

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:

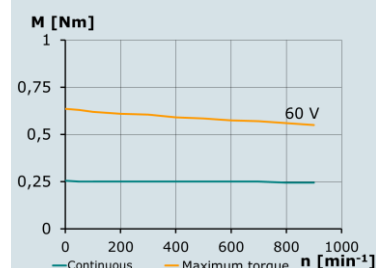
CANopen, EtherCAT, Profibus, Profinet, Ethernet, RS232, RS485

Rotary Table System Series HRT-65

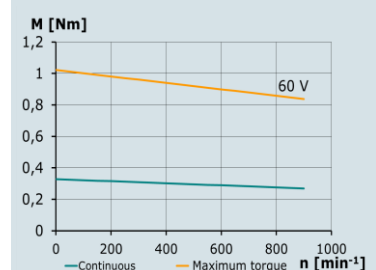
→ Technical data

		Series HRT-65-17	Series HRT-65-25	Series HRT-65-34	Series HRT-65-60
Rated Values			(preliminary)	(preliminary)	(preliminary)
Max. rated DC link voltage	V _{DC}	325	325	325	325
Peak torque (c.d.f. 5%) ¹⁾	Nm	0,63	1,0	0,9	2,6
Maximum speed ²⁾	min ⁻¹	900	900	900	t.b.d.
Rated torque ¹⁾	Nm	0,25	0,33	0,47	1,15
Max. current (per phase, c.d.f. 5%) ¹⁾	A _{RMS}	14,0	14,0	14,0	14,0
Rated current (per phase) ¹⁾	A _{RMS}	4,3	4,5	7,0	6,0
Repeatability ²⁾ with encoder incremental / absolute	arcsec	±3 / ±5	±3 / ±5	±3 / ±5	±3 / ±5
Radial eccentricity standard	µm	< 25	t.b.d.	t.b.d.	t.b.d.
Axial eccentricity standard	µm	< 35	t.b.d.	t.b.d.	t.b.d.
Technical Data Motor					
Torque constant	Nm/A	0,06	0,073	0,068	0,19
Voltage constant	V/1000min ⁻¹	3,69	7,2	5,9	16,1
Winding resistance	Ω	1,4	1,6	0,6	1,5
Winding inductivity	mH	1,6	3,2	1,4	4,2
Number of pole pairs	2p	4	4	4	4
Motor inertia	kgm ² x10 ⁻³	0,015	0,019	0,023	t.b.d.
Max. axial load	N	100 ³⁾	100 ³⁾	100 ³⁾	t.b.d.
Max. radial load	N	75 ³⁾	75 ³⁾	75 ³⁾	t.b.d.
Topple torque	Nm	5 ⁴⁾	5 ⁴⁾	5 ⁴⁾	t.b.d.
Incremental Encoder					
Resolution (standard) ²⁾	inc/rev	435 000	435 000	435 000	435 000
Resolution (maximum) ²⁾	inc/rev	445 440	445 440	445 440	445 440
Operating voltage	V _{DC}	5 (±10%)			
Signal specification		RS422			
Absolute Value Encoder					
Resolution		19 Bit	19 Bit	19 Bit	19 Bit
Operating voltage	V _{DC}	5 (±5%)			
Protocol		BiSS C			
Environmental Conditions					
Ambient temperature		0 ... 40 °C			
Temperature switch-off sensor		PTC , 105 °C			
Protection class		IP40			
<ol style="list-style-type: none"> 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 					

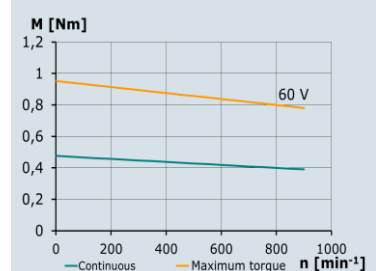
Characteristic HRT-65-17/ECOVARIO® 114D



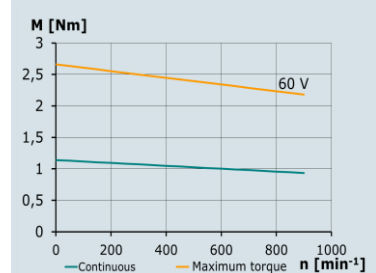
Characteristic HRT-65-25/ECOVARIO® 114D



Characteristic HRT-65-34/ECOVARIO® 114D



Characteristic HRT-65-60/ECOVARIO® 114D



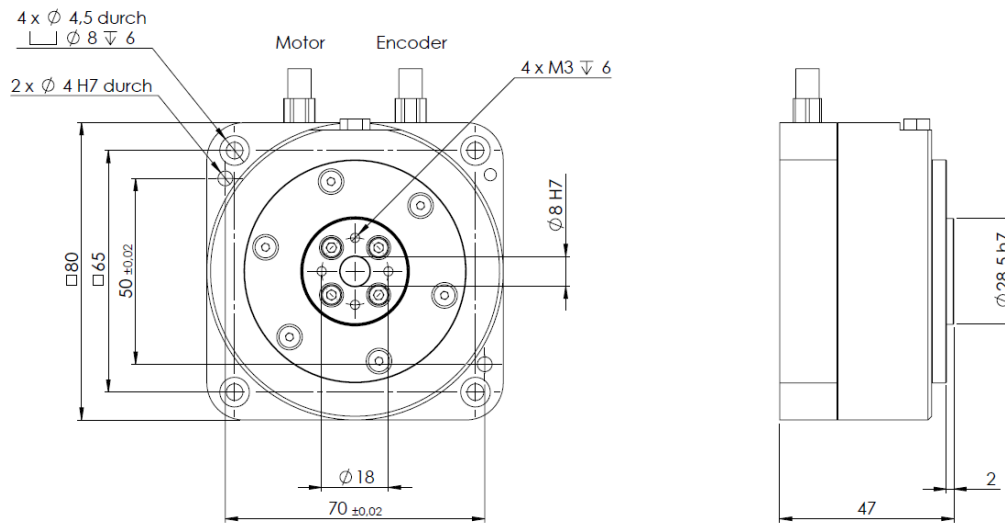
Rotary Table System Series HRT-65

→ Dimensions

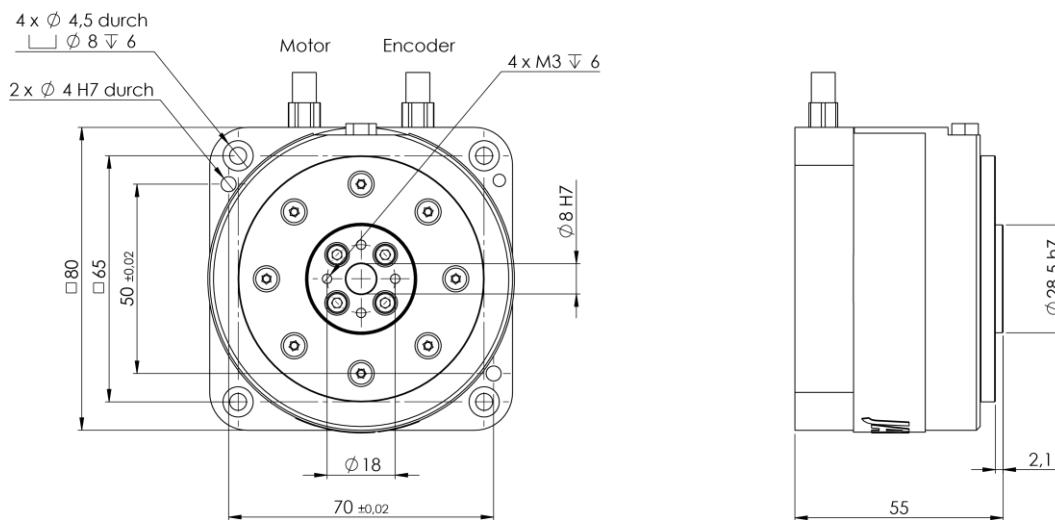
		Series HRT-65-17	Series HRT-65-25	Series HRT-65-34	Series HRT-65-60
Outer diameter	mm	80	80	80	80
Height	mm	47	55	64	t.b.d.
Weight	kg	0,8 / 0,9*	0,9 / 1,0*	1,3 / 1,4*	t.b.d.

*) with option "Improved radial and axial run-out"

HRT-65-17:

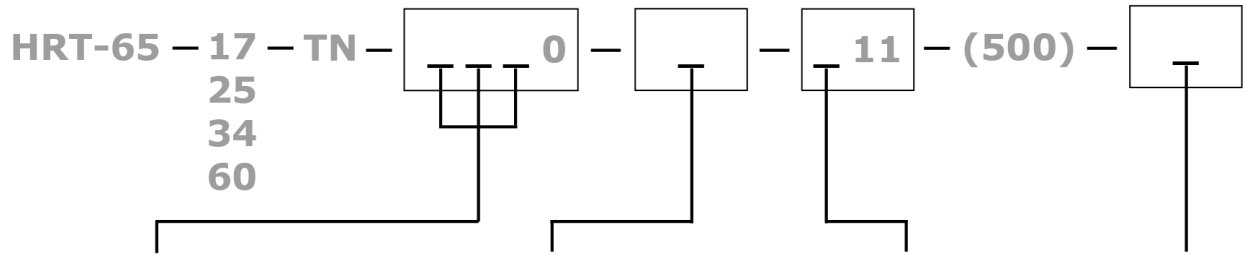


HRT-65-25:



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→ Ordering key



Measuring system	
506	Incremental 435 000 inc/rev
E13	Absolute 19 bit

Holding brake	
0	Without brake

Connector outlet	
R	Radial (default)
A	Axial

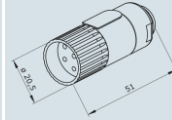
Option	
2	Default

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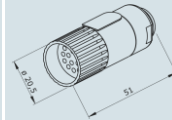
→ Accessories

Mating connector set 70.070 (for cables made by customer)

Motor mating connector M17



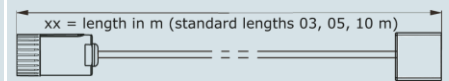
Encoder mating connector M17



Cable assemblies

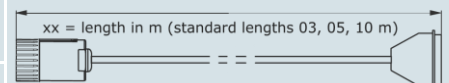
Motor cable (for ECOVARIO®)
MOT61-133-523-0xx-100

Ø 8,9 mm;
trailing capability from bend radius > 90 mm



Incremental encoder cable (ECOVARIO®)
INK65-305-525-0xx-000

Ø 9,5 mm;
trailing capability from bend radius > 90 mm



Absolute encoder cable (for ECOVARIO®)
ABS65-300-525-0xx-000

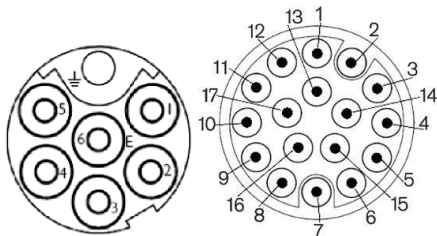
Ø 9,5 mm;
trailing capability from bend radius > 90 mm

→ Connector and cable assignment

Motor connector M17 assignment		Encoder connector M17 assignment (Ink/SinCos encoder)				Encoder connector M17 assignment (Absolute value encoder)			
Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	Phase U	1	A+ / Sin+	10	-	1	-	10	Channel /DAT
2	-	2	A- / Sin-	11	-	2	-	11	Channel CLK
3	-	3	B+ / Cos+	12	-	3	-	12	Channel /CLK
4	Phase V	4	B- / Cos-	13	-	4	-	13	+U _p
5	Phase W	5	Z+	14	-	5	-	14	Sens S+
6	-	6	Z-	15	+5 V	6	-	15	-
7	PE	7	PTC*	16	GND	7	PTC*	16	GND
		8	PTC*	17	-	8	PTC*	17	Sens S-
		9	-			9	Channel DAT		

Motor connector:

Encoder connector:



*) not 2nd measuring system connector

*) not 2nd measuring system connector