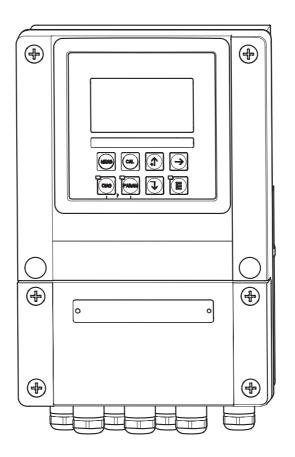


Safety Instructions Mycom S CXM153-O/-P

Transmitter for pH/ORP or conductivity measurement



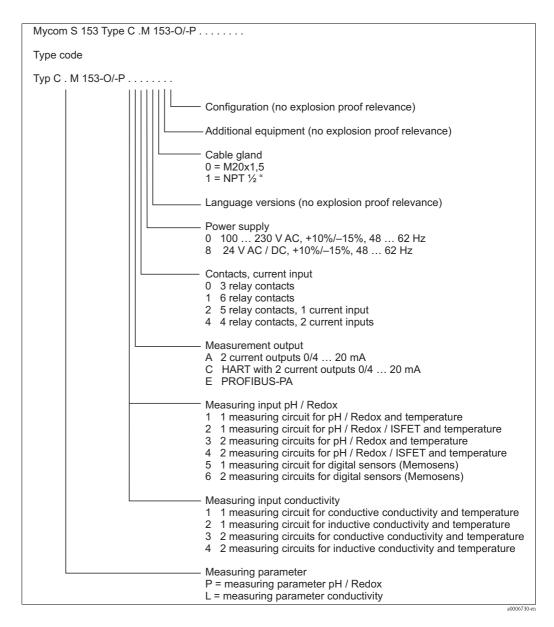




XA234C/07/en/09.06 51513471

Identification

Device identification



Equipment rating

For the Mycom S CPM153-O and Mycom S CLM153-O transmitters the rating is

 Nonincendive apparatus for Class I, Division 2, Groups A, B, C & D; dust-ignition proof for Class II and III, Division 1, Groups E, F & G with intrinsically safe connections to Class I, II & III, Division 1, Groups A, B, C, D, E, F & G and Class I, Zone 1, Group IIC hazardous (classified) locations in accordance with Control Drawing 136620, utilizing Type 4 enclosure and a temperature class of T4 @ Ta = 50 °C.

For the Mycom S CPM153-P and Mycom S CLM153-P transmitters the rating is

Nonincendive apparatus for Class I, Division 2, Groups A, B, C & D; Class I, Zone 2, Group IIC; and dust-ignition proof for Class II and III, Division 1, Groups E, F & G with nonincendive field wiring parameters to Class I, II & III, Division 2, Group A, B, C, D, F & G and Class I, Zone 2, Group IIC hazardous (classified) locations in accordance with Control Drawing 136626, utilizing Type 4 enclosure and a temperature class of T4. The product was also examined for a Division 2, FISCO application, in accordance with Control Drawing 136626.

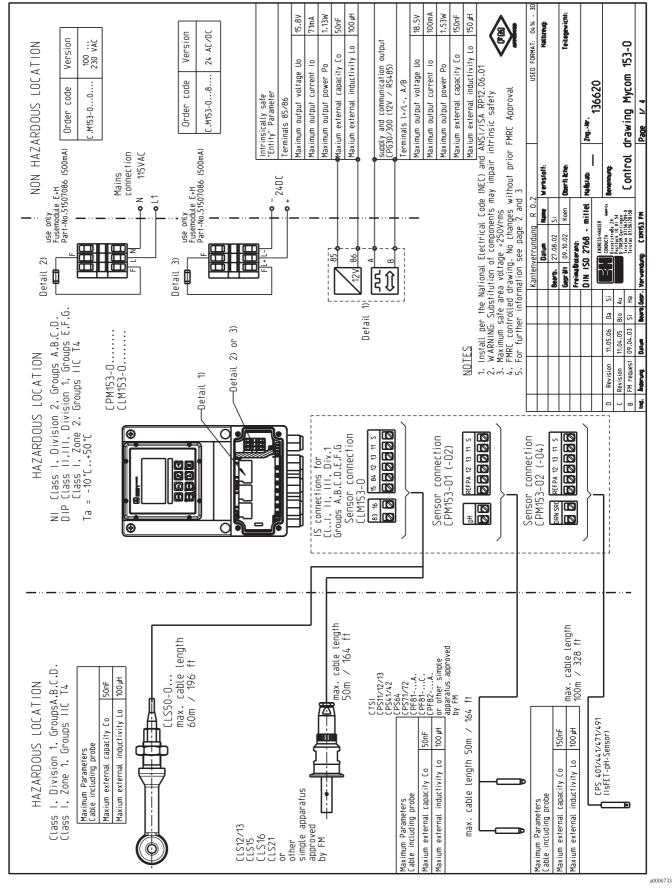
Nameplate

| Made in Germany, D-70839 Gerlingen MYCOM S pH / Redox End | Endress+Hauser 🖽 | | | | | | | |
|---|---|--|--|--|--|--|--|--|
| Order code CPM153-PA2A00A010 Serial no. 55000505G08 | | | | | | | | |
| Channels: 1 | NEMA 4 CL. I. DIV 2, GP A, B, C, D: Dust-Ignitionproof CL. II, III, | | | | | | | |
| Output 1: 0/4 20 mA Output 2: 0/4 20 mA | DIV 1, GP, E, F, G CL. I, ZONE 2 GP IIC, T4; IS outputs per DWG 136626 -10 < Ta < +50 °C | | | | | | | |
| | | | | | | | | |

Fig. 1: Nameplate Mycom S CXM153-P (example)

| MYCOM S | Conductivity Er | dress+Hauser |
|--------------------------|---|--|
| Order code Serial no. | CLM153-OA2A00A010 42000505G08 | |
| | 0.04 μS/cm 2000 mS/cm -35 +250 °C (NTC -20 +100 °C) 1 | Dust-Ignitionproof CL. II, III, |
| | 0/4 20 mA 0/4 20 mA 100-230 VAC 50/60 Hz 10 V | DIV 1, GP, E, F, G CL. I, ZONE 2 GP IIC, T4; IS outputs per DWG 136620 A-10 < Ta < +50 °C |
| | WED | |

Fig. 2: Nameplate Mycom S CXM153-O (example)

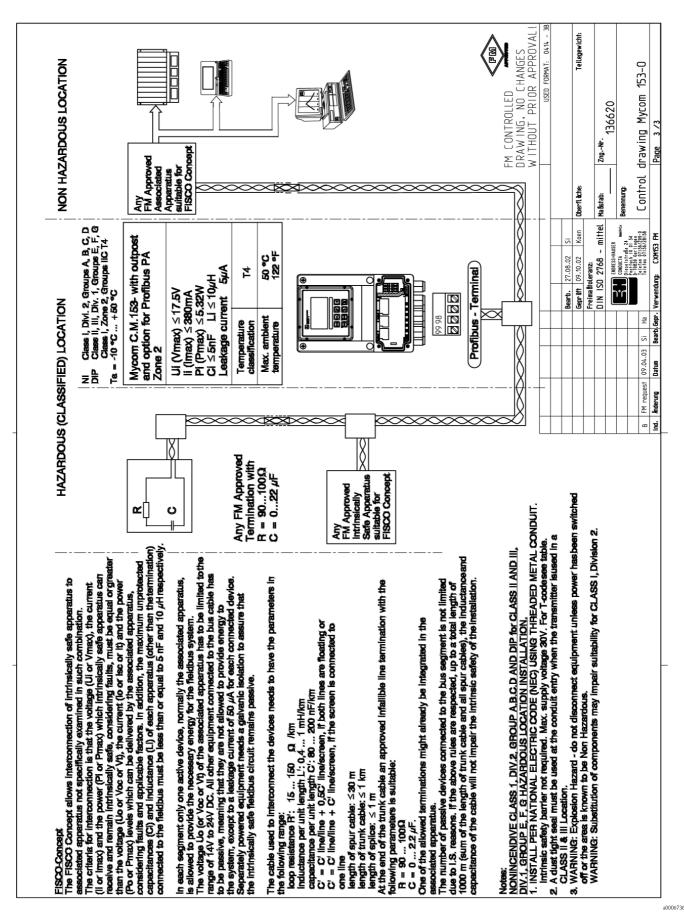


Control drawing Mycom S CXM153-O

Fig. 3: Control drawing Mycom S CXM153-O, page 1

| NON HAZARDOUS LOCATION | contac 57/58 44/45 | Supply | | 1) Uo s Ui 10 s Ui Co 2 Ci + C coble Lo 2 Li + L coble | 2) Use signal return barrier FM approved | C onnection | FM approved Terminals 21/22, 23/24 associated. | Maximum input current li | Maximum input | Maxium internal capacity Ci 1.1nF Maximum internativity Ii 22.44 | Barrier | s looble Terminals 31/32, 33/34 | ± the second toop B Maximum input voltage Ui 30V 30 Maximum input voltage Ui 30V 30 Maximum input voltage Ui 30V | London 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | inductivity Li | | FM CONTROLLED DRAWING, NO CHANGES WITHOUT | PKIUK APPKUVAL! | Dalum v vz. Balum v vz. Balum v vz. Halbitan | Operate 27.00.02 / 21. District Advance District Advance <thdistrict advance<="" th=""> <thdistread advance<="" th=""></thdistread></thdistrict> | ilel Hafslat: ZngMr. | D Revision 11.05.06 Data Stitution Mode Mode | FM request 09.04.03 |
|---|--|--------|---|---|--|-------------------------------------|--|--------------------------|---------------|---|-------------|---------------------------------|--|--|--|-----|---|-----------------|--|--|----------------------|---|-------------------------|
| HAZARDOUS LOCATION NI Class I, Division 2. Groups A.B.C.D. | UIP (lass 11,111,11,11,12,12) Class 1. Zone 2. Groups 11C T4 Ta = -10°C+50°C | | Ui= 30V Ci= 1.1nF 1= 24, pH 0= 24, pH | የ - የ - | - 9 | CXM153-0XX1 CXM153-0XX2 CXM153-0XX4 | | | | 21 C C C C C C C C C C C C C C C C C C C | | 31 + | output 1 32 | current output 2 34 6 | 61.0 Connection data for divital invite | 102 | 93 . Maximum input voltage Ui | | | inductivity Li | 1 | 0 | Lectronation See Page 3 |

Fig. 4: Control drawing Mycom S CXM153-O, page 2



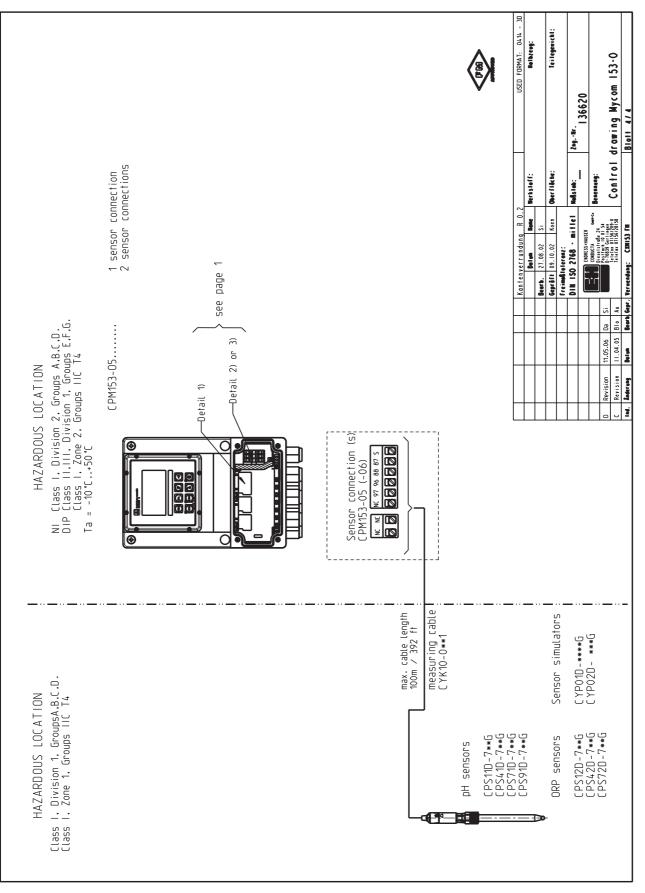
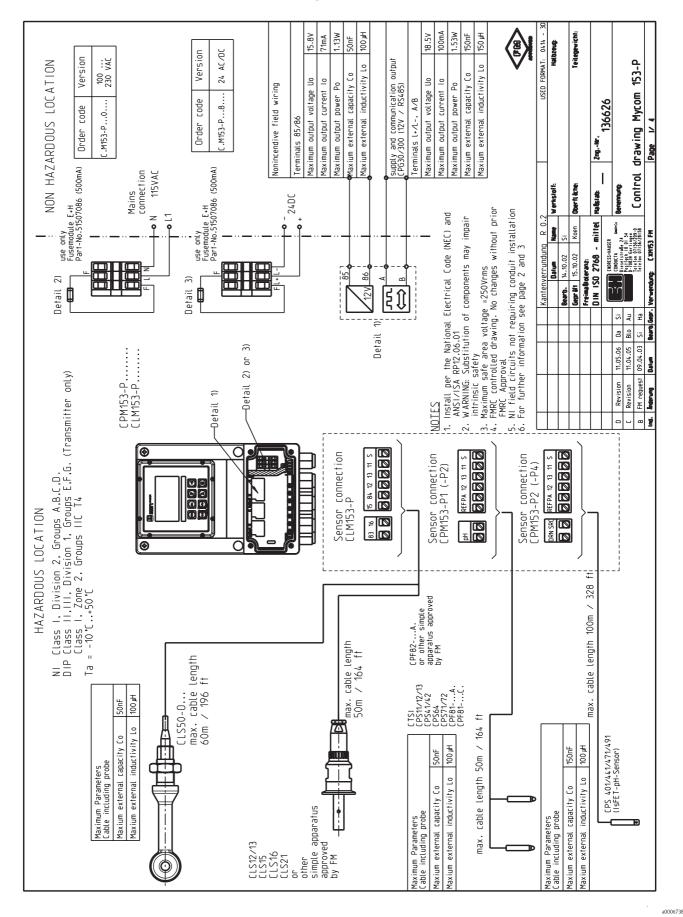


Fig. 6: Control drawing CXM153-O, page 4



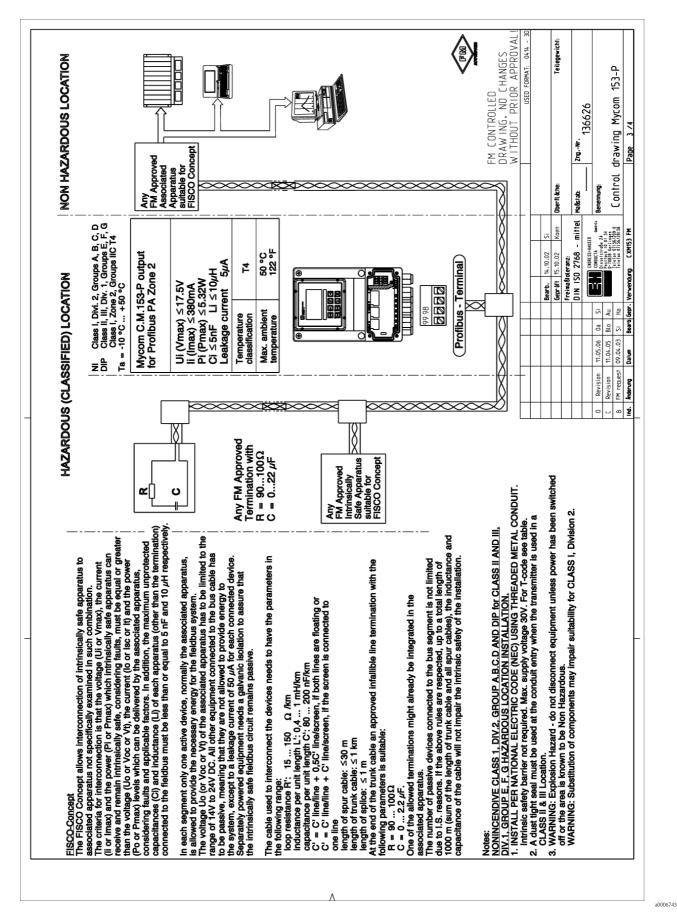
Control drawing Mycom S CXM153-P

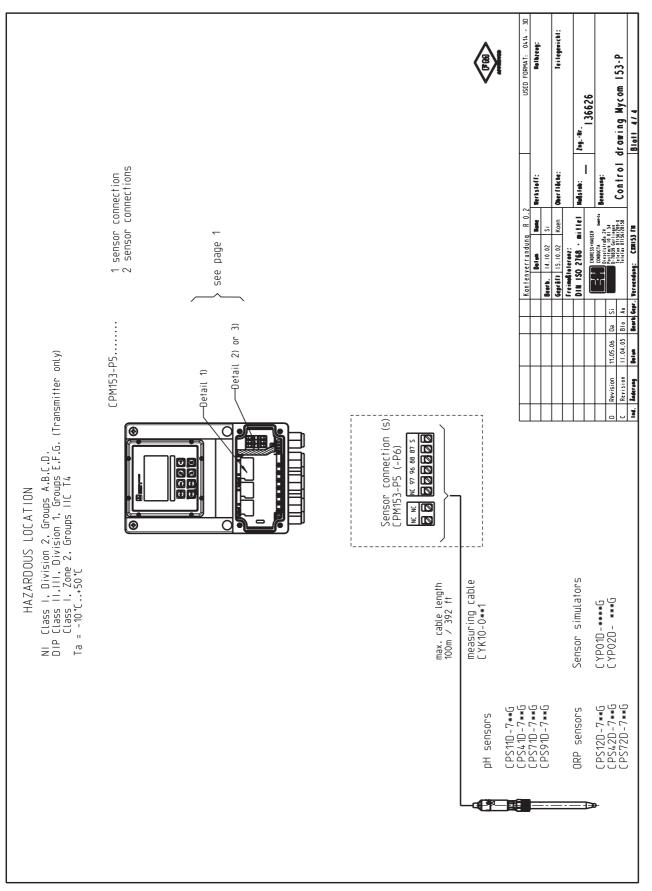
Fig. 7: Control drawing Mycom S CXM153-P, page 1

| JS LOCATION | 57/58 44/45 | Maximum input voltage Ui | - • • • • • • • • • • • • • • • • • • • | Maxium input power Fi Maxium internal capacity Ci | s I s Ii K Ci + C cable | 2) Use signal return barrier FM approved | Connection | Terminals 21/22, 23/24 | Maximum input current li | oower Pi | Maxium internal capacity Ci 1.1nF | Maxium internal inductivity Li 24 µH | <pre>sternal load = Ui - 2V - R 23 mA - Barrier [Connection data for current</pre> | (measurement output version | ■ ****** ▲ ▲ >> | | Maximum input current li | Lot 2011 Maximum input power Pi 750mW | ier ²⁾ Maxium internal inductivity Li | | EM CONTROLLED DRAWING. NO CHANGES WITHOUT | | Kantenverrundung R 0.2 USED FORMAT: 0414 - 30 Datus Kantenverrundung R 0.2 National Kantenverrundung R 0.2 | Si | General fit. 15.10.02 Koen Operal stress Teilegravicht. Freisebloterant: Freisebloterant: Freisebloterant: Freisebloterant: | DIN ISO 2768 - millet Release 2ngWr. | 01007- | FM request 09.04.03 Si Ha |
|--|----------------|--------------------------|---|--|-------------------------------|--|------------|------------------------|--------------------------|----------|-----------------------------------|--------------------------------------|--|-----------------------------|---------------------|---------------|--------------------------|---------------------------------------|--|----|---|--------------------------|--|----------|---|--------------------------------------|--------|---------------------------|
| HAZARDOUS LOCATION NI Class I. Division 2. Groups A.B.C.D. DIP Class I1.111.Division 1. Groups E.F.G. Class I 2.20ne 2. Groups ILC T4 | | | - 9 - | 6 | (each interface) | | | | | | | 45 45 22 5- 1 Current input 1 | | | ·+- | output 1 32 i | | current output 2 34 | | E1 | 93 - Maximum input voltage Ui | Maximum input current li | T | 9 | ' | Profibus | - 0 | ee Page 3 |

Fig. 8: Control drawing Mycom S CXM153-P, page 2

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a0006740

Replacing the device fuses



- Warning!

 Danger of injury! Make sure the device is voltage-free before replacing the fuse!
- Use only the Ex-approved fuse module M3F/500 mA (Pos. 30).
- Position of the fuse holder: "A"
- The safety module is directly connected to the terminals "F" at the mains terminal block (see connection diagram in the connection compartment cover of the instrument).

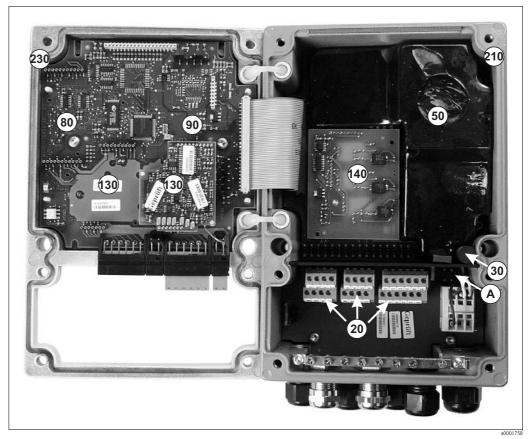


Fig. 11: Interior view of the Mycom S CXM153 transmitter

Spare parts and accessories

Spare parts list

| Pos. No. | Kit name | Contents / use | Order no. |
|-------------|--|---|-----------|
| 20 | Terminal module HART, 0 20 mA | Module M3K | 51507085 |
| 20 | Terminal module PROFIBUS-PA | Module M3K-P | 51510926 |
| 30 | Fuse module (500 mA) | 2 fuse modules M3F | 51507086 |
| 50 | Power supply 100 230 VAC | Module M3G, power supply + 3 relays | 51507088 |
| 50 | Power supply 24 VAC/DC | Module M3G, power supply + 3 relays | 51507090 |
| 80 | DC/DC converter for circuit 2 | Module M3DC | 51507091 |
| 90 | Controller module pH, 2 current outputs passive | Module M3CH-S2 | 51517385 |
| 90 | Controller module pH, 2 current outputs passive + HART | Module M3CH-H2 | 51517387 |
| 90 | Controller module pH, PROFIBUS-PA | Module M3CP-PA | 51517389 |
| 90 | Controller module conductivity, conductive measurement, 2 current outputs passive | Module M3CH-H2, conductive | 51517391 |
| 90 | Controller module conductivity, inductive measurement, 2 current outputs passive | Module M3CH-H2, inductive | 51517397 |
| 90 | Controller module conductivity, conductive measurement, 2 current outputs passive + HART | Module M3CH-S2, conductive | 51517393 |
| 90 | Controller module conductivity, inductive measurement, 2 current outputs passive + HART | Module M3CH-S2, inductive | 51517399 |
| 90 | Controller module conductivity, conductive measurement, PROFIBUS-PA | Module M3CP-PA, conductive | 51517395 |
| 90 | Controller module conductivity, inductive measurement, PROFIBUS-PA | Module M3CP-PA, inductive | 51517401 |
| 130 | pH input module | Module MKP2 | 51507096 |
| 130 | pH input module Memosens | Module MKD1 | 51514966 |
| 130 | Conductivity input module | Module MKIC | 51501206 |
| 140 | Relay module with 3 additional relays | Module M3R-3 | 51507097 |
| 140 | Relay module with 2 additional relays + 1 current input | Module M3R-2 | 51507098 |
| 140 | Relay module with 1 additional relay + 2 current inputs | Module M3R-1 | 51507099 |
| 210 | Housing front cover | Front cover with keypad sheet, connection compartment cover, hinge, nameplate | 51507105 |
| 230 | Housing lower part | for one and two-circuit devices | 51507107 |

Accessories

| Designation | Use | Order no. |
|---------------------------------------|--|-----------|
| Junction box VBE | For cable extension between sensor and transmitter in hazardous areas zone 0 | 50003993 |
| Kit power supply protection cap IP 30 | For protection of non-intrinsically safe circuits | 51517334 |

Safety instructions

- Caution!
 - The transmitter Mycom S CXM153-O/-P complies with the FM Approval Standards Class 3600 (1998), Class 3810 (1989/1995), Class 3611 (1999), Class 3610 (1999) and is suitable for use in hazardous areas.
 - Installation
 - Installations shall comply with the requirements of the relevant edition of the National Electrical Code (ANSI/NFPA 70).
 - Installations shall comply with the latest edition of the manufacturer's control drawings and instruction manual.
 - See ANSI/ISA RP12-06.01, Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations for guidance on the installation of intrinsically safe apparatus and systems.
 - The connection diagram inside the connection compartment is additionally intended to guarantee proper installation.
 - The jumpers used to set the current outputs to active or passive must not be modified. Doing so will cause loss of intrinsic safety. The current outputs must always be passive.
 - Power ratings
 - Control room equipment connected to intrinsically safe associated apparatus should not use or generate more than 250 $V_{\rm rms}$ or DC.
 - Adherence to the specified ambient temperature range and conformance with the maximum permissible electric power ratings are prerequisites for safe operation of the equipment.
 - Tightness
 - Housing cover and connection compartment cover must not be opened as long as non-intrinsically safe current circuits are still alive. A corresponding note is attached to the instrument.
 - Proper installation is required in order to maintain the housing protection type (NEMA 4): close connection compartment cover tightly, install cable glands properly.
 - Unused cable glands are to be closed up with filler plugs according to the delivery status.
 - Avoid condensate formation in the connection compartment.
 - Maintenance and replacement
 - Remove the instrument from service in case of a damaged display front foil or damaged operating keys.
 - Tampering and replacement with non-factory components may adversely affect the safe use of the system.
 - Maintenance work on the instrument may only be carried out with original spare parts for Mycom S CXM153-O/-P according to the spare parts list (see page 14). Maintenance work may only be carried out by the Endress+Hauser Service or by specially trained Ex personnel.
 - If the instrument is ever operated with **non-intrinsically safe** circuits, it **must not be reused** in hazardous areas.

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