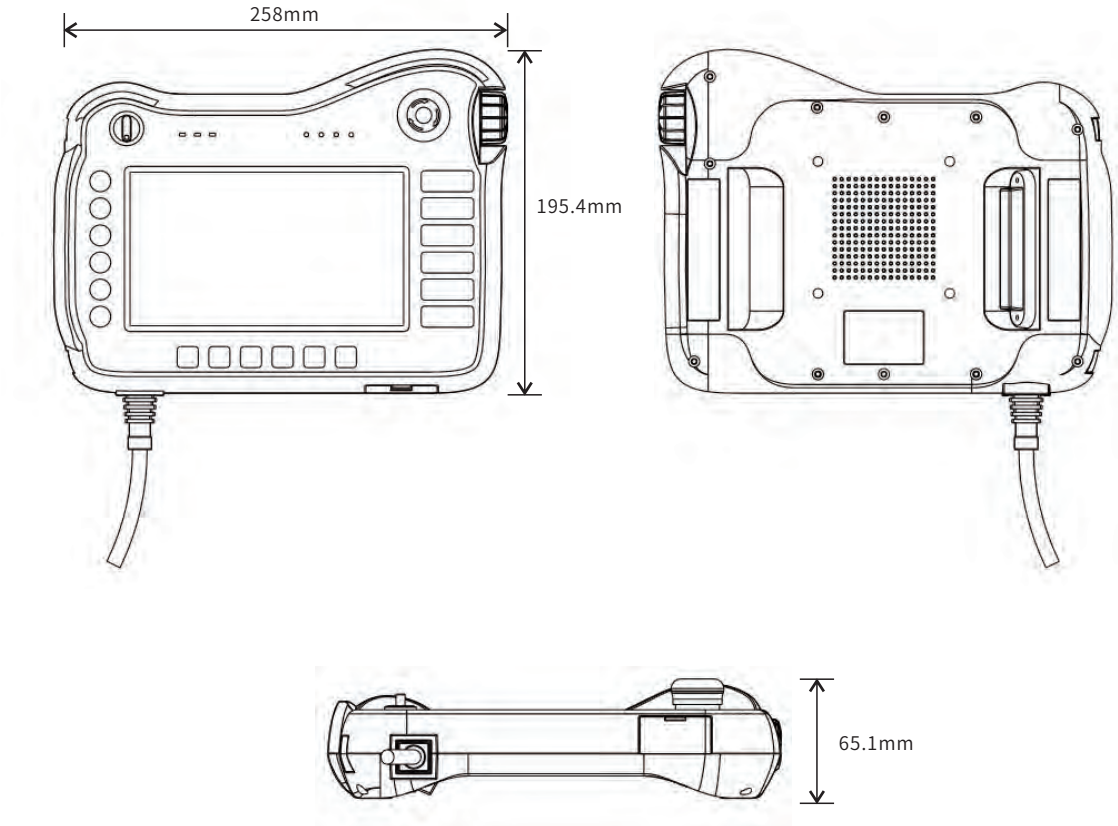
Key Position	Mapping Address	Value
Left +	LB48024	LB: 1 when pressed, 0 when released
Left -	LB48023	LB: 1 when pressed, 0 when released
Left Icon ▶	LB48022	LB: 1 when pressed, 0 when released
Left Icon ‖	LB48021	LB: 1 when pressed, 0 when released
Left Icon ■	LB48020	LB: 1 when pressed, 0 when released
Left Cycle Icon	LB48019	LB: 1 when pressed, 0 when released
Down Joint Icon	LB48018	LB: 1 when pressed, 0 when released
Down Tool Icon	LB48017	LB: 1 when pressed, 0 when released
Down Work Icon	LB48016	LB: 1 when pressed, 0 when released
Down World Icon	LB48015	LB: 1 when pressed, 0 when released
Down Speed Ratio Icon	LB48014	LB: 1 when pressed, 0 when released
Down Handwheel Icon	LB48013	LB: 1 when pressed, 0 when released
Right W-	LB48012	LB: 1 when pressed, 0 when released
Right W+	LB48011	LB: 1 when pressed, 0 when released
Right V -	LB48010	LB: 1 when pressed, 0 when released
Right V +	LB48009	LB: 1 when pressed, 0 when released
Right U -	LB48008	LB: 1 when pressed, 0 when released
Right U +	LB48007	LB: 1 when pressed, 0 when released
Right Z-	LB48006	LB: 1 when pressed, 0 when released
Right Z+	LB48005	LB: 1 when pressed, 0 when released
Right Y-	LB48004	LB: 1 when pressed, 0 when released
Right Y+	LB48003	LB: 1 when pressed, 0 when released
Right X-	LB48002	LB: 1 when pressed, 0 when released
Right X+	LB48001	LB: 1 when pressed, 0 when released
Key Switch	LW48002	LW: 1=Teach, 2=Auto, 3=Manual
Emergency Stop Switch	LB48025	LB: 1 when pressed, 0 when released
Encoder	LW48000	LW: A 32-bit positive integer value

Technical specifications

Material code	11026-00039
Model	VS-070QS-H
Display	
Display Size	7"
Resolution	1024×600
Brightness	450cd/ ㎡
Backlight Type	LED
Display Color	16.7M Colors
Touch Panel	4-wire high accuracy touch panel
Processor & Memory	
CPU	Cortex-A7 1GHz, Dual-Core
RAM	128MB DDR3
Storage	128MB FLASH
Interfaces	
USB	USB Host×1,USB Client×1
Serial Port	COM1: RS485
Ethernet	Supported
SD Card Slot	-
Power Supply	
Rated Voltage	12-24V DC (±15%)
Rated Power	5W
Environment	
Operating Temperature	-20~55°C
Operating Humidity	5~95%RH (Non-Condensing)
Protection Rating	IP65 (Front Panel)
Certifications	
CE	EN55032, EN 55035
FCC Compliance	FCC, Class A
RoHS	Compliant
Dimensions & Weight	
Physical dimension WHD (mm)	258×195×65
Cutout Dimensions (mm)	N/A (Handheld)
Weight (g)	817
Configuration	
Configuration Software	HMITOOL

Dimension

VS-070QS-H



VS-Q Series Intergrated Machine



Compact Integration

- Integrates HMI and PLC functions
- Significantly saves installation space in electrical control cabinets
- Reduces wiring costs

Flexible Configuration

- Supports external expansion modules
- Built-in analog input and analog output
- Plug-in terminals for flexible replacement

Stable & Reliable

- Industrial-grade design for stable operation
- High-capacity FLASH for large data storage with power-off retention
- Supports password protection for safer and more reliable use

Diversified Communication

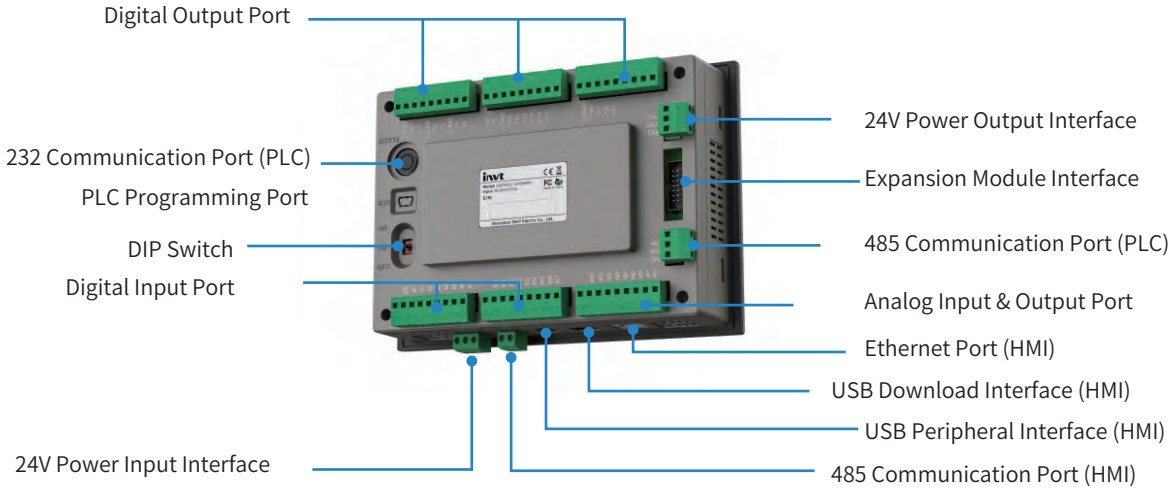
- Multi-serial port communication (RS232/RS485)
- Ethernet communication
- Supports U-disk import/export of projects and data

Powerful Functions

- Supports PID auto-tuning
- Supports motion control
- Supports high-speed counter input

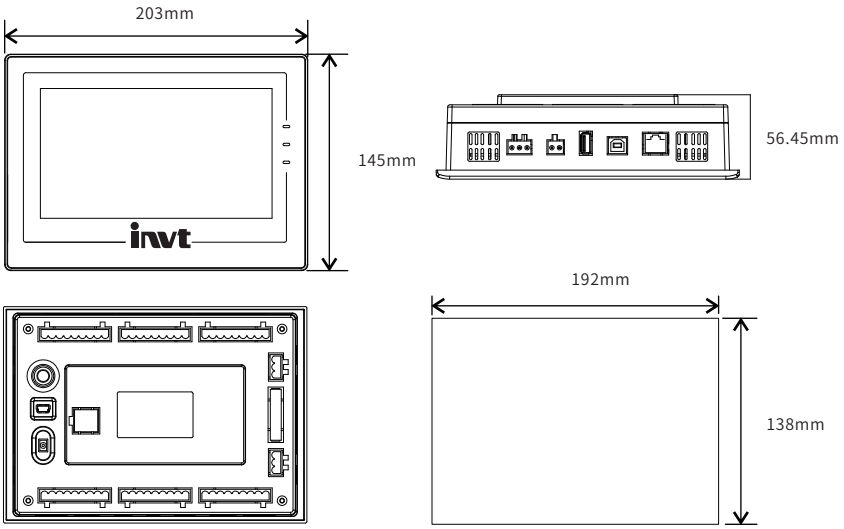
High Cost-Effectiveness

- Onboard I/O to meet most industrial control scenarios, significantly saving costs for customers

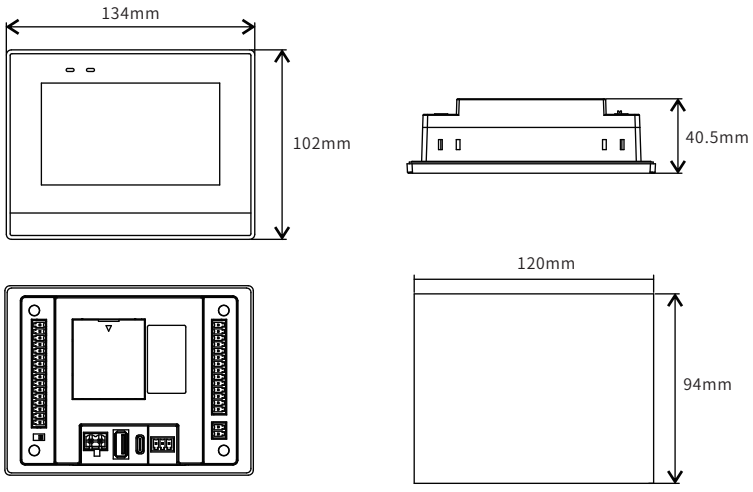


Dimension

VS070QS-1618MDM1



VS043QE-0808MDR1



Technical specifications

Material code		11060-00334	11060-00320
Model		VS043QE-0808MDR1	VS070QS-1618MDM1
Power Supply			
Rated Voltage		24VDC(±15%)	24VDC(±15%)
Rated Power		7W	10W
Inputs			
Digital Input		8	16
Analog Input		2	2
Outputs			
Digital Output		8	18 (4 transistor points, 14 relay points)
Pulse Axis Count		–	Supports up to 4 axes
Analog Output		1	1
Display			
Display size		4.3"	7"
Resolution		480×272	800×480
Screen material		TFT	TFT
Color depth		24bits	24bits
Brightness(cd/ ㎡)		400	450
Backlight type		LED	LED
Backlight life (hr)		20000	20000
Touch panel type		4-wire high accuracy touch panel	4-wire high accuracy touch panel
CPU and memory			
CPU		Cortex-A7 1GHz	Cortex-A7 1GHz
memory		128M DDR3	128M DDR3
Flash		128M FLASH	128M FLASH
Communication interface			
USB		USB Host*1 / USB Client*1	USB Host*1 / USB Client*1
Serial interface	COM1	RS485（HMI）	RS485（HMI）
	COM2	-	RS232（PLC）
	COM3	RS485（PLC）	RS485（PLC）
Ethernet		-	Support（HMI）
SD card slot		-	-
Environment			
Work temperature		0 ～ 55° C	-20 ～ 55° C
Work humidity		5 ～ 95%RH(No condensation)	5 ～ 95%RH(No condensation)
Protection level		IP65(Front panel)	IP65(Front panel)
Certification			
CE		EN 61131-2	EN 61131-2
FCC compatibility		FCC,Class A	FCC,Class A
Dimensions and weight			
Physical dimension WHD (mm)		134×102×40.5	203×145×56
Hole dimension AB (mm)		120×94	192×138
Weight (g)		332	800
Configuration			
Configuration software		HMI TOOL + Auto Station	HMI TOOL + Auto Station

Note: - indicates not supported * In the serial interface, DB9 is a male socket

VS-Q Series HMI Optional Accessories

Order Code	Product Model	Description	Picture
67001-04673	VS-SL1	VS-Q Series HMI Communication Cable (2PIN Terminal), with 24V Power Cable, 2.5m	
67001-04677	VS-SL2	VS-Q Series HMI Communication Cable (DB9), with 24V Power Cable & Emergency Stop Cable, 3m	
67001-04678	VS-SL3	Handheld Teach Pendant Communication & Power Integrated Cable, 5m, Exclusive for VS-070QS-H	
11023-00268	VS-2AI1AO	HMI-PLC Intergrated Machine Expansion Module, 2-Channel Analog Input, 1-Channel Analog Output, Exclusive for VS043QE-0808MDR1	

VS-Q Series HMI Product List

Order Code	Model	Description	Cutout Dimensions
11026-00025	VS-043QE	4.3", 480×272, 24bits, 2 serial ports; RoHS	132×80mm
11026-00031	VS-043QS	4.3", 480×272, 24bits, 1 serial port, 1 Ethernet port; RoHS	132×80mm
11026-00032	VS-070QC	7", 800×480, 24bits, 1 serial port; RoHS	192×138mm
11026-00022	VS-070QE	7", 800×480, 24bits, 3 serial ports; RoHS	192×138mm
11026-00023	VS-070QS	7", 800×480, 24bits, 3 serial ports, 1 Ethernet port; RoHS	192×138mm
11026-00029	VS-070QS-G	7", 800×480, 24bits, 3 serial ports, 1 Ethernet port, supports IoT expansion; RoHS	192×138mm
11026-00024	VS-102QS	10.2", 1024×600, 24bits, 3 serial ports, 1 Ethernet port; RoHS	259×201mm
11026-00028	VS-102QS-G	10.2", 1024×600, 24bits, 3 serial ports, 1 Ethernet port, supports IoT expansion; RoHS	259×201mm
11026-00026	VS-156QS	15.6",1920x1080, 24bits, 3 serial ports, 1 Ethernet port, supports IoT expansion;RoHS	383×246mm
11095-00024	VS-Q-4G	4G module, supports China Mobile, China Unicom, China Telecom, must be used with IoT screen	-
11095-00023	VS-Q-WIFI	WIFI module, network frequency band supports IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, must be used with IoT screen	-
11026-00039	VS-070QS-H	Handheld Teach Pendant, 7", 800×480, 24bits, 1 network port, 1 serial port; RoHS	-
11060-00334	VS043QE-0808MDR1	HMI-PLC All-in-One, 4.3", built-in 8DI, 8 relay output, 2AI, 1AO	120×94mm
11060-00320	VS070QS-1618MDR1	HMI-PLC All-in-One, 7", built-in 16DI, 18DO, 2AI, 1AO	192×138mm
67001-04673	VS-SL1	VS-Q Series HMI Communication Cable (2PIN Terminal), with 24V Power Cable, 2.5m	-
67001-04677	VS-SL2	VS-Q Series HMI Communication Cable (DB9), with 24V Power Cable & Emergency Stop Cable, 3m	-
67001-04678	VS-SL3	Handheld Teach Pendant Communication & Power Integrated Cable, 5m, exclusive for VS-070QS-H	-
11023-00268	VS-2AI1AO	HMI-PLC Intergrated Machine Expansion Module, 2-channel analog input, 1-channel analog output, exclusive for VS043QE-0808MDR1	-

Leading Smart Industry, Shaping Net-Zero Future

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Industrial Automation:
- HMI
- PLC
- VFD
- Servo System
- Elevator Intelligent Control System

Electric Power:
- UPS
- DCIM
- Solar Inverter
- New Energy Vehicle Powertrain System
- New Energy Vehicle Charging System
- New Energy Vehicle Motor

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66003-00285 202605(V3.0)