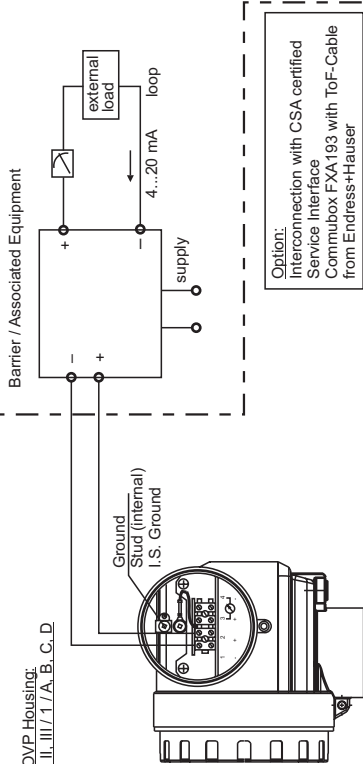


HAZARDOUS LOCATION

Class I, Div. 1, Groups A, B, C, D
Ex ia IIC, TX
Class II, Div. 1, Groups E, F, G
Class III

T12-OVP Housing:
IS / I, II, III / I, A, B, C, D



NON HAZARDOUS LOCATION

- Control room equipment may not use or generate over 250 Vrms.
- Install per the Canadian Electrical Code.
- Warning: Substitution of components may impair intrinsic safety.
- Warning: Substitution of components may compromise the security intrinsic safety.
- Ex ia IS defined as intrinsically safe / sécurité intrinsèque.
- For entry installation use CSA certified safety barrier or other associated equipment that satisfy the following conditions:
with $U_0/V_{oc} \leq U_{IVmax}$, $I_{oIsc} \leq I_{IImax}$, $Co/Ca \geq Ci + Ccable$, $Lo/La \geq Li + Lcable$.

U_0/V_{oc} (V)	I_{oIsc} (mA)	$P_{I/Imax}$ (W)	Ci (nF)	Li (μ H)
30	273	1.0	≤ 13	negligible

- For system installation use: CSA certified safety barriers as follows:
(a) $28 V / 300 \Omega + Ground$ or (b) $28 V / 300 \Omega + 28 V / Diode$ or (c) $28 V / 300 \Omega + 10 V / 50 \Omega$.
- Use supply wires suitable for 5 K above surrounding ambient.
- Utiliser des fils d'alimentation qui conviennent à une température de 5 K au-dessus de la température ambiante.
- Install barrier / associated equipment in accordance with manufacturer's instruction.
- In case of use of PTFE rod antenna (white), planar, parabolic, enamelled horn, type 244 or type 245 avoid electrostatic charge at the antenna; (e.g. do not rub with dry cloth; do not install within the filling curtain).
- The surge protection device (OVP) fulfills the requirements of CAN/CSA-E60079-14 / IEC 60079-14 clause 12.3
- Apparatus with faucet: In case of disconnection of Micropilot M from the faucet (e.g. for maintenance) we recommend to secure resp. to close the faucet e.g. with an additional blind flange. The responsibility for applicability of the arrangement behaviours exclusive the operator.
- Use specific cables, supplied with the Service Interface Commubox FXA193 or Remote Display FHX40.
- Refer to the applicable Control Drawing.

CLASS I, DIV. 2, GROUPS A, B, C, D or EX nC IIC and DIP, for CLASS II and III, DIV. 1, GROUPS E, F, G

HAZARDOUS LOCATION INSTALLATION

- Install per Canadian Electrical Code (CEC) using threaded metal conduit.
- Intrinsic safety barrier not required. Class 2 power supply shall be used, max. supply voltage 30 V. For T-code see table.
- Warning: Explosion Hazard - Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.
- Avertissement: Risque d'explosion - Avant de déconnecter l'équipement, couper le courant ou s'assurer que l'emplacement est designé non dangereux.
- Warning: Explosion Hazard - Substitution of components may impair suitability for Class I, Div. 2.
- Avertissement: Risque d'explosion - La substitution de composants peut rendre ce matériel inacceptable pour les emplacements de Classe I, Div. 2.

For CLASS II and III, DIV. 1

WARNING: Keep cover tight unless power has been switched off or the area is known to be non-hazardous.

Temperature class without display VU331	Permissible max. medium temperature at the antenna process connection (Tmed)
T6	+ 80 °C
T5	+ 95 °C
T4	+ 130 °C
T3C (functional)	+ 150 °C
T3	+ 195 °C
T2B (functional)	+ 230 °C
T2	+ 280 °C
T2	+ 290 °C
T1 (functional)	+ 350 °C
T1 (functional)	+ 400 °C

Temperature class without display VU331	Permissible max. ambient temperature of the electronic compartment (Ta) (enclosure 112 (OVP) Ex i with internal surge protection device)
T6	+55/60 °C / +60/65 °C
T5	+70/65 °C / +70/65 °C
T4	+70 °C / +70 °C
T3C (functional)	+70 °C / +70 °C
T3	+65 °C / +65 °C
T2B (functional)	+80 °C / +80 °C
T2	+80 °C / +80 °C
T2	+80 °C / +80 °C
T1 (functional)	+80 °C / +80 °C
T1 (functional)	+80 °C / +80 °C

Type	Type of antennas	Operation temperature 1)
FMR230 - .F	Horn antenna with PTFE-Korund feeder	-40 °C / -40 °F to +200 °C / 392 °F
FMR230 - .G	HT antenna (lanial gasket)	-40 °C / -40 °F to +350 °C / 662 °F
FMR230 - .L	HT antenna (Graphite gasket)	-60 °C / -76 °F to +400 °C / 752 °F
FMR230 - .M	Horn antenna with scavenging connection XT (extended temperature)	-60 °C / -76 °F to +280 °C / 536 °F
FMR230 - .N	HT (high temperature)	-60 °C / -76 °F to +400 °C / 752 °F
FMR231 -	Rod antenna PPS	-20 °C / -4 °F to +120 °C / 250 °F
FMR231 -	Rod antenna PTFE	-40 °C / -40 °F to +150 °C / 300 °F
FMR231 -	Rod antenna PTFE cladided	-40 °C / -40 °F to +150 °C / 300 °F
FMR231 -	Sanitary (process connection)	-40 °C / -40 °F to +150 °C / 300 °F
FMR231 -	PVDf (process connection)	-20 °C / -4 °F to +80 °C / 176 °F
FMR232 -	Planar antenna	-40 °C / -40 °F to +150 °C / 300 °F
FMR232 -	Parabolic antenna	-40 °C / -40 °F to +200 °C / 392 °F
FMR240 -	> 20 GHz horn antenna	-40 °C / -40 °F to +150 °C / 300 °F
FMR240 -	Wave guide antenna	-60 °C / -76 °F to +200 °C / 392 °F
FMR240 -	Horn compact, extended, special edition	-40 °C / -40 °F to +150 °C / 300 °F
FMR244 -	Compact antenna (PTFE capsuled)	-40 °C / -40 °F to +130 °C / 266 °F
FMR244 -	80 mm/3", PP cladided (type 4)	-40 °C / -40 °F to +80 °C / 176 °F
FMR245 -	Compact antenna (types 3, 4)	-40 °C / -40 °F to +150 °C / 302 °F
FMR245 -	DN50 + DN80 (types B, C, F, G)	-40 °C / -40 °F to +200 °C / 392 °F

1) Note: take care to specific temperature ranges of antenna versions

Temperature class without display VU331	Permissible max. ambient temperature of the electronic compartment (Ta) (enclosure 112 (OVP) Ex i with internal surge protection device)	FMR230 - .E/V/K/D/H	FMR230 - .L	FMR230 - .M	FMR230 - .F/G	FMR231	FMR232	FMR233	FMR240 Wave Guide	FMR244	FMR245
T6	+ 80 °C	+55/60 °C / +60/65 °C	+60/65 °C / +60/65 °C	+55/60 °C / +60/65 °C	+55/60 °C / +60/65 °C	+50/45 °C / +60/65 °C	+55/60 °C / +60/65 °C	+55/60 °C / +60/65 °C	+55/60 °C / +60/65 °C	+55/60 °C / +60/65 °C	+55/60 °C / +60/65 °C
T5	+ 95 °C	+70/65 °C / +70/65 °C	+70/65 °C / +70/65 °C	+60/65 °C / +60/65 °C	+60/65 °C / +60/65 °C	+60/65 °C / +60/65 °C	+60/65 °C / +60/65 °C	+60/65 °C / +60/65 °C	+60/65 °C / +60/65 °C	+60/65 °C / +60/65 °C	+60/65 °C / +60/65 °C
T4	+ 130 °C	+75/70 °C / +75/70 °C	+75/70 °C / +75/70 °C	+75/70 °C / +75/70 °C	+75/70 °C / +75/70 °C	+75/70 °C / +75/70 °C	+75/70 °C / +75/70 °C	+75/70 °C / +75/70 °C	+75/70 °C / +75/70 °C	+75/70 °C / +75/70 °C	+75/70 °C / +75/70 °C
T3C (functional)	+ 150 °C	+75 °C / +75 °C	+75 °C / +75 °C	+75 °C / +75 °C	+75 °C / +75 °C	+75 °C / +75 °C	+75 °C / +75 °C	+75 °C / +75 °C	+75 °C / +75 °C	+75 °C / +75 °C	+75 °C / +75 °C
T3	+ 195 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C
T2B (functional)	+ 230 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C
T2	+ 280 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C
T2	+ 290 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C
T1 (functional)	+ 350 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C
T1 (functional)	+ 400 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C	+80 °C / +80 °C

Note: the applicable temperature of antenna must be within their specified limits; Tx (functional) means limited through type of antenna; T6 and T5 requires for FF electronic enlarged derating; for ambient; 1st number = PA electronic insert; 2nd number = FF electronic insert e.g. +60/55 °C expression means: Apparatus with PA electronic insert max. ambient at housing = +60 °C; Apparatus with FF electronic insert max. ambient at housing = +55 °C.

