

DEUTA

Indicating Units





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» DEUTA indicating units- our modular system...

for your individual requests«

DEUTA indicating units - reliable and flexible

By choosing components of high quality, the indicating units fulfil the highest demands towards reliability, maintainability, safety and longevity. They can be configured in varied ways as to colour design and variability of input variables.

So you will be on the safe side!

Safety technology

Obsolescence management

Economic efficiency

Modular concept

Longevity

»DEUTA indicator units -

Product highlights at a glance!«

Forward-looking technology

Everything from one source

Consultation, development, layout and selection of components, fitting, testing and production: DEUTA controls the entire process chain from production to qualification and worldwide support.

Platform concept

Three platforms, many possibilities for individualisation. With just a few components and plug connections, we have indicating units compatible in terms of installation and function available at any time.

Safety technology

DEUTA indicating units offer SIL 2-capable solutions. That is what makes DEUTA the leader in safety technology for indicating units.

Longevity

High-quality components and processes lead to high MTBF values and low life-cycle costs.

Obsolescence management

Follow-up concepts are already considered during the design phase. This ensures the availability of the indicating units across the entire life cycle. New indicating units are compatible to the predecessors in form, fitting accuracy and function.

- **Holistic:** Deuta controls the entire process chain for your individual indicating units.
- **Flexible:** Three technologies for indicating units: Stepper motor, moving coil instrument, digital indicator
- **Safe:** SIL 2-capable solutions
- **Compatible:** Form-fit-function
- **Rugged:** Regarding extreme environmental conditions
- **High:** The MTBF values



Product Overview



ENG 6, 8/9, 10/9, 13/9

- Controlled either with voltage, currents or PWM signal
- Device versions available either with LED lighting or lamp bulb



EGS 5/9

- Controlled either with voltage, currents or PWM signal
- Device versions available either with LED lighting or lamp bulb



EZG10/9, EZG13/9

- with summation counter
- Controlled either with voltage, currents or PWM signal
- Device versions available either with LED lighting or lamp bulb



EGS 10/9, EGS 6

- Controlled either with voltage, currents or PWM signal
- Device versions available either with LED lighting or lamp bulb



EQG 9/9, EQG 14/9

- Controlled either with voltage, currents or PWM signal
- Device versions available either with LED lighting or lamp bulb



ESG 3, ESG 14 cy

- Modern ergonomic indicating configuration
- Continuous monitoring of pointer position through autonomous system
- Different types of measured variables can be displayed
- ESG 14 cy: two separate controllers for increased safety requirements (SIL 2)



EGS 3/9 a, EGS 3/9 az

- Controlled either with voltage, currents or PWM signal
- Device versions available either with LED lighting or lamp bulb



»DEUTA analogue panel meters -

ENG indicating units - a round affair for more safety!«

Flexible control

The round indicating units **ENG 6** to **ENG 13** can be controlled either with voltages (AC, DC), currents (DC) or a PWM signal. Devices with current input can also be controlled with 4-20 mA.

Choice

Indicating units with 4...20 mA current input each have a "mechanical" and an "electrical" zero point (life zero). They are available either with flat connectors or D-Sub.

ENG 6, ENG 8/9, ENG 10/9, ENG13/9

- Controlled either with voltage, currents or PWM signal
- Device versions available either with LED lighting or lamp bulb

ENG 6 ENG 8/9 ENG 10/9 ENG13/9

Feature/Specification	
Panel cutout	ENG 6: Ø 61 ^{+0.5} mm ENG 8/9: Ø 81 ^{+0.5} mm ENG 10/9: Ø 101 ^{+0.55} mm ENG 13/9: Ø 131 ^{+0.5} mm
Installation depth	ENG 6: approx. 80 mm ENG 8/9: approx. 90 mm ENG 10/9: approx. 90 mm ENG 13/9: approx. 90 mm
Weight	ENG 6: approx. 0.3 kg ENG 8/9: approx. 0.5 kg ENG 10/9: approx. 0.6 kg ENG 13/9: approx. 0.8 kg
Mounting	Clamping yoke / clamp
Installation position	0-90-180°
Degree of protection front face	IP53
Degree of protection plug	IP40
Connection	6.3 x 0.8 DIN 46244 / D-Sub
Internal scale illumination	LED
External scale illumination	For devices without internal lighting possible via light slits
Input signals	AC, DC, PWM
Data for moving coil device	e.g. 20 mA, 1.5 mA ¹⁾
Load resistance	< 20 ohm at 20 mA meas.res.
Pointer deflection	240°
Accuracy class	ENG 6: 1,5 ENG 8/9, ENG 10/9, ENG13/9: 1,5; 1 ²⁾
Temperature range	-25°C to +70°C
Test voltage	1000 V _{eff} 50 Hz, 1 min
Vibration testing	EN61373 cat:1, class: B
Device definition	EN60051, EN50155
Conformity	CE
Housing	Sheet steel
Additional indicator	Individual versions with mileage recorder

¹⁾ others upon request
²⁾ at extra charge



ENG 6



ENG 8/9



ENG 10/9



ENG 13/9



»DEUTA analogue panel meters –

EZG indicating units - with summation counter!«

Flexible control

Models EZG 10/9 and EZG 13/9 are identical in structure and function to indicators ENG 10/9 and EZG 13/9 but incorporate an additional mechanical 7-digit summation counter.

EZG10/9 6, EZG13/9

- with summation counter
- Controlled either with voltage, currents or PWM signal
- Device versions available either with LED lighting or lamp bulb

EZG10/9 EZG13/9

Feature/Specification	
Panel cutout	EZG 10/9: Ø 101 ^{+0.5} mm EZG 13/9: Ø 131 ^{+0.5} mm
Installation depth	EZG 10/9: approx. 90 mm EZG 13/9: approx. 90 mm
Weight	EZG 10/9: approx. 0.6 kg EZG 13/9: approx. 0.8 kg
Mounting	Clamping yoke / clamp
Installation position	0-90-180°
Degree of protection front face	IP53
Degree of protection plug	IP40
Connection	6.3 x 0.8 DIN 46244 / D-Sub
Internal scale illumination	LED
External scale illumination	For devices without internal lighting possible via light slits
Input signals	AC, DC, PWM
Data for moving coil device	e.g. 20 mA, 1.5 mA ¹⁾
Load resistance	< 20 ohm at 20 mA meas.res.
Pointer deflection	240°
Accuracy class	1.5; 1 ²⁾
Temperature range	-25°C to +70°C
Test voltage	1000 V _{eff} , 50 Hz, 1 min
Vibration testing	EN61373 cat:1, class: B
Device definition	EN60051, EN50155
Conformity	CE
Housing	Sheet steel
Additional indicator	Individual versions with mileage recorder

¹⁾ others upon request
²⁾ at extra charge



EZG 10/9



EZG 13/9



»DEUTA analogue panel meters –

EQG indicating units - square and good!«

Durable

The EQG../9 indicating units have a square housing. They have the same features as the ENG series. A long-life LED lighting is integrated in the housings.

They are available in versions with flat connectors or with D-Sub.

EQG 9/9, EQG 14/9

- Controlled either with voltage, currents or PWM signal
- Device versions available either with LED lighting or lamp bulb

EQG 9/9 EQG 14/9

Feature/Specification	
Panel cutout	EQG 9/9: 92 x 92 ^{+0,8} mm EQG 14/9: 138 x 138 ⁺¹ mm
Installation depth	approx. 90 mm
Weight	EQG 9/9: approx. 0.6 kg EQG 14/9: approx. 0.8 kg
Mounting	Tensioning elements at the housing
Installation position	0- 90-180°
Degree of protection front face	IP53
Degree of protection plug	IP40
Connection	6.3 x 0.8 DIN 46244 / D-Sub
Internal scale illumination	with LED
External scale illumination	-
Input signals	AC, DC, PWM
Data for measuring device	e.g. 20 mA, 1.5 mA ¹⁾
Load resistance	< 20 ohm at 20 mA meas.res.
Pointer deflection	240°
Accuracy class	1.5
Temperature range	-25°C bis +70°C
Test voltage	1000 V _{eff} , 50 Hz, 1 min
Vibration testing	EN61373, cat: 1, class: B
Device definition	EN60051, EN50155
Conformity	CE
Housing	Aluminium

¹⁾ others upon request



EQG 9/9



EQG 14/9



»DEUTA analogue panel meters -

Double indicating units EGS -

independent indicating units for reference and actual values«

Doubly safe

The indicating units have two independently operating moving coil instruments whose inputs can be adapted to current, voltage (AC/DC) or PWM signals.

Versions with current inputs of 4-20 mA make it easier to recognise malfunctions thanks to the mechanical and electrical zero point. The pointer will be below the zero position in case of errors in the current loop.

GS 3/9 a, EGS 3/9 az

- Controlled either with voltage, currents or PWM signal
- Device versions available either with LED lighting or lamp bulb

EGS 3/9 a EGS 3/9 az

Feature/Specification	
Panel cutout	Ø 131 ^{+0,5} mm
Installation depth	approx. 110 mm
Weight	approx. 1 kg
Mounting	Clamp
Installation position	0-90-180°
Degree of protection front	IP53
Degree of protection plug	IP40
Connection	6.3 x 0.8 DIN 46224
Internal scale illumination	2 x 2W Ba7s
External scale illumination	through light slits
Input signal	AC, DC
Data for measuring device	e.g. 20 mA, 1.5 mA ¹⁾
Load resistance	< 20 ohm at 20 mA meas.res.
Pointer deflection	240°
Accuracy class	1.5, 1 ²⁾
Temperature range	-25°C bis +70°C
Test voltage	1000 V _{eff} , 50 Hz, 1 min
Vibration testing	EN61373, cat: 1, class: B
Device definition	EN60051, EN50155
Conformity	CE
Housing	Sheet steel
Additional indicator	EGS 3/9 az: Counter 7-digit
Supply	EGS 3/9 az: Counter 24 V DC ± 30 %, P = 250 mW
Input signal	EGS 3/9 az: f _{max} 12 Hz, pulse dur. min. 20ms

¹⁾ others upon request
²⁾ at extra charge



EGS 3/9 a



EGS 3/9 az



»DEUTA analogue panel meters -

Double indicating units EGS -

independent indicating units for reference and actual values«

Doubly safe

EGS 3/9 indicating units have two independently operating moving coil instruments whose inputs can be adapted to current, voltage (AC/DC) or PWM signals.

EGS 5/9

- Controlled either with voltage, currents or PWM signal
- Device versions available either with LED lighting or lamp bulb

EGS 5/9

Feature / Specification	
Panel cutout	Ø 101 ^{+0.5} mm
Installation depth	approx. 98 mm
Weight	approx. 1 kg
Mounting	Clamp
Installation position	0-90-180°
Degree of protection front	IP53
Degree of protection plug	IP40
Connection	6.3 x 0.8 DIN 46244
Internal scale illumination	with LED
External scale illumination	through light slits
Input signal	AC, DC, PWM
Data for moving coil device	0-20 mA, 1.5 mA ¹⁾
Load resistance	< 20 ohm at 20 mA meas.res.
Pointer deflection	240°
Accuracy class	1.5, 1 ²⁾
Temperature range	-25°C bis +70°C
Test voltage	1000 V _{eff} 50 Hz, 1 min
Vibration testing	EN61373, cat: 1, class: B
Device definition	EN60051, EN50155
Conformity	CE
Housing	Sheet steel

¹⁾ others upon request
²⁾ at extra charge



EGS 5/9



»DEUTA analogue panel meters -

Double indicating unit EGS - doubly safe«

Doubly safe

The indicating units have two independently operating moving coil instruments whose inputs can be adapted to current, voltage (AC/DC) or PWM signals.

Versions with current inputs of 4-20 mA make it easier to recognise malfunctions thanks to the mechanical and electrical zero point. The pointer will be below the zero position in case of errors in the current loop.

Traction and voltage values

EGS 6 indicating units with a customer-specific RS485 - protocol and LED lighting.

The microcontroller is monitored with a reset module. The power is supplied through a galvanically isolated DC/DC converter.

EGS 10/9, EGS 6

- Controlled either with voltage, currents or PWM signal
- Device versions available either with LED lighting or lamp bulb

EGS 10/9 EGS 6

Feature/Specification	
Panel cutout	EGS 10/9: Ø 92 ^{+0,8} x 92 ^{+0,8} mm EGS 6: Ø 185 ⁺¹ x 92 ⁺¹ mm
Installation depth	EGS 10/9: approx. 108 mm EGS 6: approx. 100 mm
Weight	EGS 10/9: approx. 1 kg EGS 6: approx. 0.8 kg
Mounting	EGS 10/9: Tensioning element at the housing EGS 6: V-clamp
Installation position	EGS 10/9: 0-90-180° EGS 6: 0-90-160°
Degree of protection front	EGS 10/9: EGS 6: IP 53
Degree of protection plug	IP40
Connection	EGS 10/9: 6.3 x 0,8 DIN 46224 EGS 6: Push-on terminal strip 10-pole, + D-Sub9
Internal scale illumination	with LED
Input signal	EGS 10/9: AC, DC, PWM EGS 6: RS 485 - Telegram
Data for moving coil device	EGS 10/9: 0-20 mA, 1.5 mA ¹⁾ EGS 6: 1.5 mA
Load resistance	< 20 Ohm bei 20mA Messw.
Pointer deflection	240°
Accuracy class	1.5
Temperature range	-25°C bis +70°C
Test voltage	1000 V _{eff} , 50 Hz, 1 min
Vibration testing	EN61373, cat. 1, class: B
Device definition	EN60051, EN50155
Conformity	CE
Housing	EGS 10/9: Aluminium EGS 6: Plastic, fibre reinforced

¹⁾others upon request



EGS 10/9



EGS 6



»DEUTA indicating units with stepper motor -

ESG indicating units - for technically demanding usage conditions! «

Modern and secure

Pointers and scales are designed according to the most modern ergonomic aspects of design.

Monitoring function

The pointer position of the ESG 3 can be transferred back as an 8 bit information to an upper level control unit.

Increased safety

The ESG 14 cy has a second separate controller as additional safety for the feedback. The ESG 14 cy is characterised by an integrated monitoring system (feedback unit) which always informs the user about the reliability of the speed information via monitoring by master computer.

ESG 3, ESG 14 cy

- Modern ergonomic indicating configuration
- Continuous monitoring of pointer position through autonomous system
- Different types of measured variables can be displayed
- ESG 14 cy: two separate controllers for increased safety requirements (SIL 2)

ESG 3 ESG 14 cy

Feature/Specification	
Panel cutout	ESG 3: $\varnothing 131^{+0.5}$ mm ESG 14 cy: $138^{+1} \times 138^{+1}$ mm
Installation depth	ESG 3: approx. 100 mm ESG 14 cy: approx. 140 mm
Weight	ESG 3: approx. 0.65 kg ESG 14 cy: approx. 1 kg
Mounting	ESG 3: ESG 3: Clamp or assembly bracket ESG 14 cy: Tensioning element at the housing
Installation position	0-90-180°
Degree of protection front face	ESG 3: IP53 ESG 14 cy: IP54
Degree of protection plug	ESG 3: IP40 ESG 14 cy: IP41
Connection	ESG 3: 2 x D-Sub 37-polig ESG 14 cy: 1 x D-Sub 15-polig / 1 x D-Sub 24
External scale illumination	ESG 3: through light slits ESG 14 cy: with int. LED
Operating voltage	24 VDC +/-30%
Input signal	ESG 3: PWM, TTL ESG 14 cy: RS 485 8 bit
Output	ESG 3: 8 bit binär ESG 14 cy: RS 485
Error message	ESG 3: Open Collector, max. 30 V ESG 14 cy: via LCD
Pointer deflection	ESG 3: 256° ESG 14 cy: 320°
Accuracy class	ESG 3: 0.6% ESG 14 cy: 0.7%
Adjustment speed	ESG 3: 60° <) second ESG 14 cy: 70° <) second
Temperature range	-25°C up to +70°C
Test voltage	ESG 3: none ESG 14 cy: 1000 V _{eff} , 50 Hz, 1 min
Vibration testing	ENG61373, cat:1, class:B
Conformity	ESG 3: - ESG 14 cy: CE, SIL 2
Housing	ESG 3: Sheet steel ESG 14 cy: Aluminium, painted black
Additional indicator	ESG 3: 3-digit 7-segment display ESG 14 cy: 2 signal lamps, 1 LCD error display, expertise according to SIL 2



ESG 3



ESG 14 cy

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