

Hanwha Robotics

HCR Series Specification

		HCR-3	HCR-5	HCR-12	
Degrees of freedom		6 rotating joints	6 rotating joints	6 rotating joints	
Weight (excl. cable)		13kg (28.5lb)	21kg(46.3lb)	53kg (116lb)	
Payload		3kg (6.6lb)	5kg (11lb)	12kg (26.5lb)	
Reach		630mm (24.8in)	915mm (36in)	1300mm (51.2in)	
Joint ranges	J1	± 360°	± 360°	± 180°	
	J2	± 360°	± 360°	-165° ~ +135°	
	J3	± 160°	± 165°	-85° ~ +245°	
	J4	± 360°	± 360°	± 190°	
	J5	± 360°	± 360°	± 170°	
	J6	Infinite	± 360°	± 360°	
Joint Speed	J1	Max 180°/sec	Max 178°/sec	Max 130°/sec	
	J2	Max 180°/sec	Max 178°/sec	Max 130°/sec	
	J3	Max 180°/sec	Max 178°/sec	Max 200°/sec	
	J4	Max 360°/sec	Max 180°/sec	Max 200°/sec	
	J5	Max 360°/sec	Max 180°/sec	Max 200°/sec	
	J6	Max 360°/sec	Max 180°/sec	Max 200°/sec	
Robot Body	Linear Speed (Typical)	1m/s (39.4 in/s)	1m/s (39.4 in/s)	1m/s (39.4 in/s)	
	Repeatability	±0.1mm (±0.0039 in)	±0.1mm (±0.0039 in)	±0.1mm (±0.0039 in)	
	IP Classification	IP64	IP54	IP54	
	Flange	ISO 9409-1:2004 [Type 50-4-M6]	ISO 9409-1:2004 [Type 50-4-M6]	ISO 9409-1:2004 [Type 50-4-M6]	
	Digital I/O	Digital In	2 (PNP)	4 (PNP)	4 (PNP)
		Digital Out	2 (NPN)	4 (NPN)	4 (NPN)
	Analog I/O	Analog In	2	2	2
		DC	12V or 24V, 1.6A (continuous)	12V or 24V, 1.6A (continuous)	12V or 24V, 1.6A (continuous)
		EtherCAT	N/A	1	1
	Mounting Position	Floor, Wall, Ceiling	Floor, Wall, Ceiling	Floor, Ceiling	
	Material	Aluminum(Link, Cover), Plastic(Seal, LED)	Aluminum(Link, Cover), Plastic(Seal, LED)	Aluminum(Link, Cover), Plastic(LED)	
	Footprint	Ø128 mm	Ø150 mm	220mm x 227mm	
	Cable Length (Body-Controller)	6m (integrated)	6m (integrated)	6m (separable)	
	Etc.		Cleanroom Certification : ISO Class 2 according to ISO 14644-1		

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Controller	Box size(WxHxD)	450 mm x 560 mm x 223 mm	450 mm x 560 mm x 223 mm	450 mm x 560 mm x 223 mm	
	Weight	20kg	20kg	21kg	
	Emergency	1ch (dual)	1ch (dual)	1ch (dual)	
		Safety	4ch	4ch	4ch
	Remote Power On	Yes	Yes	Yes	
	I/O Ports	Digital In	16 (PNP) * including 8 flexible inputs for safety	16 (PNP) * including 8 flexible inputs for safety	16 (PNP) * including 8 flexible inputs for safety
		Digital Out	16 (PNP, <200mA per chl, 2A max) * including 8 flexible outputs for safety	16 (PNP, <200mA per chl, 2A max) * including 8 flexible outputs for safety	16 (PNP, <200mA per chl, 2A max) * including 8 flexible outputs for safety
		Analog In	2	2	2
		USB 2.0	1EA	1EA	1EA
	Communication	Ethernet (RJ-45)	1Gbps 1EA	1Gbps 1EA	1Gbps 1EA
		TCP/IP	Yes	Yes	Yes
		Mobus/TCP	Yes	Yes	Yes
	IP Classification	IP20	IP20	IP20	
	Power Supply	100-240 VAC, 50-60Hz (1kW)	100-240 VAC, 50-60Hz (1kW)	100-240 VAC, 50-60Hz (2kW)	
Etc.		Cleanroom Certification : ISO Class 5 according ISO 14644-1			
T/P	Size	343mm x 270mm x 81mm	343mm x 270mm x 81mm	343mm x 270mm x 81mm	
	Display Size	12 inch	12 inch	12 inch	
	Weight	1.8kg (excl. cable)	1.8kg (excl. cable)	1.8kg (excl. cable)	
	Communication	USB 2.0 1EA	USB 2.0 1EA	USB 2.0 1EA	
	Cable Length (TP-Controller)	4.5m	4.5m	4.5m	
	Noise	<80dB (peak)	<80dB (peak)	<80dB (LAeq)	
Ambient Temperature	0 °C ~ 50 °C	0 °C ~ 50 °C	0 °C ~ 45 °C		
Humidity	-	RH 20% ~ RH 80%	RH 20% ~ RH 80%		
Safety	EN ISO 13849-1 Cat.3, PL d EN ISO 10218-1, CE MD, KCs	EN ISO 13849-1 Cat.3, PL d EN ISO 10218-1, CE MD, KCs	EN ISO 13849-1 Cat.3, PL d EN ISO 10218-1, CE MD, KCs		



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