



HORNER
AUTOMATION GROUP

MICRO SERIES



**ALL-IN-ONE OR MODULAR,
AN EXCEPTIONAL VALUE!**



UL 50E Type 1,
4x, 12, 12K and 13
(indoor use)



DIN-rail mount Modular Controller without Built-in I/O or Operator Interface. Local I/O expansion using OCS-I/O

DIN-rail mount Modular Controller with 34 Built-in I/O points and no Operator Interface. Local I/O expansion using OCS-I/O

FEATURES	
Controller	Logic Memory (Ladder/IEC)
	Logic Scan Rate
	Variables (Word-type/Bit-type)
	Floating-Point Support
	AutoTune PID Loops
Operator Interface	Display Resolution
	Display Technology
	Number of Pages
I/O	Fields or Objects per Page
	Built-In I/O points, Total
	Built-in High Speed I/O
	Built-in Analog I/O
	Built-in Analog Type (In/Out)
	Total I/O Memory (DI/DO/AI/AO)
	Local Low-cost Relay I/O Expansion
	Local OCS-I/O Expansion
	Network OCS-I/O Expansion (maximum)
	Ethernet & Internet
Other Ethernet Protocols	
Remote Access	
USB & Serial Ports	USB Programming Port
	RS-232 Ports & RS-485 Ports
	RTU/Modbus (Master/Slave) & ASCII
CAN Networking	Standard Protocols
	I/O Expansion, Peer-to-Peer Messaging
Physical Specifications	Optional Protocols
	Typical Mounting Location
	Height (inches/mm)
	Width (inches/mm)
	Overall Depth (inches/mm)
Operating Specifications & Standards	Supply V (W), Input V
	Operating Temperature
	Relative Humidity (non-condensing)
	Environmental Rating

CPU200
2MB
0.4 mS/K
50,000/32,768 (16,384 ret)
Yes (64-bit)
(8 loops)
No Operator Interface
No Built-in I/O
2048/2048/512/512
8-32 relays
7 modules
16 bases x 7 modules
EtherNet/IP (Server), Modbus TCP (Client/Server)
BACnet IP (server), FTP (server), SMTP (client)
OCS360 Cloud Service, WebMI via HTML5, EnvisionRV
USB C
1 each on shared RJ45
Yes
CsCAN
Yes
CANopen, SAEJ1939 (opt)
DIN-rail
4.917" / 124.9 mm
4.504" / 114.4 mm
1.969" / 50 mm
10-30VDC (15W), 12/24VDC
-40° to 60°C
5 to 95%
IP20

CPU250
2MB
0.4 mS/K
50,000/32,768 (16,384 ret)
Yes (64-bit)
(8 loops)
No Operator Interface
34
4 In (500 kHz) & 2 Out up to 8 In & 8 Out
0-10V, 4-20mA (In & Out)
2048/2048/512/512
8-32 relays
7 modules
16 bases x 7 modules
EtherNet/IP (Server), Modbus TCP (Client/Server)
BACnet IP (server), FTP (server), SMTP (client)
OCS360 Cloud Service, WebMI via HTML5, EnvisionRV
USB C
1 each on shared RJ45
Yes
CsCAN
Yes
CANopen, SAEJ1939 (opt)
DIN-rail
4.917" / 124.9 mm
4.504" / 114.4 mm
1.969" / 50 mm
10-30VDC (15W), 12/24VDC
-40° to 60°C
5 to 95%
IP20



Entry-level All-in-one Controller with 26 or 30 Built-in I/O points and a monochrome display (non-touch) with keypad

All-in-one Controller with 26-30 Built-in I/O points and a 4" color touchscreen. I/O expansion using OCS-I/O bases or Low-cost Relay Module

FEATURES	
Controller	Logic Memory (Ladder/IEC)
	Logic Scan Rate
	Variables (Word-type/Bit-type)
	Floating-Point Support
	AutoTune PID Loops
Operator Interface	Display Resolution
	Display Technology
	Number of Pages
	Fields or Objects per Page
I/O	Built-In I/O points, Total
	Built-in High Speed I/O
	Built-in Analog I/O
	Built-in Analog Type (In/Out)
	Total I/O Memory (DI/DO/AI/AO)
	Local Low-cost Relay I/O Expansion
	Local OCS-I/O Expansion
	Network OCS-I/O Expansion (maximum)
Ethernet & Internet	Industrial Ethernet Protocols
	Other Ethernet Protocols
	Remote Access
USB & Serial Ports	USB Programming Port
	RS-232 Ports & RS-485 Ports
	RTU/Modbus (Master/Slave) & ASCII
CAN Networking	Standard Protocols
	I/O Expansion, Peer-to-Peer Messaging
Physical Specifications	Optional Protocols
	Typical Mounting Location
	Height (inches/mm)
	Width (inches/mm)
	Overall Depth (inches/mm)
Operating Specifications & Standards	Supply V (W), Input V
	Operating Temperature
	Relative Humidity (non-condensing)
	Environmental Rating

X2 - A, R
512 kB
1.2 mS/K
5000/2048
Yes (32-bit)
(4 loops)
128 x 64 (non-touch)
Transflective Monochrome
250
15
30 (A) & 26 (R)
4 In (500 kHz) & 2 Out
4 In & 2 Out
4-20mA/4-20mA
2048/2048/512/512
8-32 relays
via CsCAN base
16 bases x 8 modules
No Ethernet Port
USB mini-B
1 each on shared RJ45
Yes
CsCAN
Yes
CANopen, SAEJ1939
Encl. Door or Swing Panel
4.92" / 125 mm
3.78" / 96 mm
1.29" / 32.7 mm
24VDC (1.6W), 12/24VDC
-10° to 60°C
5 to 95%
UL 50E Type 1, 4x, 12, 12k, 13** (Indoor)

X4 - A, R
512 kB
0.4 mS/K
5000/2048
Yes (32-bit)
(8 loops)
480 x 272 (touch)
Backlit LCD (350 nits)
250
100
30 (A) & 26 (R)
4 In (500 kHz) & 2 Out
4 In & 2 Out
4-20mA, RTD*/4-20mA
2048/2048/512/512
8-32 relays
via CsCAN base
16 bases x 8 modules
Ethernet IP (Server & HMI), Modbus TCP (Client Server)
BACnet IP (server), FTP (server), SMTP (client)
OCS360 Cloud Service, WebMI via HTML5, EnvisionRV
USB mini-B
1 each on shared RJ45
Yes
CsCAN
Yes
CANopen, SAEJ1939
Encl. Door or Swing Panel
3.79" / 96 mm
4.92" / 125 mm
1.22" / 31 mm
24VDC (4.6W), 12/24VDC
-10° to 60°C
5 to 95%
UL 50E Type 1, 4x, 12, 12k, 13** (Indoor)



*RTD PT-100 range -50°C to +200°C



All-in-one Controller with 26-30 Built-in I/O points and a 7" color touchscreen. I/O expansion using OCS-I/O bases or Low-cost Relay Module

All-in-one Controller with 26-30 Built-in I/O points and a 10" color touchscreen. I/O expansion using OCS-I/O bases or Low-cost Relay Module

FEATURES	
Controller	Logic Memory (Ladder/IEC)
	Logic Scan Rate
	Variables (Word-type/Bit-type)
	Floating-Point Support
	AutoTune PID Loops
Operator Interface	Display Resolution
	Display Technology
	Number of Pages
	Fields or Objects per Page
I/O	Built-In I/O points, Total
	Built-in High Speed I/O
	Built-in Analog I/O
	Built-in Analog Type (In/Out)
	Total I/O Memory (DI/DO/AI/AO)
	Local Low-cost Relay I/O Expansion
	Local OCS-I/O Expansion
Network OCS-I/O Expansion (maximum)	
Ethernet & Internet	Industrial Ethernet Protocols
	Other Ethernet Protocols
	Remote Access
USB & Serial Ports	USB Programming Port
	RS-232 Ports & RS-485 Ports
	RTU/Modbus (Master/Slave) & ASCII
CAN Networking	Standard Protocols
	I/O Expansion, Peer-to-Peer Messaging
Physical Specifications	Optional Protocols
	Typical Mounting Location
	Height (inches/mm)
	Width (inches/mm)
	Overall Depth (inches/mm)
Operating Specifications & Standards	Supply V (W), Input V
	Operating Temperature
	Relative Humidity (non-condensing)
	Environmental Rating

X7 - A, R
512 kB
0.4 mS/K
5000/2048
Yes (32-bit)
(8 loops)
800 x 480 (touch)
Backlit LCD (300 nits)
250
100
30 (A) & 26 (R)
4 In (500 kHz) & 2 Out
4 In & 2 Out
4-20mA, RTD*/4-20mA
2048/2048/512/512
8-32 relays
via CsCAN base
16 bases x 8 modules
EtherNet/IP (Server), Modbus TCP (Client/Server)
BACnet IP (server), FTP (server), SMTP (client)
OCS360 Cloud Service, WebMI via HTML5, EnvisionRV
USB mini-B
1 each on shared RJ45
Yes
CsCAN
Yes
CANopen, SAEJ1939
Encl. Door or Swing Panel
5.65" / 143.5 mm
7.33" / 186.1 mm
2.08" / 52.9 mm
24VDC (4.6W), 12/24VDC
-10° to 60°C
5 to 95%
UL 50E Type 1, 4x, 12, 12k, 13** (Indoor)

X10 - A, R
512 kB
0.4 mS/K
5000/2048
Yes (32-bit)
(8 loops)
1024 x 600 (touch)
Backlit LCD (300 nits)
250
100
30 (A) & 26 (R)
4 In (500 kHz) & 2 Out
4 In & 2 Out
4-20mA, RTD*/4-20mA
2048/2048/512/512
8-32 relays
via CsCAN base
16 bases x 8 modules
EtherNet/IP (Server), Modbus TCP (Client/Server)
BACnet IP (server), FTP (server), SMTP (client)
OCS360 Cloud Service, WebMI via HTML5, EnvisionRV
USB mini-B
1 each on shared RJ45
Yes
CsCAN
Yes
CANopen, SAEJ1939
Encl. Door or Swing Panel
6.5" / 166.2 mm
10.4" / 263.9 mm
2.2" / 55.8 mm
10-30 VDC (7.4W), 12/24VDC
-10° to 60°C
5 to 95%
UL 50E Type 1, 4x, 12, 12k, 13** (Indoor)



THE BEST VALUE IN AUTOMATION

THE BEST CONTROLLER FOR A SIMPLE MACHINE

Our Micro line represents your best option for controlling a small or medium application in a wide variety of markets, including OEM Machinery, Water/Wastewater, Agriculture, Building Automation, Oil & Gas, Food & Beverage, Packaging and many more.

The Micro line includes several All-in-one Controllers which combine a full logic controller with an operator interface, with most including 26 or 30 points of built-in I/O. These typically install on the door of your enclosure and provide everything you need for machine control and operator interface in the smallest possible package. Not only are these units highly economical and a great value in their own right - but the space reduction they offer lowers your overall system cost.

NEWLY ADDED MODULAR CONTROLLERS

Recently added to the Micro line are our DIN-rail mounted Modular Controller models. Like the All-in-one models, these include powerful logic engines, I/O support and network connectivity - but without an operator interface. Local I/O is either built-in, snapped on, or both. The built-in I/O consists of 34 I/O points including 8 Flexible inputs - configurable (point-by-point) as digital or analog. All of our Modular Controllers also support the direct connection of several OCS-I/O modules for more specialized I/O or higher I/O counts.

ALL-IN-ONE CSCAPE PROGRAMMING SOFTWARE

A true strength of any Horner Automation control product is Cscape - our all-in-one, FREE programming package. Every aspect of your application is handled by the software - including logic (ladder or IEC-61131), screen development, I/O and network configuration, and more. With Cscape controlling your application, you have one program to develop, load and maintain with a single set of variables for your logic, screen, and network.

INDUSTRY LEADING CONNECTIVITY

Unlike some manufacturers who charge you for nearly every communications option in their entry level offering, the Horner Micro line offers the best standard connectivity available in the market. A wide variety of Ethernet/Internet protocols are supported, including those which connect to other machines (Ethernet IP server & HMI) and peripherals (Modbus TCP client/server). And we haven't left off USB for programming, multiple serial ports for connecting to variable frequency drives, stepper/servo drives, bar code scanners and other devices. While ALL the above are included as standard, we also offer optional BACnet IP & MSTP, along with CANopen and J1939.

EASILY ADD RELAYS OR DOZENS OF DIGITAL AND ANALOG I/O

Simple machines often use relays for their load capacity and flexibility. Our Micro Relay expansion modules are an easy, low-cost way to add up to 32 relays. For more comprehensive I/O requirements, all Micro line products support OCS-I/O with up to 16 bases of 8 modules each.



Micro I/O Relay Module
(8 pt)



OCS-I/O Base & Modules

BUILT-IN I/O DETAILS

Model	DC In	DC Out	Rly Out	HS I/O	Analog In			Analog Out	
					mA	mA/RTD	V	mA	V
CPU200	No Built-in I/O								
CPU250	≤16*	10		4/2	≤8* (V/mA)			4	4
X2A	12	12		4/2	4			2	
X2R	12	2	6	4/2	4			2	
X4A	12	12		4/2		4		2	
X4R	12	2	6	4/2		4		2	
X4R-V20	12	2	6	4/2		2	2	2	
X4R-V42	12	2	6	4/2			4		2
X7A	12	12		4/2		4		2	
X7R	12	2	6	4/2		4		2	
X10A	12	12		4/2		4		2	
X10R	12	2	6	4/2		4		2	

*Flexible inputs 9-16 can each be set to 5/12/24V DC In or mA/V Analog In



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