Compu-Spread CS-150RC
Standalone Dual Joystick Controller

The Rexroth CS-150 RC joystick console is an ergonomically designed operator interface for the control of multiple hydraulic actuators, typically cylinders, on Snow and Ice Control vehicles. The full CANbus architecture facilitates connection of the console to the robust Rexroth BODAS controller, which in turn drives the system hydraulic valves and other devices.

The two 3 axis non-contact joysticks, each with a deadman switch, are fitted into a slim profile console for easy installation in tight cab spaces. The console allows installation of up to 6 auxiliary rocker switches for lighting, warning and other valve functions.

Hydraulic valve nulling and trimming are easily done with the joysticks and a console switch, or with the optional nulling pendant.

CS-150 Joystick & console features
- Hall effect joysticks with integrated CANbus output
- Joystick dead-man switch prevents inadvertent and unwanted actuator movements
- Low profile joysticks require limited movement and low operating force
- Backlit console legends for joystick identification
- Simple power float mode supported
- Dump Limit supported
- Valve trimming and nulling can be done with a separate control box (optional), which is then set aside
- Wiring harnesses have integral moulded diagnostic LEDs
- All functions are configurable
- Standard Scraper Auto-raise function when vehicle transmission goes into reverse
## Technical Data

### Joystick

<table>
<thead>
<tr>
<th>Mechanical (for X, Y axes)</th>
<th>Break-out force: 1.8N (0.4 lbf)</th>
<th>Expected life: 10 million cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating force:</td>
<td>3.5N (0.75 lbf)</td>
<td>Material: Glass filled nylon</td>
</tr>
<tr>
<td>Maximum applied force:</td>
<td>450 N (100 lbf)</td>
<td>Lever action: Spring centring</td>
</tr>
<tr>
<td>Mechanical angle of movement</td>
<td>40°</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mechanical (for Z axis)</th>
<th>Break-out torque: 0.09 Nm (0.80 lbf-in)</th>
<th>Hand mechanical angle: 80° (40° from centre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating torque:</td>
<td>0.121 Nm (1.07 lbf-in)</td>
<td>Handle action: spring centring</td>
</tr>
<tr>
<td>Max. allowable torque:</td>
<td>0.150 Nm (1.33 lbf-in)</td>
<td>Expected life: 10 million cycles</td>
</tr>
</tbody>
</table>

#### Sealing (IP)
- IP 65

#### EMC Immunity Level (V/M)
- IEC 61000-4-3: 2006

#### EMC Emissions Level
- IEC 61000-4-8: 1993/A1: 2000

#### ESD
- IEC 61000-4-2: 2008

### CS-150RC System Electrical & Environmental Specifications

<table>
<thead>
<tr>
<th>Supply Voltage</th>
<th>9-32 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outputs</td>
<td>Proportional outputs 12 channels</td>
</tr>
<tr>
<td>Digital Outputs</td>
<td>4 channels</td>
</tr>
<tr>
<td>Inputs (All inputs protected and filtered)</td>
<td>Switched Inputs 6 channels</td>
</tr>
<tr>
<td>Analogue Voltage Inputs</td>
<td>20 channels</td>
</tr>
<tr>
<td>Analogue Current Inputs</td>
<td>4 channels</td>
</tr>
<tr>
<td>Interfaces</td>
<td>1 CAN port, CAN 2.0B</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-30°C to 85°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°F to 185°F</td>
</tr>
</tbody>
</table>

### Compliant Standards RC Controller (for more BODAS Controller series 20 details refer to Rexroth data sheet RE 95 200)

#### Electromagnetic Compatibility
- 100v/m, load dump ISO 7637-2 (2004) pulse 5

#### RF Immunity:
- ISO 11452-2, 400-1000 MHz, 80% mod.1kHz
- 1 GHz–2 GHz, 80% mod. 1 kHz 25v/m (Level 1 Severity)

#### Conducted Immunity:
- ISO 7637-2 (2004), System Pulse 1, 2a, 2b, 3b, 4

#### RF Emissions
- CISPR 25:2002-08, 30 MHz–1 GHz, according to 72/245/EC EN 55025

#### Electrostatic Discharge
- EN 61000-4-2 ISO 10605, Contact +/- 8kV, air discharge +/- 15kV

#### Vibration
- ISO 16750-3, 10-2000Hz @ 58 m/s

#### Shock
- IEC 60068-2-72, 40G for 11 ms

#### Moisture
- DIN IEC 68, part 2, Hum=95% 25 to –55°C

#### Salt Spray
- DIN 50021-SS, 72h 35°C 5% NaCl

#### Media Resistance
- ISO 16750-5, cola, coffee, paint thinner

#### Enclosure Protection
- IEC 60529 IP56

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