

DIN Rail Devices



- 1 or 2 channel 22.5 mm wide enclosure
- Mounts on 35 mm DIN rail
- Screw-plug in connectors for inputs, outputs and power supply
- Safe galvanic isolation
- Status LED
- Low power consumption
- EEx ia approved
- Suitable for DCS and PLC
- Horizontal or vertical mounting without gap (check ambient conditions)
- International approvals

Description

DIN rail devices serve as low-cost signal conditioning modules between the field device and the control system. The new enclosures mounted on the 35 mm standard rail are equipped with plug-in screw terminals.

These make it easy to replace modules without interruption of the auxiliary power supply.







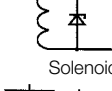

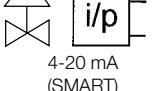





Galvanic isolation and the amplifier properties are the assets of DIN rail devices. Equipotential earth as required with safety barriers is not necessary because of the inherent galvanic isolation. Due to the amplifier properties, fluctuations of the auxiliary power supply do not affect the performance of the measuring circuit.

The plug-in screw terminals facilitate mounting of input and output leads as well as of the auxiliary power supply. Each terminal has a clamping capacity of two conductors of 1.5 mm² cross-section each.

LEDs show the status of the respective device. The operating mode is indicated by means of a green LED while yellow LEDs indicate the switching state, e.g. of switch amplifiers. Red LEDs signal fault conditions, e.g. a line break or short-circuit. When using DIN rail devices, the properties as an amplifier often allow you more freedom than the cumbersome considerations which are common with barriers would normally permit.

DIN Rail Devices

Selection chart

	Application	Type	Preferred version	Page	
Digital input	 Switches  Proximity Switches  Electronic Switches	Relay output	GHG 122 3121 D 1002 (230 V AC)	110	
			GHG 122 3121 D 1009 (24 V DC)	110	
		Transistor output	2/941	GHG 122 3121 C 3009	109
Analog input	 4-20 mA Transmitter	HART Fully isolated	6/420	GHG 124 3111 K 1206	103
		HART Field device isolated	8/420	GHG 124 3111 M 1109	105
	 4-20 mA current source	NON HART Fully isolated	7/420	GHG 124 3111 L 1006	104
		NON HART Field device isolated	8/420	GHG 124 3111 M 1109	105
	4-20 mA current source	Trip output	3/209	GHG 137 3011 E 1016	97
	Voltage source 	Voltage	4/126	GHG 124 3115 N 1006	95
Digital output	 Solenoid  LED Sounders	Standard	7/915	GHG 138 3311 F X009	108
		Loop powered	6/915	GHG 138 3311 E X008	107
Analog output	 4-20 mA (SMART) i/p converter  4-20 mA Display	HART Standard	6/304	GHG 125 3310 K 0306	101
		NON HART Standard	5/304	GHG 125 3310 H 0306	100
		NON HART loop powered	5/303	GHG 126 3321 D 1008	98
		NON HART with level shift	7/304	GHG 125 3310 L 0306	102
Pt100	 2-, 3- or 4-wire Pt100	Standard	4/125	GHG 131 3100 L 0006	94
TC	 Thermocouple	Standard	4/127	GHG 131 3100 M 0006	96
Fire gas		Standard	6/303	GHG 126 3321 E 1008	99
Others		230 V Power supply for DIN Rail Devices	1/482	GHG 139 0001 D 1002	106

Model 4/125 RTD Temperature Converter



Product features

- 2-, 3- or 4-wire-RTD converter
- DIN rail mounted
- Short circuit protected output
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Galvanic isolation
- Plug-in screw connectors
- Off-line programmable (powered by PC)

Technical data:

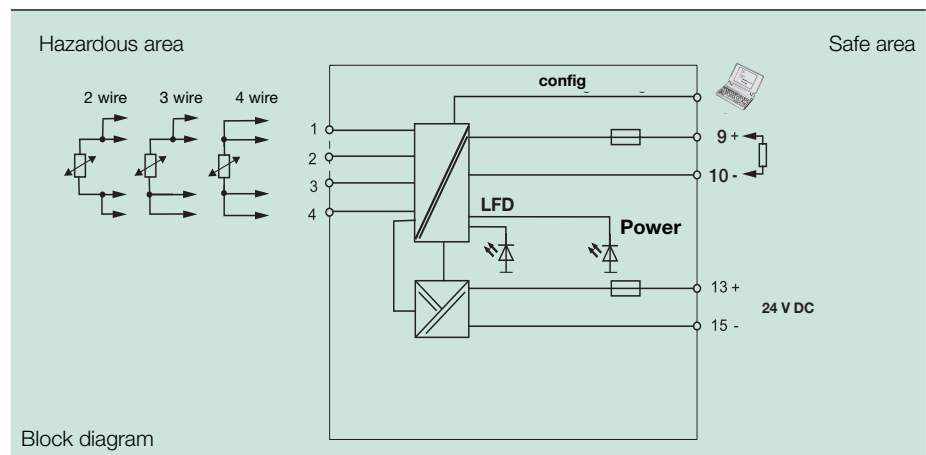
Range	-200 °C +850 °C, smallest span 20 Ω
Output	4 - 20 mA
Burn-out feature	Output selectable 0, > 100 %, frozen
Load	< 750 Ω
Line resistance	< 50 Ω
Linearity	< 0.1 %
Temperature drift	< 0.1 % / 10 K
Response time	< 150...350 ms mode dependant
Power supply	20.4 - 30 V DC (< 1.5 W)
Weight	160 g
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 % no condensation

Explosion protection:

Category	[EEx ia/ib] IIC
Approval	TÜV 97 ATEX 1165
Safety values	$V_{oc} \leq 2.7 \text{ V}$, $I_{sc} \leq 10.6 \text{ mA}$

Ordering details

Type	Ex-protection	Order No.
4/125	ia/ib	GHG 131 3100 L 0006
4/125	-	GHG 131 3000 L 0006



Model 4/126 Voltage Converter



Product features

- Converter for voltages
- 10 V input
- DIN rail mounted
- Short circuit protected output
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Safe galvanic isolation between input, output and power supply
- Off-line programmable (powered by PC)
- Plug-in screw connectors

Technical data:

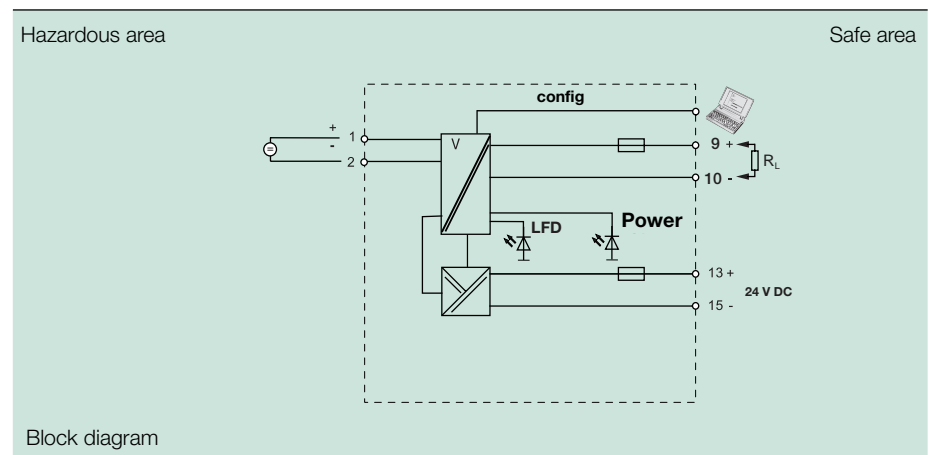
Range	-10 V ... +10 V smallest span 1 V
Output	4 - 20 mA
Load	< 750 Ω
Linearity	< 0.1 %
Temperature drift	< 0.1 % / 10 K
Response time	< 150 ... 600 ms mode dependant
Power supply	20.4 - 30 V DC (< 1.5 W)
Weight	160 g
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 % no condensation

Explosion protection:

Category	[EEx ia] IIC
Approval	TÜV 98 ATEX 1289
Safety values	$V_{oc} \leq 0.9 \text{ V}$, $I_{sc} \leq 11 \text{ mA}$

Ordering details

Type	Ex-protection	Order No.
4/126	ia/ib	GHG 124 3115 N 1006
4/126	-	GHG 124 3015 N 1006



Model 4/127 Thermocouple Converter



Product features

- Converter for all thermocouples
- mV input
- DIN rail mounted
- Short circuit protected output
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Safe galvanic isolation between input, output and power supply
- Off-line programmable (powered by PC)
- Plug-in screw connectors

Technical data:

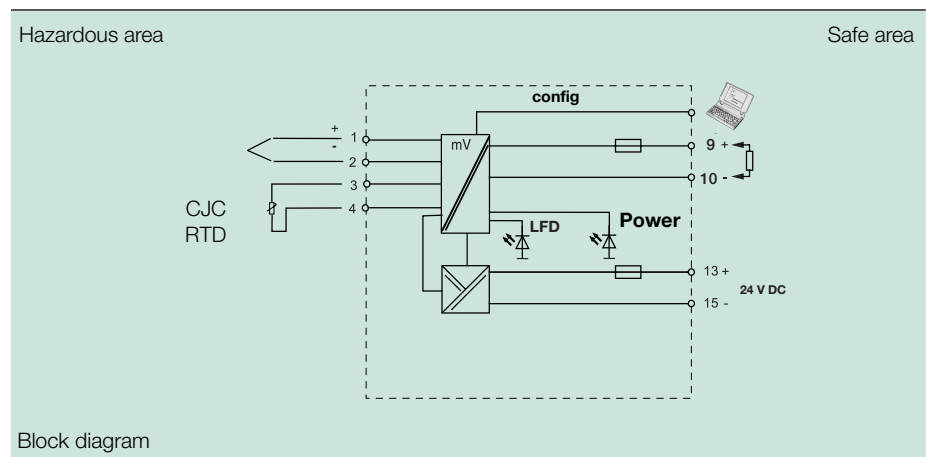
Range mV	-75 mV ... + 75 mV (smallest range 5 mV for 0.1 %)
Thermocouple DIN / IEC 43710	B, E, J, K, N, R, S, T, L, U und Pallaplat
Compensation	internal or external
Output	4 - 20 mA
Load	< 750 Ω
Burn-out feature	Output selectable 0, > 100 %, frozen
Line fault detection (LFD)	> 1 kΩ
Linearity	< 0.1 %
Temperature drift	< 0.1 % / 10 K
Response time	< 150 ... 600 ms mode dependant
Power supply	20.4 - 30 V DC (< 1.5 W)
Weight	160 g
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 %, no condensation

Explosion protection:

Category	[EEx ia] IIC
Approval	TÜV 97 ATEX 1165
Safety values	$V_{oc} \leq 1.8 \text{ V}$, $I_{sc} \leq 21.6 \text{ mA}$

Ordering details

Type	Ex-protection	Order No.
4/127	ia/ib	GHG 131 3100 M 0006
4/127	-	GHG 131 3000 M 0006



Model 3/209

Trip Amplifier with 1-2 Trip Points



Product features

- Programmable (via DIP switch)
- Digital display via external DVM trip settings via front push-buttons
- Self monitoring
- EMC to IEC 1000 and EN 50081-50082
- Safe galvanic separation between input, power supply and contacts
- Line monitor

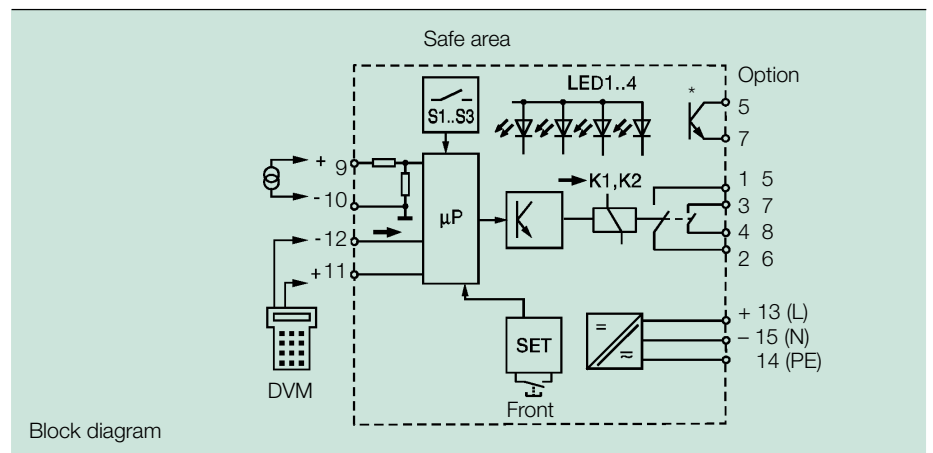
Technical data:

Input	0/4-20 mA, 0/1-5 V, 0/2-10 V
Input impedance	25 Ω (mA) 10 kΩ (V)
Output	
Relay	
Voltage rating	250 V AC / 150 V DC
Current rating	2 A AC / DC
Power rating	60 VA / 30 W
Mechanical life	10 Mio. operations
Electrical life	0.5 Mio. operations
Response time	>20 ms (variable)
Transistor	
Voltage drop	24 V max. 30 V DC / 100 mA
Response time	> 10 ms (variable)
Temperature drift	< 0.1 % / 10 K
Power supply	20 - 26.4 V AC 20 - 30 V DC
Power consumption	2 VA / 1.5 W
Weight	300 g
Ambient temperature	-10 °C... + 60 °C
Relative humidity	< 95 %, no condensation

Ordering details

Output	Trip relays ¹⁾	Input	Order No.
2 relays	1 min. / 1 max.	0/4 - 20 mA	GHG 137 3011 E 1016
1 relays, 1 transistor*	1 min. / 1 max.	0/4 - 20 mA	GHG 137 3011 E 9016

¹⁾ selectable DIP switch



Model 5/303

Analog Output

Loop Powered



Product features

- Analog output for 4 - 20 mA Signals (I/P converter, displays, positioners)
- DIN rail mounted
- 1 or 2 channels
- Short circuit protected outputs
- EMV to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Galvanic isolation
- Safe galvanic isolation between input and field side

Technical data:

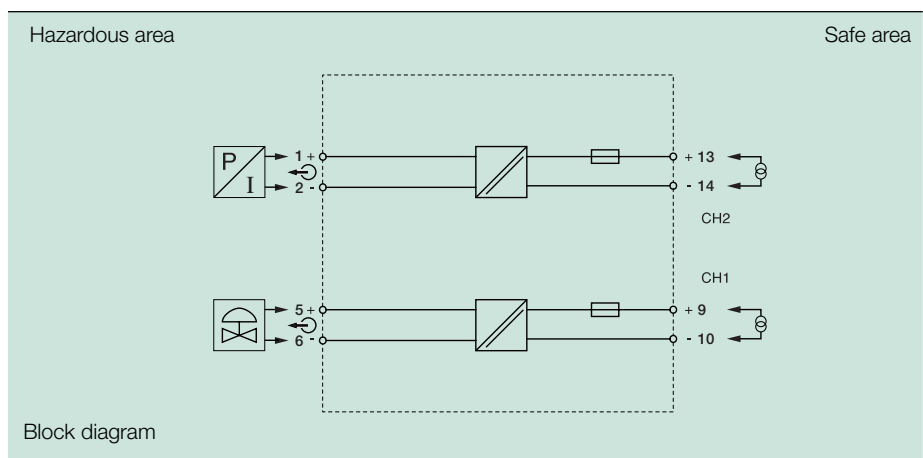
Input voltage	$8.4 \text{ V} + 0.02 \times \text{load} \times (\text{V}/\Omega)$
Linearity	< 0.1 %
Temperature drift	< 0.1 % / 10 K
Power supply	8.4 - 30 V DC loop powered
Weight	160 g
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 %, no condensation

Explosion protection:

Category	[EEx ia] II C
Approval	TÜV 98 ATEX 1338
Safety values	$V_{oc} \leq 12,6 \text{ V}$ $I_{sc} \leq 95 \text{ mA}$

Ordering details

Type	Channels	Ex-protection	Order No.
5/303	one	ia	GHG 126 3311 D 1008
5/303	two	ia	GHG 126 3321 D 1008
5/303	one	-	GHG 126 3011 D 1008
5/303	two	-	GHG 126 3021 D 1008



Model 6/303

Output Isolator for Fire/Gas Detection

Loop Powered



Product features

- I/I output isolator, loop powered
- 2 channels
- EEx ia/ib approved
- EMC to IEC 1000 and EN 50081-50082
- Safe galvanic isolation between input and field side

Technical data:

Output voltage	$U_{in} < 24\text{ V}$ $U_{in} < 4\text{ V}$	$U_{out} = U_{in} - 1\text{V} - R_{out} \times I_{out}$ $U_{out} = 0\text{ V}$
Current		0 - 38 mA, short circuit protected
Response time		< 30 msec für $\Delta I = 0.3\text{ mA}$
Quiescent current		300 μA (24 V)

Supply:

Loop power supply	5 - 30 V DC
-------------------	-------------

Transmission:

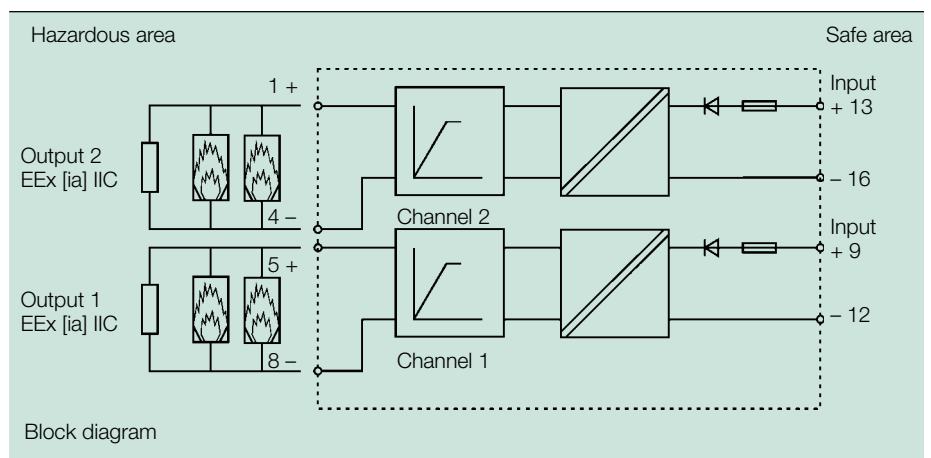
Linearity loop power (18 - 26 V DC, 20 °C, 500 Ω)		
0 < I < 10 mA	< 1 %	
> 10 mA	< 5 %	
Temperature drift	< 1 % /10 K	
Galvanic isolation	2.5 kV	
Ambient temperature	- 20 °C ... + 60 °C	
Relative humidity	< 95 %, no condensation	
Weight	160 g	
Terminals	plug-in screw terminals	
Protection	IP 20	

Explosion protection:

Category	[EEx ia] IIC
Approval	TÜV 98 ATEX 1343
Safety values	$U_0 < 27,3\text{ V}$, $I_0 \leq 93\text{ mA}$

Ordering details

Type	Channels	Ex-protection	Order No.
6/303	2	ia	GHG 126 3321 E 1008



Model 5/304 Output Isolator



Product features

- Output isolator for 0/4 - 20 mA signals (I/P converter, displays, positioners)
- DIN rail mounted
- Short circuit protected outputs
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Safe galvanic isolation between input, output and power supply

Technical data:

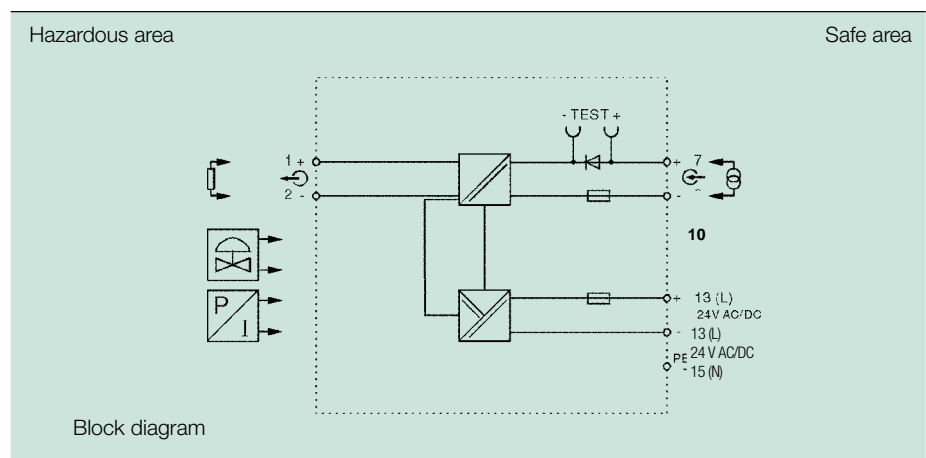
Input resistance	25 Ω
Max. load at 22.5 V Power supply	500 Ω
20 V Power supply	320 Ω
Linearity	< 0.1
Temperature drift	< 0.1 % / 10 K
Response time	100 ms (10 - 90 %)
Power supply	20 - 26.4 V AC 20 - 30 V DC
Power consumption	2.3 VA / 1.4 W
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 %, no condensation

Explosion protection:

Category	[EEx ia] II C
Approval	TÜV 97 ATEX 1166 X
Safety values	$V_{oc} \leq 20$ V $I_{sc} \leq 70$ mA

Ordering details

Type	Ex-protection	Order No.
5/304	ia/ib	GHG 125 3310 H 0306
5/304	-	GHG 125 3010 H 0306



Model 6/304 HART Output Isolator



Product features

- Output isolator for 0/4 - 20 mA signals (I/P converter, displays, positioners)
- DIN rail mounted
- Short circuit protected outputs
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Safe galvanic isolation between input, output and power supply
- HART communication for transmitters of known manufacturers

Technical data:

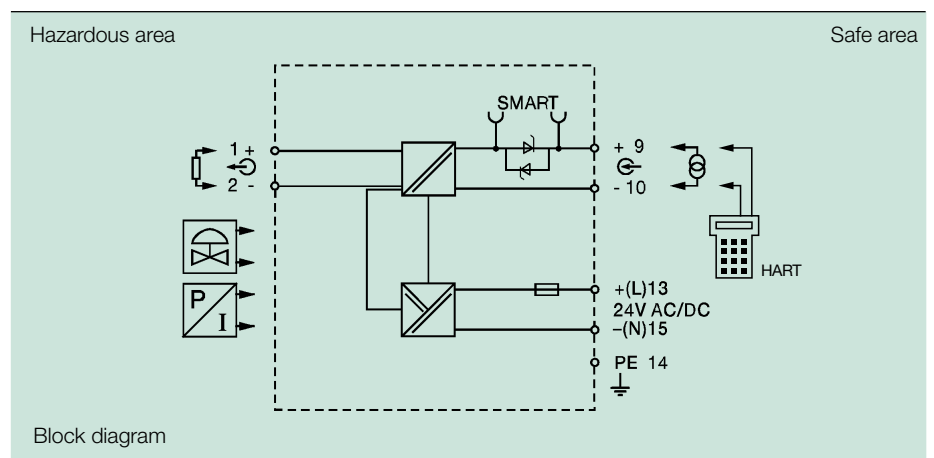
Input resistance	< 50 Ω static, > 250 Ω dynamic
Max. load	750 Ω
Linearity	< 0.1
Temperature drift	< 0.1 % / 10 K
Response time	approx. 2.2 ms (10 - 90 %)
Power supply	20 - 26.4 V AC 20 - 30 V DC
Power consumption	2.3 VA / 1.4 W
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 %, no condensation

Explosion protection:

Category	[EEx ia] IIC
Approval	TÜV 98 ATEX 1278 X
Safety values	V _{oc} ≤ 27.3 V I _{sc} ≤ 93 mA

Ordering details

Type	Ex-protection	Order No.
6/304	ia/ib	GHG 125 3310 K 0306
6/304	-	GHG 125 3010 K 0306



Model 7/304

Analog Output with Level Shift Option



Product features

- Output isolator for 4 - 20 mA signals (I/P converter, displays, positioners)
- DIN rail mounted
- Short circuit protected outputs
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Safe galvanic isolation between input, output and power supply
- Level Shift Option
- Current/voltage converter

Technical data:

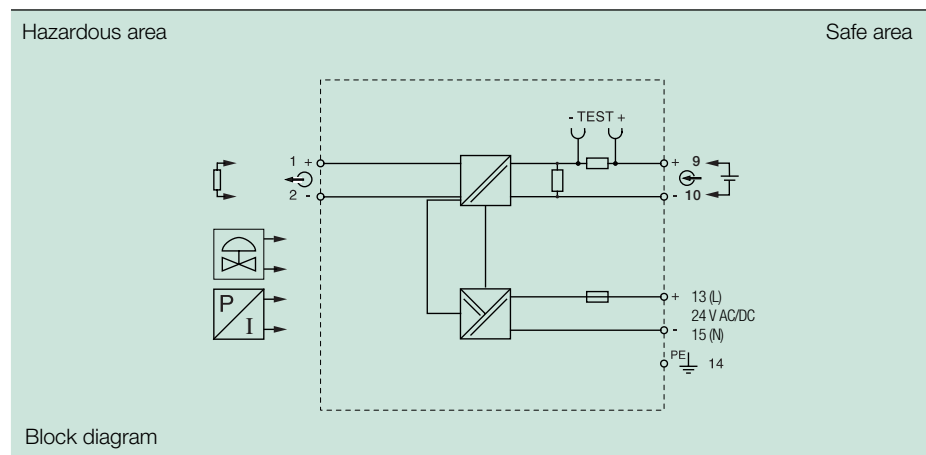
Input resistance	25 Ω (mA), 10 kΩ/V	
Max. load at	22.5 V Power supply	500 Ω
	20 V Power supply	320 Ω
Linearity	< 0.1 %	
Temperature drift	< 0.1 % / 10 K	
Response time	100 ms (10 - 90 %)	
Power supply	20 - 26.4 V AC (2.3 VA)	
	20 - 30 V DC (1.4 W)	
Ambient temperature	-20 °C ... +60 °C	
Relative humidity	< 95 %, no condensation	

Explosion protection:

Category	[EEx ia] IIC
Approval	TÜV 98 ATEX 1342
Safety values	$V_{oc} \leq 12.6 \text{ V}$, $I_{sc} \leq 87 \text{ mA}$

Ordering details

Type	Input	Output	Ex-protection	Order No.
7/304	0/4 - 20 mA	0/4 - 20 mA	ia/ib	GHG 125 3310 L 0306
7/304	0 - 20 mA	4 - 20 mA	ia/ib	GHG 125 3310 L 0106
7/304	1 - 5 V	4 - 20 mA	ia/ib	GHG 125 3313 L 0306
7/304	2 - 10 V	4 - 20 mA	ia/ib	GHG 125 3315 L 0306
7/304	0/4 - 20 mA	0/4 - 20 mA	-	GHG 125 3010 L 0306
7/304	0 - 20 mA	4 - 20 mA	-	GHG 125 3010 L 0106
7/304	1 - 5 V	4 - 20 mA	-	GHG 125 3013 L 0306
7/304	2 - 10 V	4 - 20 mA	-	GHG 125 3015 L 0306



Model 6/420 HART Transmitter Power Supply Input Isolator



Product features

- Power supply for 2- and 3-wire 4 - 20 mA transmitters
- HART communication for all major brands
- DIN rail mounted
- Short circuit protected outputs
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Safe galvanic isolation between input, output and power supply

Technical data:

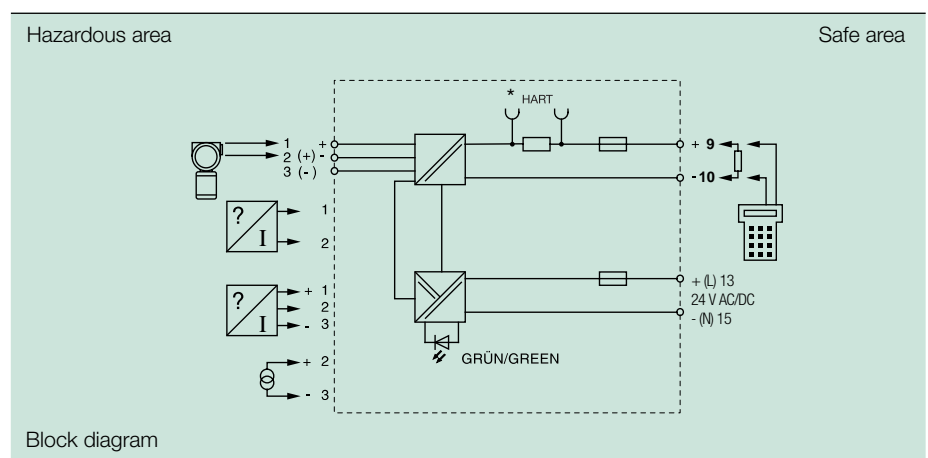
Field device power supply	17 Volt at 20 mA ($U_z=28$ V), 15 Volt at 20 mA ($U_z=24$ V)
Load	800 Ω (550 Ω for HART*)
HART communication	across load or via front socket
Linearity	< 0.1 %
Temperature drift	< 0.1 % / 10 K
Response time	2.2 ms (10 - 90 %)
Band width	0 - 12 KHz
Power supply	20 - 26.4 V AC 20 - 30 V DC
Power consumption	3.1 VA / 2.2 W
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 %, no condensation

Explosion protection:

Category	[EEx ia] IIC
Approval	TÜV 97 ATEX 1170
Safety values	see ordering details

Ordering details

Type	Ex-protection	Order No.
6/420-1	ia/ib, $U_o \leq 28$ V, $I_k \leq 93$ mA	GHG 124 3111 K 1206
6/420-4	ia/ib, $U_o \leq 23.9$ V, $I_k \leq 76$ mA	GHG 124 3411 K 1206
6/420	-	GHG 124 3011 K 1206



Model 7/420 Transmitter Power Supply Input Isolator



Product features

- Power supply for 2- and 3-wire (4 - 20 mA) transmitters
- Processing of active signals from the field area
- DIN rail mounted
- Short circuit protected outputs
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Safe galvanic isolation between input, output and power supply

Technical data:

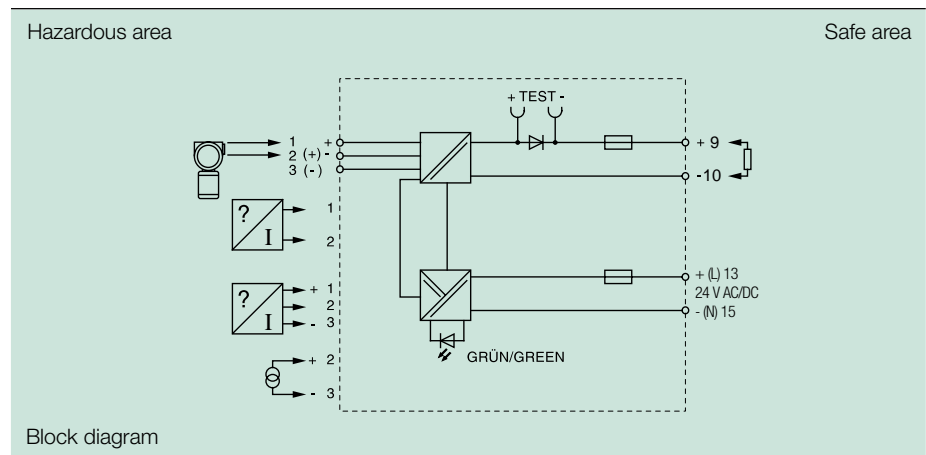
Field device power supply	17 Volt at 20 mA ($U_z=28$ V), 15 Volt at 20 mA ($U_z=24$ V)
Load	1000 Ω
Response time	2.2 ms (10-90 %)
Linearity	< 0.1 %
Temperature drift	< 0.1 % / 10 K
Power supply	20 - 26.4 V AC 20 - 30 V DC
Power consumption	3.1 VA / 2.2 W
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 %, no condensation

Explosion protection:

Category	[EEx ia] IIC
Approval	TÜV 97 ATEX 1170
Safety values	see ordering details

Ordering details

Type	Ex-protection	Order No.
7/420-1	ia/ib, $U_o \leq 28$ V, $I_k \leq 93$ mA	GHG 124 3111 L 1006
7/420-4	ia/ib, $U_o \leq 23.9$ V, $I_k \leq 76$ mA	GHG 124 3411 L 1006
7/420	-	GHG 124 3011 L 1006



Model 8/420 HART Transmitter Power Supply Input Isolator



Product features

- Power supply for 2- and 3-wire 4 - 20 mA transmitters
- HART communication for all major transmitter brands
- DIN rail mounted
- Short circuit protected outputs
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Safe galvanic isolation between input and field side

Technical data:

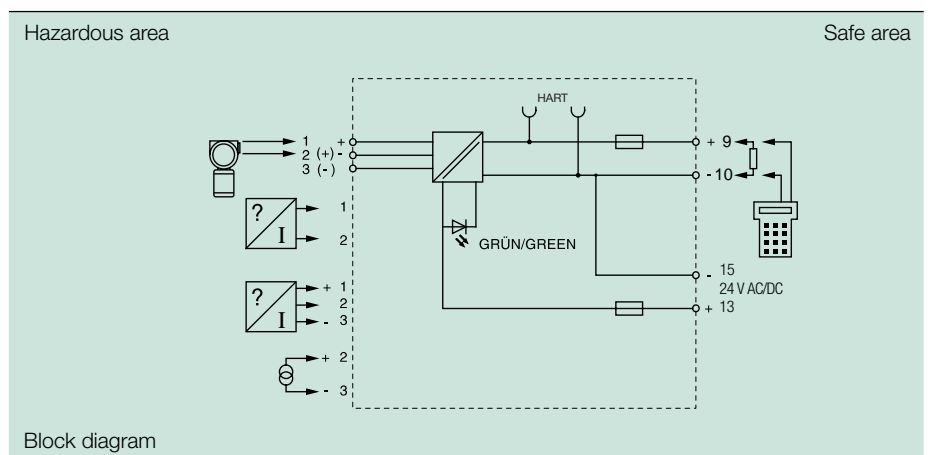
Field device power supply	17 Volt at 20 mA
Load	510 Ω (18 V) 800 Ω (24 V)
HART communication	across load or via front socket
Response time	2.2 ms (10 - 90 %)
Linearity	< 0.1 %
Temperature drift	< 0.1 % / 10 K
Band width (HART)	0 - 12 KHz
Power supply	20 - 30 V DC
Power consumption	2.1 W
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 %, no condensation

Explosion protection:

Category	[EEx ia] IIC
Approval	TÜV 97 ATEX 1170
Safety values	$V_{oc} \leq 28 \text{ V}$, $I_{sc} \leq 93 \text{ mA}$

Ordering details

Type	Ex-protection	Order No.
8/420	ia/ib	GHG 124 3111 M 1109
8/420	-	GHG 124 3011 M 1109



Model 1/482 Power Supply



Product features

- for supply of 24 V DC DIN rail devices
- permanently short circuit protected
- EMV to IEC 1000 and EN 50081-50082

Input:

Input voltage	184 V ... 264 V AC 200 V ... 375 V DC
Frequency	47 - 63 Hz
Input current	0.2 A
Bridging time after mains failure	> 20 msec.

Output:

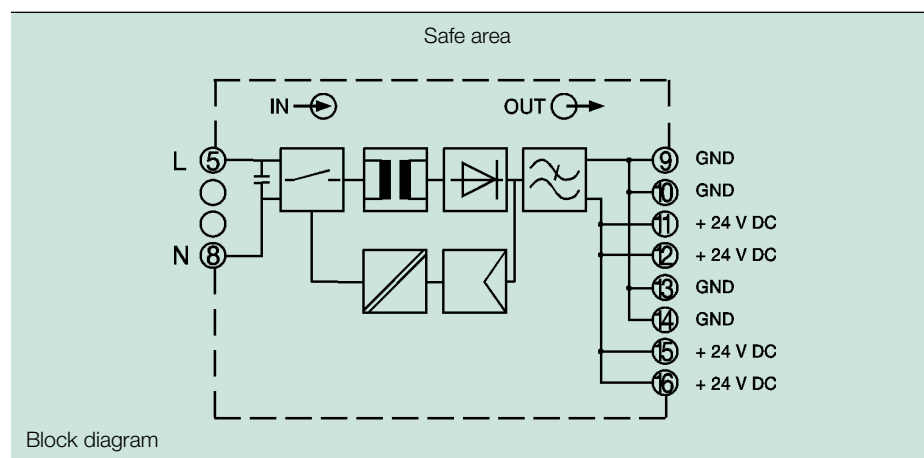
Output voltage	24 V DC \pm 3 %
Rated current	0.65 A
Limiting	permanent short circuit protected
Residual ripple	< 200 mV ss
Surge protection	Transient suppressor diode

General data:

Isolation Input-Output	3 kV
Ambient temperature	- 20 °C to + 60 °C
Climatic conditions	3K3 to EN 60721-3
Mounting	horizontal DIN rail vertical DIN rail
Weight	140 g
Terminals	plug-in screw connectors
Protection	IP 20

Ordering details

Type	Order No.
1/482 Power supply	GHG 138 3311 E 1008



Model 6/915

Digital Output

Loop Powered



Product features

- Drives solenoid valves, acoustic alarms, LEDs
- DIN rail mounted
- Short circuit protected outputs
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- safe galvanic isolation of field area

Technical data:

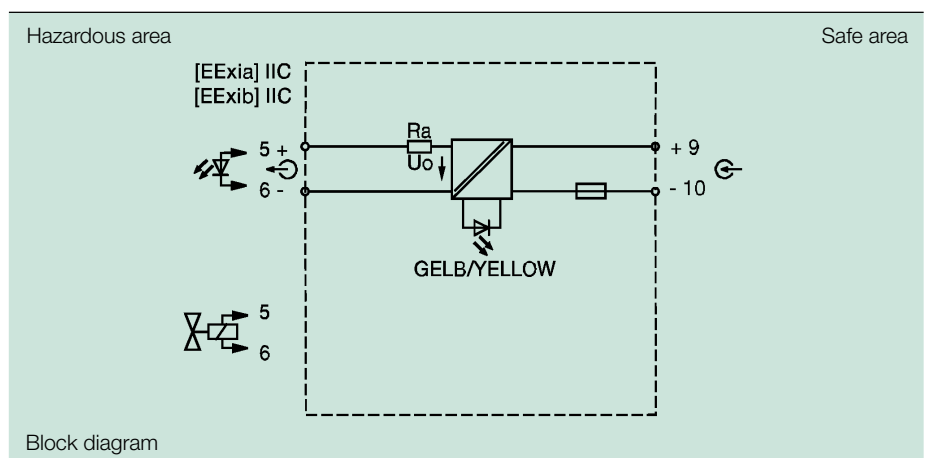
Input current	1,2 .. 2 x output current (depends on type)
Valve current	$I = V_N / (R_a + R_{\text{valve}})$
Power supply	18 - 30 V DC
Power consumption	approx. 1 W
Response time	20 ms
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 %, no condensation

Explosion protection:

Category	[EEx ia] II C
Approval	TÜV 97 ATEX 1240
Safety values	see ordering details

Ordering details

Type	Ex-protection		Drive capability		Order No.
	U_z [V]	I_k [mA]	U_o [V]	R_a [Ω]	
6/915-0	4.9	200	4	31	GHG 138 3311 E 0008
6/915-1	7.9	148	6.5	64	GHG 138 3311 E 1008
6/915-2	12.6	150	12	115	GHG 138 3311 E 2008
6/915-3	15.8	175	14	122	GHG 138 3311 E 3008
6/915-4	18.7	144	17	175	GHG 138 3311 E 4008
6/915-5	18.7	282	17	115	GHG 138 3311 E 5008
6/915-6	23.1	85	21	340	GHG 138 3311 E 6008
6/915-7	27.3	96	24	370	GHG 138 3311 E 7008
6/915-8	23.1	69	20.6	404	GHG 138 3311 E 8008
6/915-9	18.7	329	16.6	103	GHG 138 3311 E 9008



Model 7/915 Digital Output



Product features

- Drives solenoid valves, acoustic alarms, LEDs
- DIN rail mounted
- Short circuit protected outputs
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Safe galvanic isolation between input, output and power supply

Technical data:

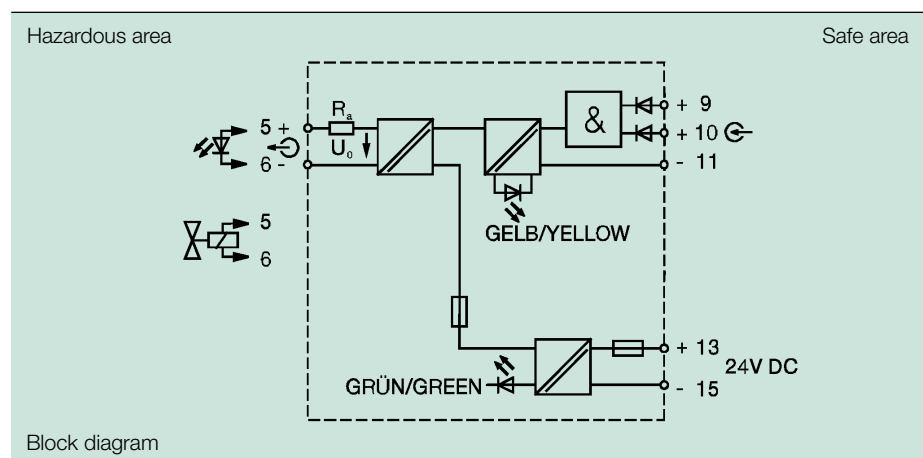
Input drive	on: 10 - 30 V off: 0 - 1.5 V
Input resistance	4 kΩ
Valve current	$I = V_N / (R_a + R_{\text{Valve}})$
Power supply	20 - 30 V DC
Power consumption	approx. 1 W
Response time	20 ms
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 %, no condensation

Explosion protection:

Category	[EEx ia] II C
Approval	TÜV 97 ATEX 1240
Safety values	see ordering details

Ordering details

Type	Ex-protection		Drive capability		Order No.
	U_o [V]	I_k [mA]	U_N [V]	R_a [Ω]	
7/915-0	4.9	200	4	31	GHG 138 3311 F 0009
7/915-1	7.9	148	6.5	64	GHG 138 3311 F 1009
7/915-2	12.6	150	12	115	GHG 138 3311 F 2009
7/915-3	15.8	175	14	122	GHG 138 3311 F 3009
7/915-4	18.7	144	17	175	GHG 138 3311 F 4009
7/915-5	18.7	282	17	115	GHG 138 3311 F 5009
7/915-6	23.1	85	21	340	GHG 138 3311 F 6009
7/915-7	27.3	96	24	370	GHG 138 3311 F 7009
7/915-8	23.1	69	20.6	404	GHG 138 3311 F 8009
7/915-9	18.7	329	16.6	103	GHG 138 3311 F 9009



Model 2/941 Switch Amplifier Transistor Output



Product features

- NAMUR inputs, mechanical contacts, or optocouplers
- DIN rail mounted
- 1 or 2 channels
- Line monitoring
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Safe galvanic isolation between input, output and power supply

Technical data:

Input	NAMUR specification
Transistor output	(npn open emitter)
switches per channel	1 or 2 outputs / channel passive external +24 V (30 V max.) active internal +24 V
Current rating	100 mA max. (short circuit protected)
Phase reversal	via front switch
Power supply	20 - 30 V DC
Power consumption	0.5 W per channel
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 %, no condensation

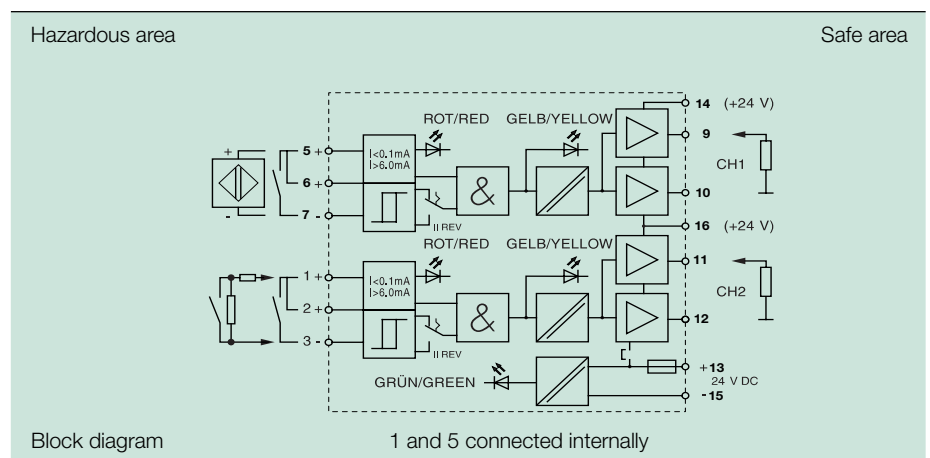
Explosion protection:

Category	[EEx ia] II C
Approval	TÜV 97 ATEX 1168
Safety values	$V_{oc} \leq 10.5 \text{ V}$ $I_{sc} \leq 26 \text{ mA}$

Ordering details

Type	Output	Ex-protection	Order No.
2/941	2 channels 700 Hz, 1 passive output each	ia/ib	GHG 122 3121 C 1009
2/941	2 channels 700 Hz, 2 passive outputs each	ia/ib	GHG 122 3121 C 2009
2/941	2 channels 700 Hz, 1 active output	ia/ib	GHG 122 3121 C 3009
2/941	1 channel 1200 Hz, 1 passive output	ia/ib	GHG 122 3151 C 1009
2/941	1 channel 1200 Hz, 2 passive outputs	ia/ib	GHG 122 3151 C 2009
2/941	2 channels 700 Hz, 1 passive output	-	GHG 122 3021 C 1009
2/941	2 channels 700 Hz, 1 active output	-	GHG 122 3021 C 3009
2/941	1 channel 700 Hz, active output*	ia/ib	GHG 122 3121 C 3999

* Line fault detection on output 2



Model 2/942 Switch Amplifier Relay Output



Product features

- NAMUR inputs, mechanical contacts, or optocouplers
- DIN rail mounted
- 1 or 2 channels
- Line monitoring
- EMC to IEC 1000 and EN 50081-50082
- EEx ia/ib approved
- Safe galvanic isolation between input, output, power supply and contacts

Technical data:

Input	NAMUR specification
Output relay	1 change over
Voltage rating	250 V AC / 100 V DC
Current rating	5 A AC / 2 A DC
Power rating	100 VA / 50 W
Mech. life time	10 Mio. operations (20 Hz max.)
Phase reversal	via front switch
Power consumption at 230 V	2.2 VA per channel
Power consumption at 24 V	0.55 W per channel
Ambient temperature	-20 °C ... +60 °C
Relative humidity	< 95 % (30 d/a) no condensation

Explosion protection:

Category	[EEx ia] II C
Approval	TÜV 97 ATEX 1169
Safety values	$V_{oc} \leq 10.5 \text{ V}$, $I_{sc} \leq 26 \text{ mA}$

Ordering details

Type	Channels	Power supply	Ex-protection	Order No.
2/942	1 channel	230 V AC	ia/ib	GHG 122 3111 D 1002
2/942	1 channel	120 V AC	ia/ib	GHG 122 3111 D 1003
2/942	1 channel	24 V AC	ia/ib	GHG 122 3111 D 1007
2/942	1 channel	24 V DC	ia/ib	GHG 122 3111 D 1009
2/942	2 channels	230 V AC	ia/ib	GHG 122 3121 D 1002
2/942	2 channels	120 V AC	ia/ib	GHG 122 3121 D 1003
2/942	2 channels	24 V AC	ia/ib	GHG 122 3121 D 1007
2/942	2 channels	24 V DC	ia/ib	GHG 122 3121 D 1009
2/942	2 channels	230 V AC	-	GHG 122 3021 D 1002
2/942	2 channels	120 V AC	-	GHG 122 3021 D 1003
2/942	2 channels	24 V AC	-	GHG 122 3021 D 1007
2/942	2 channels	24 V DC	-	GHG 122 3021 D 1009
2/942	1 channel*	230 V AC	ia/ib	GHG 122 3121 D 1992
2/942	1 channel*	120 V AC	ia/ib	GHG 122 3121 D 1993
2/942	1 channel*	24 V DC	ia/ib	GHG 122 3121 D 1994

* Line fault detection on relay 2

