

## Safety Instructions

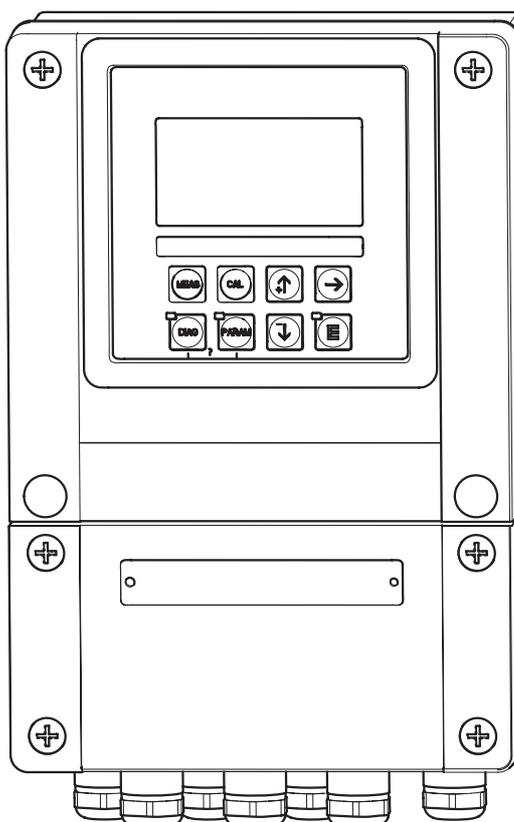
# Mycom S CXM153-S

Transmitter for pH/ORP or conductivity measurement



**en** - Safety instructions for electrical apparatus for explosion-hazardous areas according to CSA standard

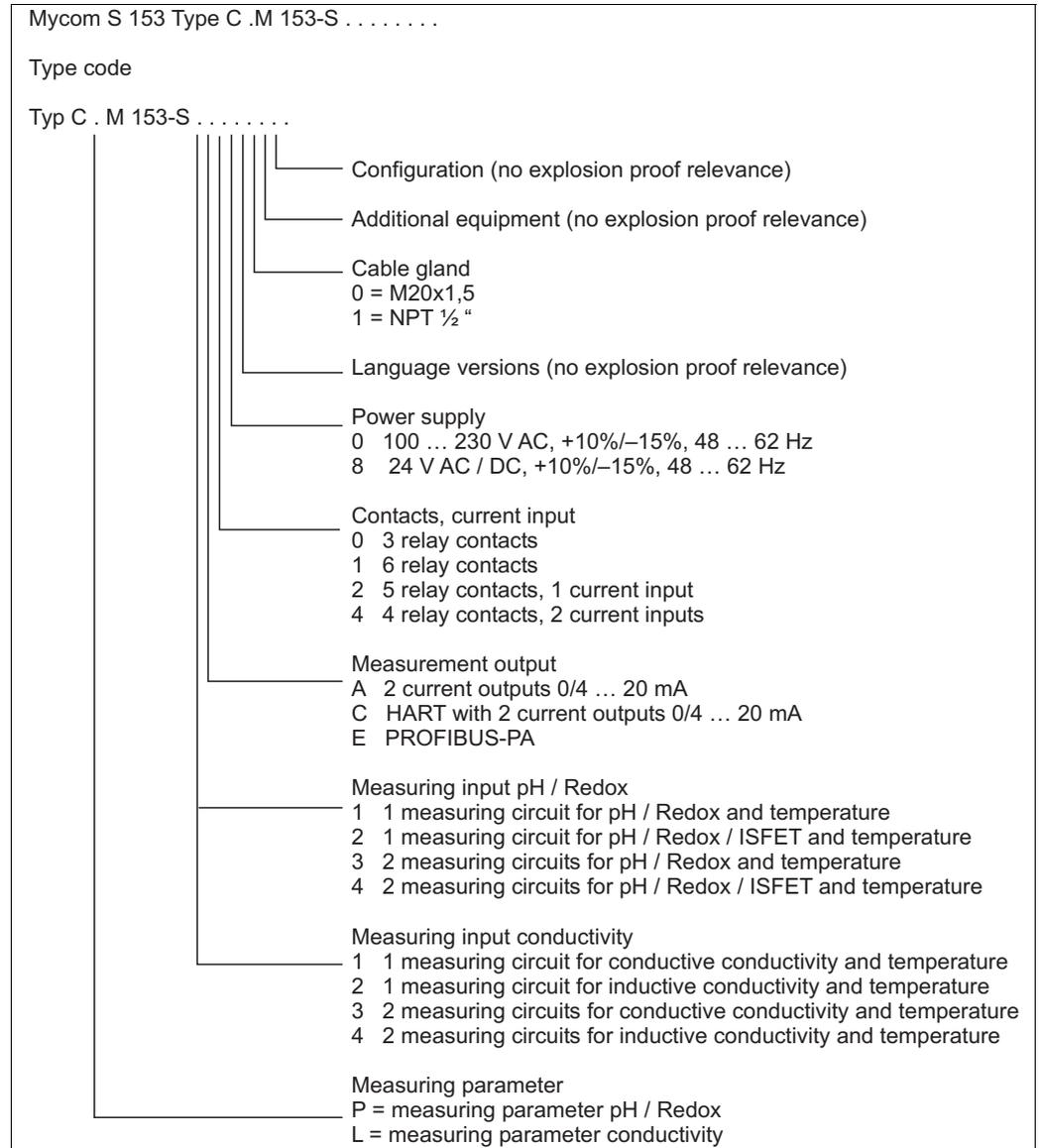
**fr** - Conseils de sécurité pour matériels électriques destinés aux zones explosibles et selon norme CSA





# Identification

## Device identification



## Nameplate

<b>ENDRESS+HAUSER</b>		Made in Germany D-70839 Gerlingen
<b>MYCOM S</b> pH / Redox		1138022-0416-4-A
Order code: CPM153-S1A00A000 Serial No.: 36004C05G08		
Meas. range: -2 .. +16 pH	±1500 mV	TYPE 4 
Temperature: -10 .. +150 °C	Channels: 1	
Output 1: 0/4 .. 20 mA Output 2: 0/4 .. 20 mA		-10 < Ta < +50 °C
Mains: 100-230 VAC      50 / 60 Hz    10 VA		
CL. I, DIV 2. GR. A, B, C, D CL. II, DIV 1. GR. E, F, G:    CL. III    Provides intrinsically safe and nonincendive outputs per dwg. 136783		

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

# Control drawing Mycom S CXM153-S

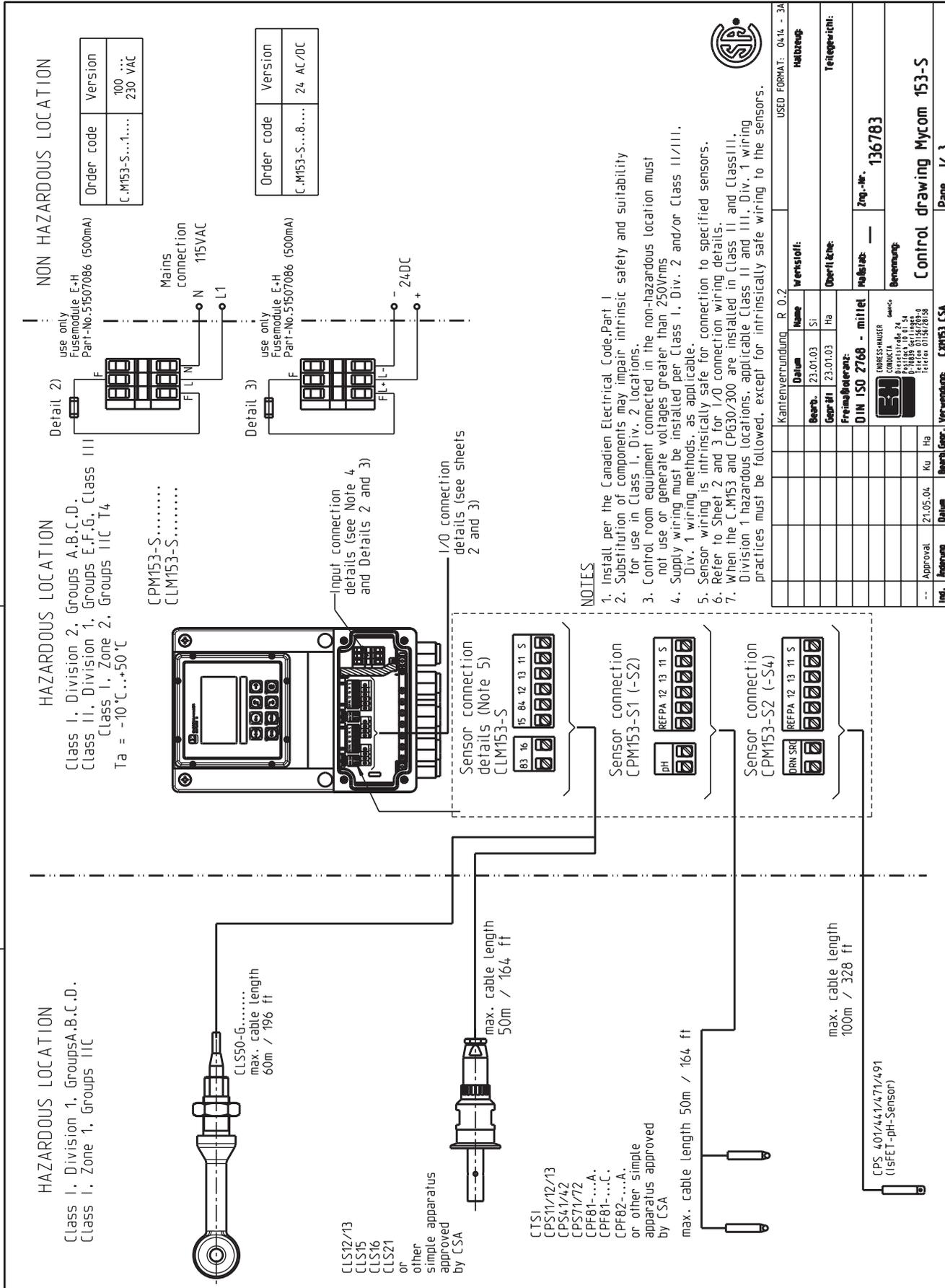


Fig. 2: Control drawing Mycom S CXM153-S, page 1

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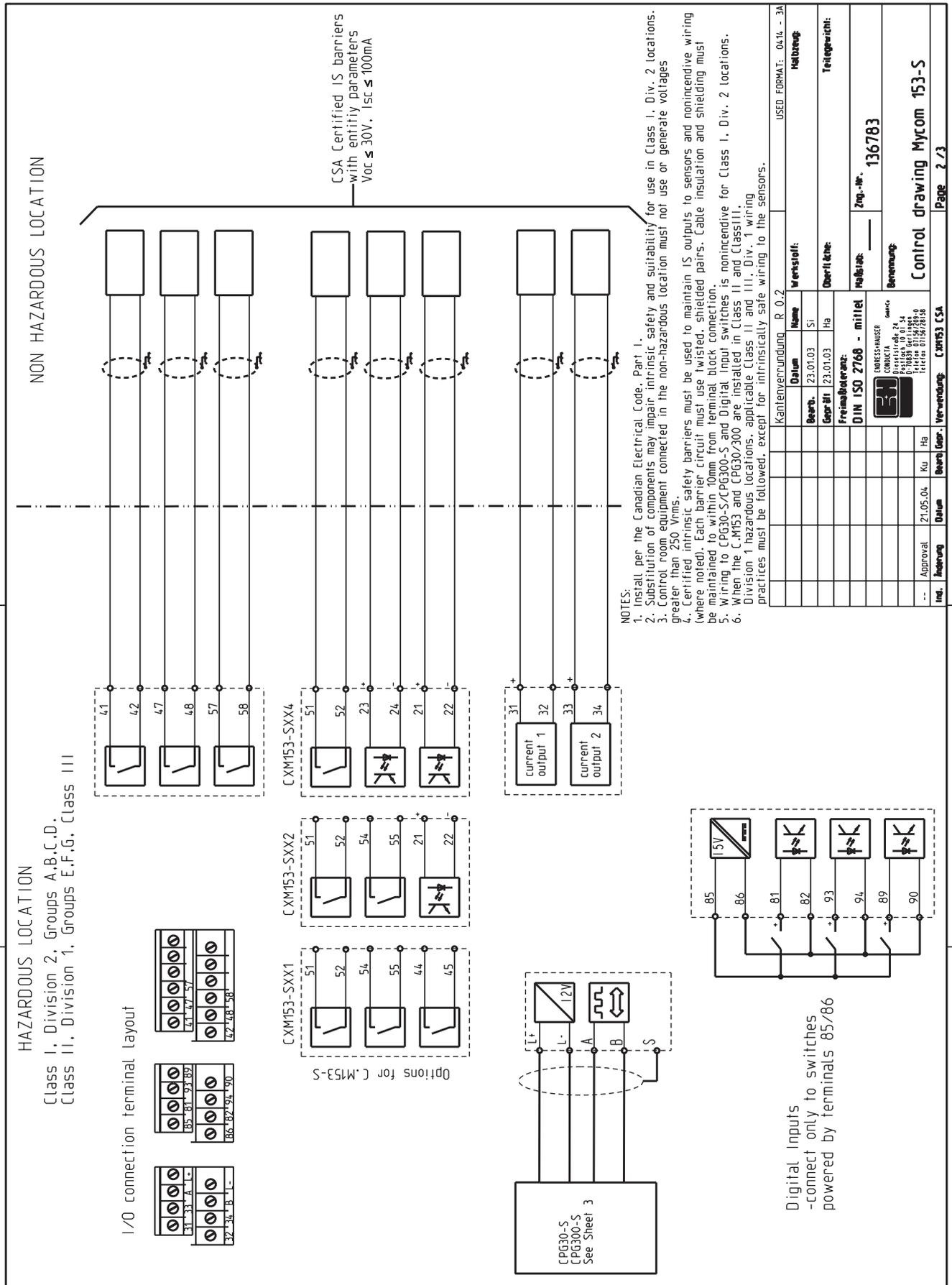
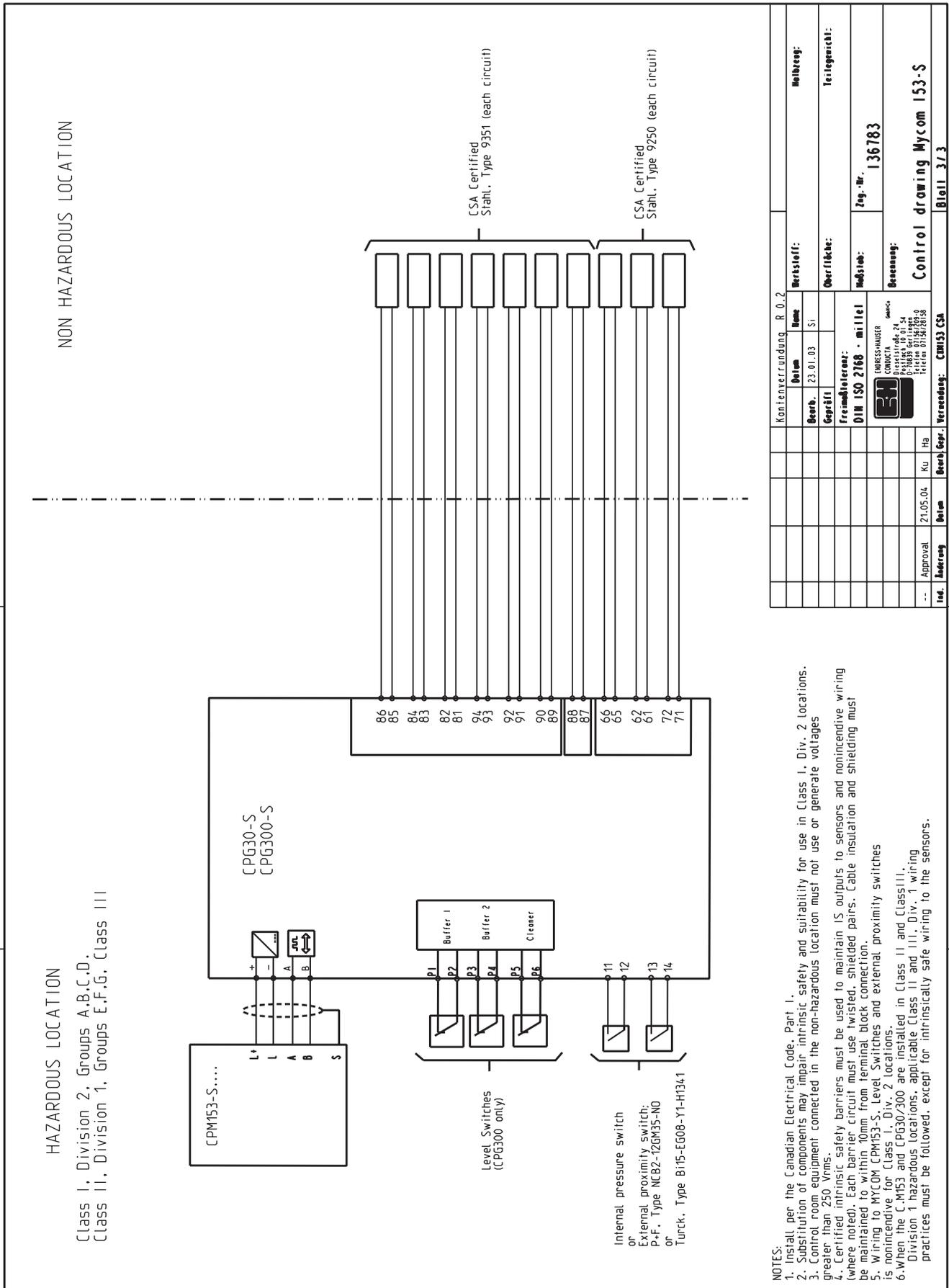


Fig. 3: Control drawing Mycom S CXM153-S, page 2



**NOTES:**

1. Install per the Canadian Electrical Code, Part 1.
2. Substitution of components may impair intrinsic safety and suitability for use in Class I, Div. 2 locations.
3. Control room equipment connected in the non-hazardous location must not use or generate voltages greater than 250 Vrms.
4. Certified intrinsic safety barriers must be used to maintain IS outputs to sensors and nonintrusive wiring (where noted). Each barrier circuit must use twisted, shielded pairs. Cable insulation and shielding must be maintained to within 10mm from terminal block connection.
5. Wiring to MTCOM (CPM153-S), Level Switches and external proximity switches is nonintrusive for Class I, Div. 2 locations.
6. When the CPM153 and CPG30/300 are installed in Class II and Class III, Division 1 hazardous locations, applicable Class II and III, Div. 1 wiring practices must be followed, except for intrinsically safe wiring to the sensors.

Fig. 4: Control drawing Mycom S CXM153-S, page 3

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## 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).

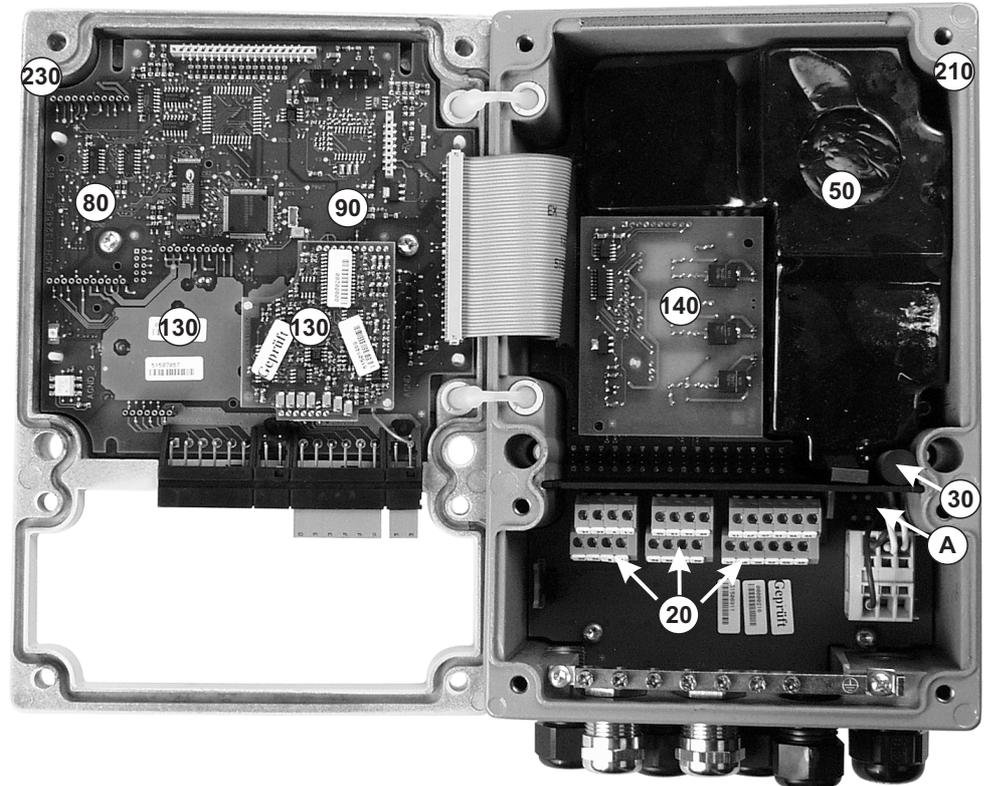


Fig. 5: Interior view of the Mycom S CXM153 transmitter

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## 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	CPM153 delivered until 11/30/2004: Controller module pH, 2 current outputs passive	Module M3CH-S2	51507092
90	CPM153 delivered from 12/01/2004 (from serial no. 6Cxxxx05G08): Controller module pH, 2 current outputs passive	Module M3CH-S2	51517385
90	CPM153 delivered until 11/30/2004: Controller module pH, 2 current outputs passive + HART	Module M3CH-H2	51507093
90	CPM153 delivered from 12/01/2004 (from serial no. 6Cxxxx05G08): Controller module pH, 2 current outputs passive + HART	Module M3CH-H2	51517387
90	CPM153 delivered until 11/30/2004: Controller module pH, PROFIBUS-PA	Module M3CP-PA	51507094
90	CPM153 delivered from 12/01/2004 (from serial no. 6Cxxxx05G08): Controller module pH, PROFIBUS-PA	Module M3CP-PA	51517389
90	CLM153 delivered until 11/30/2004: Controller module conductivity, conductive measurement, 2 current outputs passive	Module M3CH-H2, conductive	51510991
90	CLM153 delivered from 12/01/2004 (from serial no. 6Cxxxx05G08): Controller module conductivity, conductive measurement, 2 current outputs passive	Module M3CH-H2, conductive	51517391
90	CLM153 delivered until 11/30/2004: Controller module conductivity, inductive measurement, 2 current outputs passive	Module M3CH-H2, inductive	51516045
90	CLM153 delivered from 12/01/2004 (from serial no. 6Cxxx05G08): Controller module conductivity, inductive measurement, 2 current outputs passive	Module M3CH-H2, inductive	51517397
90	CLM153 delivered until 11/30/2004: Controller module conductivity, conductive measurement, 2 current outputs passive + HART	Module M3CH-S2, conductive	51510990
90	CLM153 delivered from 12/01/2004 (from serial no. 6Cxxxx05G08): Controller module conductivity, conductive measurement, 2 current outputs passive + HART	Module M3CH-S2, conductive	51517393
90	CLM153 delivered until 11/30/2004: Controller module conductivity, inductive measurement, 2 current outputs passive + HART	Module M3CH-S2, inductive	51516040

Pos. No.	Kit name	Contents / use	Order no.
90	CLM153 delivered from 12/01/2004 (from serial no. 6Cxxxx05G08): Controller module conductivity, inductive measurement, 2 current outputs passive + HART	Module M3CH-S2, inductive	51517399
90	CLM153 delivered until 11/30/2004: Controller module conductivity, conductive measurement, PROFIBUS-PA	Module M3CP-PA, conductive	51509607
90	CLM153 delivered from 12/01/2004 (from serial no. 6Cxxxx05G08): Controller module conductivity, conductive measurement, PROFIBUS-PA	Module M3CP-PA, conductive	51517395
90	CLM153 delivered until 11/30/2004: Controller module conductivity, inductive measurement, PROFIBUS-PA	Module M3CP-PA, inductive	51516047
90	CLM153 delivered from 12/01/2004 (from serial no. 6Cxxxx05G08): 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!

- Mycom S, type CPM153-S pH/ORP transmitter or type CLM153-S conductivity transmitter, rated 120/240 Vac, 50/60 Hz, 18 VA or 24 Vac/Vdc, 12 VA; suitable for installation in Class I, Div. 2, Groups A, B, C,D or Class II, Div. 1, Groups E, F, G, Class III; temperature code T4. May be used with type CPG30-S or CPG300-S Controllers. Provides intrinsically safe circuits and contains non-incendive field wiring circuits when installed per connection drawing 136783.
- The connection diagram inside the connection compartment is additionally intended to guarantee proper installation.
- 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.
- If the sensor is operated in a hazardous area and the Mycom S CXM153-G transmitter is located in a non-hazardous area, still make sure that all electrical circuits except for the power supply circuit are intrinsically safe and the specified permissible power ratings are adhered to.
- Proper installation is required in order to maintain the housing protection type (Type 4).
- Unused cable glands are to be closed up with filler plugs according to the delivery status.
- If the instrument is ever operated with **non-intrinsically safe** circuits, it **must not be reused** in hazardous areas.
- Remove the instrument from service in case of a damaged display front foil or damaged operating keys.
- Avoid condensate formation in the connection compartment.
- Maintenance work on the instrument may only be carried out with original spare parts for Mycom S CXM153-S according to the spare parts list (see page 8). Maintenance work may only be carried out by the Endress+Hauser Service or by specially trained Ex personnel.
- 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.



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