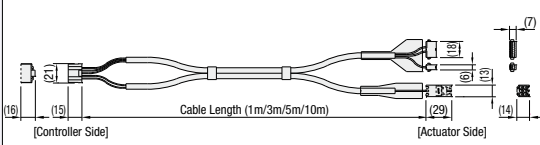
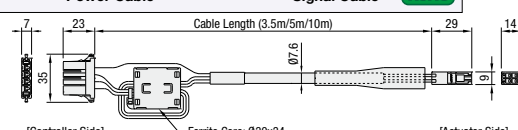
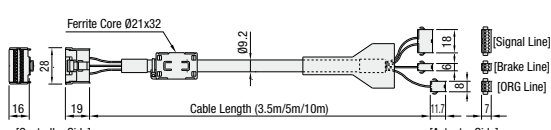
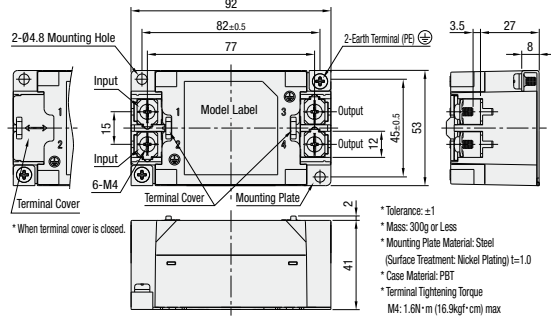




Single Axis Robot Maintenance Products

Single Axis Robot Terminology

<div> <div>Ordering Example</div> <div> <div>Part Number</div> <div>EXRS-CT1</div> </div> <div> <div>Cable Length</div> <div>5</div> </div> </div>																				
<div> <div>Power/Signal-Integrated Cables (Flex-Resistant)</div> <div>(Controller EXRS-C1/P1)</div> </div> <div>  <div>RoHS</div> </div>	<table> <tr> <th>Part Number</th><th>Cable Length (m)</th></tr> <tr> <td rowspan="4">EXRS-CT1</td><td>1</td></tr> <tr> <td>3</td></tr> <tr> <td>5</td></tr> <tr> <td>10</td></tr> </table> <div>  </div>	Part Number	Cable Length (m)	EXRS-CT1	1	3	5	10	<div> <div>Data Storage Battery</div> <div>Part Number</div> <div>EXRS-BA2</div> </div> <div>  </div> <div> <div>* Battery for absolute data back-up. (Applicable Controllers: EXRS-C21/C22)</div> <div>* Included as standard in absolute model controllers.</div> <div>Replacement cycle is approx. one year.</div> <div>* This product is outside the scope of RoHS Directive.</div> <div>* The photo is an image. Please note that the appearance may differ from the photo.</div> </div>											
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EXRS-CT1	1																			
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	10																			
<div> <div>Power/Signal Cables</div> <div>(Controller EXRS-C21/C22)</div> </div> <div> <div>Power Cable</div> <div>Signal Cable</div> <div>RoHS</div> </div> <div>  </div>	<table> <tr> <th>Part Number</th><th>Type</th><th>Cable Length</th></tr> <tr> <td rowspan="3">EXRS-CM1</td><td rowspan="3">Power</td><td>3.5m: 3</td></tr> <tr> <td>5m: 5</td></tr> <tr> <td>10m: 10</td></tr> <tr> <td rowspan="3">EXRS-CR1 (Standard)</td><td rowspan="3">Single</td><td>3.5m: 3</td></tr> <tr> <td>5m: 5</td></tr> <tr> <td>10m: 10</td></tr> <tr> <td rowspan="3">EXRS-CR2 (Flexible)</td><td rowspan="3">Single</td><td>3.5m: 3</td></tr> <tr> <td>5m: 5</td></tr> <tr> <td>10m: 10</td></tr> </table> <div>  </div>	Part Number	Type	Cable Length	EXRS-CM1	Power	3.5m: 3	5m: 5	10m: 10	EXRS-CR1 (Standard)	Single	3.5m: 3	5m: 5	10m: 10	EXRS-CR2 (Flexible)	Single	3.5m: 3	5m: 5	10m: 10	
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<div> <div>Noise Filter</div> <div>Part Number</div> <div>EXRS-NF1</div> <div>Rated Voltage</div> <div>AC250V/DC250V</div> <div>Rated Current</div> <div>10A</div> </div> <div> <div>As this product uses push-down type terminal block, it is shipped in the state below.</div> <div>* Terminal cover is stored.</div> <div>* Terminal block screws are kept on the upper side.</div> </div> <div>  <div>RoHS</div> </div> <div> <div>* These listed products are made by COSEL.</div> <div>* Other Recommended Products: SOSHIN ELECTRIC-made Part Number: NF2010A-UP</div> </div>	<div>  </div>																			
<div> <div>Communication Cable</div> <div>Part Number</div> <div>EXRS-USB1</div> <div>EXRS-DSUB1</div> <div>Communication Type</div> <div>USB Communication</div> <div>D-Sub Communication</div> <div>Applicable Controller</div> <div>EXRS-C1/P1</div> <div>EXRS-C21/C22</div> </div> <div> <div>* USB driver is included in Support Software.</div> <div>* The cables are for communications between controller and PC.</div> </div> <div> <div>EXRS-USB1</div> <div>EXRS-DSUB1</div> </div>		<div> <div>Support Software (RS-Manager)</div> <div>  <div>RS-Manager</div> </div> <div> <div>Part Number</div> <div>EXRS-RSM</div> <div>Applicable Controller</div> <div>EXRS-C1/P1</div> <div>EXRS-C21/C22</div> </div> </div>																		
<div> <div>Power Connector</div> <div>Part Number</div> <div>EXRS-PC1</div> <div>EXRS-PC21</div> <div>EXRS-PC22</div> <div>Voltage</div> <div>DC24V</div> <div>AC100V</div> <div>AC200V</div> <div>Applicable Controller</div> <div>EXRS-C1/P1</div> <div>EXRS-C21A/C21B</div> <div>EXRS-C22A/C22B</div> </div> <div> <div>EXRS-PC1</div> <div>EXRS-PC21</div> <div>EXRS-PC22</div> </div>		<div> <div>EXT Connector</div> <div>Part Number</div> <div>EXRS-EXT1</div> <div>Applicable Controller</div> <div>EXRS-C21/C22</div> </div> <div>  </div> <div> <div>Dummy Connector</div> <div>Part Number</div> <div>EXRS-DMP1</div> <div>Applicable Controller</div> <div>EXRS-C1/P1</div> <div>EXRS-C21/C22</div> </div> <div>  </div>																		

Terminology

■ Positioning Repeatability

Variations in stop positions when positioning moves approached in one direction from one starting location are made.

Maximum Load Capacity

Maximum load that can be placed on the carriage. A sum of the workpiece and the tooling must not exceed this value. Take Allowable Overhang into consideration if the tool/workpiece C.G. is offset from the table center.

■ **Max. Push Force**

Maximum thrust force the slider can generate while not moving.
Do not perform push and hold actions with shock loading since that may cause failures.
Additionally, do not exceed 60% of the Static Load Capacity when the push point is offset from the slider's guide center.

■ **Rated Force**

Continuous force that can be generated.
For workpiece holding and pushing operations, keep under the Rated Force (approx. 60%).
Do not perform shock loading operations even under the Rated Force as that may cause failures.
Do not exceed 60% of the Static Load Capacity when the static push point is offset from the slider's guide center.

■ Rated Running Life

Total running distance where 90% of the Actuators under the same operating condition will reach without failures.

■ Allowable Overhang Load

Indicates offset distance of tool/workpiece C.G. to the slider's guide center.
It depends on the workpiece's load weight, and the running life of more than 10,000km is achieved if the center of gravity is within allowable overhung.
The published values are calculated based on automatically configured acceleration values per given carried mass.

■ Allowable Static Moment

Moment load value applicable on the slider top surface while the actuator is static.
For dynamic applications, overhang value must be determined with running life into consideration.

■ Lost Motion

A difference in position values when positioning moves are made to a specified coordinate in the positive direction and in the negative direction.

■ Rod Non-Rotational Accuracy

Rod play in the rotational direction.

Notes on Positioning Repeatability

Norte that, under either of the following conditions/situations, the above Positioning Repeatability cannot be guaranteed.

Absolute Position Accuracy-related Factor

There must not be discrepancy between the coordinate points (position input points) on the controller and the real space positions (move positions).

■ Action Pattern Factor

- Beside the reciprocating motion, the current action pattern includes some motion that approaches toward the teaching point from the different orientation.
- The above motion shares the same teaching point and orientation with the reciprocating motion, but is turned off or paused during operation.

■ Thermal Factor

- The ambient temperature changes sharply.
- The temperature on the robot main body changes.

Load Fluctuation Factor

- The load fluctuates during operations (for example, resulting from the task of mounting or removing workpieces).