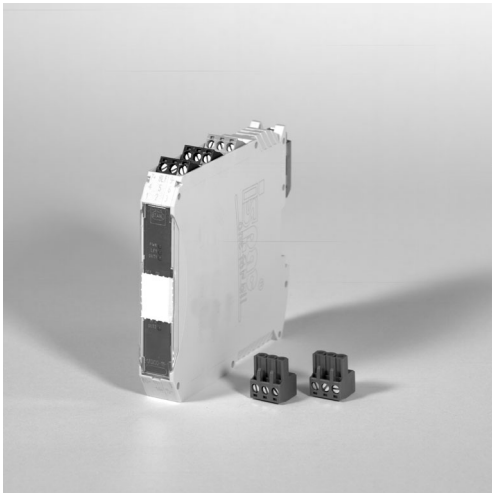
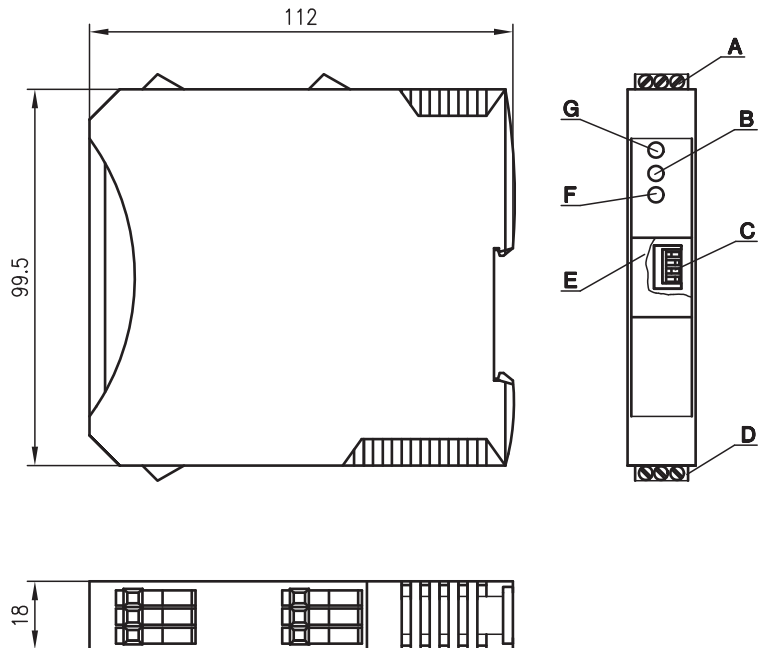


VS 403 Ex i

Isolated switching amplifier



Dimensioned drawing



- A** Connection terminals: operating voltage and switching output
- B** Line Fault LF 1
- C** Switch for setting the operating modes
- D** Connection terminals: input [Ex ia] IIC
- E** Label area
- F** Switching state OUT 1
- G** Auxiliary energy available PWR

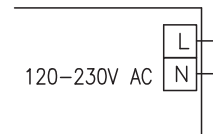
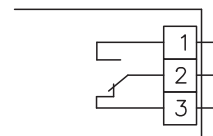
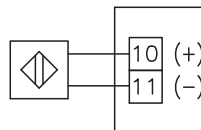


- Intrinsically safe input [Ex ia] IIC
- Input, output and operating voltage are galvanically isolated
- Wire break monitoring (may be deactivated)
- Operating modes adjustable
- Switching output with power relay
- 1 channel
- Top hat rail mounting
- EU type examination certificate DMT 02 ATEX E 195 X
- Ex II(1) GD [Ex ia] IIC/IIB
- Usable acc. to IEC 61508 up to: SiL 2 (relay output) SiL 3 (electronic output)

Electrical connection

potentially explosive area

area without danger of explosions



Accessories:

- Blue connection cable for intrinsically safe circuits (BK7 ... Ex)

We reserve the right to make changes • 92_ex_ex_v03gb.fm



Specifications

Electrical data

Operating voltage 120 ... 230VAC
 Frequency range 48 ... 62Hz
 Power consumption ≤ 1.4VA

Ex i input

acc. to IEC 60 947-5-6 (NAMUR)
 Current I_E for ON ≥ 2.1 mA
 Current I_E for OFF ≤ 1.2mA
 Bias voltage ≤ 8.2V
 Short-circuit current ≤ 8.2mA
 Internal resistance 1000Ω

Output

Minimum load 12V/100μA
 Maximum load DC 250V/2A
 Maximum load AC 250V/4A
 Maximum switching power 50W/1000VA

Timing

Switching frequency (max.) 6Hz
 Switching delay ON ** OFF ≤ 10ms
 Switching delay OFF ** ON ≤ 10ms

Indicators

LED 1 green PWR auxiliary energy available
 LED 2 red LF 1 wire break
 LED 3 yellow OUT 1 switching output ON


Mechanical data

Housing plastic (polyamide 6.6)
 Fire resistance housing VO (UL standard 94)
 Weight 160g
 Mounting type outside the potentially explosive area on DIN rails









Environmental data

Ambient temp. (operation/storage) -20°C ... +70°C/-40°C ... +80°C
 Protection class housing IP 30
 Protection class terminals IP 20
 Electromagnetic compatibility IEC 60 947-5-6, NAMUR NE 21

Explosion protection

Labelling (CENELEC)  II (1) GD [Ex ia] IIC/IIB
 Classification accompanying electrical device
 Maximum safe voltage U_{max} 10.6V
 Maximum safe current I_{max} 24mA
 Max. power P_{max} 64mW
 Max. capacitance IIC/IIB C_a 2.32μF/16.2μF
 Max. inductance IIC/IIB L_a 63mH/230mH
 Inner capacitance C_i 2.42nF
 Inner inductance L_i negligible
 Insulation voltage U_m 250V

Adjustments

	Line Fault detection LF		Direction of action INV	
	Not activated ¹⁾	Activated	Normal ¹⁾	Inverted
Channel 1	OFF ON  LF1  INV1	OFF ON  LF1  INV1	OFF ON  LF1  INV1	OFF ON  LF1  INV1

1) Standard setting on delivery

Order guide

Designation	Part No.
VS 403/R-AC	500 40824

Tables



Diagrams

Remarks

- When connecting sensor and isolated switching amplifier, make sure not to exceed the permissible limit values for intrinsic safety.
- Line fault and auxiliary power failure message. In the case of a fault, the auxiliary contact (30W/100mA) is switched to GND.

EG-Konformitätserklärung
EC-Declaration of Conformity
CE-Déclaration de Conformité



Wir (we; nous)	
R. STAHL Schaltgeräte GmbH, Am Bahnhof 30, D-74638 Waldenburg	9170/0-.-.1
erklären in alleiniger Verantwortung, dass das Produkt <i>hereby declare in our sole responsibility, that the product</i> <i>déclarons de notre seule responsabilité, que le produit</i>	Schaltverstärker <i>Switching repeater</i> <i>Relais amplificateur</i>
auf das sich diese Erklärung bezieht, mit der/den folgenden Norm(en) oder normativen Dokumenten übereinstimmt <i>which is the subject of this declaration, is in conformity with the following standard(s) or normative documents</i> <i>auquel cette déclaration se rapporte, est conforme aux norme(s) ou aux documents normatifs suivants</i>	
Bestimmungen der Richtlinie <i>terms of the directive</i> <i>prescription de la directive</i>	Titel und/oder Nr. sowie Ausgabedatum der Norm <i>title and/or No. and date of issue of the standard</i> <i>titre et/ou No. ainsi que date d'émission des normes</i>
94/9 EG: Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen <i>94/9 EC: Equipment and protective systems intended for use in potentially explosive atmospheres</i> <i>94/9 CE: Appareils et systèmes de protection destinés à être utilisés en atmosphères explosibles</i>	EN 50014 (1997) EN 50020 (1994) EN 50284 (1999) EN 50281-1-1 (1998) EN 50021 (1999)
89/336 EWG: Elektromagnetische Verträglichkeit <i>89/336 EEC: Electromagnetic compatibility</i> <i>89/336 CEE: Compatibilité électromagnétique</i>	EN 61326-1 (1997)
EG-Baumusterprüfbescheinigung: <i>EC-Type Examination Certificate:</i> <i>Attestation d'examen CE de type:</i>	DMT 02 ATEX E 195 X
Qualitätssicherung Produktion: <i>Production Quality Assessment:</i> <i>Assurance Qualité Production:</i>	PTB 96 ATEX Q006
Waldenburg, 24.03.2003	
Ort und Datum <i>Place and date</i> <i>lieu et date</i>	
 Dr.-Ing. A. Schimmele Leiter Marketing und Entwicklung <i>Director Development and Engineering</i> <i>Directeur technique et développement</i>	 J.-P. Rückgauer Leiter Qualitätsmanagement <i>Director Quality management dept.</i> <i>Directeur dept. assurance de qualité</i>

