WC-9604

Advanced weighers and weighing systems for static, dynamic and continuous weighing
The Jesma Weightcontrol 9604 is an advanced computer-based control unit for automatic weighers. WC9604 is well-suited for weighing processes with continuous weighers and loss-in-weight systems. WC9604 controls continuous weighing and dosing processes which include powder and crumble material flow and dosing of liquids.

Based on many years of experience in designing industrial process solutions the WC9604 meets today’s requirements to speed, reliability and precision. Top quality weighing electronics combined with advanced measuring technique, data conversion and a strong microprocessor offer technical advantages which ensure superior function under high process speeds to the user.

WC9604 is in operation in weighing and dosing systems in many of the tested function areas of Jesma, but also in many other new-developed automatic processes requiring few operator interventions and systems easy to operate.

The Weightcontrol design is very user-friendly with guide texts in display and internationally used function keys according to EC standards.

A well-known tested software with a strong technological foundation and experience gained from installations worldwide from the basis of a reliable weight control. The WC9604 is flexibly constructed with variants suited for both simple and more complicated weighing jobs.

Functions and facilities

- Keyboard and processor are separated to allow separate mounting in e.g. plant and control room connected via a single fibre optic cable.
- Display/keybord with numeric 6 digit display 15 mm high, 2 lines x 24 characters alphanumeric display and keyboard with 16 keys.
- Automatic preact correction at charge weighing.
- Automatic reset, optional.
- 9 optional language versions of display guide texts.
- Data store with EE Prom.
- Certifiable according to OIML R50.
- Special software for LIW units, weigh feeders and impact weighers.
- Software averaging and linearizing of dynamic weighers.
- Access codes for change of technically variable parameters.
- Printer function for printing of weight ticket and log printing of topical flow and summarizer.
- Setpoint regulation, constant flow with regulation of feeder.
- Proportional regulation - additives - powder or liquid - are regulated by WC9604 proportionally to another material flow.
- Reverse proportional regulation - WC9604 regulates its material flow proportionally to another material flow.
- Master-slave regulation – the process material flow which cannot be regulated is master, to which the slave products are regulated in correct proportions.
- Mixing proportions can be selected as end product = 100% or main product=100% + additive percentage.
### Technical specifications:

- **Voltage:** 24 or 230 VAC, 47-110 Hz
- **Power consumption:** max. 30VA
- **Digital input:** Connection of potential-free switch
- **Switch load:** 24VDC/10 mA
- **Relay outputs:** Potential-free cut-in max. 48VAC 2A
- **Lifetime:** min. 500,000 operations at max. load
- **Analogue in/output:** Galvanically separated 0/4-20 mA [Max. error 0.05%]
- **Serial communication:** RS422/485 galvanically separated
  - 2- or 4-thread connection.
- **Protocol options:** Modbus, Allen-Bradley, Omron, Siemens, Telemecanique, Profibus
- **Temperature area:** Operation -10 - +40°C / Storage -40 - +70°C
- **Protection:** Main module IP20
  - Keyboard from front IP65
- **Weighing area:** 1-999 kg/h – t/h – kt/h
- **Amount counter division:** 0.01-0.1-1-10-100 g/kg/t
- **Totalizer division:** 10-100-1000 x amount counter

Interface for main module via 2 conductor optics cables.(max 30 m),
Option up to 1000 m.

Parameter set-up: Parameters are entered from keyboard,
or via serial communication.

<table>
<thead>
<tr>
<th>INPUT</th>
<th>Flow scale</th>
<th>Belt scale</th>
<th>Weigh feeder</th>
<th>Loss-in-weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load cell(s)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Tacho</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Digital (programmable)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1 analogue for set point (4-20mA/0-20mA)</td>
<td>0</td>
<td>0</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
<th>Flow scale</th>
<th>Belt scale</th>
<th>Weigh feeder</th>
<th>Loss-in-weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital (programmable)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2 additional digital (programmable)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>1 analogue for flow rate (4-20mA/0-20mA)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>1 analogue (additional) (4-20mA/0-20mA)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>“Watchdog”</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMMUNICATION</th>
<th>Flow scale</th>
<th>Belt scale</th>
<th>Weigh feeder</th>
<th>Loss-in-weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS422/RS485</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Profibus DP</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

- **Standard**
- **Option**
- **Not available**