

vsaUT			
Typology			
		<p>Fig.2 Mechanical interface drawings</p>	
Operating Data			
#	(quantity)	(unit)	(value)
Mechanical			
1	Continuous Output Power	[W]	xxx
2	Nominal Torque	[Nm]	xxx
3	Nominal Speed	[rad/s]	xxx
4	Nominal Stiffness Variation Time	with no load	[s] xxx
5		with nominal torque	[s] xxx
6	Peak (Maximum) Torque	[Nm]	xxx
7	Maximum Speed	[rad/s]	xxx
8	Maximum Stiffness	[Nm/rad]	xxx
9	Minimum Stiffness	[Nm/rad]	xxx
10	Maximum Elastic Energy	[J]	xxx
11	Maximum Torque Hysteresis	[%]	xxx
12	Maximum deflection	with max. stiffness	[°] xxx
13		with min. stiffness	[°] xxx
14	Active Rotation Angle	[°]	xxx
15	Angular Resolution	[°]	xxx
16	Weight	[Kg]	xxx
Electrical			
17	Nominal Voltage	[V]	xxx
18	Nominal Current	[A]	xxx
19	Maximum Current	[A]	xxx
Control			
20	Voltage Supply	[V]	xxx
21	Nominal Current	[A]	xxx
22	I/O protocol	[]	xxx
<p>Fig.6 Connection diagram</p>		<p>Fig.3 Stiffness vs Torque</p>	
		<p>Fig.4 Speed vs Torque</p>	
		<p>Fig.5 Deflection vs Torque</p>	

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Additional Characteristics

Fig.7
Measured
Torque
VS
Deflection

Fig.8
3D workspace

Additional sensors data			
#	(quantity)	(unit)	(value)
Sensor a			
a1	Resolution	[yyy]	xxx
a2	Range	[yyy]	xxx
a3	I/O protocol	[yyy]	xxx
ax	(specific sensor properties)	[yyy]	xxx
Sensor b			
bx	(specific sensor properties)	[yyy]	xxx
by	(specific sensor properties)	[yyy]	xxx
bz	(specific sensor properties)	[yyy]	xxx
Sensor n			
n0			
...

Fig.9
Sensor Map

This space is left blank for any integrative information at the compiler's discretion. Examples may include:

- additional system images
- max. structural load values
 - accessories
 - software details

vsaUT		
Model		
Mathematical model		
101	Recoil Point Function	$x_e = q_2$
102	Energy Function	$H = \frac{1}{2} k \left(l \frac{r - q_2}{q_1} \right)^2$
103	Output Torque Function	$\tau = -k \left(\frac{l}{q_1} \right)^2 (r - q_2)$
104	Output Stiffness Function	$\sigma = k \left(\frac{l}{q_1} \right)^2$
105	Spring Torque Function	$e_s = k l \frac{r - q_2}{q_1}$
106	Springs to Motors Transmission Ratio	$A = -\frac{l}{q_1} [\sin(\phi) \quad 1]$
107	Springs to Output Transmission Ratio	$B = \frac{l}{q_1}$