# **Протокол проведения калибровки от <Date>**

Цифрового измерительного преобразователя сигналов от термосопротивления DMC-RT24, серийный номер <SerialNumber> с целью проверки на соответствие ТУ …

Версия прошивки: <FirmwareVersion>

**1.Содержание:**

Определение погрешности измерения сопротивления и преобразования в цифровой код.

2. калибровка производится по п. инструкции по наладке РАКУРС.КБ….

3.**Условия испытаний:**

Соответствуют нормальным климатическим условиям

**4.Применяемые СИ:**

Эталоны

**5. Таблица основной абсолютной погрешности DMC-RT24 входного сопротивления**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| № канала | Наименование | Погрешность, Ом | | Результат |
| Допуск. | Фактич. |
| 1 | 4x – точечная схема подключения | <I0d0EValue> | <I0GenErr> | <I0GenRez> |
| 2 | 4x – точечная схема подключения | <I1d0EValue> | <I1GenErr> | <I1GenRez> |
| 3 | 4x – точечная схема подключения | <I2d0EValue> | <I2GenErr> | <I2GenRez> |
| 4 | 4x – точечная схема подключения | <I3d0EValue> | <I3GenErr> | <I3GenRez> |
| 5 | 4x – точечная схема подключения | <I4d0EValue> | <I4GenErr> | <I4GenRez> |
| 6 | 4x – точечная схема подключения | <I5d0EValue> | <I5GenErr> | <I5GenRez> |
| 7 | 4x – точечная схема подключения | <I6d0EValue> | <I6GenErr> | <I6GenRez> |
| 8 | 4x – точечная схема подключения | <I7d0EValue> | <I7GenErr> | <I7GenRez> |

**6. Таблица основной абсолютной погрешности DMC-RT24 токовые аналоговые выходы**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| № канала | Наименование | Погрешность, Ом | | Результат |
| Допуск. | Фактич. |
| 1 | Сила тока на выходе | <O0d0EValue> | <O0GenErr> | <O0GenRez> |
| 2 | Сила тока на выходе | <O1d0EValue> | <O1GenErr> | <O1GenRez> |
| 3 | Сила тока на выходе | <O2d0EValue> | <O2GenErr> | <O2GenRez> |
| 4 | Сила тока на выходе | <O3d0EValue> | <O3GenErr> | <O3GenRez> |
| 5 | Сила тока на выходе | <O4d0EValue> | <O4GenErr> | <O4GenRez> |
| 6 | Сила тока на выходе | <O5d0EValue> | <O5GenErr> | <O5GenRez> |
| 7 | Сила тока на выходе | <O6d0EValue> | <O6GenErr> | <O6GenRez> |
| 8 | Сила тока на выходе | <O7d0EValue> | <O7GenErr> | <O7GenRez> |

**Результаты при проверке калибровки при 4-x точечной схеме подключения**

**Канал 1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <I0d0Ref> | <I0d0x0> | <I0d0x1> | <I0d0x2> | <I0d0x3> | <I0d0x4> | <I0d0x5> | <I0d0x6> | <I0d0x7> | <I0d0x8> | <I0d0x9> | <I0d0AverVal> | <I0d0MEValue> |
| <I0d1Ref> | <I0d1x0> | <I0d1x1> | <I0d1x2> | <I0d1x3> | <I0d1x4> | <I0d1x5> | <I0d1x6> | <I0d1x7> | <I0d1x8> | <I0d1x9> | <I0d1AverVal> | <I0d1MEValue> |

**Канал 2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <I1d0Ref> | <I1d0x0> | <I1d0x1> | <I1d0x2> | <I1d0x3> | <I1d0x4> | <I1d0x5> | <I1d0x6> | <I1d0x7> | <I1d0x8> | <I1d0x9> | <I1d0AverVal> | <I1d0MEValue> |
| <I1d1Ref> | <I1d1x0> | <I1d1x1> | <I1d1x2> | <I1d1x3> | <I1d1x4> | <I1d1x5> | <I1d1x6> | <I1d1x7> | <I1d1x8> | <I1d1x9> | <I1d1AverVal> | <I1d1MEValue> |

**Канал 3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <I2d0Ref> | <I2d0x0> | <I2d0x1> | <I2d0x2> | <I2d0x3> | <I2d0x4> | <I2d0x5> | <I2d0x6> | <I2d0x7> | <I2d0x8> | <I2d0x9> | <I2d0AverVal> | <I2d0MEValue> |
| <I2d1Ref> | <I2d1x0> | <I2d1x1> | <I2d1x2> | <I2d1x3> | <I2d1x4> | <I2d1x5> | <I2d1x6> | <I2d1x7> | <I2d1x8> | <I2d1x9> | <I2d1AverVal> | <I2d1MEValue> |

**Канал 4**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <I3d0Ref> | <I3d0x0> | <I3d0x1> | <I3d0x2> | <I3d0x3> | <I3d0x4> | <I3d0x5> | <I3d0x6> | <I3d0x7> | <I3d0x8> | <I3d0x9> | <I3d0AverVal> | <I3d0MEValue> |
| <I3d1Ref> | <I3d1x0> | <I3d1x1> | <I3d1x2> | <I3d1x3> | <I3d1x4> | <I3d1x5> | <I3d1x6> | <I3d1x7> | <I3d1x8> | <I3d1x9> | <I3d1AverVal> | <I3d1MEValue> |

**Канал 5**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <I4d0Ref> | <I4d0x0> | <I4d0x1> | <I4d0x2> | <I4d0x3> | <I4d0x4> | <I4d0x5> | <I4d0x6> | <I4d0x7> | <I4d0x8> | <I4d0x9> | <I4d0AverVal> | <I4d0MEValue> |
| <I4d1Ref> | <I4d1x0> | <I4d1x1> | <I4d1x2> | <I4d1x3> | <I4d1x4> | <I4d1x5> | <I4d1x6> | <I4d1x7> | <I4d1x8> | <I4d1x9> | <I4d1AverVal> | <I4d1MEValue> |

**Канал 6**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <I5d0Ref> | <I5d0x0> | <I5d0x1> | <I5d0x2> | <I5d0x3> | <I5d0x4> | <I5d0x5> | <I5d0x6> | <I5d0x7> | <I5d0x8> | <I5d0x9> | <I5d0AverVal> | <I5d0MEValue> |
| <I5d1Ref> | <I5d1x0> | <I5d1x1> | <I5d1x2> | <I5d1x3> | <I5d1x4> | <I5d1x5> | <I5d1x6> | <I5d1x7> | <I5d1x8> | <I5d1x9> | <I5d1AverVal> | <I5d1MEValue> |

**Канал 7**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <I6d0Ref> | <I6d0x0> | <I6d0x1> | <I6d0x2> | <I6d0x3> | <I6d0x4> | <I6d0x5> | <I6d0x6> | <I6d0x7> | <I6d0x8> | <I6d0x9> | <I6d0AverVal> | <I6d0MEValue> |
| <I6d1Ref> | <I6d1x0> | <I6d1x1> | <I6d1x2> | <I6d1x3> | <I6d1x4> | <I6d1x5> | <I6d1x6> | <I6d1x7> | <I6d1x8> | <I6d1x9> | <I6d1AverVal> | <I6d1MEValue> |

**Канал 8**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <I7d0Ref> | <I7d0x0> | <I7d0x1> | <I7d0x2> | <I7d0x3> | <I7d0x4> | <I7d0x5> | <I7d0x6> | <I7d0x7> | <I7d0x8> | <I7d0x9> | <I7d0AverVal> | <I7d0MEValue> |
| <I7d1Ref> | <I7d1x0> | <I7d1x1> | <I7d1x2> | <I7d1x3> | <I7d1x4> | <I7d1x5> | <I7d1x6> | <I7d1x7> | <I7d1x8> | <I7d1x9> | <I7d1AverVal> | <I7d1MEValue> |

**Результаты при проверке калибровки аналоговых выходов**

**Канал 1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <O0d0Ref> | <O0d0x0> | <O0d0x1> | <O0d0x2> | <O0d0x3> | <O0d0x4> | <O0d0x5> | <O0d0x6> | <O0d0x7> | <O0d0x8> | <O0d0x9> | <O0d0AverVal> | <O0d0MEValue> |
| <O0d1Ref> | <O0d1x0> | <O0d1x1> | <O0d1x2> | <O0d1x3> | <O0d1x4> | <O0d1x5> | <O0d1x6> | <O0d1x7> | <O0d1x8> | <O0d1x9> | <O0d1AverVal> | <O0d1MEValue> |

**Канал 2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <O1d0Ref> | <O1d0x0> | <O1d0x1> | <O1d0x2> | <O1d0x3> | <O1d0x4> | <O1d0x5> | <O1d0x6> | <O1d0x7> | <O1d0x8> | <O1d0x9> | <O1d0AverVal> | <O1d0MEValue> |
| <O1d1Ref> | <O1d1x0> | <O1d1x1> | <O1d1x2> | <O1d1x3> | <O1d1x4> | <O1d1x5> | <O1d1x6> | <O1d1x7> | <O1d1x8> | <O1d1x9> | <O1d1AverVal> | <O1d4MEValue> |

**Канал 3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <O2d0Ref> | <O2d0x0> | <O2d0x1> | <O2d0x2> | <O2d0x3> | <O2d0x4> | <O2d0x5> | <O2d0x6> | <O2d0x7> | <O2d0x8> | <O2d0x9> | <O2d0AverVal> | <O2d0MEValue> |
| <O2d1Ref> | <O2d1x0> | <O2d1x1> | <O2d1x2> | <O2d1x3> | <O2d1x4> | <O2d1x5> | <O2d1x6> | <O2d1x7> | <O2d1x8> | <O2d1x9> | <O2d1AverVal> | <O2d1MEValue> |

**Канал 4**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <O3d0Ref> | <O3d0x0> | <O3d0x1> | <O3d0x2> | <O3d0x3> | <O3d0x4> | <O3d0x5> | <O3d0x6> | <O3d0x7> | <O3d0x8> | <O3d0x9> | <O3d0AverVal> | <O3d0MEValue> |
| <O3d1Ref> | <O3d1x0> | <O3d1x1> | <O3d1x2> | <O3d1x3> | <O3d1x4> | <O3d1x5> | <O3d1x6> | <O3d1x7> | <O3d1x8> | <O3d1x9> | <O3d1AverVal> | <O3d1MEValue> |

**Канал 5**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <O4d0Ref> | <O4d0x0> | <O4d0x1> | <O4d0x2> | <O4d0x3> | <O4d0x4> | <O4d0x5> | <O4d0x6> | <O4d0x7> | <O4d0x8> | <O4d0x9> | <O4d0AverVal> | <O4d0MEValue> |
| <O4d1Ref> | <O4d1x0> | <O4d1x1> | <O4d1x2> | <O4d1x3> | <O4d1x4> | <O4d1x5> | <O4d1x6> | <O4d1x7> | <O4d1x8> | <O4d1x9> | <O4d1AverVal> | <O4d1MEValue> |

**Канал 6**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <O5d0Ref> | <O5d0x0> | <O5d0x1> | <O5d0x2> | <O5d0x3> | <O5d0x4> | <O5d0x5> | <O5d0x6> | <O5d0x7> | <O5d0x8> | <O5d0x9> | <O5d0AverVal> | <O5d0MEValue> |
| <O5d1Ref> | <O5d1x0> | <O5d1x1> | <O5d1x2> | <O5d1x3> | <O5d1x4> | <O5d1x5> | <O5d1x6> | <O5d1x7> | <O5d1x8> | <O5d1x9> | <O5d1AverVal> | <O5d1MEValue> |

**Канал 7**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <O6d0Ref> | <O6d0x0> | <O6d0x1> | <O6d0x2> | <O6d0x3> | <O6d0x4> | <O6d0x5> | <O6d0x6> | <O6d0x7> | <O6d0x8> | <O6d0x9> | <O6d0AverVal> | <O6d0MEValue> |
| <O6d1Ref> | <O6d1x0> | <O6d1x1> | <O6d1x2> | <O6d1x3> | <O6d1x4> | <O6d1x5> | <O6d1x6> | <O6d1x7> | <O6d1x8> | <O6d1x9> | <O6d1AverVal> | <O6d1MEValue> |

**Канал 8**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ед. изм. | Xo | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Xоткл. | Xоткл.-Xo |
| Ом | <O7d0Ref> | <O7d0x0> | <O7d0x1> | <O7d0x2> | <O7d0x3> | <O7d0x4> | <O7d0x5> | <O7d0x6> | <O7d0x7> | <O7d0x8> | <O7d0x9> | <O7d0AverVal> | <O7d0MEValue> |
| <O7d1Ref> | <O7d1x0> | <O7d1x1> | <O7d1x2> | <O7d1x3> | <O7d1x4> | <O7d1x5> | <O7d1x6> | <O7d1x7> | <O7d1x8> | <O7d1x9> | <O7d1AverVal> | <O7d1MEValue> |

**Калибровочные коэффициенты**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| № канала | Смещение, 3-x точка прямая | Множитель, 3-x точка прямая | Смещение, 3-x точка обратная | Множитель, 3-x точка обратная | Смещение, аналоговый выход | Множитель, аналоговый выход |
| 1 | <InO3Dc0> | <InM3Dc0> | <InO3Rc0> | <InM3Rc0> | <OutOc0> | <OutMc0> |
| 2 | <InO3Dc1> | <InM3Dc1> | <InO3Rc1> | <InM3Rc1> | <OutOc1> | <OutMc1> |
| 3 | <InO3Dc2> | <InM3Dc2> | <InO3Rc2> | <InM3Rc2> | <OutOc2> | <OutMc2> |
| 4 | <InO3Dc3> | <InM3Dc3> | <InO3Rc3> | <InM3Rc3> | <OutOc3> | <OutMc3> |
| 5 | <InO3Dc4> | <InM3Dc4> | <InO3Rc4> | <InM3Rc4> | <OutOc4> | <OutMc4> |
| 6 | <InO3Dc5> | <InM3Dc5> | <InO3Rc5> | <InM3Rc5> | <OutOc5> | <OutMc5> |
| 7 | <InO3Dc6> | <InM3Dc6> | <InO3Rc6> | <InM3Rc6> | <OutOc6> | <OutMc6> |
| 8 | <InO3Dc7> | <InM3Dc7> | <InO3Rc7> | <InM3Rc7> | <OutOc7> | <OutMc7> |