

# i4-650H/750H/850H EtherCAT (NJ501-R) version

## New i4H robot for precision machining, assembly, and material handling

- EtherCAT connectivity to the Omron NJ501-R controller and programming through the familiar IEC 61131-3 programming language or scripting (eV+).
- Simple integration with EtherCAT controller integrated into the robot base.
- Easy to service with high visibility, multi-colored light ring and display to show the robot status
- Reach Options: 650 mm, 750 mm, 850 mm
- Weight 650: 50.4 kg ; 750: 50.9 kg ; 850: 51.6 kg



## Specifications

Product		i4-650H		i4-750H		i4-850H	
Type		Standard		Standard		Standard	
Quill Length (mm)		210 mm	410 mm	210 mm	410 mm	210 mm	410 mm
Part Number		RS4-2066502	RS4-2066504	RS4-2067502	RS4-2067504	RS4-2068502	RS4-2068504
Number of axes		4					
Mounting		Table					
Reach (mm)		650		750		850	
Maximum Payload (kg)		15					
Repeatability	XY (mm)	±0.015					
	Z (mm)	±0.01					
	Theta (deg)	±0.005					
Joint Range	Joint 1 (deg)	±152					
	Joint 2 (deg)	±140					
	Joint 3 (mm)	210 mm (Standard Quill), 410 mm (Long Quill)					
	Joint 4 (deg)	±360					
Inertia Moment (Max.)	Joint 4 (kg m2)	0.5					
Maximum push force - vertical	Joint 3 (N)	588, 3 s on, 2 s off					
Joint Speeds	Joint 1 (deg/s)	450					
	Joint 2 (deg/s)	720					
	Joint 3 (mm/s)	1583					
	Joint 4 (deg/s)	2400					
Cycle times *1	Burst (s)	0.41		0.39		0.39	
	Sustained (s)	0.45		0.46		0.50	
	Blended Burst (s) *2	0.32		0.31		0.31	
Power Requirements		24 VDC: 8 A (max) 200 to 240 VAC: 12.0 A (max)					
Protection		IP20 / NEMA Type 1					
Environment Requirements	Ambient Temperature	5 to 40°C					
	Humidity Range	5 to 90% non-condensing					
Weight (kg)		50.4		50.9		51.6	
Basic Configuration	Controller	iCS-ECAT					
	On-board I/O	12 inputs / 8 outputs					
	End of Arm EtherCAT Connection	1					
	Pneumatic connections	4x 6 mm pneumatic connectors					
	Conveyor tracking input	2					
	RS-232C serial comm port	1					
	Programming	Sysmac Studio 64-bit					
	Vision Manager	Yes					
Pack Manager	Yes						
Connectable Controller		Omron NJ501-R Series					

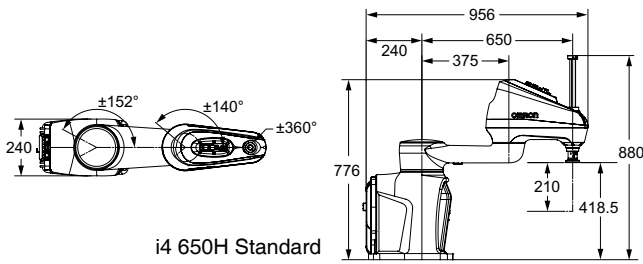
\*1. Adept cycle, in mm 25/305/25 (seconds, at 20°C ambient) with 2.0 kg payload

\*2. Fast cycle, in mm (25/305/25) (seconds, at 20°C ambient) with 2.0 kg payload but with arc motion

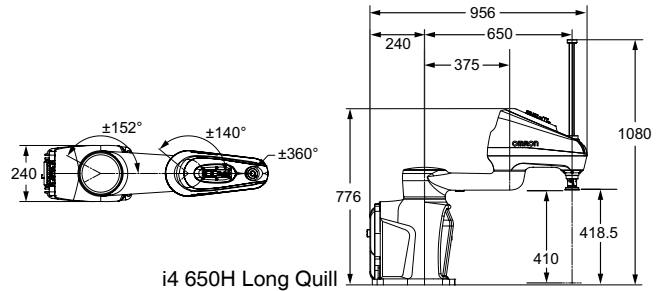
# Dimensions

(Unit: mm)

## i4 650 H Dimensions

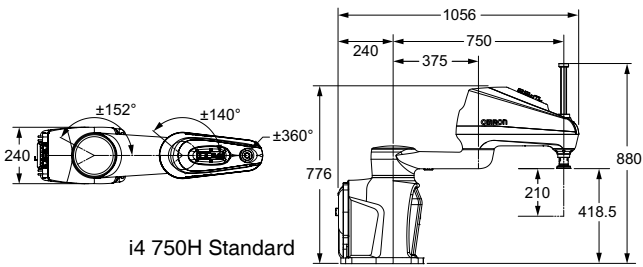


i4 650H Standard

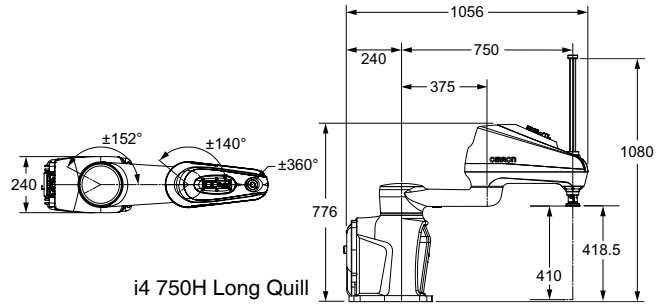


i4 650H Long Quill

## i4 750H Dimensions

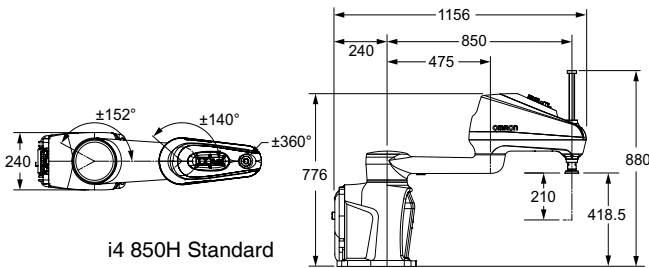


i4 750H Standard

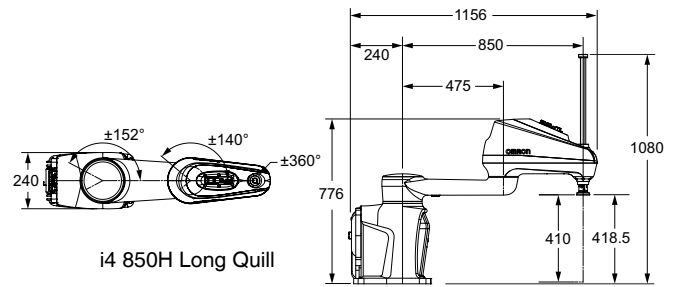


i4 750H Long Quill

## i4 850H Dimensions



i4 850H Standard

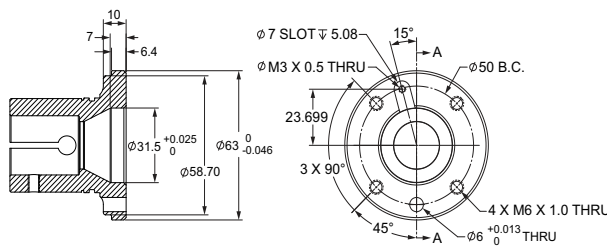


i4 850H Long Quill

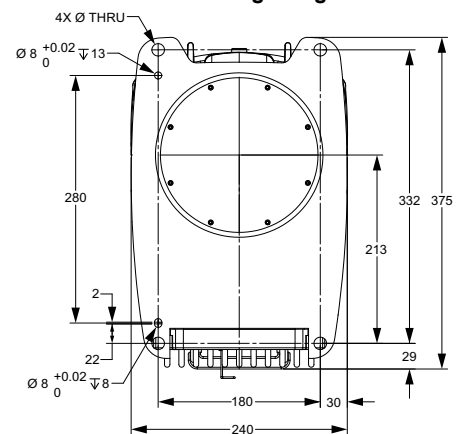
## Front Panel



## Tool Flange



## Mounting Flange



# Robot Parts Code and Bundled Accessories

Product	i4-650H		i4-750H		i4-850H	
Type	Standard		Standard		Standard	
Quill Length	210 mm	410 mm	210 mm	410 mm	210 mm	410 mm
Overview	SCARA Robot Arm + Integrated iCS ECAT Controller					
Bundled Accessories	XSYSTEM cable with jumpers, and Ethernet Management port, 1.8 m/6 ft (13323-100) Front Panel Kit (92546-10358)					
Optional Accessories	Plate, eCobra Adapter (Allows i4H to be mounting with eCobra mount hole pattern) (21636-100) Camera Bracket Mount (18908-000)					

# i4-650H/750H/850H Inverted

EtherCAT (NJ501-R) version

## New i4H robot for precision machining, assembly, and material handling

- EtherCAT connectivity to the Omron NJ501-R controller and programming through the familiar IEC 61131-3 programming language or scripting (eV+).
- Easy to service with high visibility, multi-colored light ring and display to show the robot status
- Reach Options: 650 mm, 750 mm, 850 mm
- Weight 650: 50.4 kg ; 750: 50.9 kg ; 850: 51.6 kg



## Specifications

Product		i4-650H		i4-750H		i4-850H	
Type		Inverted		Inverted		Inverted	
Quill Length (mm)		210 mm	410 mm	210 mm	410 mm	210 mm	410 mm
Part Number		RS4-2066702	RS4-2066704	RS4-2067702	RS4-2067704	RS4-2068702	RS4-2068704
Number of axes		4					
Mounting		Ceiling					
Reach (mm)		650		750		850	
Maximum Payload (kg)		15					
Repeatability	XY (mm)	±0.015					
	Z (mm)	±0.01					
	Theta (deg)	±0.005					
Joint Range	Joint 1 (deg)	±152					
	Joint 2 (deg)	±140					
	Joint 3 (mm)	210 mm (Standard Quill), 410 mm (Long Quill)					
	Joint 4 (deg)	±360					
Inertia Moment (Max.)	Joint 4 (kg m <sup>2</sup> )	0.5					
Maximum push force - vertical	Joint 3 (N)	588, 3 s on, 2 s off					
Joint Speeds	Joint 1 (deg/s)	450					
	Joint 2 (deg/s)	720					
	Joint 3 (mm/s)	1583					
	Joint 4 (deg/s)	2400					
Cycle times *1	Burst (s)	0.41		0.39		0.39	
	Sustained (s)	0.45		0.46		0.50	
	Blended Burst (s) *2	0.32		0.31		0.31	
Power Requirements		24 VDC: 8 A (max) 200 to 240 VAC: 12 A (max)					
Protection		IP20 / NEMA Type 1					
Environment Requirements	Ambient Temperature	5 to 40°C					
	Humidity Range	5 to 90% non-condensing					
Weight (kg)		50.4		50.9		51.6	
Basic Configuration	Controller	iCS-ECAT					
	On-board I/O	12 inputs / 8 outputs					
	End of Arm EtherCAT Connection	1					
	Pneumatic pass-through connections	4x 6 mm pneumatic connectors					
	Conveyor tracking input	2					
	RS-232C serial comm port	1					
	Programming Environment	Sysmac Studio 64-bit					
	Vision Manager	Yes					
Pack Manager	Yes						
Connectable Controller		Omron NJ501-R Series					

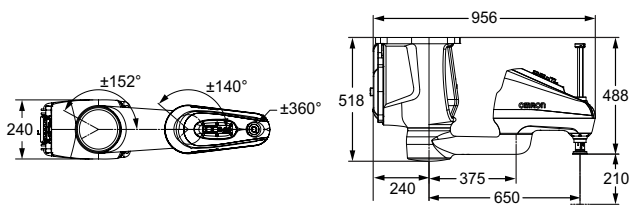
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\*2. Fast cycle, in mm (25/305/25) (seconds, at 20°C ambient) with 2.0 kg payload but with arc motion

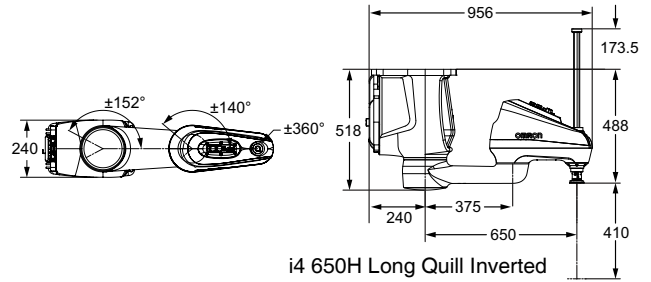
# Dimensions

(Unit: mm)

## i4 650 H Dimensions

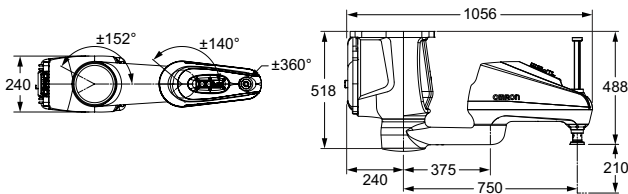


i4 650H Standard Inverted

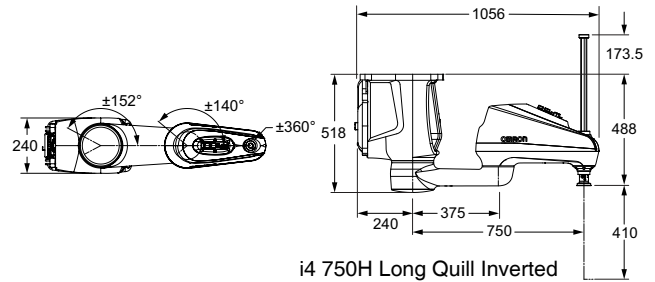


i4 650H Long Quill Inverted

## i4 750H Dimensions

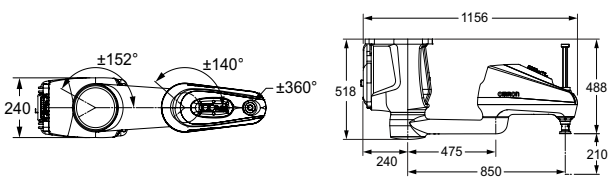


i4 750H Standard Inverted

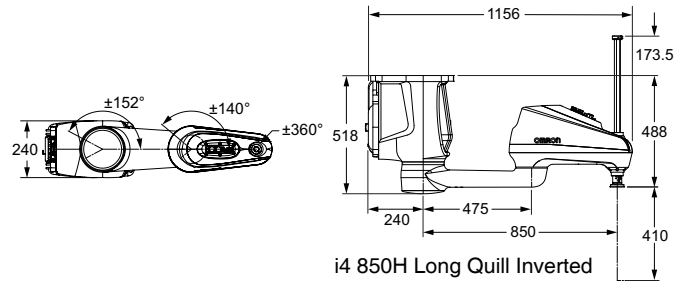


i4 750H Long Quill Inverted

## i4 850H Dimensions



i4 850H Standard Inverted

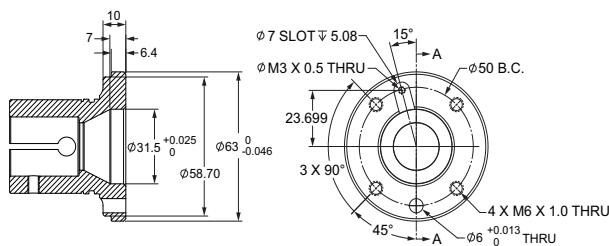


i4 850H Long Quill Inverted

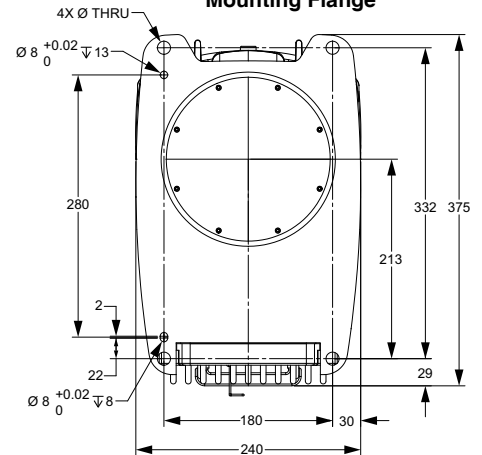
## Front Panel



## Tool Flange



## Mounting Flange



# Robot Parts Code and Bundled Accessories

Product	i4-650H		i4-750H		i4-850H	
Type	Inverted		Inverted		Inverted	
Quill Length	210 mm	410 mm	210 mm	410 mm	210 mm	410 mm
Interface Panel Orientation	Rear Panel	Bottom Panel	Rear Panel	Bottom Panel	Rear Panel	Bottom Panel
Part Number	RS4-2066702	RS4-2066704	RS4-2067702	RS4-2067704	RS4-2068702	RS4-2068704
Overview	SCARA Robot Arm + Integrated iCS ECAT Controller					
Bundled Accessories	XSYSTEM cable with jumpers, and Ethernet Management port, 1.8 m/6 ft (13323-100) Front Panel Kit (92546-10358)					
Optional Accessories	Plate, eCobra Adapter (Allows i4H to be mounting with eCobra mount hole pattern) (21636-100) Camera Bracket Mount (18908-000)					