General Specifications

GS 61A YHC-01E-A

Model YHC4100
Portable HART® Communicator

The YHC4100 is a portable HART Communicator from Yokogawa Corporation of America. All HART field devices can be configured, polled, and trimmed using the YHC4100 with HART communications. The YHC4100 is a full function HART Communicator supporting Universal, Common Practice and Device Specific commands for commissioning, configuration and maintenance operations.

This is the HART Communicator designed for optimum convenience and usability. Just consider the YHC4100's standard features:

• Update new device profiles and firmware via the Internet – YHC4100 is never out of your hands
• Dedicated memory for 600 HART device profiles
• Clone / Upload / Download configurations
• Off-line mode for developing / reviewing configurations
• Document and store more than 200 configurations
• As-found / As-left history with DMS software
• 13-line, 128 x 128 pixel graphic, backlit display
• Full alpha-numeric keypad
• Edit directly from Review/Edit mode
• Quick Menu access key
• HART menu Home key
• Dedicated text edit keys
• Programmable lock-out settings
• Contrast key for direct adjustment from any mode
• Elastic hand strap and adjustable, detachable strap
• Thumb keys (left hand) for menu Up, Down, and Select
• Custom "use-in-place" soft case with lead kit compartment

The YHC4100 offers several unique features that provide HART users with a more useful, more reliable and more available communication tool. Combine it with our Device Management System (DMS) documenting software and it offers the only single-source device management solution capable of meeting continually changing documentation requirements.

FEATURES & ADVANTAGES

YHC4100 supports all HART devices at the Universal and Common Practice command levels plus a large and growing list of devices at the Device Specific command level.
View our device list at
http://www.us.yokogawa.com/mi/ypcyhc.htm

Use the YHC4100 to …
• Commission devices
  - Step-by-step configuration
  - Document as-left configuration
  - Electronic Birth Certificate
• Operations
  - Reconfiguration for process changes
  - Reconfiguration for batch runs
  - Document as-found and as-left configurations
  - Populate DMS database software
• Device Maintenance
  - Troubleshoot devices with HART
  - View device error messages
  - Clone devices to commission replacements
  - Preventive review of device status

SPECIFICATIONS

BASE UNIT: 10"L x 4.25"w x 1.65" D
ABS plastic case with shock absorbing boot, 19oz. including batteries
KEYPAD: single sheet elastomer keys: 4 soft, 8 single function, 30 dual function, 3 thumb keys

DISPLAY: 13 line, 128 x 128 pixel graphic display, 2.6" x 2.6" viewable area, backlight

POWER: two 9V alkaline, Lithium, or NiMH batteries (external charge);optional 100 – 240 Vac power adapter

TEMPERATURE SPECIFICATIONS:
Storage: -40° F to 140° F (-40° C to 60° C) Operating: 14° F to 140° F (-10° C to 60° C)

CONNECTIONS:
Standard banana jacks (3/4" center) for HART, AC adapter jack, DB-9 for data transfer

INTRINSICALLY SAFE OPTION: Certification to Class I, Div I, Groups A, B, C & D Certification to ATEX and FM PENDING

YHC 4100 HART Communicator

YHC MODEL NUMBERS							
YHC 4100	HART Communicator (Includes CE Mark, HART leads Kit, Batteries, Universal Power Adapter, RS-232 Serial Cable, Paper User's Manual)						
	Code	**Reserved**					
	-01	Always -01					
		Code	**Documenting Options**				
		-1	Standard documenting (as-found & as-left documenting; separate DMS database software recommended for electronic procedure / result transfer)				
		-2	21CFR Part 11 documenting for FDA electronic signature compliance (as-found & as left, DMS database software recommended for downloading data to PC sold separately)				
			Code	**Reserved**			
			-01	CE Mark, Intrinsically Safe unit (see Note 1)			
				Code	**Carrying Case and Strap Options**		
				-0	Green Protective Boot with Rear Hand Strap		
				-2	Fitted, use-in-place, soft carrying case with adjustable shoulder strap and pocket for HART leads		
				-4	Green Protective Boot and Adjustable Hanging Strap		
					Code	**User's Manual Language Options**	
					-01	English language	
					-02	German language (Pending)	
					-03	French language (Pending)	
					-04	Spanish language (Pending)	
					-05	Chinese (Mandarin) language (Pending)	
					-06	Italian language (Pending)	
					-07	Japanese (Pending)	
						Code	**Download Subscription (DLS) Fee options**
						-1	Standard 3-year DOF Download Subscription

Example Part Number

YPC 4100	**-01**	**-1**	**-01**	**-0**	**-01**	**-1**	**Full Model ID:** **YPC 4100-01-1-01-0-01-1**
Calibrator & HART Communicator	Always	Documenting	Intrinsic Safety	Green Boot and rear Hand Strap	English Manual	Standard 3 Year DLS	Note: Only YHC 4100-01-1-01 portion of the model number is tracked by DPC Manager and DMS Software

Note 1 – Unit is tested and certified by MET Laboratories. MET Laboratories is a Nationally Recognized Testing Lab (NRTL). This unit is certified by MET Laboratories to comply with standards CSA C22.2 No. 1010.1-92, C22.2 No. 157, and UL913, Fifth Edition Rev. 2/21/97 for Class I, Div I, Groups A, B, C & D

Accessories for YHC4100

YHC ACCESSORIES	
PROTECTIVE BOOT	
A37049	Protective green boot provides degree of protection against drop related damage; slip on

CARRYING ACCESSORIES	
A36875	YHC carrying case - custom soft case with adjustable shoulder strap and HART lead compartment
A36884	Adjustable, detachable hanging strap - clips directly to YHC attach points

COMMUNICATION ACCESSORIES	
A900529-00014	HART Test Lead Kit (inc'd w/ YHC) - std banana plugs, mini-grabbers, 250 ohm resistor
A36821	Std size 250 ohm shunt resistor (inc'd w/ YHC) - req'd for HART low resistance loops
A900447-00052	DB-9 cable, Male x Female, 6 ft length

POWER ACCESSORIES	
A900614-00006	9 Volt Alkaline Battery (inc'd w/ YHC) (2 req'd)
A900614-00009	9 Volt Lithium Battery (2 req'd)
A900614-00015	9 Volt NiMH Batteries (2 req'd)
A36888	NiMH battery charger (9 Volt) ,110Vac, 60 Hz
A36742	Power adapter, 100 Vac to 240 Vac, 50-60 Hz
A36755	Universal plug adapter kit for A36742 power adapter

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DMS - Device Management System & Expansion Options

	Device Management System Software		
	Part Number	Product Description	UOM
DMS Client/Server	**Device Mangement System (DMS) Software, DMS Server and Clients Version 1.X, 1 Year Software Maintenance & Technical Support Included, Device Model Library, Minor Releases. Option DMSDPC01-CFG-0 below required for communications to YHC4100 (Note 1)**		
		Floating Client License; Ext. Price = 1 x License Group	
	DMSBAS01-01-0	1 Client	License
	DMSBAS05-01-0	5 Client	License
	DMSBAS10-01-0	10 Client	License
	DMSBAS10-01-0	15 Client	License
		>15 Client	License

	OPTIONS		
DPC Interface	**Documenting Process Communicator (DPC) Interface to DMS**		
		Hand Helds by Yokogawa	
	DMSDPC01-CFG-0	Configuration Data Only (Note 2)	System

	Single Point Access (SPA) (Note 3)		
Hart Modem Interface		**Floating Client License; Ext. Price = # of Clients x Price**	
	DMSSPA01	1 to 4 Clients	Client
	DMSSPA05	5 to 9 Clients	Client
	DMSSPA10	10 to 14 Clients	Client
	DMSSPA15	15 to 20 Clients	Client
		>20 Clients	Client

	MacTek HART Modems		
Modem	DMSHMS-01	RS-232 Serial	Each
	DMSHMU-01	USB	Each

DMS – 21 CFR Part 11 Enabling Device Management System & Expansion

21 CFR Part 11 Enabling Device Management System Software		
Part Number	Product Description	UOM
21 CFR Part 11 Enabling Device Mangement System (DMS) Software, DMS Server and Clients Version 1.X, 1 Year Software Maintenance & Technical Support Included, Device Model Library, Minor Releases. Option DMSDPC01-CFG-1 below required for communications to YHC4100 (Note 1)		
	Floating Client License; Ext. Price = 1 x License Group	
DMSBAS01-01-1	1 Client	License
DMSBAS05-01-1	5 Client	License
DMSBAS10-01-1	10 Client	License
DMSBAS10-01-1	15 Client	License
	>15 Client	License

DMS Client/Server

OPTIONS		
Documenting Process Communicator (DPC) Interface to DMS		
	Hand Helds by Yokogawa	
DMSDPC01-CFG-1	Configuration Data Only (Note 2)	System

DPC Interface

Single Point Access (SPA) (Note 3)		
	Floating Client License; Ext. Price = # of Clients x Price	
DMSSPA01	1 to 4 Clients	Client
DMSSPA05	5 to 9 Clients	Client
DMSSPA10	10 to 14 Clients	Client
DMSSPA15	15 to 20 Clients	Client
	>20 Clients	Client

Hart Modem Interface

MacTek HART Modems		
DMSHMS-01	RS-232 Serial	Each
DMSHMU-01	USB	Each

Modem

DMS Software Notes:

Note 1 One copy of DMS Server is included. DMS Server must be installed for DMS Client to work. DMS Server can be installed on a network SQL server or on a stand alone host machine. The DMS Server must be running for DMS Client(s) to operate. For network applications, DMS Client can be installed on multiple machines but the number of concurrent users is limited to the number of client licenses purchased. For stand alone applications, the DMS Server and DMS Client are installed on the same host machine.

Note 2 "Configuration Data Only" DPC Interface to DMS: The YPC 4010 / YHC to DMS interface handles the transfer of HART configuration files. An as found HART configuration can be saved on YPC 4010 or YHC products, changes can be made to the connected HART device's configuration, and the as left configuration can be saved as well. Both configurations can be uploaded to DMS for documentation of the as found HART configuration and the change(s) made. In addition, configuration changes can be made to a HART configuration file within DMS, downloaded to a YHC 4100, and then sent to a HART device in the field.

Note 3 Allows HART Communications between the PC and a single HART Device through the DMS software using a HART Modem.

DOF Subscriptions for YPC 4010/ YHC 4100 Multi-Function Tester with HART Communications

HART communication support for the YPC/YHC products (YPC 4010 and YHC 4100) and HART smart field devices takes two forms. One is a Generic Device Object File (DOF) shipped with every YPC/YHC unit. The Generic DOF enables Universal and Common Practice HART commands to poll, write and execute analog trim and loop test functions on any HART device. Device Specific Commands are supported by device specific DOFs. All device specific DOFs available at the time are included with each YPC/YHC shipment. New device specific HART DOFs are added at a rate of 5 to 8 per month and posted on our Download Site at www.us.yokogawa.com/mi/ypcyhc.htm.

A Subscription to the Download Site provides the user with access to YPC/YHC firmware updates and all posted DOFs for a period of 3 years after YPC/YHC shipment. Users will gain access to the Download Site by logging in with a User Name (YPC/YHC serial number, example 950680-S01 including hyphen) and Password (initially assigned by supplier but user can enter his own after first log in).

Why subscribe: 2 reasons
1. Products remain current. With the release of HART 6.0 specifications, new devices and new device revisions of older products will be released. This subscription will enable you to download DOF's for new devices and new revisions for older devices. Additionally, the exclusive Field Device Revision Independence (FDRI) allows YHC and YPC to automatically map configurations from older devices to newer devices by the same manufacturer in the event of field replacement. This feature saves you valuable downtime, and is exclusive to the YPC/YHC HART products.
2. Firmware updates. Periodically, enhancements, improvements, and or features are made available. You may also decide to add new options (Documentation capability for example). The firmware is flashable (i.e. field upgradeable) so that the unit never leaves the customer's facility for an update – the result is no down time.

Trademarks
HART® is a registered trademark of Hart Corporation.