CA LV 124 SERIES
CALIBRATION SET FOR OEM LV 124, LV 148 AND RELATED STANDARDS

VERIFICATION SET FOR THE PFM 200N SERIES FOR VERIFY THE PULSES E10 AND E13 OF THE LV 124 STANDARDS

The CA LV 124 set includes four load resistors for the verification of the pulses E10 and E13 of the LV 124 (2013). The load resistors CA LV124-P1R and CA LV124-P100R are used for power line verification. For verification the 16 signal and data lines the CA LV124-D1R and CA LV124-D1000R are used. As the LV 148 standard requires no data line verification, the CA LV148 consists of a CA LV148-P10R and CA LV148-P1000R for power line verification.

HIGHLIGHTS

- Low inductive, high precision load resistor for direct connection into the PFM 200N Series output power plugs
- Load resistors for power lines verification
- Load resistor 1.0 ohm and 1000 ohm for data line verification (LV 124)
- Software procedure for verification with CA LV124 loads

APPLICATION AREAS

AUTOMOTIVE
### POWER LINE VERIFICATION

#### TEST PROCEDURE
LV 124 defines one reference measurement each with 100 ohm (±5 %) and 1 ohm (±5 %) as a DUT substitute must be performed and documented. Verification of the edge steepness must be provided with this test setup. Low-inductance parts must be used as resistors.

LV 148 defines an equivalent reference measurement with 1000 ohm and 10 ohm.

The load resistor must have the following characteristics to achieve the required pulse parameters:
- Low Inductive Component
- Shortest possible cables (a few cm) to the PFM output
- Probe must be as near as possible to the load resistor or, as with the CA LV 124-P, using a BNC connection directly on the load.

### SIGNAL AND DATALINES

#### TEST PROCEDURE
One reference measurement each with 1 k ohm (±5 %) and 1 ohm (±5%) as a DUT substitute must be performed and documented. Verification of the edge steepness must be provided with this test setup. Low-inductance parts must be used as resistors.

During the test, all even and odd I/O lines are switched alternately at the same time. With the test adapter is guaranteed that only one line is charged at each time.

### SOFTWARE

#### POWER LINE SETTINGS
The reference measurement can be selected by selecting Edge Verification in the software. There is a test window for call up the reference measurement settings.

1 Edge Verification:
Choose this option to perform the reference measurement.

2 Test Window for the reference measurement

#### DATA LINE SETTINGS (LV 124 ONLY)
The reference measurement can be selected by selecting Edge Verification in the software. There is a test window for call up the reference measurement settings.

1 Edge Verification:
Choose this option to perform the reference measurement.

2 Test Window for the reference measurement
## TECHNICAL DETAILS

### COMPONENTS CA LV 124 SET

<table>
<thead>
<tr>
<th>Load resistors for:</th>
<th>CA LV124-P1R</th>
<th>Power Lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA LV124-P100R</td>
<td>Power Lines</td>
<td></td>
</tr>
<tr>
<td>CA LV124-D1R</td>
<td>Data lines</td>
<td></td>
</tr>
<tr>
<td>CA LV124-D1000R</td>
<td>Data lines</td>
<td></td>
</tr>
<tr>
<td>BNC cable</td>
<td>BNC Measuring cable 2 m, Verification power lines</td>
<td></td>
</tr>
<tr>
<td>Power cable</td>
<td>2 Cable 0.5m red/black, Verification signal- data lines</td>
<td></td>
</tr>
</tbody>
</table>

### CA LV124-P1R

- **Line**: Power lines
- **Resistance**: 1 ohm
- **Accuracy**: ± 1 %
- **Max. Voltage**: 12 V
- **Max. Power**: 30 W, 150 W, 1 s peak
- **Dimension**: 185 mm x 105 mm x 58 mm
- **Weight**: 1.05 kg

### CA LV124-P100R

- **Line**: Power Lines
- **Resistance**: 100 ohm
- **Accuracy**: ± 1 %
- **Max. Voltage**: 100 V
- **Max. Power**: 30 W, 100 W, 1 s peak
- **Dimension**: 185 mm x 105 mm x 58 mm
- **Weight**: 0.90 kg

### COMPONENTS CA LV 148 SET

<table>
<thead>
<tr>
<th>Load resistors for:</th>
<th>CA LV148-P1000R</th>
<th>Power Lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA LV148-P10R</td>
<td>Power Lines</td>
<td></td>
</tr>
<tr>
<td>BNC cable</td>
<td>BNC Measuring cable 2 m, Verification power lines</td>
<td></td>
</tr>
</tbody>
</table>

### CA LV124-D1R

- **Line**: Data lines
- **Resistance**: 1 ohm
- **Accuracy**: ± 2 %
- **Max. Voltage**: 2.0 V
- **Max. Power**: 1 W, 100 W, 1 s peak
- **Dimension**: 120 mm x 65 mm x 40 mm
- **Weight**: 0.15 kg

### CA LV124-D1000R

- **Line**: Data lines
- **Resistance**: 1,000 ohm
- **Accuracy**: ± 2 %
- **Max. Voltage**: 40.0 V
- **Max. Power**: 1 W, 4 W, 1 s peak
- **Dimension**: 120 mm x 65 mm x 40 mm
- **Weight**: 0.15 kg

### GENERAL DATA

<table>
<thead>
<tr>
<th>Reference temperature</th>
<th>23 °C ±5 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>10 °C to 35 °C</td>
</tr>
<tr>
<td>Humidity</td>
<td>25 % to 75 %, non condensing</td>
</tr>
<tr>
<td>Atmospheric pressure</td>
<td>86 kPa (860 mbar) to 106 kPa (1 060 mbar)</td>
</tr>
</tbody>
</table>
COMPETENCE WHEREVER YOU ARE

Information about scope of delivery, visual design and technical data correspond with the state of development at time of release. Subject to change without further notice.