INDICATORS,
ALARM UNITS

GEFRAN

Thanks to forty years of experience, Gefran is the world leader in the design and production of solutions for **measuring, controlling, and driving industrial production processes**.
We have 14 branches in 12 countries and a network of over 80 worldwide distributors.

QUALITY AND TECHNOLOGY

Gefran indicators are designed to directly **acquire multiple physical variables** such as temperature, pressure, displacement, force/weight, humidity, and many others via normalised signals.

ONE STOP SHOP

Gefran offers complete display solutions for industry, providing its own sensors and ensuring maximum component compatibility and integration.

The numerous models in the catalogue offer different acquisition speeds, read resolutions, and specific functions assignable to auxiliary inputs and to alarm outputs.

SERVICES

A team of Gefran experts works with the customer to select the ideal product for its application and to help install and configure devices (customercare@gefran.com).

Gefran offers a wide range of courses at different levels for the technical-commercial study of the Gefran product range as well as specific courses on *demand*.

PLASTICS

MATERIAL TESTS

WEIGHING SYSTEMS

TEST BENCHES

MACHINES FOR WOOD AND MARBLE

ROLLING LINES

SOFTWARE
GF_eXpress

Configuration kit for Gefran instruments by means of PC (Windows environment).
Lets you read or write all of the parameters of a single instrument via serial connection.

- A single software for all models
- Easy configuration
- Copy/paste, save recipe, trend functions
- Rapid configuration of instruments
- Saving and management of parameter recipes
- On-line trend and saving of historical data

- Recovery of factory settings
- Custom linearization
- On-line user manual
- Easy programming with custom messages
- Easy graphics programming with setpoint programmers

GF_eXpress

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ALL GEFRAN INDICATORS FEATURE

INPUTS
Configurable universal analogue inputs for main variables and auxiliary analogue/digital inputs for additional functions.

KEYBOARD
Keyboard for rapid setting and diagnostics.

LEDS
LEDs for constant display of main instrument states.

DISPLAY
Clear and immediate display of main variables.

IP65
Elevated front panel protection without accessories.

OUTPUTS
Various types of outputs for alarm management, input retransmission.

FLEXIBILITY
Connection to process via various types of sensors.

SHARED SOFTWARE
All models use the same software.

READY TO USE
Pre-installed software for zero start-up time.

EASY TO USE
Immediate and intuitive parameter settings.

UNIVERSAL MODELS

Gefran indicators and alarm units feature flexibility, simplicity, and compactness.
Available in versions measuring 72x36...48x48 and 48x96, they indicate variables such as temperature, displacement, and force.

HIGH PERFORMANCE MODELS

Gefran's 2400 series of indicators provide speed and precision, ensuring the measurement and setpoints of pressures (direct and differential), displacements, forces, temperatures, and process variables read by amplified sensors.

Calculation capacity
- Ability to compare input variables, engineer measurements, derive flow values.
- Use of results of math functions such as value of process/ alarm limit/retransmission output.

Double channel
- Two main universal analogue inputs for two simultaneous acquisitions with a single instrument.
- Direct feeding of up to 6 load cells.

Easy calibration
- Calibration of input by copying sensor plate data.
- Standard calibration with specific menu

		72X36	48X48 (1/16 DIN)	48X96 (1/8 DIN)	96X96 (1/4 DIN)	
MULTICHANNEL MODELS				8 Channels °C/°F bar 0...10V 4...20mA **2308** ●	2 Channels °C/°F bar 0...10V 4...20mA **40TB** ●	Plastics, Plants
HIGH-PERFORMANCE MODELS	**High speed High resolution**			4 Channels **2400** ○ ●	°C/°F bar 0...10V 4...20mA **Kg** Potentiometers	Climatic chambers, Dosers, Pressure , Test benches, Laboratories
UNIVERSAL MODELS	**RPM Frequency**			**40F96**	**Hz RPM**	Plastics, Various
	V/Aac		**4A48 40A48**	**4A96 – 40A96**	**V/Aac**	Plastics, Various
	Pressure Force Position		**40B48**	**4B96 – 40B96** ●	**Kg** Potentiometers bar Magnetostrictives	Plastics, Packaging
	Temperature Linear Potentiometers	**4T72 40T72**	**4T48 40T48** ●	**4T96 – 40T96** ●	°C/°F 0...10V 4...20mA Potentiometers	Plastics, Packaging, Wood, Metal, Ovens

LEGEND: 🖥 *PC configuration*   ○ **PROFIBUS®**   ● **Modbus** TCP/RTU

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INDICATORS

		4T 72 Indicator	4T 48 / 4T96 Indicator
	Front panel dimensions	72 x 36mm	48 x 48mm (1/16 DIN) / 96 x 48mm (1/8DIN)
Inputs	Number of analog inputs	1	
	Sampling time	120 - 60 - 30 - 15msec	
	Precision	0,2% ±1 digit	
	Maximum resolution	8000 pti	16000 pti
	Input filter	0...20,0 sec + display hysteresis 0...9,9 scale points	
	Zero Offset	Settable by user over entire scale range	
	Application	Indicator of physical quantities -1999...+9999 (with or without decimal point)	
Thermocouples	Types	J, K, T, E, N, S, R, B, LGost, U, G, D, C, custom, with scales in °C or °F (IEC 584)	
	Cold junction compensation	Internal, with automatic compensation	
Resistance thermometer	Types	Pt100 DIN43710 (3 fili), Pt100 Japan, custom	
Thermistors	Types	PTC, NTC (1K/25°C), custom	
Linear	Types	0...20mA, 4...20mA, 0...60mV, 0...1V, 0...5V, 0...10V, possible linearization on 32 segments	
	Potentiometer	-	(R77 version) Input from potentiometer (min 100Ω) powered by instrument 1,2Vdc
	Pressure probe Load cells	-	
Alternating sinusoidal (current transformer)	Types	-	
	Ranges	-	
	Application	-	
	Power supply for transmitter	18Vdc ±10% non-stabilized, 50mA 1,2Vdc for potentiometer >100Ω	24Vdc ±10% non-stabilized, 50mA 15Vdc for transmitter; 50mA 1,2Vdc for potentiometer >100Ω
	Power supply	11...27Vdc, 18...27Vac ±10% 50/60Hz, not isolated from sensor	11...27Vac/dc, 100...240Vac/dc; ±10% 50/60Hz
	Faceplate protection level	IP65	
	Certifications	-	UL

4A 48 / 4A 96 Alternating current and voltage indicator	4B 96 Pressure, force, position indicator
48 x 48mm (1/16 DIN) / 96 x 48mm (1/8 DIN)	96 x 48mm (1/8 DIN)
1	
120msec	120 - 60 - 30 - 15msec
0,2%f.s. ±1 digit (per 2/20Vac, 20/50mAac, 1Aac) 0,5% f.s. ±1 digit (for 200Vac, 500Vac, 5Aac)	0,2% ±1 digit
8000 pti	16000 pti
0...20,0 sec + display hysteresis 0...9,9 scale points	
Settable by user over entire scale range	
Indicator of physical quantities -1999...+9999 (with or without decimal point)	Indicator of physical quantities -1999...+9999 (resolution 1 digit) -19990...+99990 (resolution 10 digit) Configurable decimal point position
-	
-	
-	
-	
-	
-	Input from potentiometer (min 100Ω) powered by instrument 1,2Vdc possible linearization on 32 segments
-	Autorange sensitivity 1,5...3,3mV/V possible linearization on 32 segments
Direct non-isolated input or via transformer in voltage or AC	-
0...2/0...20/0...200/0...500Vac 0...20/0...50/0...200mAac, 0...1/0...5Aac	-
Voltmeter, Ammeter	-
-	1,2Vdc for potentiometer 5-10Vdc/120mA; 15Vdc/50mA 24Vdc non stabilized, 50mA
11...27Vac/dc, 100...240Vac/dc; ±10% 50/60Hz	
IP65	
UL (4A96)	UL

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ALARM UNITS

		40T 72 Alarm Unit	40T 48 / 40T 96 Alarm Unit
	Front panel dimensions	72 x 36mm	48 x 48mm (1/16 DIN) / 96 x 48mm (1/8 DIN)
Inputs	Number of analog inputs	1	
	Sampling time	120 - 60 - 30 - 15msec	
	Precision	0,2% ±1 digit	
	Maximum resolution	8000 pti	16000 pti
	Input filter	0...20,0 sec + display hysteresis 0...9,9 scale points	
	Zero Offset	Settable by user over entire scale range	
	Application	Indicator of physical quantities -1999...+9999 (with or without decimal point)	
Thermocouples	Types	J, K, T, E, N, S, R, B, LGost, U, G, D, C, custom with scales in °C o °F (IEC 584)	
Cold junction compensation		Internal, with automatic compensation	
Resistance thermometer	Types	Pt100 DIN43710 (3-wires), Pt100 Japan, custom	
Thermistors	Types	PTC, NTC (1K/25°C), custom	
Linear	Types	0...20mA, 4...20mA, 0...60mV, 0...1V, 0...5V, 0...10V Possible linearization on 32 segments	
	Potentiometer	-	(R77 version) Input from potentiometer((min 100Ω) powered by instrument 1,2Vdc possible linearization on 32 segments
	Pressure probe Load cells	-	
Alternating sinusoidal (current transformer)	Types	-	
	Ranges	-	
	Application	-	
Digital communication		-	RS485, 1200...19200 baud MODBUS RTU, CENCAL GEFRAN
Digital input	Type	Optoisolated passive PNP isolated 1500V	
	Application	Tare zero, reset alarm latches, Hold, Flash	
Outputs		max 3	max 4
Relay	NA	max 5A, 250V resistive load cosφ = 1	
	Application	Alarm units, alarms, on/off control	
Logic	Type	With 18Vac/dc power supply Rout 560Ω (6V/20mA)	24V (10V min / 20mA max)
	Application	Interception, alarm, On/Off Control	
Triac	Type	24...240Vac ± 10% 2A max	
	Application	Alarm units, alarms, on/off control	
Analog	Type	4...20mA (R max 60Ω) res. 12bit, not isolated	0...10V, 4...20mA (Rmax = 500Ω) res. 12bit, not isolated
	Application	Retransmission of variable	
Power supply sensor or transmitter		18Vdc; 50mA	24Vdc ±10% non-stabilized, 50mA 15Vdc for transmitter, 50mA 1,2V for potentiometer
	Power supply	11...27Vdc, 18...27Vac; ±10% 50/60Hz not isolated from sensor	11...27Vac/dc, 100...240Vac/dc; ±10% 50/60Hz
	Faceplate protection level	IP65	
	Certifications	-	UL

40A 48 / 40A 96 Alternating current and voltage alarm unit	40B 48 Alternating current and voltage alarm unit	40B 96 Pressure, force, position alarm unit
48 x 48mm (1/16 DIN) / 96 x 48mm (1/8 DIN)	48 x 48mm (1/16 DIN)	96 x 48mm (1/8 DIN)
1		
120msec	120 - 60 - 30 - 15msec	
0,2%f.s. ±1 digit (for 2/20Vac, 20/50mAac, 1Aac) 0,5% f.s. ±1 digit (for 200Vac, 500Vac, 5Aac)	0,2% ±1 digit	
8000 pti		16000 pti
0...20,0 sec + display hysteresis 0...9,9 scale points		
Settable by user over entire scale range		
Indicator of physical quantities -1999...+9999 (with or without decimal point)		Indicator of physical quantities -1999...+9999 (resolution 1 digit) -19990...+99990 (resolution 10 digit) Configurable decimal point position
-		
-		
-		
-		
-		
-	IInput from potentiometer (min 100Ω) powered by instrument 1,2Vdc possible linearization on 32 segments	
-	Autorange sensitivity 1,5...3,3mV/V possible linearization on 32 segments	
Direct non-isolated input or via transformer in voltage or AC	-	
0...2/0...20/0...200/0...500Vac 0...20/0...50/0...200mAac, 0...1/0...5Aac	-	
Voltmeter, Ammeter	-	
-		RS485, 1200...19200 baud MODBUS RTU
Optoisolated passive PNP Isolated 1500V		
Tare zero, reset alarm latches, Hold, Flash		
max 3		max 4
max 5A, 250V resistive load cosφ = 1		
Alarm units, alarms	Interception, alarm, On/Off Control	
11V Rout 220Ω (6V/20mA)		24Vdc (10V min /20mA max)
Alarm units, alarms	Interception, alarm, On/Off Control	
24...240Vac ± 10% 3A max (for mod.40A96)	-	24...240Vac ± 10% 1A max
Alarm units, alarms	Alarm units, alarms	
4...20mA (R max 150Ω) resolution 12bit, not isolated		0..10V, 4..20mA (Rmax 500Ω) resolution 12bit, not isolated
Retransmission of variable		
-	1,2Vdc for potentiometer, 5-10Vdc/120mA; 15-24Vdc/50mA	
11...27Vac/dc, 100...240Vac/dc; ±10% 50/60Hz		
IP65		
UL (40A96)	-	UL

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ALARM UNITS

		40TB Temperature and pressure alarm unit	40F 96 Frequency Indicator
	Front panel dimensions	96 x 96mm (1/4 DIN)	96 x 48mm (1/8 DIN)
Inputs	Number of analog inputs	2	1 mechanical contact, logic or alternating voltage drive
	Sampling time	120 - 60 - 30 - 15msec	Configurable frequency: 100KHz max.
	Precision	0,2% ±1 digit	0,1% in autorange mode ±1 digit with fixed f.s.
	Maximum resolution	16000 pti	-
	Input filter	0...20,0 sec + display hysteresis 0...9,9 scale points	Fixed 100Hz, may be cut out
	Zero Offset	Settable by user over entire scale range	
	Application	Indicator of frequencies -1999...+9999 (settable decimal point)	Indicator of frequencies 0...+9999 (automatic or settable decimal point)
Thermocouples	Types	J, K, T, E, N, S, R, B, LGost, U, G, D, C,Custom with scale in °C or °F (IEC 584)	-
Cold junction compensation		Internal, with automatic compensation	-
Resistance thermometer	Types	Pt100 DIN43710 (3-wires), Pt100 Japan	-
Thermistors	Types	PTC, NTC (1K/25°C)	-
Linear	Types	0...20mA, 4...20mA, 0...60mV, 0...1V, 0...5V, 0...10V Ri > 500Ω for voltage signals ≤ 1V Ri > 20KΩ for voltage signals > 1V Ri = 50Ω for current signals Possible linearization on 32 segments	-
	Potentiometer	Input from potentiometer (min 100Ω) powered by instrument 1,2Vdc	-
Pressure probe Load cells		Autorange sensitivity 1,5...3,3mV/V	-
Frequency	Type	-	Input from inductive or capacitive proximity encoder NAMUR 2 or 3-wires limit switch. Input in alternating voltage 0,5...500V
	Type	-	Input frequency ranges ≤ 20KHz
	Display	-	Frequency meter with or whitout automatic scale and decimal point change, input frequency selectable in ranges: 9.999; 99.99; 999.9; 9999
	Application	-	Revolution counter or frequency meter with programmable sampling time
Digital input	Type	2 inputs from voltage-free contact	Optoisolated passive PNP isolated 1500V
	Application	Tare zero, reset alarm latches, Hold, Flash	
Outputs		max 3	
Relay	NA	max 5A, 250V resistive load cosφ = 1	
	Application	Alarm units, alarms	
Logic	Type	-	11V Rout 220Ω(6V/20mA)
	Application	-	Alarm units, alarms
Triac	Type	-	24...240V ±10% 3A max.
	Application	-	Alarm units, alarms
Analog	Type	2 outputs: 0-10V, 0/4-20mA is.1500V,resolut.12 bit	4...20mA (R max 150Ω) resolution 12bit non isolated
	Application	Configurable	Retransmission of variable
	Digital communication	RS485, RS232 1200...19200 baud MODBUS RTU	-
	Sensor or transmitter power supply	1,2Vdc for potentiometer > 100Ω ;5,10Vdc max. 120A for strain gauge 15Vdc max/80mA; 24Vdc max 50mA for transmitter 2-wires	24Vdc; ±10% not stabilized 50mA max 5Vdc/120mA; 12Vdc/50mA max
	Power supply	100...240Vac/dc ± 10% 20...27Vac/dc ±10% 50/60Hz	11...27Vac/dc, 100...240Vac/dc; ±10% 50/60Hz
	Faceplate protection level	IP65	
	Certifications	UL	

2400 Fast Indicator	2308 Multichannel Indicator
96 x 48mm (1/8 DIN)	
2 Main, 2 Auxiliaries	8
2 msec (ch1, ch2) 10 msec (ch3, ch4)	900 msec
0,1% f.s. ±1digit (0,2% f.s. for TC)	0,2% f.s. ±1digit for linear inputs;; 0,5% f.s. ±1 digit for TC, RTD, mVac inputs
100000 pti	4000 pti
0,0...20,00 sec input reading, 0,0...9,9 sec display	Fisso 120 msec, may be cut out
Settable by user over entire scale range	-
Indicator of pressure, forces, weight, shift, physical quantities -19999...+99999 settable decimal point	Indicator of temperature and physical quantities -999...3000 settable decimal point
J, K, R,S, T with scale in °C or °F	
Internal / external	Internal, with automatic compensation
Pt100 2/3-wires, scale in °C or °F	
-	
Strain-gauge: 5/10Vdc 200mA, 350Ω Potentiometer: ≥100Ω, Ri >10MΩ @ 2,5Vdc DcLinear: 0/4...20mA (Ri = 50Ω) ≤±100mV, Ri > 10MΩ; ±1V...±10V, Ri > 2MΩ); Auxiliary input: 0...10V (Ri ≥ 2MΩ); 0/4...20mA (Ri = 50Ω) Possible linearization on 64 segments	0...20mV, 0...50mV, 0...100mV, 0...10V (Ri ±1MΩ); 0/4...20mA (Ri = 5Ω); 100mVac, external dividers provided for signals up to 1500Vac and external shunt for 20Aac and 5Aac
≥100Ω, Ri > 10MΩ	-
Strain-gauge 350Ω; sensitivity 1,5...4mV/V	-
-	
-	
-	
-	
2, NPN, PNP,optoisolated, configurable function	-
Reset, Zero, Tare, Calibration, Loc/Rem, Hold, Flash	-
max 4; can be expanded up to 10 relay or logic outputs with MD82	max 2 relay or logic; can be expanded up to 10 relay or logic outputs with MD81
5A/250V, contacts, resistive load cosφ= 1	
Alarm units, alarms	
24Vdc (20mA, max.12V)	24Vdc Rout=47Ω (20mA, max.12V)
Alarm units, alarms	
-	
-	
Isolated 1500V, 0/4...20mA, Rmax = 500Ω,±10V, resolution 0,03%, configurable via software	-
PV, retransmission, auxiliary inputs, peak	-
Isolated RS485 / RS232 (max 115200 baud), protocol MOD BUS RTU / PROFIBUS DP	Isolated RS485 (1200-9600baud),current loop (1200baud), prot. MODBUS RTU
Isolated 1500V, 5, 10Vdc/200mA o 24Vdc,±5% 100mA	10...15V, 100mA max.
11...27Vac/dc ±10%; 100...240Vac/dc ±10% 50/60Hz, 10VA max., internal fuse	
IP65	IP54 (IP65 with protective cover)
UL	-
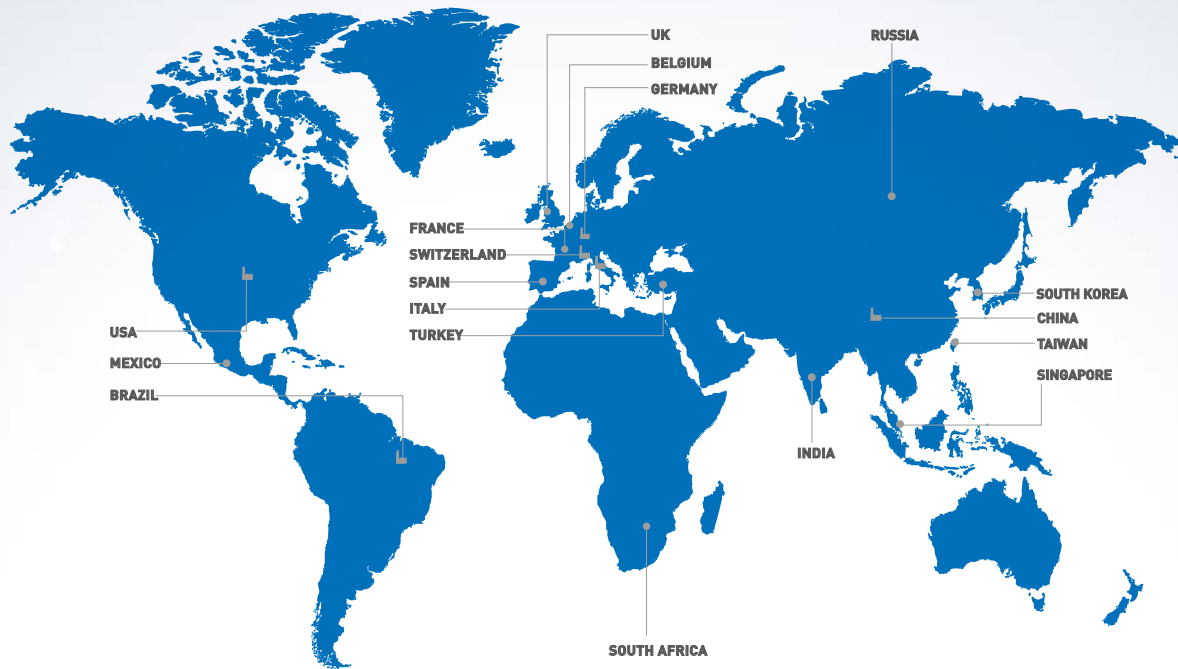
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