JENAER ANTRIEBSTECHNIK

Rotary Table System Series HRT-65

Innovative design for highest dynamic and precision

Compact design

Highest torque density

Smaller packing means lowering footprint

Low cogging value

Smooth motion and positioning accuracy

No backlash

Highest stiffness

Integrated measuring system

Incremental or absolute value encoder, different types

Rotary table - ready to install

Mechanically & electrically ready for connection

M17 connectors

Direct drive

Precise & no backlash

Innovative design

Reduced moving mass for low inertia

Low cogging value

Smooth running characteristics

Customer specific modifications possible

Use with servo amplifiers:

ECOVARIO® 114D

ECOMODUL

Field bus interfaces:

CANopen, EtherCAT, Profibus, Profinet, Ethernet, RS232, RS485

www.jat-gmbh.de

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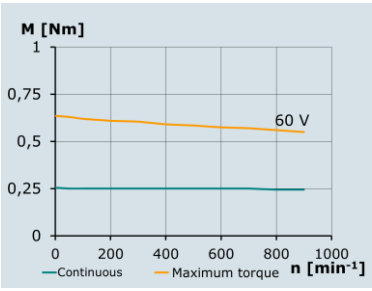
Rotary Table System Series HRT-65

→ Technical data

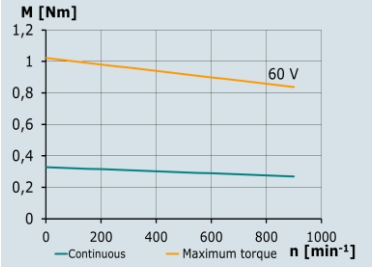
			Series HRT-65-17	Series HRT-65-25	Series HRT-65-34
Rated Values				(preliminary)	(preliminary)
Max. rated DC link voltage		V_{DC}	325	325	325
Peak torque (c.d.f. 5%) [1]		Nm	0,63	1,0	0,9
Maximum speed [2]		min^{-1} [1]	900	900	900
Rated torque [1]		Nm	0,25	0,33	0,47
Max. current (per phase, c.d.f. 5%) [1]		A_{RMS}	14,0	14,0	14,0
Rated current (per phase) [1]		A_{RMS}	4,3	4,5	7,0
Repeatability [2] with encoder incremental / absolute		arcsec	±3 / ±5	±3 / ±5	±3 / ±5
Radial eccentricity	standard	µm	< 25	t.b.d.	t.b.d.
Axial eccentricity	standard	µm	< 35	t.b.d.	t.b.d.
Technical Data Motor					
Torque constant		Nm/A	0,06	0,073	0,068
Voltage constant		V/1000min^{-1}	3,69	7,2	5,9
Winding resistance		Ω	1,4	1,6	0,6
Winding inductivity		mH	1,6	3,2	1,4
Number of pole pairs		2p	4	4	4
Motor inertia		kgm^2x10^{-3}	0,015	0,019	0,023
Max. axial load		N	100 [3]	100 [3]	100 [3]
Max. radial load		N	75 [3]	75 [3]	75 [3]
Topple torque		Nm	5 [4]	5 [4]	5 [4]
Incremental Encoder					
Resolution (standard) [2]		inc/rev	435 000	435 000	435 000
Resolution (maximum) [2]		inc/rev	445 440	445 440	445 440
Operating voltage		V_{DC}	5 (±10%)		
Signal specification			RS422		
Absolute Value Encoder					
Resolution (standard)			18 Bit	18 Bit	18 Bit
Resolution (maximum) [5]			19 Bit	19 Bit	19 Bit
Operating voltage		V_{DC}	5 (±5%)		
Protocol			BiSS C		
Environmental Conditions					
Ambient temperature			0 ... 40 °C		
Protection class			IP40		

1. Mounting flange 250 mm x 250 mm / thickness 20 mm
2. Depends on the measuring system
3. speed: 300 min^{-1}, a higher individual load leads to a limitation of the bearing life
4. speed: 300 min^{-1} with maximum load, different application must be calculated
5. under preparation

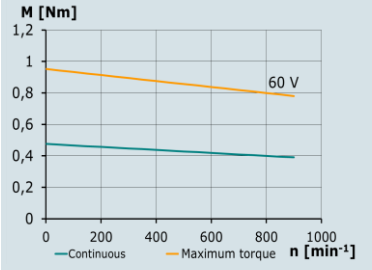
Characteristic HRT-65-17/ECOVARIO® 114D



Characteristic HRT-65-25/ECOVARIO® 114D



Characteristic HRT-65-34/ECOVARIO® 114D

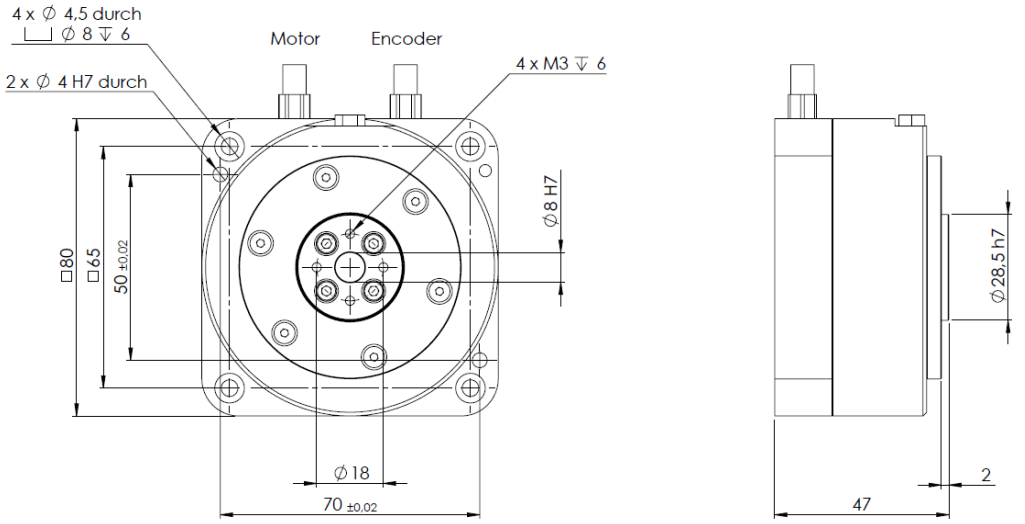


Rotary Table System Series HRT-65

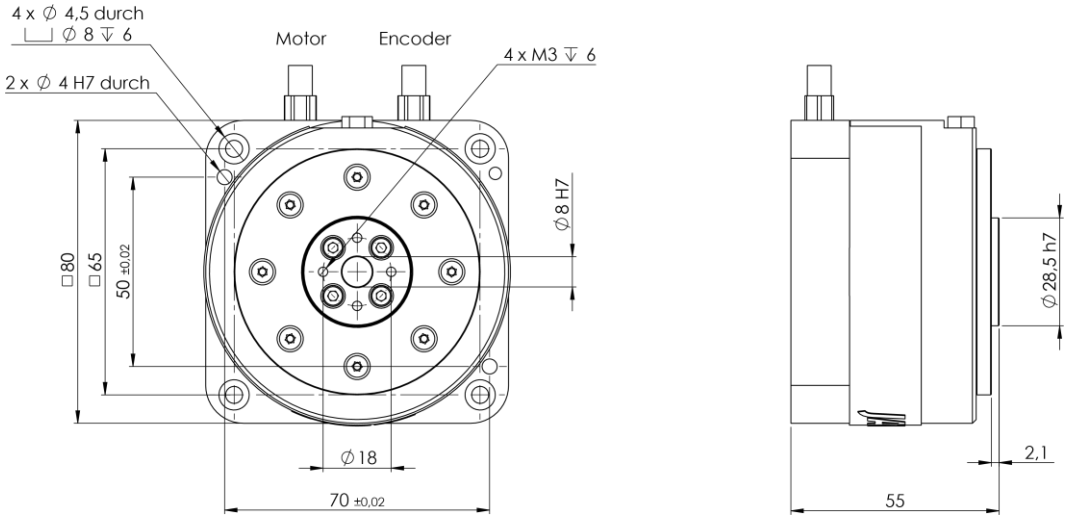
→ Dimensions

		Series HRT-65-17	Series HRT-65-25	Series HRT-65-34
Outer diameter	mm	80	80	80
Height	mm	47	55	64
Weight	kg	0,8	0,9	1,3

HRT-65-17:

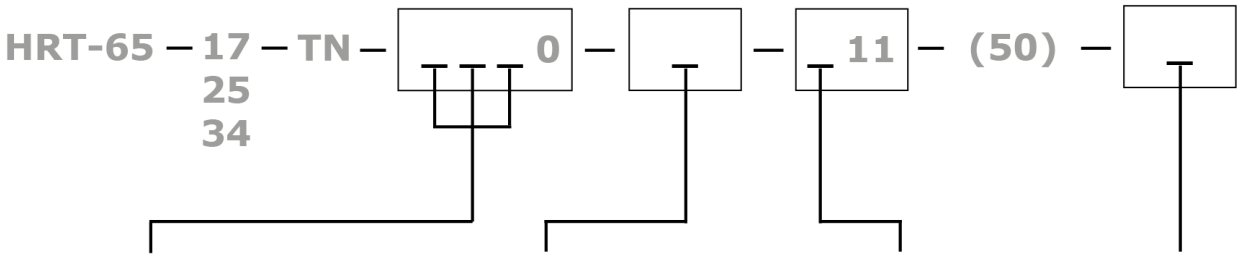


HRT-65-25:



Rotary Table System Series HRT-65

→ Ordering key



Measuring system	
506	Incremental 435 000 inc/rev
E04	Absolute 18 bit
E13	Absolute 19 bit *
*) under preparation	

Holding brake	
0	Without brake

Connector outlet	
R	Radial (default)

Option	
2	Default

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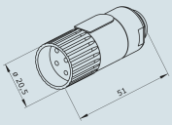
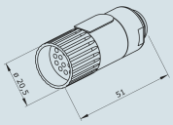
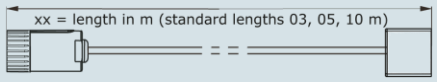
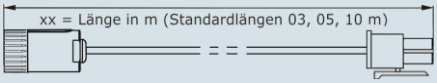
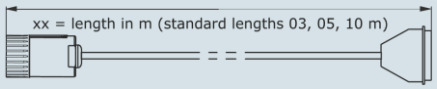
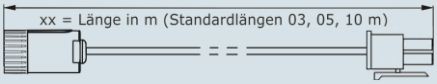
Rotary Table System Series HRT-65

→ Accessories

Mating connector set 70.070 (for cables made by customer)	
Motor mating connector M17	
Encoder mating connector M17	

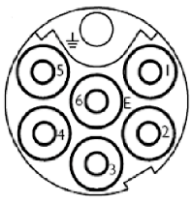
Cable assemblies		
Motor cable (for ECOVARIO® 114D) MOT43-135-523-0xx-100	Ø 6,4 mm; trailing capability from bend radius > 35 mm	
Motor cable (for ECOMODUL) MOT43-853-523-0xx-000	Ø 6,4 mm; trailing capability from bend radius > 35 mm	
Incremental encoder cable (for ECOVARIO®) ENC47-305-525-0xx-000	Ø approx. 6,2 mm; trailing capability from bend radius > 35 mm	
Absolute value encoder cable (for ECOVARIO®) ABS47-300-525-0xx-000	Ø approx. 6,2 mm; trailing capability from bend radius > 35 mm	
Incremental encoder cable (for ECOMODUL) ENC55-861-525-0xx-000	Ø 6,9 mm; trailing capability from bend radius > 52 mm	
Absolute value encoder cable (for ECOMODUL) ABS55-862-525-0xx-000	Ø 6,9 mm; trailing capability from bend radius > 52 mm	

→ Connector and cable assignment

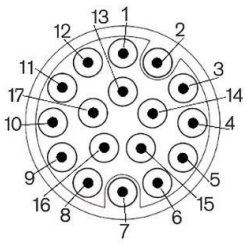
Cable assignment motor

Connection	Pin motor connector	Wire cable MOT43
Phase U	4	black
Phase V	1	orange
Phase W	5	red
PE	7	gn/ye

Motor connector:



Encoder connector:



Encoder connector M17 assignment (Incremental encoder)

Pin	Signal	Pin	Signal
1	Channel A+	10	-
2	Channel A-	11	-
3	Channel B+	12	-
4	Channel B-	13	-
5	Channel Z+	14	-
6	Channel Z-	15	+5 V
7	-	16	GND
8	-	17	-
9	-		

Encoder connector M17 assignment (Absolute value encoder)

Pin	Signal	Pin	Signal
1	-	10	/DAT
2	-	11	CLK
3	-	12	/CLK
4	-	13	$+U_P$
5	-	14	Sens S+
6	-	15	-
7	-	16	GND
8	-	17	Sens S-
9	DAT		

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