

Main applications

- Plastics extrusion line and injection presses
- Weighing systems
- Synthetic fiber polymerization and production plants
- Filling machines
- Food processing plants

Main features

- 8 analog inputs configurable via software
- 16 bit resolution
- Intercepts
- Configuration of inputs via software
- On board power supply for transducers
- Diagnostics LEDs for power supplies and alarm
- Removable connector supplied
- In Conformity with UL508

PROFILE

The R-A/D8 module has 8 optically isolated analog inputs at 16 bit $\pm 10V$ and can be used to send reference signals to drives, servo-controls, solid state power units with linear input, or to retransmit variables to recording devices, other units, etc. Maximum current for each output is 20 mA.

The outputs have electronic protection against short-circuit and overload, and a feedback circuit for diagnostics of channel operation and direct reading of the output via software with 8 bit resolution. The module is installed on the R-BUS(x), from which it receives its power supply.

TECHNICAL DATA

- 8 analog inputs with 16 bit A/D conversion
- Sample time $< 100\mu\text{sec}$ for all channels
- Digital Filter
- Power supply: via R-BUS(x) 3.3V backplane

Inputs for:

- Potentiometer min. $2k\Omega$
- Differential $0\text{...}100\text{mV}$, $0\text{...}30\text{mV}$ for strain gauge
- Linear $0\text{...}10V$, $\pm 10V$, $0\text{...}2V$
- Linear $0\text{...}20\text{mA}$, $4\text{...}20\text{mA}$

Input impedance for:

- Potentiometer $> 1M\Omega$
 - Linear $0\text{...}10V$, $\pm 10V$ e $0\text{...}2V > 1M\Omega$
 - Strain gauge $0\text{...}30\text{mV}$, $0\text{...}100\text{mV} > 1M\Omega$
 - Linear $0/4\text{...}20\text{mA} = 100\Omega$
- Accuracy of inputs better than 0,2%

Power supply for transducers and potentiometers

24Vdc $\pm 25\%$ 500mA max external (fed to front terminals)
Power supply is internally distributed to the various channels:

- 10V for strain-gauge max 150mA
- 24V amplified sensors max. 500mA

Input isolation: $> 2,0kV$
Over-voltage on inputs for 1 ms maximum: max. 1kV

Diagnostics

- Yellow LED presence external 24V power supplies
- Yellow LED presence power supply for transducers
- Green RUN LED with double function:
 - Low frequency: work with parameters of default
 - High frequency: work with parameters sets from master
- Red LED Interrupt on
- Red Fail LED module error

MECHANICAL DATA

Dimensions: 92x90x25.4 mm
Weight: 120 g. max
Attachment: snaps onto R-BUS(x)
Protection level IP20
36 pin front panel connector with spring-mounted lock

AMBIENT CONDITIONS

Working temperature: $0\text{...}50^\circ\text{C}$
Storage temperature: $-20\text{...}70^\circ\text{C}$
Humidity: max. 90% Rh not condensing

CONFIGURABILITY OF INPUTS

	Potentiometer 10V power supply on board	Voltage 0...10V	Voltage -10...+10V	Voltage 0...2V	Current 0/4...20mA	Amplified sensor	Strain-gauge
CH1	X	X				X	X
CH2	X	X				X	X
CH3	X	X	X			X	
CH4	X	X	X			X	
CH5	X	X		X	X	X	
CH6	X	X		X	X	X	
CH7	X	X		X	X	X	
CH8	X	X		X	X	X	

INSTALLATION AND CONNECTIONS

Power supplies : 24Vdc \pm 25% 500mA max.: Use unipolar cable 0.5mm². Do not attach lug.

Field inputs:

Linear 0-10V \pm 10V 0-2V 0/4-20mA use 2 pin shielded cable with 0.5 mm max. cross-section. Do not attach lug. Connect shielding directly to the grounding rod and as close as possible to the module.

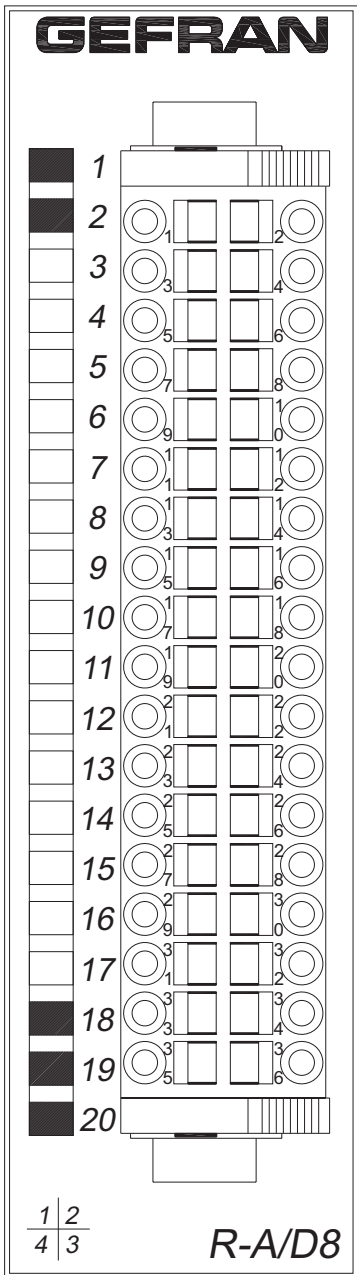
Potentiometer, use 3 pin shielded cable with 0.5 mm max. cross-section. Do not attach lug. Connect shielding directly to the grounding rod and as close as possible to the module.

Amplified sensors: use 2 or 3 pin shielded cable with 0.5 mm max. cross-section. Do not attach lug. Connect shielding directly to the grounding rod and as close as possible to the module.

Strain-gauge: use 4 or 6 pin shielded cable with 0.5 mm max. cross-section. Do not attach lug. Connect shielding directly to the grounding rod and as close as possible to the module. To calibrate the transducer, use calibration cables outside the module



Any shielding must be secured near the module on the shielding rod (see appendix) or directly on the plate.

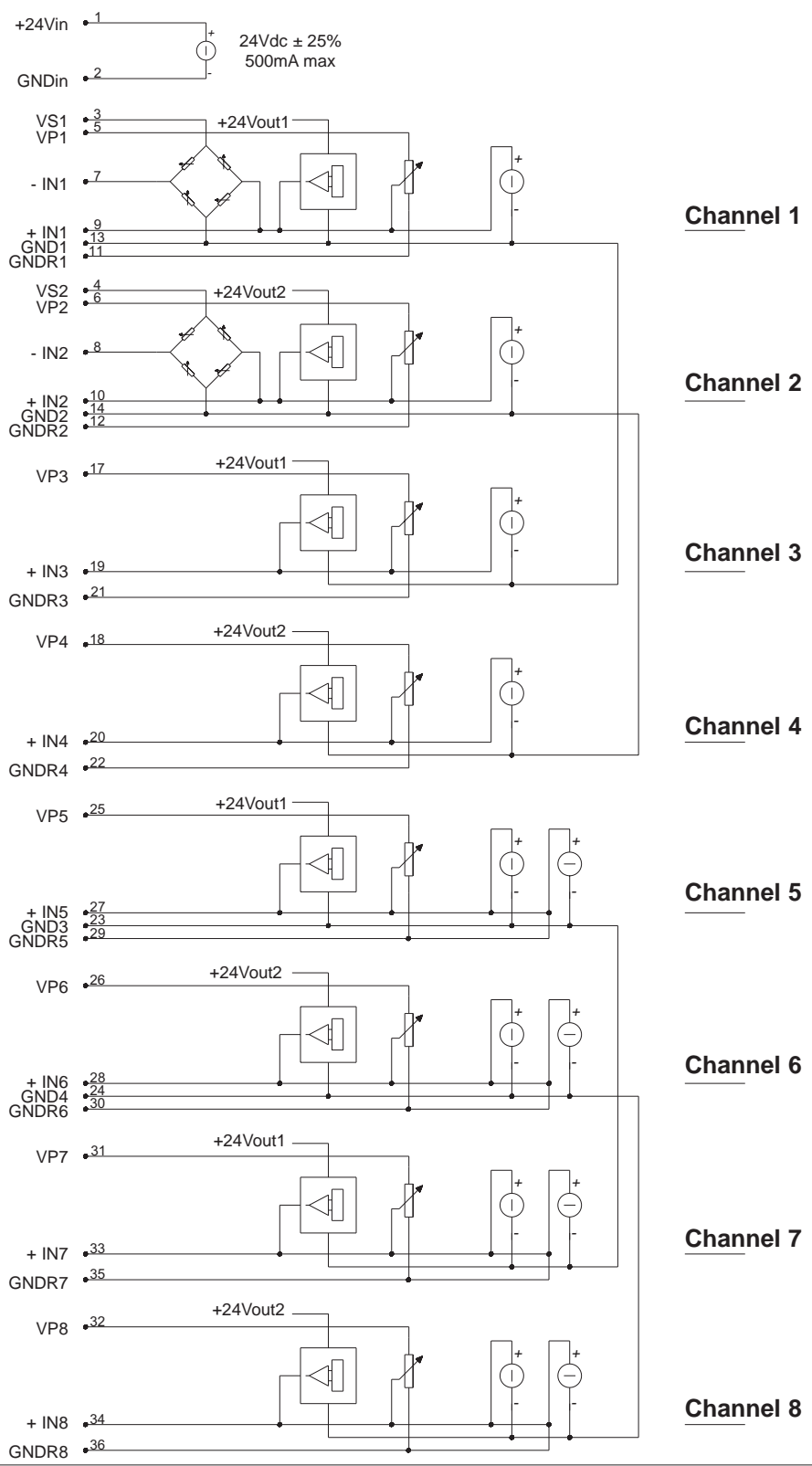


Yellow LED POWER
+24Vin
Yellow LED POWER Vs/Vp

Red LED INT
Green LED RUN
Red LED FAIL

- | | | | |
|----------|----|----|----------|
| +24Vin | 1 | 2 | GNDin |
| VS1 | 3 | 4 | VS2 |
| VP1 | 5 | 6 | VP2 |
| -IN1 | 7 | 8 | -IN2 |
| +IN1 | 9 | 10 | +IN2 |
| GNDR1 | 11 | 12 | GNDR2 |
| GND1 | 13 | 14 | GND2 |
| +24Vout1 | 15 | 16 | +24Vout2 |
| VP3 | 17 | 18 | VP4 |
| IN3 | 19 | 20 | IN4 |
| GNDR3 | 21 | 22 | GNDR4 |
| GND3 | 23 | 24 | GND4 |
| VP5 | 25 | 26 | VP6 |
| IN5 | 27 | 28 | IN6 |
| GNDR5 | 29 | 30 | GNDR6 |
| VP7 | 31 | 32 | VP8 |
| IN7 | 33 | 34 | IN8 |
| GNDR7 | 35 | 36 | GNDR8 |



Vp = Supply for potentiometer
Vs = Supply for strain gauge



ORDER CODE

module code	R-A/D8	F027063	Code
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GEFRAN spa reserves the right to make aesthetic or functional changes at any time and without notice

 c US	Conformity UL508 File no. E198546
	The instrument conforms to the European Directives 2004/108/CE and 2006/95/CE with reference to the generic standards: - EN 61000-6-2 (immunity in industrial environments) - EN 61000-6-3 (emission in residential environments) - EN 61010-1 (safety) - EN 61161-2 (product standard). The Declaration of conformity is available on GEFran web: www.gefran.com