

Cobra 350

Small SCARA robot for precision machining, assembly, and material handling

- Ethernet capability to control the robot through the familiar programming language (IEC 61131-3) of Machine Automation Controller NJ/NX/NY Series
- High repeatability suitable for precision assembly
- High payload for screw-driving tools
- The separate amplifier with a built-in controller minimizes the robot footprint
- Reach 350 mm
- Maximum payload 5 kg
- Weight 20 kg



Specifications

Product name		Cobra	
		Size	350
Cleanroom		Standard	Cleanroom
Model		1720□-13000	1720□-13010
Number of axes		4	
Mounting		table/floor	
Reach		350 mm	
Maximum Payload		5 kg	
Repeatability	XY	±0.015 mm	
	Z	±0.01 mm	
	Theta	±0.005°	
Joint Range	Joint 1	±155°	
	Joint 2	±145°	
	Joint 3	200 mm	
	Joint 4	±360°	
Joint Speeds	Joint 1	720°/s	
	Joint 2	720°/s	
	Joint 3	2000 mm/s	
	Joint 4	2400°/s	
Power Requirements		24 VDC: 6 A 200 to 240 VAC: 10 A, single-phase	
Clean Class		---	Class 10
Protection		IP20	
Environment Requirements	Ambient Temperature	5 to 40°C	
	Humidity Range	5 to 90% (non-condensing)	
Weight		20 kg	
Basic configuration	Controller	eAIB	
	On-board I/O (Input/Output)	12/8	
	Conveyor tracking input	2	
	RS-232C serial communications port	1	
	Programming environment	ACE, PackXpert, ePLC	
	ACE Sight	Yes	
	ePLC Connect	Yes	
ePLC I/O	Yes		
Connectable controller *1		eMotionBlox-40R, SmartController EX, NJ/NX/NY Series *2	

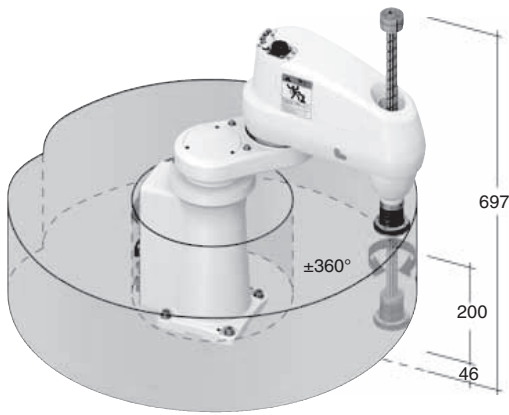
*1. Choose a controller to suit your application.

*2. The robot version 2.3.C or later is required to connect with the NJ/NX/NY Series.

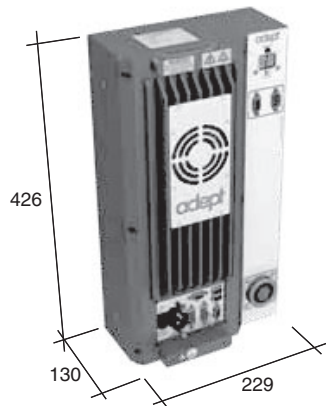
Dimensions

(Unit: mm)

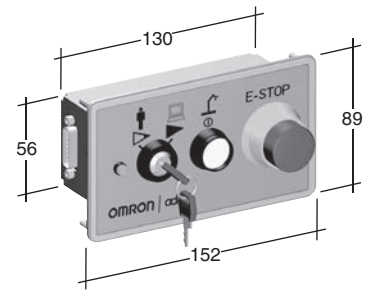
Cobra 350



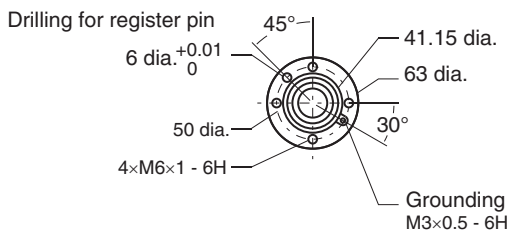
eMotion Blox-40R



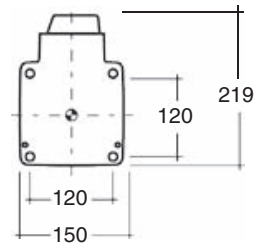
Front panel



Flange



Footprint



Robot Parts Code and Bundled Accessories

Type	Cobra 350		Cobra 350 Add-On		
	Cleanroom	Standard	Cleanroom	Standard	Cleanroom
Cobra 350		17201-13000	17201-13010	17203-13000	17203-13010
Overview	Robot + eMotionBlox amplifier with fully integrated controls			Robot + eMotionBlox + required connection cables	
Purpose	Typical for use in single robot system			Typically added to systems with an existing SmartController EX to create multi-robot systems	
Bundled Accessories	<ul style="list-style-type: none"> XSYS cable with jumpers, 1.8m/6ft (13323-000) Front panel kit (90356-10358) Arm power/signal cable, 4m (05020-000) 			<ul style="list-style-type: none"> XSYS cable with jumpers, 1.8m/6ft (13323-000) XSYS cable, 5m/15 ft (11585-000) DB9 splitter (00411-000) 1394 latch cable, 5m/15 ft (13632-045) eV+ license to connect to controller (14529-103) 	

Protection and Cleanroom Classes

Type	Name	Specifications	Option	Remarks
Parallel Robots	Hornet 565	IP67: arms and platform IP65: underside of robot IP20: topside of robot Class 1000	IP65: topside of robot	The addition of the cable sealing kit raises the IP rating of the topside of the robot to IP65.
	Quattro 650H Quattro 800H	IP67: arms and platform Class 1000	IP65: underside of robot	The addition of the cable sealing kit raises the IP rating of the topside of the robot to IP65.
	Quattro 650HS Quattro 800HS	IP67: arms and platform IP66: robot base Class 1000	---	Mount the Cable Inlet Box (09564-000) on the topside of the robot.
SCARA Robots	Cobra 350	IP20	Class10 Cleanroom model	See pages 14 - 15 for model numbers.
	eCobra 600	IP20	Class10 Cleanroom model	See pages 16 - 17 for model numbers.
	eCobra 800 eCobra 800 Inverted	IP20	IP65, Class10 Cleanroom model	See pages 18 - 21 for model numbers.
Articulated Robots	Viper 650 Viper 850	IP40	IP54: robot main body IP65: robot joints (J4, J5, J6) Class10 Cleanroom model	See pages 22 - 25 for model numbers.

SCARA Robots

Model Number Structure

Cobra350

17 2 0 1 - 1 3 0 0 0

(1) (2) (3) (4) (5) (6) (7) (8)

No.	Item	Symbol	Specifications
(1)	Industrial Robots		
(2)	Performance level	2	Pro
(3)	Version	0	
(4)	Configuration	1	Standard
		3	Add-On
(5)	Robot type	1	Cobra/eCobra
(6)	Size	30	350 mm
(7)	Cleanroom/IP rating	0	Standard
		1	Class 10
(8)	Options	0	None

Type	Model
Cobra 350	17201-13000
Cobra 350 Cleanroom	17201-13010
eCobra 600 Lite	17010-16000
eCobra 600 Standard	17111-16000
eCobra 600 Pro	17211-16000
eCobra 600 Lite Cleanroom	17010-16010
eCobra 600 Standard Cleanroom	17111-16010
eCobra 600 Pro Cleanroom	17211-16010
eCobra 800 Lite	17010-18000
eCobra 800 Standard	17111-18000
eCobra 800 Pro	17211-18000
eCobra 800 Lite Cleanroom	17010-18010
eCobra 800 Standard Cleanroom	17111-18010
eCobra 800 Pro Cleanroom	17211-18010
eCobra 800 Lite IP65	17010-18030
eCobra 800 Standard IP65	17111-18030
eCobra 800 Pro IP65	17211-18030
eCobra 800 Inverted Lite	17010-18400
eCobra 800 Inverted Standard	17111-18400
eCobra 800 Inverted Pro	17211-18400
eCobra 800 Inverted Lite Cleanroom	17010-18410
eCobra 800 Inverted Standard Cleanroom	17111-18410
eCobra 800 Inverted Pro Cleanroom	17211-18410

Note: The purpose of this model number structure is to provide understanding of the meaning of specifications from the model number.
Models are not available for all combinations of code numbers.

eCobra 600/800/800Inverted

17 0 1 0 - 1 6 0 0 0

(1) (2) (3) (4) (5) (6) (7) (8)

No.	Item	Symbol	Specifications
(1)	Industrial Robots		
(2)	Performance level	0	Lite
		1	Standard
		2	Pro
(3)	Version	1	
(4)	Configuration	0	ePLC not supported
		1	Standard
		3	Add-On
(5)	Robot type	1	Cobra/eCobra
(6)	Size	60	600 mm
		80	800 mm
		84	800 mm Inverted
(7)	Cleanroom/IP rating	0	Standard
		1	Class 10
		3	IP65 (not available for 600 mm)
(8)	Options	0	None

Type	Model
eCobra 800 Inverted Lite IP65	17010-18430
eCobra 800 Inverted Standard IP65	17111-18430
eCobra 800 Inverted Pro IP65	17211-18430
Cobra 350 Add-On	17203-13000
Cobra 350 Cleanroom Add-On	17203-13010
eCobra 600 Standard Add-On	17113-16000
eCobra 600 Pro Add-On	17213-16000
eCobra 600 Standard Cleanroom Add-On	17113-16010
eCobra 600 Pro Cleanroom Add-On	17213-16010
eCobra 800 Standard Add-On	17113-18000
eCobra 800 Pro Add-On	17213-18000
eCobra 800 Standard Cleanroom Add-On	17113-18010
eCobra 800 Pro Cleanroom Add-On	17213-18010
eCobra 800 Standard IP65 Add-On	17113-18030
eCobra 800 Pro IP65 Add-On	17213-18030
eCobra 800 Inverted Standard Add-On	17113-18400
eCobra 800 Inverted Pro Add-On	17213-18400
eCobra 800 Inverted Standard Cleanroom Add-On	17113-18410
eCobra 800 Inverted Pro Cleanroom Add-On	17213-18410
eCobra 800 Inverted Standard IP65 Add-On	17113-18430
eCobra 800 Inverted Pro IP65 Add-On	17213-18430

Options

Type	Name/Specifications	Model
Robot Controller	SmartController EX	19300-000
Pendant	T20 Pendant with 10 m Cable	10046-010
	T20 Pendant-Jumper Plug	10048-000
	T20 Pendant Wall Bracket	10079-000
	T20 Adapter Cable, 3 m	10051-003
Sensor Controllers	SmartVision MX	14189-901
Camera	GigE PoE, 640 x 480 dots, 120 fps, Monochrome, CCD (1/4-inch equivalent), 10 m camera cables included	24114-100
	GigE PoE, 640 x 480 dots, 120 fps, Color, CCD (1/4-inch equivalent), 10 m camera cables included	24114-101
	GigE PoE, 1296 x 996 dots, 30 fps, Monochrome, CCD (1/3-inch equivalent), 10 m camera cables included	24114-200
	GigE PoE, 1296 x 996 dots, 30 fps, Color, CCD (1/3-inch equivalent), 10 m camera cables included	24114-201
	GigE PoE, 1600 x 1200 dots, 60 fps, Monochrome, CMOS (1/1.8-inch equivalent), 10 m camera cables included	24114-250
	GigE PoE, 2048 x 2048 dots, 25 fps, Monochrome, CMOS (1-inch equivalent), 10 m camera cables included	24114-300
Belt Encoder (Conveyor-Tracking)	Encoder Kit IP65	09742-001
	Y-Adapter Cable, 3 m	09443-000
	Encoder Extension Cable, 5 m	09446-050
	SCEX-BELT,Y-Adapter Cable, 0.5 m	09550-000
	XBELTIO Cable, 0.6 m	13463-000
Additional I/O Options	IO Blox (connect to robot), 8 inputs/8 outputs, 0.3 m cables included	90356-30200
	IO Block (connect to previous IO Blox), 8 inputs/8 outputs, 0.3 m cables included	90356-30100
	IO Blox-to-robot Cable, 3 m	04679-030
	IO Blox-to-IO Blox Cable, 0.3 m	04679-003
	IO Blox-to-IO Blox Cable, 3 m	04677-030
	Termination Block, 12inputs/8 outputs, cables included (1.8 m)	90356-40100
Front panel	XIO, 12 inputs/8 outputs, 1.8 m cables included	90356-10358
	Front Panel Cable, 3 m	10356-10500
Power Supply/Cable	AC Power Cable, 5 m	04118-000
	24 VDC Power Cable, 5 m	04120-000
	24 VDC, 6.5 A, 150 W (Front Mounting), Power Supply	S8FS-G15024C *1
	24 VDC, 6.5 A, 150 W (DIN-Rail Mounting), Power Supply	S8FS-G15024CD *1
	1394 Cable, 4.5m	13632-045
	eAIB XSYSTEM Cable Assembly, 1.8 m	13323-000
	DB9 Splitter, 0.3 m	00411-000
	eAIB XSYS Cable, 4.5 m	11585-000
	Ethernet Cable	XS6W-6LSZH8SS□□□CM-Y *2
Industrial Switching Hubs	W4S1-05C *3	
Solenoid Valve Kit	eCobra robots	02853-000
Cable Seal Kit	Hornet 565 IP65/67, Quattro 650HS IP65/67, Quattro 800HS IP65/67	08765-000
	Quattro 650HS Standard/Quattro 800HS Standard	09564-000
	eCobra 800 IP65/67	04813-000
	eCobra 800 Inverted IP65	09073-000
ACE License	Automation Control Environment (ACE)	Please download it from following URL: http://www.adept.com/Robots-Tool
	ACE PackXpert	09187-000
	ACE Sight Vision Software	01056-030
	ACE PackXpert with ACE Sight Vision This license contains an ACE PackXpert license and an ACE Sight license.	09187-010

Type	Name/Specifications	Model
Related Products	Machine Automation Controller NJ/NX/NY Series	NJ/NX/NY *4
	Automation Software Sysmac Studio	SYSMAC-SE2□□□ *4
	Collection of software functional components Sysmac Library Adept Robot Control Library	SYSMAC-XR009 *5

*1. Refer to the S8FS-G Switch Mode Power Supply DATASHEET (Cat.No.T207) for details.

*2. Refer to the Industrial Ethernet Cables Catalog (Cat.No.G019) for details.

*3. Refer to the Industrial Switching Hubs Catalog (Cat.No.V227) for details.

*4. Refer to your OMRON website for details.

*5. Refer to the Sysmac Library Catalog (Cat.No.P106) for details.