



FM Control Drawing 960393-1035 B

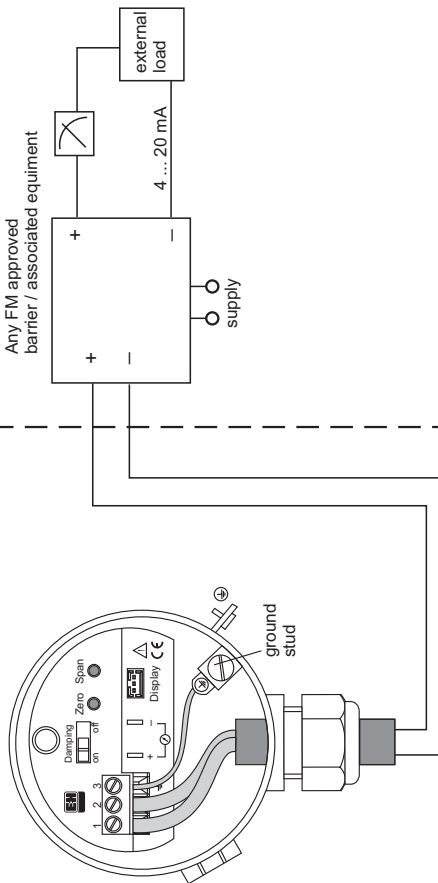
Cerabar M
 PMC41, PMC45,
 PMP41, PMP45, PMP46, PMP48
 4...20 mA HART

Endress+Hauser
 People for Process Automation



Hazardous location

Class I, Div.1, 2 Groups A, B, C, D
 Class I, Zone 0, IIC
 Class II, Div.1, 2 Groups E, F, G
 Class III



Terminals:

- 1 + functional ground
- 2 -
- 3 functional ground

Entity parameter:

Vmax = 30 VDC
 I max = 100 mA
 Pmax = see table
 Ci ≤ 10 nF
 Li = 0

Area of application:
 The compact instruments are suitable for use in areas subject to explosion caused by gases, vapours or mists

Table: Permissible ambient temperature, max. supply power and temperature code:

Temperature code	permissible ambient temperature electronic compartment	Pmax
T6	-40°C...40°C	0.8 Watt
T4	-40°C...70°C	1 Watt

Functional ratings:

These ratings do not supersede Hazardous Location values

Unom ≤ 45 VDC
 Inom = 4...20 mA (max. 25 mA)

Agency controlled drawing.
 No changes without prior agency approval

Intrinsically safe installation

Intrinsically safe (entity), Class I, Div.1, Group A,B,C,D Hazardous Location Installations

1. Control room equipment may not use or generate over 250 V
2. Use Factory Mutual Entity-approved intrinsic safety barrier with Voc or Vt ≤ Vmax, Isc or It ≤ Imax, Ca ≥ Ci + Ccable, La ≥ Li + Lcable
 Barrier must be incapable of delivering more than 0.8/ 1 Watt (see table) to a matched load.
 Vmax = 30 VDC
 I max = 100 mA
 Ci ≤ 10 nF
 Li = 0
 Pmax = see table

3. Installation should be in accordance with ANSI/ ISA RP 12.06.01 „Installation of intrinsically safe systems for hazardous (classified) locations and the National Electrical Code (ANSI/ NFPA 70)“.

4. Warning: Substitution of Components may impair intrinsic safety
5. Intrinsic safety barrier manufacturer's installation drawing must be followed, when installing this equipment: The configuration of the intrinsic safety barrier(s) must be FMRC approved.

6. Use supply wires suitable for 5°C above surrounding ambient.

Division 2 and Zone 2 installation

Nonincendive Class I, Div.2, Group A,B,C,D Hazardous Location Installation

7. Installation shall be in accordance with NEC using threaded conduits or other wiring methods in accordance with articles 500 to 510.

Intrinsic safety barrier not required
 max. supply voltage 45 VDC
 for T-code see table

8. Nonincendive field wiring installation

The Nonincendive Field Wiring Circuit Concept allows interconnection of nonincendive field wiring apparatus with associated nonincendive field wiring apparatus or associated apparatus not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations, when Vmax ≥ Voc or Vt, Ca ≥ Ci + Ccable, La ≥ Li + Lcable
 Transmitter parameters are as follows: Vmax = 45 VDC; Ci ≤ 10 nF; Li = 0
 Imax = see note 9

9. For these current controlled circuit, the parameter Imax is not required and need not to be aligned with parameter Isc and It of the nonincendive field wiring or associated apparatus.

10. Warning: Explosion Hazard – Do not disconnect equipment unless power has been switched off or the area is known to be non hazardous.
 Warning: Substitution of Components may impair suitability for Class I, Div.2

Class II, III installation

DIP for Class II and III, Div.1, group E, F, G Hazardous Location Installation

11. Installation of transmitter wiring according to NEC using threaded conduits or other wiring methods in accordance with articles 500 to 510.
12. Use a dust tight seal at the conduit entry.