VIGOR
PROGRAMMABLE CONTROLLER

PRACTICAL, RELIABLE, ULTRA VALUABLE

NEW!
VH-20AR
Main Unit Built-in Analog I/O

VH Series
Programmable controllers

VIGOR ELECTRIC

System Structure

RS-232 Communication Expansion Card
VB-232

RS-422/RS-485 Communication Expansion Card
VB-485

RS-485 Communication Expansion Module
VB-485A

Dual Ports Communication Expansion Module
VB-CADP

Programming Tools

MS Windows® based Programming Tool
Ladder Master

PDA (Palm® OS) based Programming Tool
NeoTouch

VH-10MR	6 Inputs 4 Relay Outputs
VH-14MR	8 Inputs 6 Relay Outputs

VH-20MR	12 Inputs 8 Relay Output
VH-24MR	14 Inputs 10 Relay Output
VH-28MR	16 Inputs 12 Relay Output
VH-32MR	16 Inputs 16 Relay Output
VH-40MR	24 Inputs 16 Relay Output
VH-60MR	36 Inputs 24 Relay Output
VH-20AR	8 Inputs 6 Relay Outputs 4 Analog Inputs 2 Analog Outputs

Memory Card Slot *
Available For:
VB-RTC or ***VB-MP1R***

I/O Extension Slot *
Available for:
VH-32ER
VH-28XYR
VH-16XYR
VH-8XYR
VH-8X
VH-8YR

VB-RTC *
Real Time Clock Card

- With this card, ***VH*** series PLC is able to indicate all the time details (year, month, day, hour, minute, second, week, etc.).
- The battery life is around 5 years at 25℃ (77℉). (If the battery is low, the spacial relay M9005 will automatically be switched "ON".)

VB-MP1R *
Program Memory Card

- With the Flash ROM, it can rewrite over 10,000 times.
- Providing program upload/download function, easy for program copy and machine maintenance.
- Including the function of ***VB-RTC***. The battery life is around 5 years at 25℃ (77℉). (If the battery is low, the spacial relay M9005 will automatically be switched "ON".)

Extension Unit *

VH-32ER	16 Inputs 16 Relay Outputs

Extension Module *

VH-28XYR	20 Inputs 8 Relay Outputs

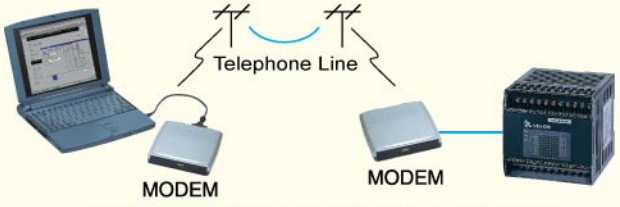
Extension Module *

VH-16XYR	8 Inputs 8 Relay Outputs
VH-16X	16 Inputs
VH-8XYR	4 Inputs 4 Relay Outputs
VH-8X	8 Inputs
VH-8YR	8 Relay Outputs

- The Communication Expansion Slot can be used to install a RS-232 or RS-422/485 communication expansion card (***VB-232*** / ***VB-485***) or module (***VB-485A*** / ***VB-CADP***).
- The Analog Rotary Potentiometers (VR1 and VR2) provide number values (0~255) which can be used for data inputs (i.e. changing timer settings).
- The I/O Indicator Switch is attached for the purpose of indicating the I/O status of the first or the last 64 points shown on the display. *
- The Main Unit has a built-in RUN/STOP Switch which allows convenient control of running or stopping the PLC.
- The Programming Tool Communication Port is a RS-232 interface (USB A-type outlet) which can be used to connect a PLC with a programming tool (computer or PDA), HMI (Human-Machine Interface) or SCADA (Supervisor Control And Data Acquisition). Also through this port, the remote program modification and data monitoring can be performed via a MODEM.
- The PLC's CP1 can be communicated via either the Programming Tool Communication Auxiliary Port (JST 4P outlet) or Programming Tool Communication Port (USB A-type outlet).
- The Program Memory Card (***VB-MP1R***) or Real Time Clock Card (***VB-RTC***) can be inserted into the Memory Card Slot. *
- The I/O Extension Slot allows the Min Unit to connect with I/O Extension Units and various Extension Modules. *

VBUSB-200 or ***MWPC-200***

The Main Unit has a built-in RS-232 interface. It is easy to do programming and monitoring via a computer with a right transmission cable.



Program and data can be monitored, uploaded or downloaded using the programming tool remotely via MODEMs.

* Not available for ***VH-10MR*** or ***VH-14MR***

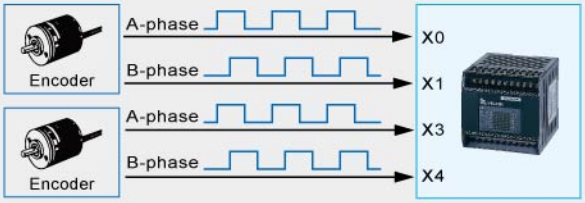
◎ Characteristics

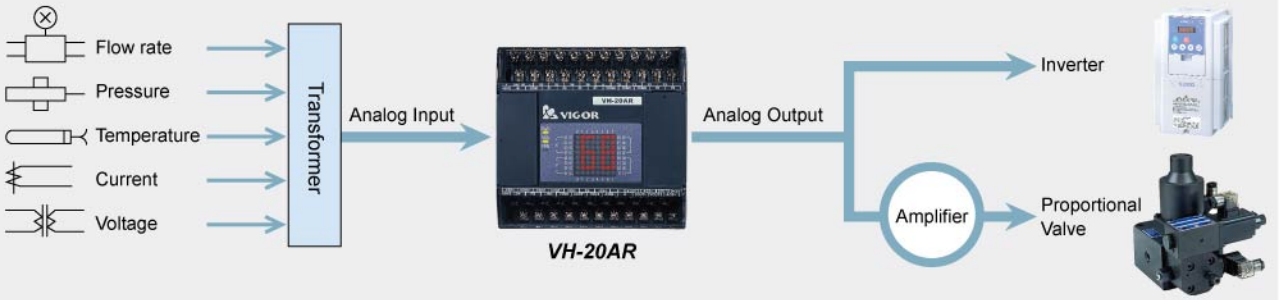
● Error Codes Display Function *

The LCD display on the Main Unit can not only indicate the I/O status, but also perform error code display function (01~99 or E0~E9). This is a very useful function which allows easy maintenance of a machine.

● External Interrupt and High Speed Counter Functions

The Main Unit contains 6 rapid input points (X0~X5) which can be used as the external interrupt or high speed counter input terminals. It can be connected with maximally 6 single-phase high-speed counter input signals or 2 AB-phase rotations encoders.





● Handy System Functions

- With a built-in Flash ROM program memory, no back-up battery required.
- Main programs, component annotations and program annotations can completely be loaded to the PLC, which allows easy system maintenance.
- Plenty instructions (including In-Line Comparisons) has made program writing easy.
- The password protection function can prevent any unauthorized program upload, thus, the intellectual property right can be protected.
- With a Real Time Clock card installed, timer and related applications will set off automatically.
- AC power input from AC 85V to AC 264V (AC power unit only).

● Flexible Modular Structure With Multitudinous Models and Modules

- The Main Unit comes in 10 to 60 I/O points for various needs. (provide 10, 14, 20, 24, 28, 32, 40 and 60 points)
- A selection of I/O extension modules in the range of 4X/4Y to 16X/16Y is available to meet different requirements.

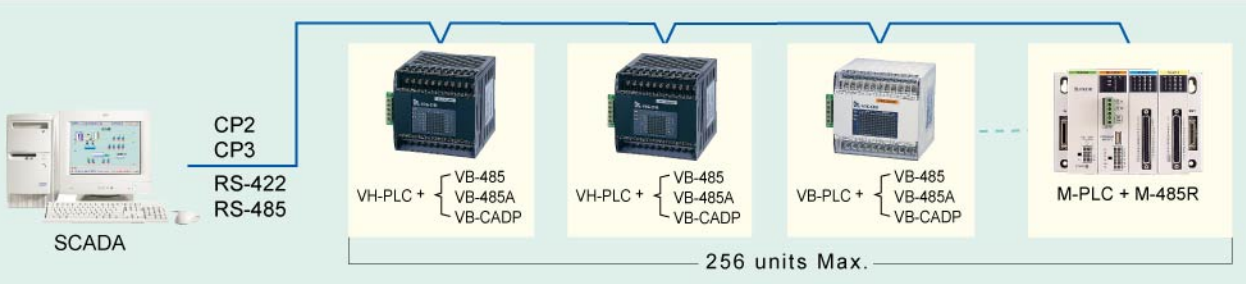
● Compact and Ingenious Design, Saves Assembling Space

● Advanced Window® Based Programming Software: *Ladder Master*, Easy to Comprehend and Use

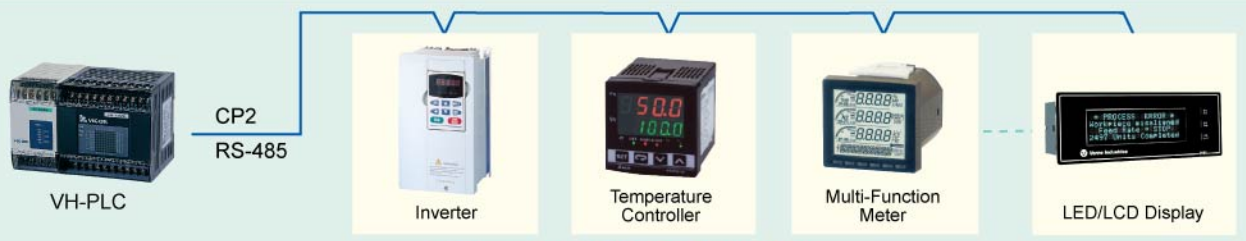
● Advanced PDA (Palm® OS) Based Screen Creation Software: *NeoTouch*, Inaugurate a New Fashion

● Various Communication Functions

- The Main Unit has a built-in RS-232 (CP1) communication port which enables data to be transferred between the PLC and the computer, HMI or SCADA. Also, through this port, program editing and data monitoring can be performed remotely via MODEMs.
- Multiplex communication cards and expansion modules provide RS-232 and RS-485 interfaces. A system can be expanded up to 3 communications ports (CP1~CP3).
- Through the Computer Link (protocol for ***VH, VB*** and ***M*** series) or MODBUS slave communication protocol, VH series PLC can be connected with a computer, HMI or SCADA to form a local area monitoring network.



- The ***VH*** series PLC has the MODBUS (master) communication function which can be used to connect to any MODBUS enabled peripherals to access data.
- The ***VH*** series PLC has the Non-Protocol communication function which is applied when there are no any specific communication protocol can be performed. All the communication processes are customized and completed by PLC's user program. This function is useful when connecting with various equipment which cannot be communicated using the MODBUS communication protocol.



* Not available for ***VH-10MR*** or ***VH-14MR***

PRACTICAL, RELIABLE, ULTRA VALUABLE

◎ Specifications

Performance Specification

Item			Specifications
Operation Control Method			Cyclic Operation by Stored Program
Programming Language Method			Electric Ladder Diagram + SFC
I/O Control Method			Batch Processing
Operation Processing Time	Basic Instructions		0.375 ~ 12.56 μS
	Applied Instructions		Several μS ~Several 100 μS
Number of Instructions	Basic Instructions		27 (including: LDP, LDF, ANDP, ANDF, ORP, ORF and INV, etc.)
	Stepladder Instructions		2
	Applied Instructions		81
Operation Memory Capacity	Program Capacity		Built-in 4 K Steps Flash ROM
	Component Capacity		2730 comments (16 characters or 8 double-words for each comment)
	Program Comment Capacity		20,000 words or 10,000 double-words
Max. Input / Output Points			128 points : X0~X77, Y0~Y77
Internal Relay	Auxiliary Relay (M)	General	384 points : M0 ~ M383
		Latched	128 points : M384 ~ M511
		Special	256 points : M9000 ~ M9255
	State Relay (S)	Initial	10 points : S0 ~ S9 (Latched)
		Latched	118 points : S10 ~ S127
Timer (T)		100 ms	63 points : T0 ~ T62 (Timer range : 0.1 ~ 3276.7 sec.)
		10 ms	31 points: T32 ~ T62, When M9028= "ON" (Timer range: 0.01 ~ 327.67 sec.)
		1 ms	1 points : T63 (Timer range : 0.001 ~ 32.767 sec.)
Counter (C)	16-bit Up	General	16 points : C0 ~ C15
		Latched	16 points : C16 ~ C31
High Speed Counter (C)	32-bit Bi-directional, Latched	1-phase Counter	11 points : C235 ~ C245 (Signal Frequency : 10 kHz Max.)
		2-phase Counter	5 points : C246 ~ C250 (Signal Frequency : 10 kHz Max.)
		A/B Phase Counter	4 points : C251 ~ C254 (Signal Frequency : 5 kHz Max.)
Data Register (D)		General	128 points : D0 ~ D127
		Latched	128 points : D128 ~ D255
		Special	256 points : D9000 ~ D9255
		Index	16 points : V0 ~ V7,Z0 ~ Z7
Pointer		Call Pointer (P)	64 points : P0 ~ P63
		Interrupt Pointer (I)	15 points : 6 points for external interrupt, 3 points for timer interrupt, and 6 points for counter interrupt
		Nest Pointer (N)	8 points : N0 ~ N7
Range of Constants	Decimal (K)	16 Bits	-32,768 ~ 32,767
		32 Bits	-2,147,483,648 ~ 2,147,483,647
	Hexadecimal(H)	16 Bits	0 H ~ FFFF H
		32 Bits	0 H ~ FFFF FFFF H
Pulse Output			1 point; Max. 7 kHz
Programming Device Link Interface CP1			RS-232C, for directly connect with a computer, HMI or MODEM
Communication Link Interface CP2 (Optional)			RS-232C or RS-422 / RS-485, multi-functional expansion communication port
Communication Link Interface CP3 (Optional)			RS-485, for connect with a computer, HMI or MODEM
Real Time Clock (Optional)			To indicate the year, month, day, hour, min., sec. and week
Error Code Display Function			64 points LED shows I/O status or an error code (01~99 or E0~E9)
Analog Potentiometer			2 Analog Rotary Potentiometers, for values input (0~255 or 0~10)
Analog I/O Function (VH-20AR)		Analog Input	4 channels, 12 bits, ±10V / 4~20mA / ± 20mA inputs
		Analog Output	2 channels, 12 bits, ±10V / 4~20mA / ± 20mA outputs

◎ Specifications

Basic Instruction Table

Title	Function	Devices
LD	LoaD	X,Y,M,S,T,C
LDI	LoaD Inverse	X,Y,M,S,T,C
AND	AND	X,Y,M,S,T,C
ANI	ANd Inverse	X,Y,M,S,T,C
OR	OR	X,Y,M,S,T,C
ORI	OR Inverse	X,Y,M,S,T,C
ANB	ANd Block	—
ORB	OR Block	—
OUT	OUT	Y,M,S,T,C
SET	SET	Y,M,S
RST	ReSeT	Y,M,S,T,C,D

Title	Function	Devices
PLS	PuLSe	Y,M
PLF	PuLse Falling	Y,M
LDP	LoaD Pulse	X,Y,M,S,T,C
LDF	LoaD Falling pulse	X,Y,M,S,T,C
ANDP	AND Pulse	X,Y,M,S,T,C
ANDF	AND Falling pulse	X,Y,M,S,T,C
ORP	OR Pulse	X,Y,M,S,T,C
ORF	OR Falling pulse	X,Y,M,S,T,C
INV	INVerse	—
MC	Master Control	N0 ~ N7
MCR	Master Control Reset	N0 ~ N7

Title	Function	Devices
MPS	Point Store	—
MRD	ReaD	—
MPP	PoP	—
NOP	No OPeration	—
END	END	—

Stepladder Instruction Table

Title	Function	Devices
STL	STep Ladder	S
RET	RETurning to standard ladder	—

Applied Instructions Table

Type	FNC No.	Title* D		Title* P	Function
Program Flow	00		CJ	P	Conditional Jump
	01		CALL	P	CALL subroutine
	02		SRET		Subroutine RETurn
	03		IRET		Interrupt RETurn
	04		EI		Enable Interrupt
	05		DI		Disable Interrupt
	06		FEND		First END
	07		WDT	P	Watch Dog Timer refresh
	08		FOR		Start of a FOR-NEXT loop
	09		NEXT		End of a FOR-NEXT loop
Compare and Move	10	D	CMP	P	CoMPare
	11	D	ZCP	P	Zone ComPare
	12	D	MOV	P	MOVe
	13		SMOV	P	Shift MOVe
	14	D	CML	P	CoMpLiment
	15		BMOV	P	Block MOVe n→n
	16	D	FMOV	P	Fill MOVe 1→n
	17	D	XCH	P	EXCHange
	18	D	BCD	P	Converts BIN→BCD
	19	D	BIN	P	Converts BCD→BIN
Arithmetic and Logical Operations	20	D	ADD	P	ADDition
	21	D	SUB	P	SUBtraction
	22	D	MUL	P	MULtiplication
	23	D	DIV	P	DIVision
	24	D	INC	P	INCrement
	25	D	DEC	P	DECrement
	26	D	WAND	P	Logic Word AND
	27	D	WOR	P	Logic Word OR
	28	D	WXOR	P	Logic Word eXclusive OR
Rotary and Shift	30	D	ROR	P	ROtation Right
	31	D	ROL	P	ROtation Left
	32	D	RCR	P	Rotation Right with Carry
	33	D	RCL	P	Rotation Left with Carry
	34		SFTR	P	Bit ShiFT Right
	35		SFTL	P	Bit ShiFT Left
	38		SFWR	P	ShiFt register WRite (FIFO)
	39		SFRD	P	ShiFt register ReaD (FIFO)
Data Operation	40		ZRST	P	Zone ReSeT
	41		DECO	P	DECOde
	42		ENCO	P	ENCOde

Type	FNC No.	Title* D		Title* P	Function
High Speed Processing	50		REF	P	REFresh I/O
	53	D	HSCS		High Speed Counter Set
	54	D	HSCR		High Speed Counter Reset
	56		SPD		SPeed Detection
	57	D	PLSY		PuLSe Y output
	58		PWM		Pulse Width Modulation
	59	D	PLSR		PuLSe Ramp output
Handy Instruction	62	D	ABSD		ABSolute Drum sequencer
	63		INCD		INCremental Drum sequencer
	66		ALT	P	ALTernate state
	67		RAMP		RAMP variable value
External Serial Communication	80		RS		RS communications
	82		ASCI	P	Converts HEX→ASCII
	83		HEX	P	Converts ASCII→HEX
	84		CCD	P	Check CoDe
	85		VRRD	P	VR volume ReaD
	86		VRSC	P	VR volume SCale
	149		MBUS		MODBUS communication
Other	73		SEGD	P	Seven SEGment Decoder
	167		TWR	P	Time WRites to RTC
	176		TFT		Timer (10ms)
	177		TFH		Timer (100ms)
	178		TFK		Timer (1 sec.)
In- line Comparisons	224	D	LD=		LoaD when (S1) = (S2)
	225	D	LD>		LoaD when (S1) > (S2)
	226	D	LD<		LoaD when (S1) < (S2)
	228	D	LD<>		LoaD when (S1) ≠ (S2)
	229	D	LD<=		LoaD when (S1) ≦ (S2)
	230	D	LD>=		LoaD when (S1) ≧ (S2)
	232	D	AND=		AND when (S1) = (S2)
	233	D	AND>		AND when (S1) > (S2)
	234	D	AND<		AND when (S1) < (S2)
	236	D	AND<>		AND when (S1) ≠ (S2)
	237	D	AND<=		AND when (S1) ≦ (S2)
	238	D	AND>=		AND when (S1) ≧ (S2)
	240	D	OR=		OR when (S1) = (S2)
	241	D	OR>		OR when (S1) > (S2)
	242	D	OR<		OR when (S1) < (S2)
	244	D	OR<>		OR when (S1) ≠ (S2)
	245	D	OR<=		OR when (S1) ≦ (S2)
	246	D	OR>=		OR when (S1) ≧ (S2)

* D: 32 bit operation

P: Pulse (single) operation

PRACTICAL & RELIABLE & ULTRA VALUABLE

◎ Specifications

Regulation Specification

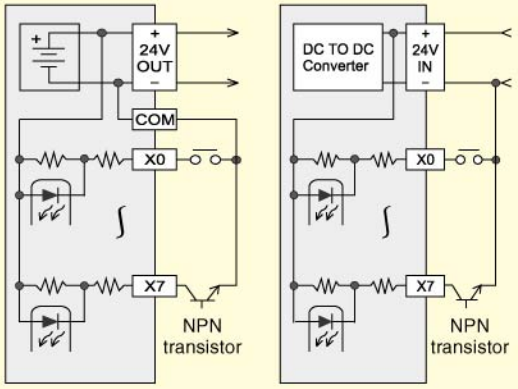
Item	Specifications
Work Ambient Temperature	0~55℃ / 32~131°F
Storage Ambient Temperature	-20~70℃ / -4~158°F
Work Ambient Humidity	10~90% RH, (at 25°C / 77°F, no condensation)
Storage Ambient Humidity	10~90% RH, (at 25°C / 77°F, no condensation)
Vibration Tolerance	10 ~ 55 Hz with amplitude of 0.075mm. / 0.30 inch; acceleration at 55~150 Hz = 1G; 80 min. (8 min./Cycle × 10 times = 80 min.) in each of X, Y and Z axes
Shock Tolerance	10 G, three times for each of X, Y and Z axes
Noise Immunity	Noise Simulator : 1500 Vp-p, Pulse Width : 1 μS, Frequency : 25~60Hz
Dielectric Strength	AC 1500V, 1 min. (between AC terminal and rack panel) / AC 500V, 1 min. (between DC terminal and rack panel)
Insulation Resistance	5 MΩ or above at DC 500V (between AC terminal and rack panel)
Grounding	Class-3 Grounding
Atmosphere	Keep away from corrosive gas and dusty environment

Power Specification

Item		AC Power (Including All AC input Main and Extension Units)	DC Power *(VH-10 / 14 MR)*	DC Power *(VH-20AR)*
Input Voltage		AC 100~240V, +10%/-15%	DC24V +20% / -15%	DC24V +20% / -15%
Input Frequency		50/60Hz	—	—
Keep Working Momentary Power Failure		10mS	1mS	1mS
Power Fuse		250V 2A	250V 0.5A	250V 0.5A
Power Consumption		30VA	5W	5W (Main Unit only)
Rated Current	Inner	DC5V; 400mA	—	DC 5V; 400mA
		DC12V; 530mA	—	DC 12V; 530mA
	Outer	DC24V, ±15%; 420mA; output from terminal	—	—

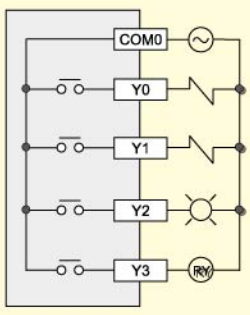
Digital Input Point Specification

Item	Specifications
Input Activating Voltage	DC24V±15%
Input Signal Circuit	7mA / DC24V
Input ON Circuit	Above 3.5 mA
Input OFF Circuit	Below 1.7 mA
Input Resistance	3.3 kΩ approximately
Input Response Time	10mS approximately (X0~X7 are variable, can be set between 0~15ms.)
Input Signal Type	Dry Contact or NPN open collector transistor
Isolation Mode	Photocoupler Isolation
Circuit Diagram	AC Power Model / DC Power Model



Digital Output Point Specification

Item		Specifications
Output Type		Relay Output
Switched Voltage		≤ AC 250V / DC 30V
Rated Current	Resistive Load	2A / point, 8A / 4 point COM
	Inductive Load	80VA
	Lamp Load	100W
Open Circuit Leakage		—
Response Time		10mS approximately
Isolation Mode		Mechanical Isolation (Relay)
Circuit Diagram		



◎ Specifications, Cables and Terminal Layouts

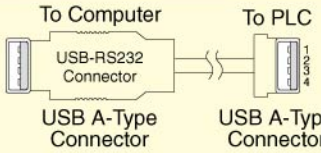
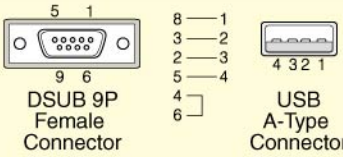
Analog Input Specification

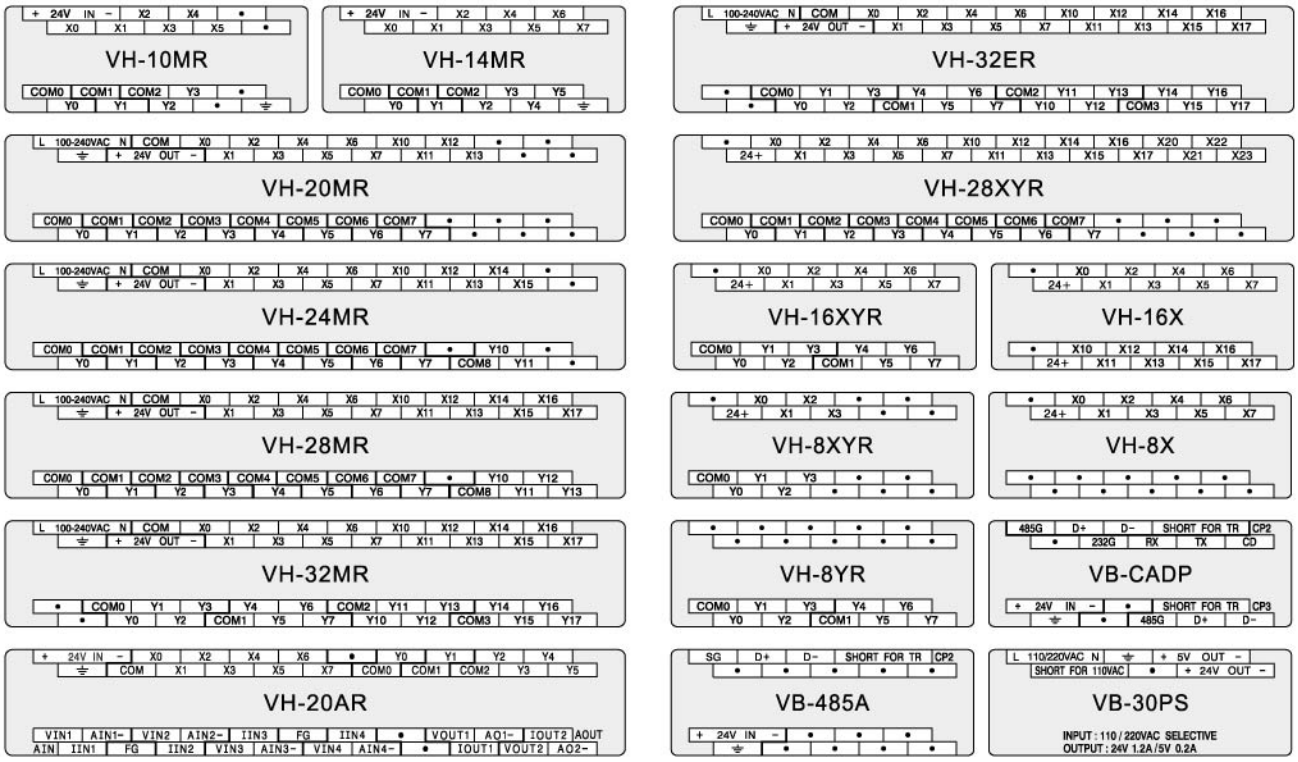
Item	Voltage Input	Current Input
	Voltage or Current Signal Inputs are Designated by D9090 and Different Terminals	
Analog Input Range	-10V ~ +10V	+4 ~ +20mA / -20mA ~ +20 mA
Digital Output Range	-2000 ~ +2000	0 ~ +2000 / -2000 ~ +2000
Input Resistance	200 kΩ	250 Ω
Resolution	5 mV	20 μA
Overall Accuracy	±1% (Max.)	
Conversion Speed	Data refresh at every Scan Time	
Isolation Method	Magnetic-coupler isolation between PLC's core and inputs; no isolation between analog I/O channels	
Max. Sustainable Input Range	±15V	±32 mA

Analog Output Specification

Item	Voltage Input	Current Input
	Voltage or Current Signal Inputs are Designated by D9095 and Different Terminals	
Analog Output Range	-10V ~ +10V	+4 ~ +20mA / -20mA ~ +20 mA
Digital Input Range	-2000 ~ +2000	0 ~ +2000 / -2000 ~ +2000
External Loading Resistance	500 Ω ~ 1 MΩ	Under 500 Ω
Resolution	5mV	100 μA
Overall Accuracy	±2% (Max.)	
Conversion Speed	Outputs refresh at every Scan Time	
Isolation Method	Magnetic-coupler isolation between PLC's core and outputs; no isolation between analog I/O channels	

Connecting Cables and Terminal Layouts

Model	Physical Demonstration	Connection Schematics	Application
VBUSB-200 (Length : 200cm / 6'7")			• PC USB Port ↔ ***VH, VB*** or ***M*** Series PLC
MWPC-200 (Length : 200cm / 6'7")			• PC D-SUB 9-pint ↔ ***VH, VB*** or ***M*** Series PLC



◎ Models

Item	Model No.	Specifications	Exterior
Main Unit	VH-10MR	6-point DC 24V Signal Inputs; 4-point Relay Outputs; DC 24V Power Input	Refer. To Figure B
	VH-14MR	8-point DC 24V Signal Inputs; 6-point Relay Outputs; DC 24V Power Input	
	VH-20MR	12-point DC 24V Signal Inputs; 8-point Relay Outputs; AC Power Input; DC 24V 420mA Output	Refer. To Figure A
	VH-24MR	14-point DC 24V Signal Inputs; 10-point Relay Outputs; AC Power Input; DC 24V 420mA Output	
	VH-28MR	16-point DC 24V Signal Inputs; 12-point Relay Outputs; AC Power Input; DC 24V 420mA Output	
	VH-32MR	16-point DC 24V Signal Inputs; 16-point Relay Outputs; AC Power Input; DC 24V 420mA Output	
	VH-40MR	24-point DC 24V Signal Inputs; 16-point Relay Outputs; AC Power Input; DC 24V 420mA Output	32MR+8X
	VH-60MR	36-point DC 24V Signal Inputs; 24-point Relay Outputs; AC Power Input; DC 24V 420mA Output	32MR+28XYR
	VH-20AR	8-point DC 24V Signal Inputs; 6-point Relay Outputs; DC 24V Power Input; 4 CH 12-bit Analog Inputs (±10V / 4 ~ 20 mA / ±20 mA); 2 CH 12-bit Analog Outputs (±10V / 4 ~ 20 mA / ±20 mA);	Refer. To Figure A
Expansion Unit	VH-32ER	16-point DC 24V Signal Inputs; 16-point Relay Outputs; AC Power Input; DC 24V 420mA Output	
Expansion Module	VH-28XYR	20-point DC 24V Signal Inputs; 8-point Relay Outputs	
	VH-16XYR	8-point DC 24V Signal Inputs; 8-point Relay Outputs	Refer. To Figure B
	VH-16X	16-point DC 24V Signal Inputs	
	VH-8XYR	4-point DC 24V Signal Inputs; 4-point Relay Outputs	
	VH-8X	8-point DC 24V Signal Inputs	
	VH-8YR	8-point Relay Outputs	
Communi-cation Module	VB-485A	RS-485 Communication Expansion Module; Photocoupler Isolated; Max. Distance: 1000M 3280'	
	VB-CADP	Dual-Port Communication Expansion Module; One Isolated RS-232 / RS-485 Port and One Isolated RS-485 Port; Max. Distance: 1000M 3280' (RS-232: 15M 49')	
Communi-cation Card	VB-232	RS-232 Communication Expansion Card; Non-Isolated; Max. Distance: 15M 49'	—
	VB-485	RS-485/RS-422 Communication Expansion Card; Non-Isolated; Max. Distance: 50M 164'	
Expansion Card	VB-MP1R	16K Steps Flash ROM Program Memory Card (Only 4K Steps available for the VH); Including the RTC (Real Time Clock) Function	
	VB-RTC	RTC (Real Time Clock) Expansion Card; Provides the Clock and Calendar (Year, Month, Day, Hour, Min., Sec. and Week)	
Connection Cable	VBUSB-200	Cable Between a PLC (CP1 A-type USB) and Computer A-type USB Port; Length: 200cm. 6'7"	
	MWPC-200	Cable Between a PLC (CP1 A-type USB) and Computer (9-pin Female D-sub); Length: 200cm. 6'7"	
	MWMD-200	Cable Between a PLC (CP1 A-type USB) and MODEM (9-pin Male D-sub); Length: 200cm. 6'7"	
	MWPC25-200	Cable Between a PLC (CP1 A-type USB) and Computer (25-pin Female D-sub); Length: 200cm 6'7"	
	VBMD09-200	Cable Between a PLC (CP1 JST 4P) and MODEM (9-pin Male D-sub) ; Length: 200cm. 6'7"	
	VBPC25-200	Cable Between a PLC (CP1 JST 4P) and Computer (25-pin Female D-sub) ; Length: 200cm. 6'7"	
	VBFDHMI-200	Cable Between a PLC (CP1 JST 4P) and Fuji, ProFace HMI (25-pin Male D-sub) ; Length: 200cm. 6'7"	
	VHEC-050	VH Series PLC Expansion Extended Cable; Length: 50cm. 19.7"	
Power Supplier	VB-30PS	30W Power Supply; Power Input: AC 110V or 220V; Outputs: DC 24V 1.2A and DC 5V 0.2A	Refer. To Figure B

Figure A

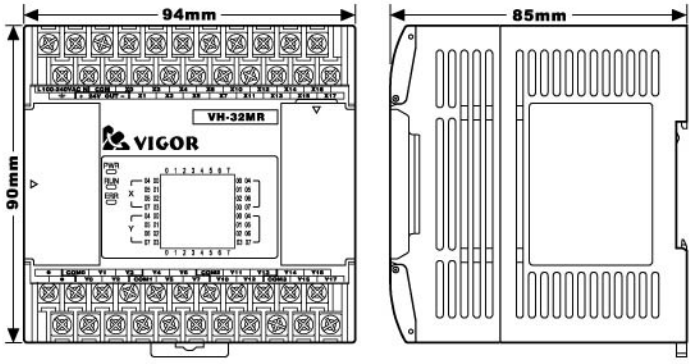
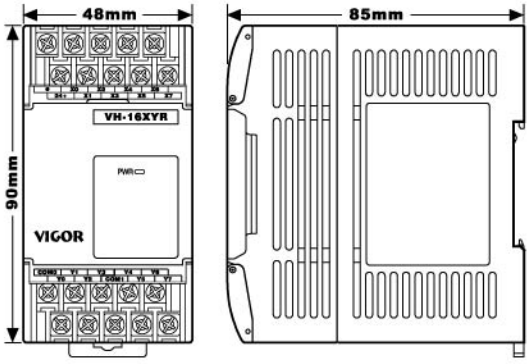


Figure B



VIGOR ELECTRIC CORP.

Address : No.42-12, Pidao Village,
Danshi Township, Taipei County 251, Taiwan

Tel : 886-2-2620-4393

Fax : 886-2-2620-4976

E-mail : vigor.sales@msa.hinet.net

http : //www.vigorplc.com