

# 8-channel Analog Output



## 4–20 mA

8104-AO-IP

- ◆ 8 single-ended outputs
- ◆ 4–20 mA
- ◆ for I/P converters and remote indicators, etc
- ◆ open circuit detection is provided on each channel
- ◆ 24 V dc bussed field power required

### MODULE SPECIFICATION

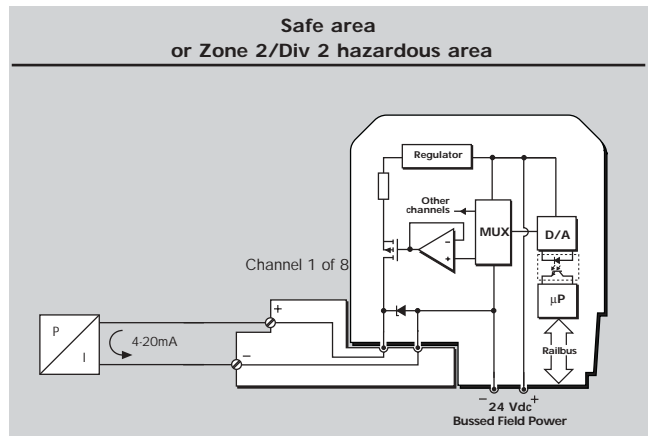
See also System Specification

#### OUTPUTS

Number of channels .....8, single-ended  
 Nominal signal range (span) .....4 to 20 mA  
 Full signal output range .....1 to 23 mA  
 Open loop detection threshold ..... $0.7 \pm 0.25$  mA  
 Output compliance  
 .....20 mA at 21.6 V dc supply (into 700  $\Omega$  load)  
 Accuracy (over temp range) ..... $\pm 0.25\%$  of span  
 Output ripple ..... $< 0.02\%$  of span  
 Resolution .....12 bits  
 Isolation  
 any channel to Railbus .....100 V ac

#### CONFIGURABLE PARAMETERS

Initialisation state .....predefined value  
 Drive on fail-safe .....predefined value / last value  
 Channel status .....active / inactive



#### RESPONSE TIME

##### Response time

From Railbus command to output change .....25 ms (max.)

#### SAFETY

##### FM non-incendive field wiring parameters (each channel)

..... $V_{oc} = 28.7$  V;  $I_{sc} = 33$  mA;  $C_a = 0.17$   $\mu$ F;  $L_a = 11.0$  mH

#### POWER SUPPLIES

Railbus (12V) current .....100 mA (typ.)  
 .....150 mA (max.)  
 Bussed Field Power .....300 mA (max.) @ 24 V dc  $\pm 10\%$   
 Quiescent current .....60 mA

#### MECHANICAL

Module Key Code .....A4  
 Module width .....42 mm  
 Weight .....200 g

#### FIELD TERMINAL

Field wiring	Recommended Field Terminal	Compatible Field Terminal
General purpose	8602-FT-ST Standard	8604-FT-FU Fused
Class 1, Div 2 or Zone 2 hazardous areas	8601-FT-NI Non-incendive	8603-FT-FU Non-incendive, fused

