



HARMONIC ROBOT JOINT MODULES

AHM Series | Mid-Size Harmonic Joint Modules

Mid-size harmonic platforms for robot arms, collaborative robots and general integrated motion axes.

PLATFORM SELECTION

Platform	Motor Ø (mm)	Module Ø (mm)	Available Ratios	Peak Torque Range (Nm)	Rated Power (W)	Weight — No Brake (kg)	Communication
AHM-050-070	50	70	51 / 81 / 101	23 — 34	85	0.66	CAN / EtherCAT
AHM-060-070	60	70	51 / 81 / 101 / 121	42 — 66	230	0.73	CAN / EtherCAT
AHM-060-080	60	80	51 / 81 / 101 / 121	42 — 66	230	1.03	CAN / EtherCAT
AHM-070-080	70	80	51 / 81 / 101 / 121	69 — 108	340	0.9	CAN / EtherCAT
AHM-070-090	70	90	51 / 81 / 101 / 121	69 — 108	340	1.27	CAN / EtherCAT

MODEL CONFIGURATION

Base model: AHM-[motor diameter]-[module diameter]-R[ratio]. Add B for brake, 2E for dual encoder, and EC for EtherCAT where required. Final suffixes are confirmed against the project configuration before ordering.



HARMONIC ROBOT JOINT MODULES

AHM-050-070 | Harmonic Joint Module Specification

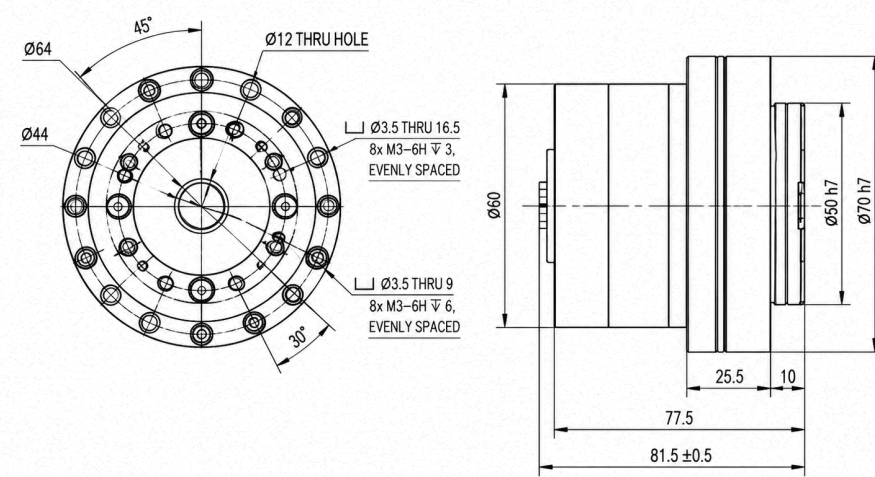
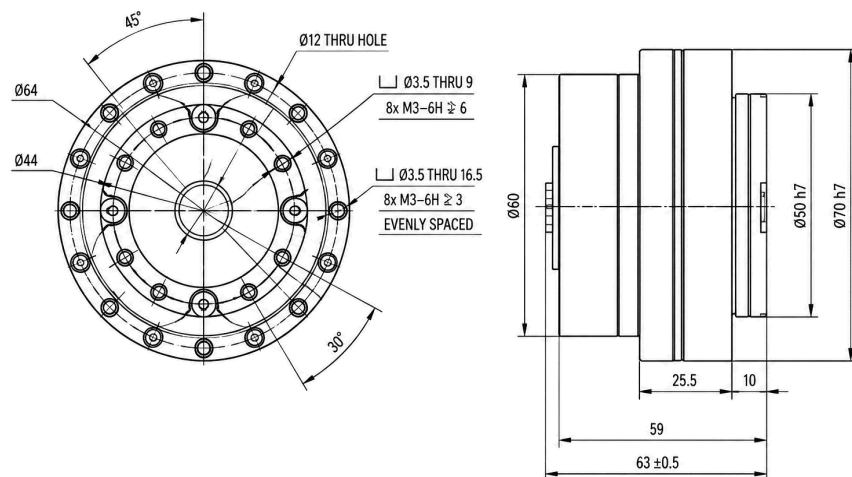
PRODUCT PLATFORM

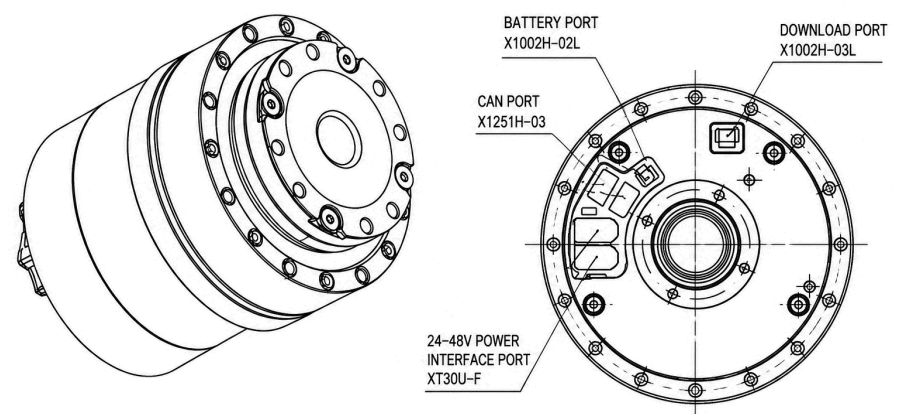
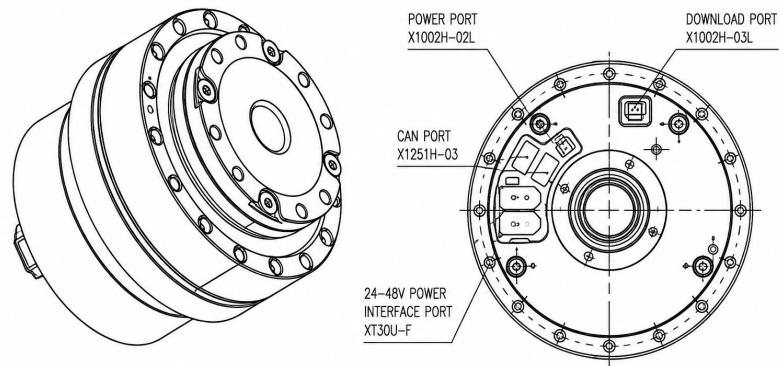
ARTUS PLATFORM	AHM-050-070
3 RATIO OPTIONS	Ø70 mm 23–34 Nm PEAK TORQUE CAN / EtherCAT

Parameter	Unit	AHM-050-070-R51	AHM-050-070-R81	AHM-050-070-R101
Reduction Ratio	:1	51	81	101
Start / Stop Peak Torque	Nm	23	29	34
Max. Average Load Torque — Robot	Nm	8.6	13.5	13.5
Rated Torque at 2000 rpm / Ratio — Industrial	Nm	6.6	9.6	9.6
Output Peak Speed	rpm	97	61	49
Rated Speed at 1/2 Rated Torque	rpm	75	46	37
Backlash	arcsec	20	20	10
Rated Power	W	85	85	85
Supply Voltage	VDC	24–48	24–48	24–48
Encoder Resolution	bit	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional

Communication	—	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT
Brake Torque — No Brake / Brake	Nm	0 / 0.3	0 / 0.3	0 / 0.3
Torsional Stiffness	10 ⁴ N/rad	0.32	0.45	0.45
Allowable Radial Load	kN	8.6	8.6	8.6
Allowable Axial Load	kN	19.55	19.55	19.55
Allowable Bending Moment	Nm	74	74	74
Length — No Brake / Brake	mm	63±0.5 / 81.5±0.5	63±0.5 / 81.5±0.5	63±0.5 / 81.5±0.5
Through Bore	mm	12	12	12
Weight — No Brake / Brake	kg	0.66 / 0.78	0.66 / 0.78	0.66 / 0.78
Inertia — No Brake / Brake	g·cm ²	158.8 / 228.8	158.8 / 228.8	158.8 / 228.8

DIMENSIONAL DRAWINGS — STANDARD / BRAKE CONFIGURATION





Operating environment: -40 to 70°C extreme working range; -10 to 45°C general use; -30 to 60°C storage. Indoor use, no condensation, dust, corrosive or flammable gas, oil mist, or direct sunlight.



HARMONIC ROBOT JOINT MODULES

AHM-060-070 | Harmonic Joint Module Specification

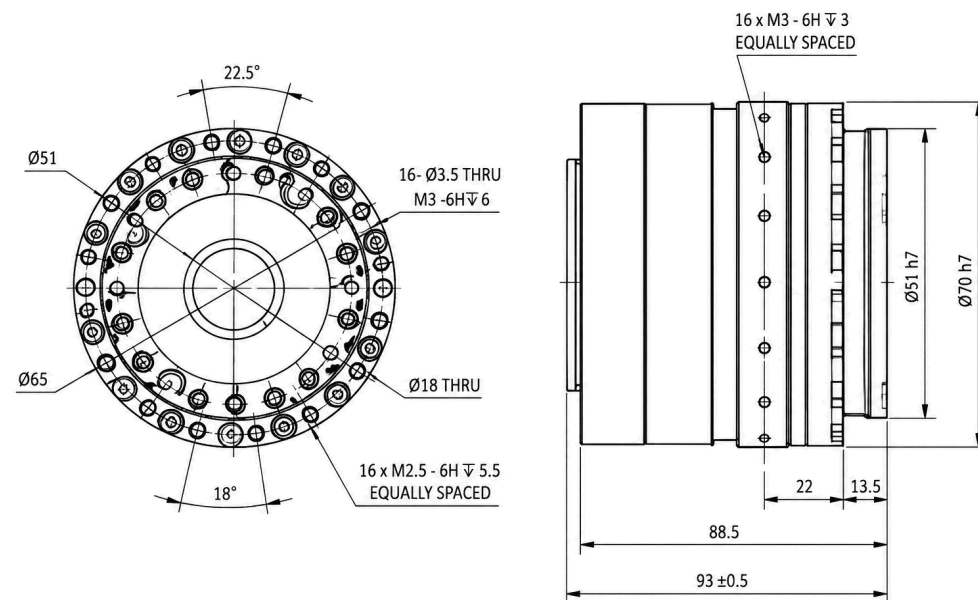
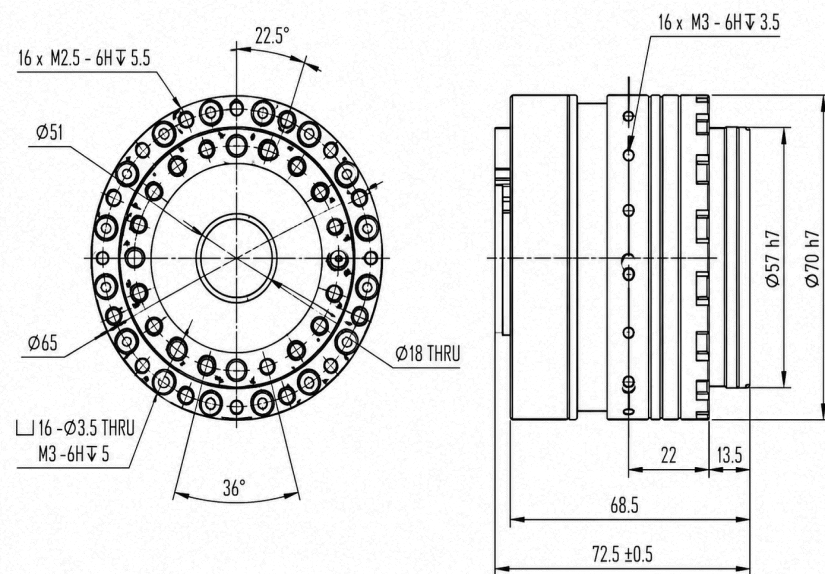
PRODUCT PLATFORM

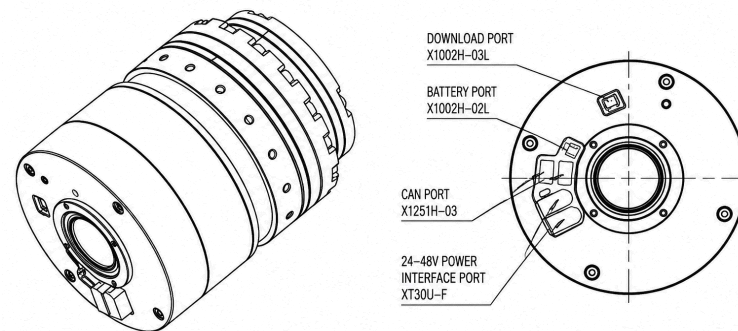
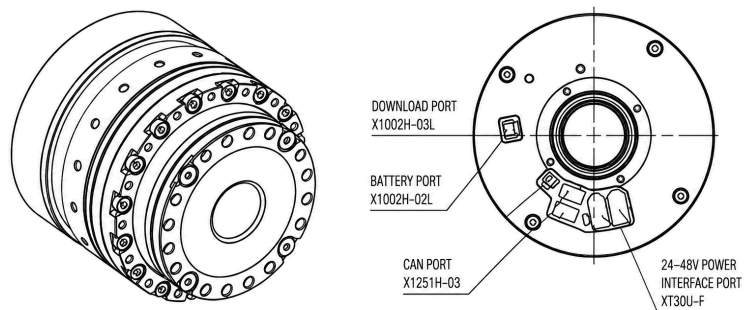
ARTUS PLATFORM	AHM-060-070
4 RATIO OPTIONS	Ø70 mm 42–66 Nm PEAK TORQUE CAN / EtherCAT

Parameter	Unit	AHM-060-070-R51	AHM-060-070-R81	AHM-060-070-R101	AHM-060-070-R121
Reduction Ratio	:1	51	81	101	121
Start / Stop Peak Torque	Nm	42	53	66	66
Max. Average Load Torque — Robot	Nm	32	33	49	49
Rated Torque at 2000 rpm / Ratio — Industrial	Nm	19.8	27.5	30	30
Output Peak Speed	rpm	82	51	41	32
Rated Speed at 1/2 Rated Torque	rpm	68	43	34	24
Backlash	arcsec	20	20	10	10
Rated Power	W	230	230	230	230
Supply Voltage	VDC	24–48	24–48	24–48	24–48
Encoder Resolution	bit	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional
Communication	—	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT
Brake Torque — No Brake / Brake	Nm	0 / 1	0 / 1	0 / 1	0 / 1
Torsional Stiffness	10 ⁴ N/rad	0.77	0.95	0.95	0.95
Allowable Radial Load	kN	8.4	8.4	8.4	8.4
Allowable Axial Load	kN	19.1	19.1	19.1	19.1

Allowable Bending Moment	Nm	218	218	218	218
Length — No Brake / Brake	mm	72.5±0.5 / 93±0.5	72.5±0.5 / 93±0.5	72.5±0.5 / 93±0.5	72.5±0.5 / 93±0.5
Through Bore	mm	18	18	18	18
Weight — No Brake / Brake	kg	0.73 / 0.8	0.73 / 0.8	0.73 / 0.8	0.73 / 0.8
Inertia — No Brake / Brake	g·cm ²	394.8 / 492	394.8 / 492	394.8 / 492	394.8 / 492

DIMENSIONAL DRAWINGS — STANDARD / BRAKE CONFIGURATION





Operating environment: -40 to 70°C extreme working range; -10 to 45°C general use; -30 to 60°C storage. Indoor use, no condensation, dust, corrosive or flammable gas, oil mist, or direct sunlight.



HARMONIC ROBOT JOINT MODULES

AHM-060-080 | Harmonic Joint Module Specification

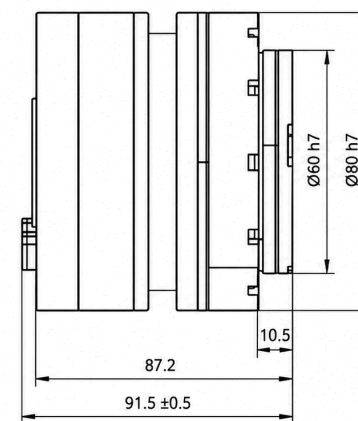
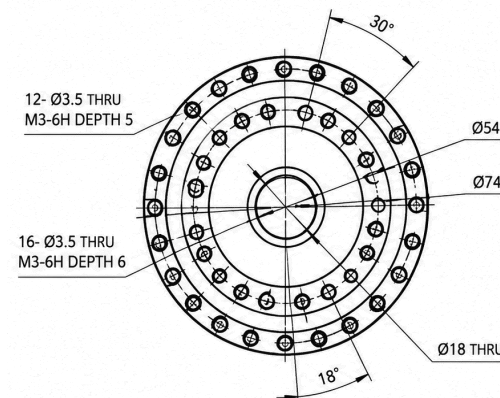
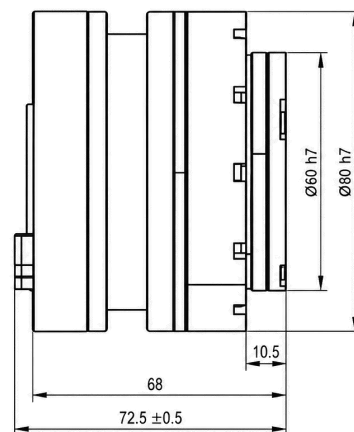
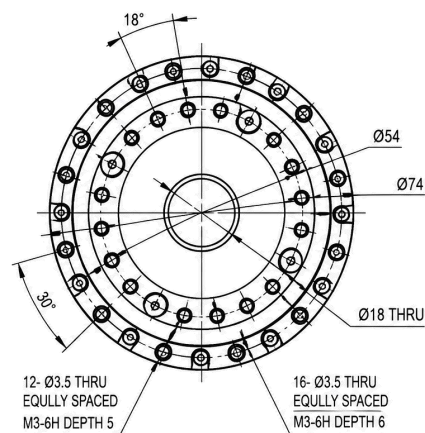
PRODUCT PLATFORM

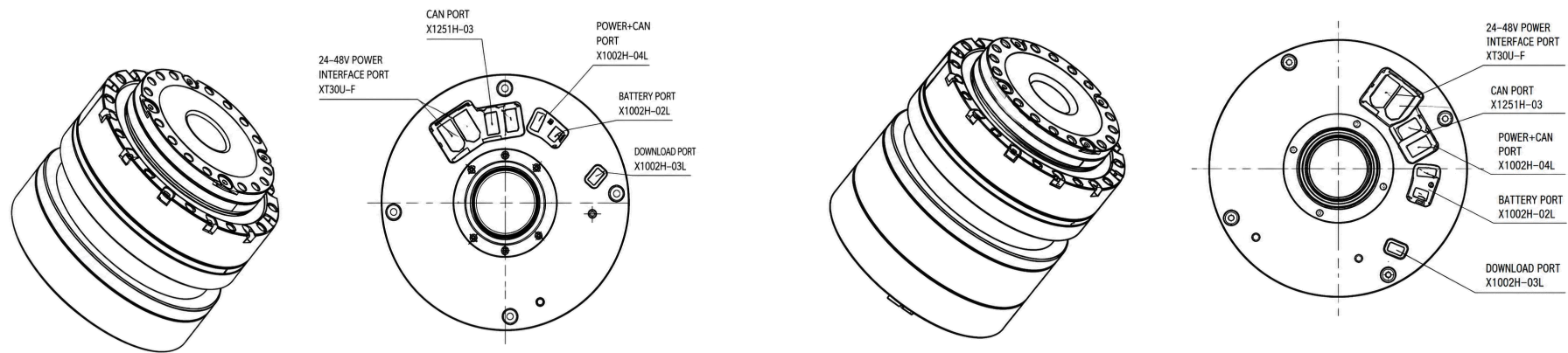
ARTUS PLATFORM	AHM-060-080
4 RATIO OPTIONS	Ø80 mm 42–66 Nm PEAK TORQUE CAN / EtherCAT

Parameter	Unit	AHM-060-080-R51	AHM-060-080-R81	AHM-060-080-R101	AHM-060-080-R121
Reduction Ratio	:1	51	81	101	121
Start / Stop Peak Torque	Nm	42	53	66	66
Max. Average Load Torque — Robot	Nm	32	33	49	49
Rated Torque at 2000 rpm / Ratio — Industrial	Nm	19.8	27.5	30	30
Output Peak Speed	rpm	82	51	41	32
Rated Speed at 1/2 Rated Torque	rpm	68	43	34	24
Backlash	arcsec	20	20	10	10
Rated Power	W	230	230	230	230
Supply Voltage	VDC	24–48	24–48	24–48	24–48
Encoder Resolution	bit	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional
Communication	—	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT
Brake Torque — No Brake / Brake	Nm	0 / 1	0 / 1	0 / 1	0 / 1
Torsional Stiffness	10 ⁴ N/rad	0.77	0.95	0.95	0.95
Allowable Radial Load	kN	16.3	16.3	16.3	16.3
Allowable Axial Load	kN	37.05	37.05	37.05	37.05

Allowable Bending Moment	Nm	124	124	124	124
Length — No Brake / Brake	mm	72.5±0.5 / 91.5±0.5	72.5±0.5 / 91.5±0.5	72.5±0.5 / 91.5±0.5	72.5±0.5 / 91.5±0.5
Through Bore	mm	18	18	18	18
Weight — No Brake / Brake	kg	1.03 / 1.2	1.03 / 1.2	1.03 / 1.2	1.03 / 1.2
Inertia — No Brake / Brake	g·cm ²	394.8 / 492	394.8 / 492	394.8 / 492	394.8 / 492

DIMENSIONAL DRAWINGS — STANDARD / BRAKE CONFIGURATION





Operating environment: -40 to 70°C extreme working range; -10 to 45°C general use; -30 to 60°C storage. Indoor use, no condensation, dust, corrosive or flammable gas, oil mist, or direct sunlight.



HARMONIC ROBOT JOINT MODULES

AHM-070-080 | Harmonic Joint Module Specification

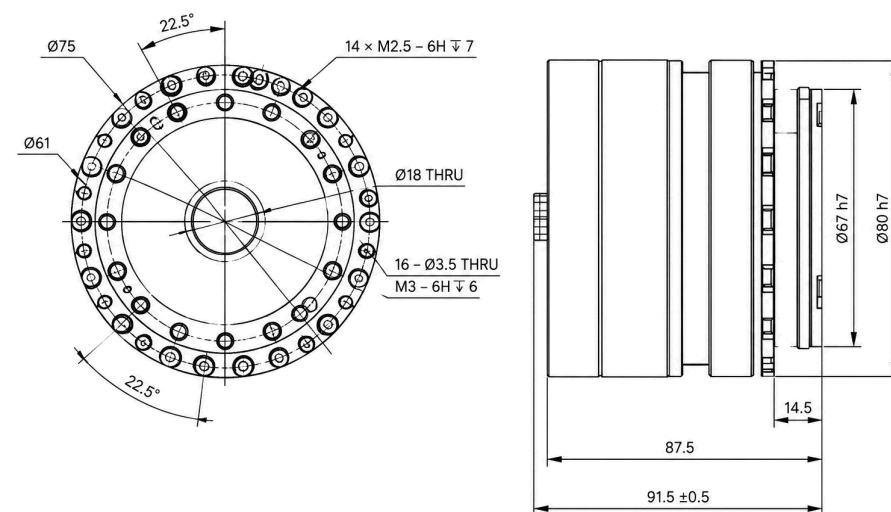
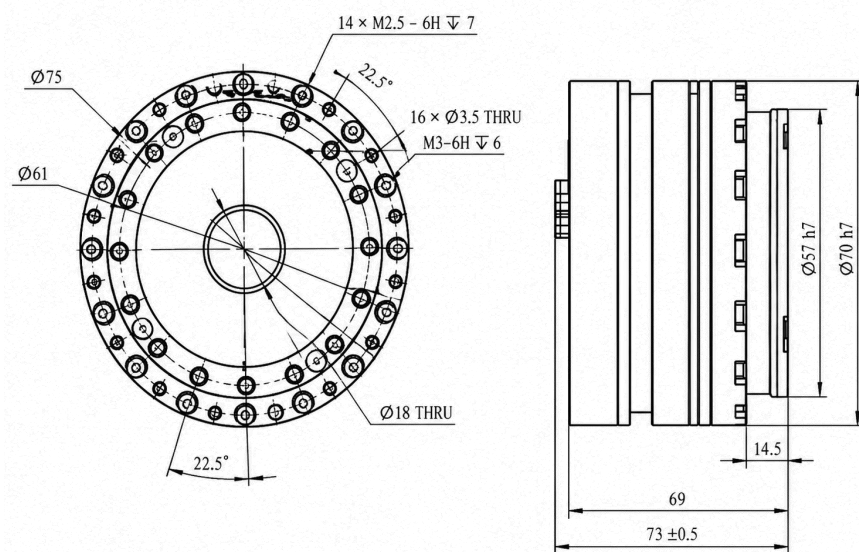
PRODUCT PLATFORM

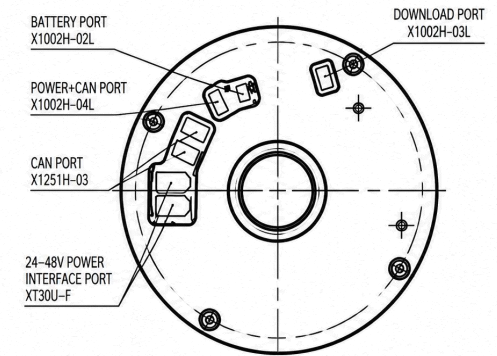
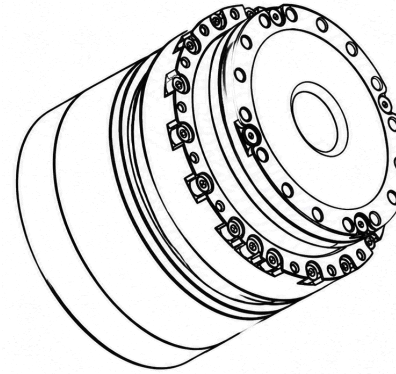
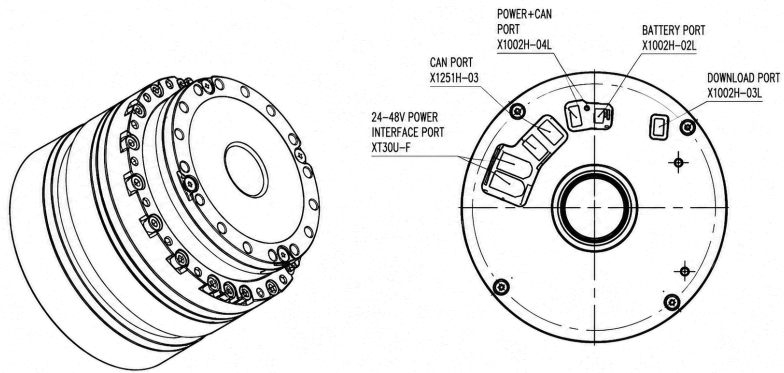
ARTUS PLATFORM	AHM-070-080
4 RATIO OPTIONS	Ø80 mm 69–108 Nm PEAK TORQUE CAN / EtherCAT

Parameter	Unit	AHM-070-080-R51	AHM-070-080-R81	AHM-070-080-R101	AHM-070-080-R121
Reduction Ratio	:1	51	81	101	121
Start / Stop Peak Torque	Nm	69	91	102	108
Max. Average Load Torque — Robot	Nm	42	58	61	61
Rated Torque at 2000 rpm / Ratio — Industrial	Nm	32	42	50	50
Output Peak Speed	rpm	77	48	40	30
Rated Speed at 1/2 Rated Torque	rpm	61	38	30	25
Backlash	arcsec	20	20	10	10
Rated Power	W	340	340	340	340
Supply Voltage	VDC	24–48	24–48	24–48	24–48
Encoder Resolution	bit	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional
Communication	—	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT
Brake Torque — No Brake / Brake	Nm	0 / 1	0 / 1	0 / 1	0 / 1
Torsional Stiffness	10 ⁴ N/rad	1.24	1.52	1.52	1.52
Allowable Radial Load	kN	10.42	10.42	10.42	10.42
Allowable Axial Load	kN	23.68	23.68	23.68	23.68

Allowable Bending Moment	Nm	320	320	320	320
Length — No Brake / Brake	mm	73±0.5 / 91.5±0.5	73±0.5 / 91.5±0.5	73±0.5 / 91.5±0.5	73±0.5 / 91.5±0.5
Through Bore	mm	18	18	18	18
Weight — No Brake / Brake	kg	0.9 / 1.11	0.9 / 1.11	0.9 / 1.11	0.9 / 1.11
Inertia — No Brake / Brake	g·cm ²	596.4 / 746.7	596.4 / 746.7	596.4 / 746.7	596.4 / 746.7

DIMENSIONAL DRAWINGS — STANDARD / BRAKE CONFIGURATION





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HARMONIC ROBOT JOINT MODULES

AHM-070-090 | Harmonic Joint Module Specification

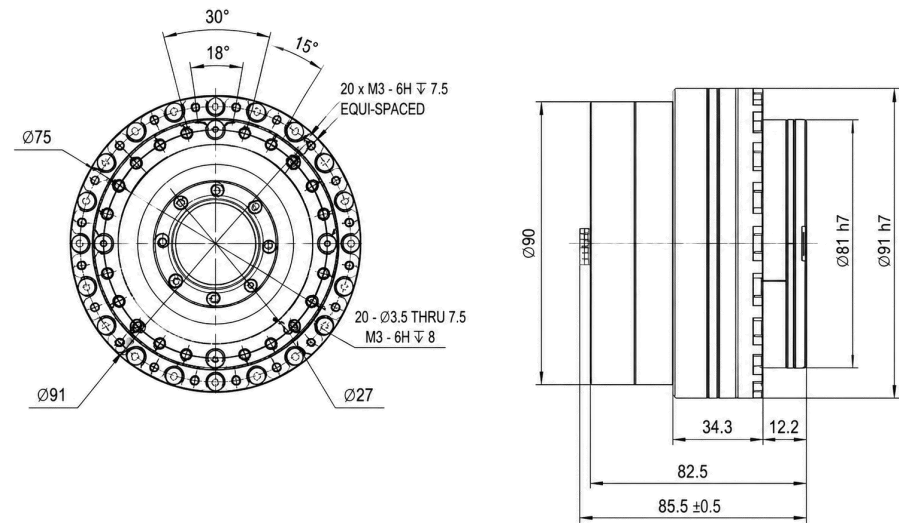
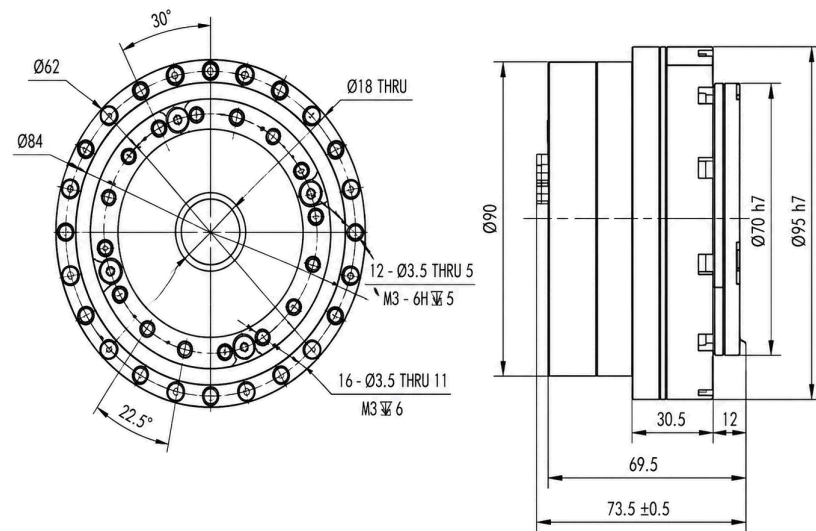
PRODUCT PLATFORM

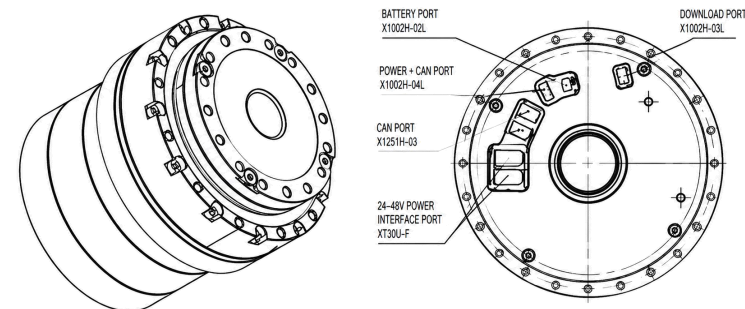
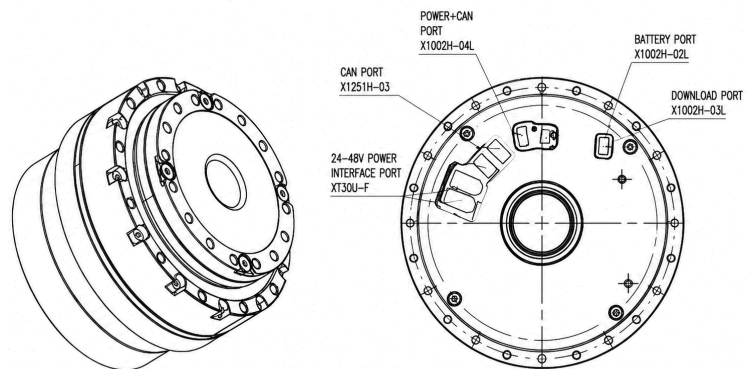
ARTUS PLATFORM	AHM-070-090
4 RATIO OPTIONS	Ø90 mm 69–108 Nm PEAK TORQUE CAN / EtherCAT

Parameter	Unit	AHM-070-090-R51	AHM-070-090-R81	AHM-070-090-R101	AHM-070-090-R121
Reduction Ratio	:1	51	81	101	121
Start / Stop Peak Torque	Nm	69	91	102	108
Max. Average Load Torque — Robot	Nm	42	58	61	61
Rated Torque at 2000 rpm / Ratio — Industrial	Nm	32	42	50	50
Output Peak Speed	rpm	77	48	40	30
Rated Speed at 1/2 Rated Torque	rpm	61	38	30	25
Backlash	arcsec	20	20	10	10
Rated Power	W	340	340	340	340
Supply Voltage	VDC	24–48	24–48	24–48	24–48
Encoder Resolution	bit	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional
Communication	—	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT
Brake Torque — No Brake / Brake	Nm	0 / 1	0 / 1	0 / 1	0 / 1
Torsional Stiffness	10 ⁴ N/rad	1.24	1.52	1.52	1.52
Allowable Radial Load	kN	22	22	22	22
Allowable Axial Load	kN	50	50	50	50

Allowable Bending Moment	Nm	190	190	190	190
Length — No Brake / Brake	mm	73.5±0.5 / 92±0.5	73.5±0.5 / 92±0.5	73.5±0.5 / 92±0.5	73.5±0.5 / 92±0.5
Through Bore	mm	18	18	18	18
Weight — No Brake / Brake	kg	1.27 / 1.5	1.27 / 1.5	1.27 / 1.5	1.27 / 1.5
Inertia — No Brake / Brake	g·cm ²	596.4 / 746.7	596.4 / 746.7	596.4 / 746.7	596.4 / 746.7

DIMENSIONAL DRAWINGS — STANDARD / BRAKE CONFIGURATION





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