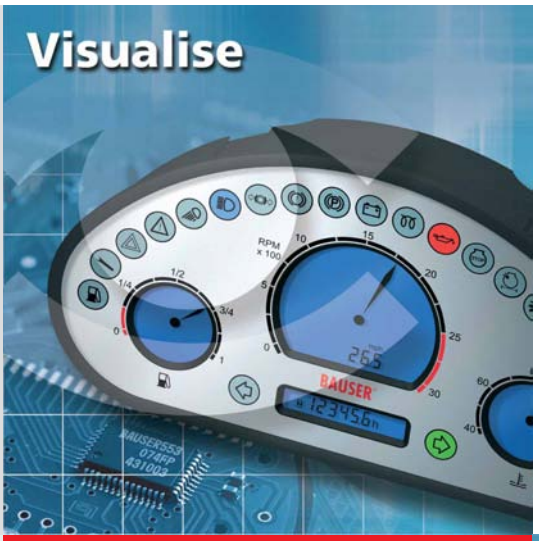
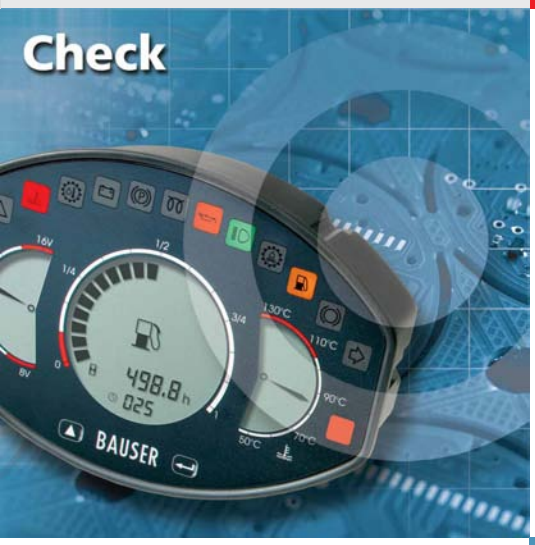
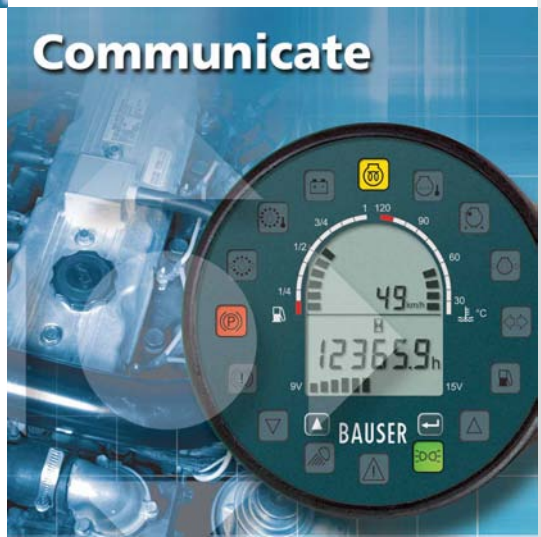


BAUSER®



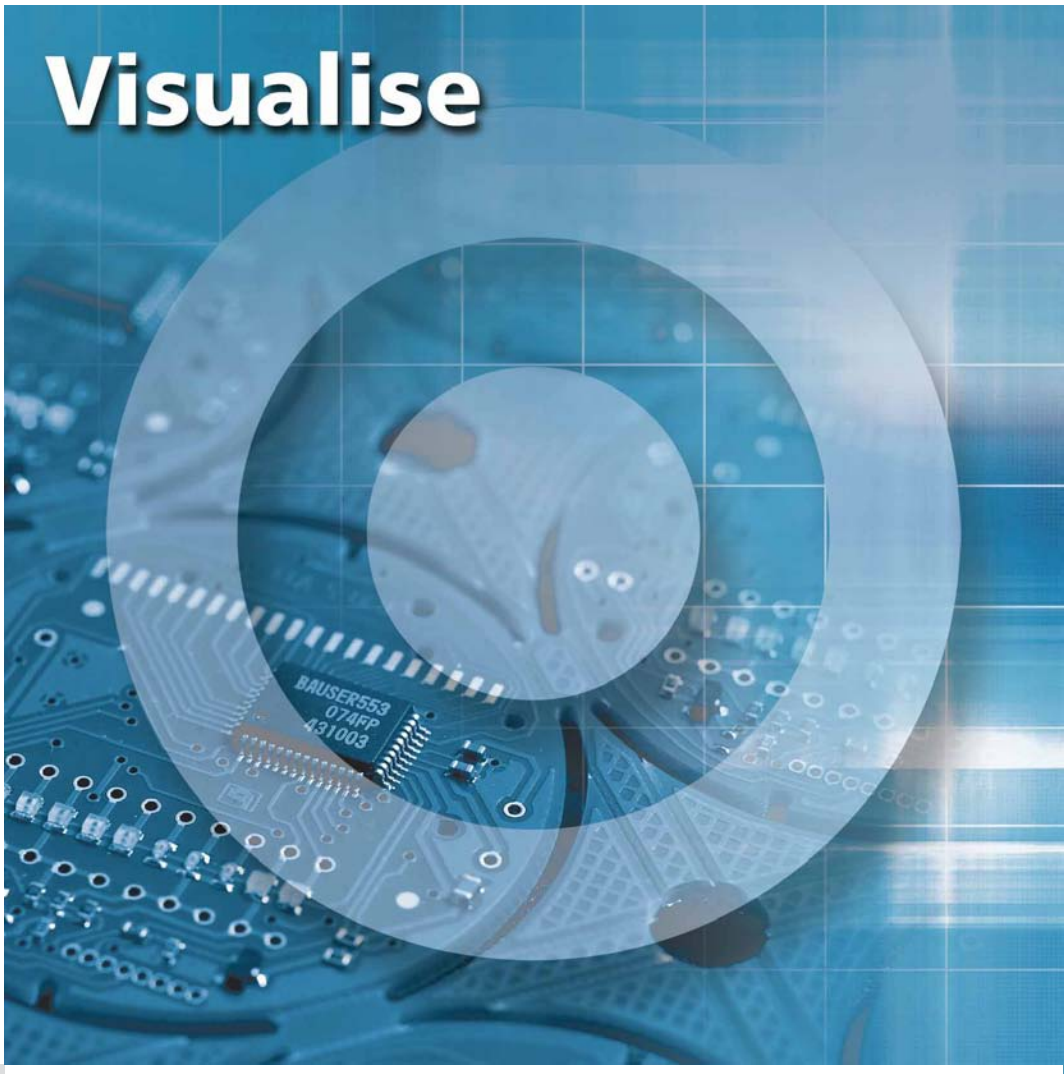
Instrument Clusters

- CAN | CANopen | SAE J1939
- digital and analogue sensors
- high environmental requirements
- individual solutions



BAUSER instrument clusters – the new look for your cockpit – all information at a glance

The instrument clusters can communicate via CAN, CANopen and SAE J1939. Further possibilities are inputs for digital and analogue sensors. Whether in the utility vehicles of the Off-Highway sectors, agricultural and forestry application or industrial lawn mowers, fork lift trucks, scissor lifts and specialised vehicles, BAUSER instrument clusters complement the aesthetics of manufacturers equipment, combining several single indication instruments into one unit improving supervision and control as well as saving time and money.



Industrial applications, stationary machines and aggregates such as generators and compressors etc. are also taking advantage of this robust unit in its suitability to give feedback from machine sensors and display instrumentation information.

As a stationary or individual produced OEM solution, in almost every application these rapidly mountable BAUSER instrument clusters can be used. For example to indicate the battery voltages, temperatures in °C or °F, fuel gauge levels, pressure in bar or psi, rpm, kmph or mph, to supervise the battery capacity of electro-operated vehicles, or as warning and control lamps, to inform about the settable service intervals, the time in European or American format or the operating hours.

A wide range of variety: From bar graph to needle animation and digital indication. At the standard units everything is technically possible. And if you decide to use an instrument with frontal key buttons it is possible to visualise further functions on the display, reset service values or optionally set the time.

Being up to each challenge

BAUSER standard instrument clusters are available in different front dimensions. To suit even very rough operational applications, these units are high-grade front side treated to achieve a complete and safe protection all around the case.

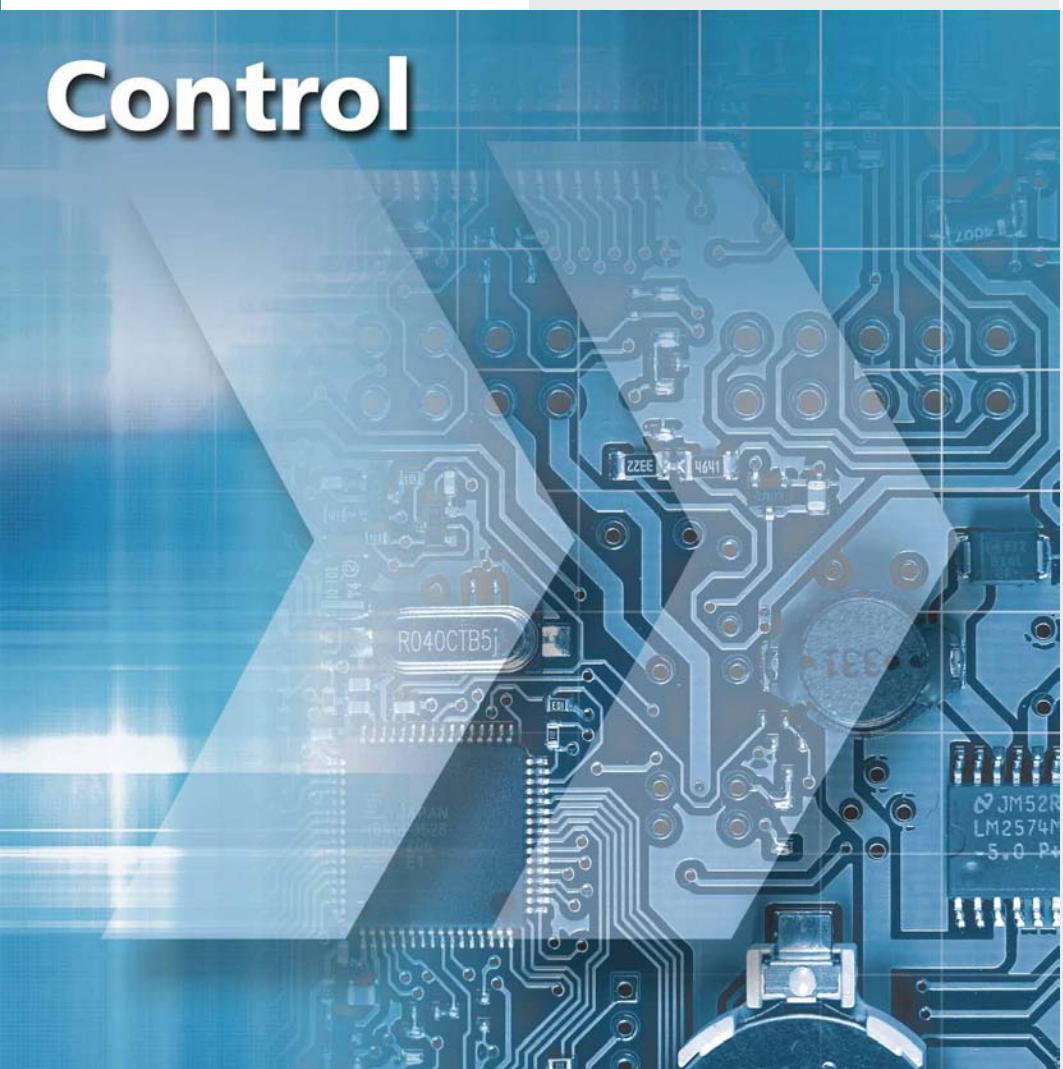
Our DIN EN ISO 9001: 2000 certificate guarantees a process-safe and maximum quality in the series production.

The instrument clusters have digital and analogue sensors. On vehicles with on-board data network data transmission is effected via CAN, CANopen, SAE J 1939 or other serial protocols. And of course all relevant industrial and vehicle technical standards were fulfilled.

Special requests can be accommodated

A qualified team of consultants and engineers will support you in the realisation of special applications: From initial concept, through the project development phase, then prototyping stages, to final production run.

BAUSER benefit and draw from its decades of experience in the art of electronic, electrotechnical and hard- and software engineering. All specialists work under one roof – they own construction moulding department, as well as they own injection department. And thanks microprocessor technology we can easily adapt to suit your individual requirements.



Find further details on BAUSER and our complete product range under: **www.bauser-control.de** in the Internet.

Or better contact us directly by phone under **0049 (0) 7485 181-0** or e-mail at **mail@bauser-control.de**. We would assist you with pleasure.

CAN | CANopen | SAE J1939

813.1

BAUSER instrument cluster Type 813.1 – the top solution with supervision

The instrument cluster can communicate via CAN, CANopen or SAE J1939

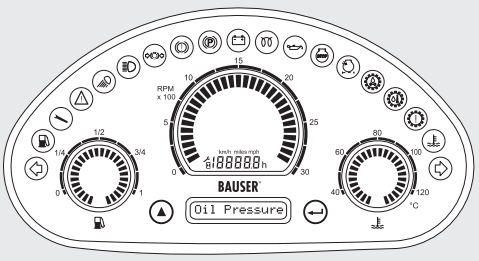
For displaying data, e.g.:

- fuel level
- rpm
- speed
- oil pressure
- coolant temperature
- error messages
- etc.

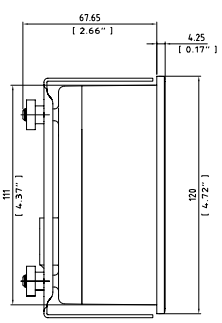
Error messages are displayed in clear text on the integrated character display

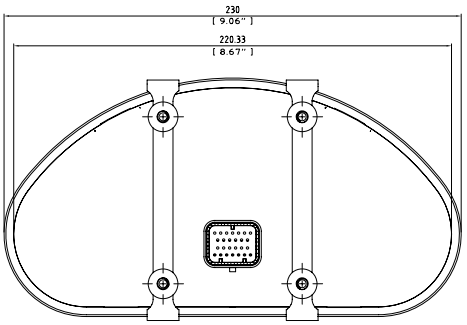
Inputs for digital and analogue sensors (resistor, currency, voltage, frequency)

housing:	plastic PC-ABS, black colour front side: chemical und UV resistant polyester foil viewing side: non-reflecting glass
LC-Display:	**LCD gauge 1:** 26-segment bargraph for fuel level
	LCD gauge 2: 31-segment bargraph for rpm 5 1/2 digits 7 segment for km, km/h, miles, mph, rpm, hour meter, service counter
	LCD gauge 3: 26-segment bargraph for coolant temperature
	LCD gauge 4: 6 digits 7 segment for error codes, clock, km, km/h, miles, mph, hour meter, service counter optional: 12 digits character display for clear text error messages
	backlight green-yellow
LED indication:	max. 19 brightness LEDs, readable even in direct sunlight, connection configurable
buttons:	two buttons for scrolling
inputs:	max. 18x digital inputs, polarity selectable, 2x count, 3x resistance, CAN Bus
operating voltage:	8 to 36 V DC (nominal 12 VDC)
current consumption:	max. 550 mA @ 12 V DC
operating temperature:	-40° C to +85° C
storage temperature:	-40° C to +90° C
connector:	Tyco Super Seal, 26 pole
fixing:	two metal clamps with four nuts
protection class:	IP67 front, IP40 rear (optional IP65)
vibration resistance:	EN 60068-2-64, SAE J1378
shock resistance:	EN 60068-2-27, EN 60068-2-29, SAE J1378
EMC:	EN 12895, DIN 40839-1, EN 13309
approval:	CE
options:	customised front foil design, customized LCD, LCD with bargraph animation, LCD backlight blue, Gore™ Membrane, IP65 rear, real time clock, indication of residual capacity of battery, real time clock, buzzer, FET outputs 1.5 A – positive connected, relay outputs 3.0 A, Fixing with four clamps (snap-in), UL, cUL approvals



general view





Digital and anlogue sensors

813.2

BAUSER instrument cluster Type 813.2 – the intelligent solution for digital and analogue sensors

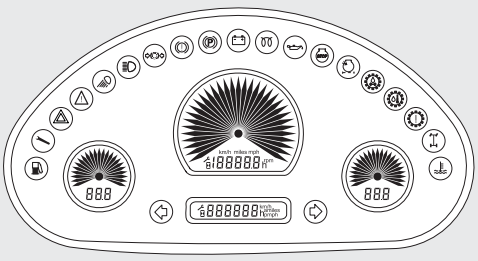
Modifications are no problem: A competent team supports your application to realization.

BAUSER is renowned for flexible and individual solutions, benefiting from decades of experience in the electronic, electrotechnical, soft- and hardware engineering sectors.

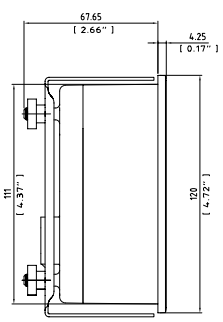
From initial concept through project development prototyping to the final production run, everything is handled under one roof.

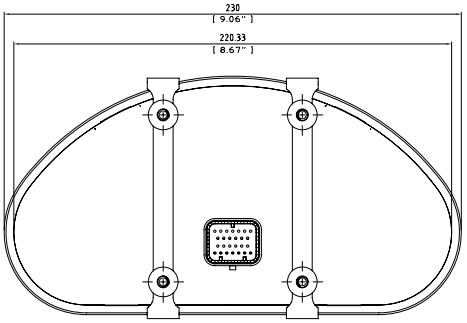
BAUSER has high quality standards, proven by many customer audits and guarantee »just in time« shipments.

housing:	plastic PC-ABS, black colour front side: chemical und UV resistant polyester foil viewing side: non-reflecting glass
LC-Display:	**LCD gauge 1:** 23-segment needle for fuel level
	LCD gauge 2: 33-segment needle for rpm 5 1/2 digits 7 segment for km, km/h, miles, mph, rpm, hour meter, service counter
	LCD gauge 3: 23-segment needle for coolant temperature
	LCD gauge 4: 6 digits 7 segment for clock, km, km/h, miles, mph, hour meter, service counter
	backlight blue
LED indication:	max. 21 brightness LEDs, readable even in direct sunlight, connection configurable
inputs:	max. 20x digital inputs, polarity selectable, 2x count, 3x resistance
operating voltage:	8 to 36 V DC (nominal 12 VDC)
current consumption:	max. 550 mA @ 12 V DC
operating temperature:	-40° C to +85° C
storage temperature:	-40° C to +90° C
connector:	Tyco Super Seal, 26 pole
fixing:	two metal clamps with four nuts
protection class:	IP67 front, IP40 rear (optional IP65)
vibration resistance:	EN 60068-2-64, SAE J1378
shock resistance:	EN 60068-2-27, EN 60068-2-29, SAE J1378
EMC:	EN 12895, DIN 40839-1, EN 13309
approval:	CE
options:	customised front foil design, customized LCD with bargraph animation, LCD backlight blue, Gore™ Membrane, IP65 rear, real time clock, indication of residual capacity of battery, front buttons for setting the time and for scrolling, buzzer, FET outputs 1.5 A – positive connected, relay outputs 3.0 A, Fixing with four clamps (snap-in), UL, cUL approvals



general view





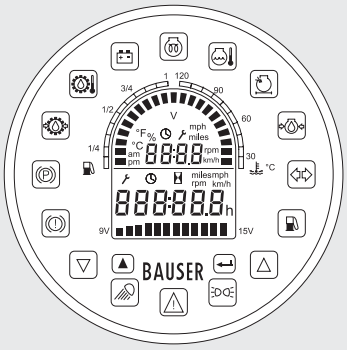
CAN | CANopen | SAE J1939
Digital and anlogue sensors

807

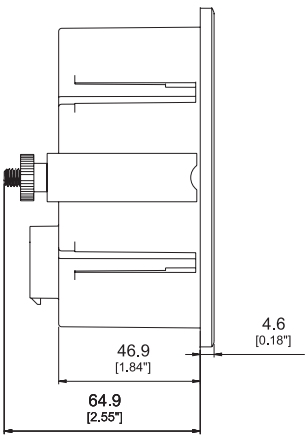
BAUSER instrument cluster type 807 – comfortable, flexible, economical

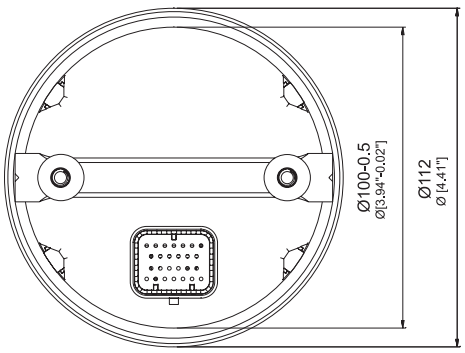
In the 100 mm cutout standard casing of this variant there are an integrated spacious round arch display and directly under it a rectangular LC-Display with maximum 16 LEDs and optionally 2 buttons. This unit is rapidly mountable per snap-in fixing or alternatively via metal clamps and offers you the possibility to select between different types of visualisation. The 21-segment bar graph, even divisible into two indications, and the digital 6-digit, 7-segment indication enable this. You can display for example the fuel gauge level and temperature separately and immediately under it in the next display the operating and service values or the battery voltage by the additional bar graph. At one view you can manage all main functions of smaller construction machines, industrial lawn mowers or sweeping machines.

housing	plastic PC-ABS blend; black colour front side: chemical and UV resistant polyester foil viewing side: polycarbonate glass
LC-Display	2x10-segment bar graph for temperature and tank 1x12-segment bar graph for voltage 6x7-segment indication for the following functions: 1. service (max. 9999 h), 2. hour counter (max. 99999.9 h), 3. speed [kmph]/[mph], 4. distance [km]/[miles], 5. revolution [rpm], 6. temperature [°C]/[°F], 7. fault codes 4x7-segment indication for the clock
	backlight green-yellow
LED indication	max. 16 LEDs, connection configurable
inputs	max. 16x digital polarity selectable, 2x count, 3x resistance
operating voltage	max. 350 mA @12V DC
current consumption	110 mA @ 36 V DC
ambient temperature	-40° C...+85° C
storage temperature	-40° C...+90° C
electrical connections	Tyco Super Seal, 26 poles
fixing	metal clamp with 2 screws
protection class	IP67 front, IP40 rear (optional IP65)
vibration resistance	EN 60068-2-64, SAE J1378
shock resistance	EN 60068-2-27, EN 60068-2-29, SAE J1378
EMC	EN 12895, DIN 40839-1, EN 13309
approvals	CE
options	customised front foil design customised LCD LCD backlight blue viewing part with anti-scratch treatment Gore™ Membrane, IP65 rear connector: Molex Minifit Jr., AMP-Tyco Mini-Universal-Mate-N-Lok time front buttons for setting the time and for scrolling buzzer FET outputs 1.5 A – positive connected relay outputs 3.0 A CAN, CANopen or SAE J1939 protocol fixing with 4 snap-in clamps – mounting depth 56.5 mm UL, cUL Approvals indication of residual capacity of battery



general view





suited for cutout: ø 100+0,5; [ø 3.94"+0.02"]

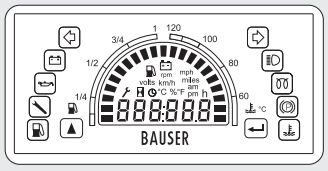
CAN | CANopen | SAE J1939
Digital and anlogue sensors

808

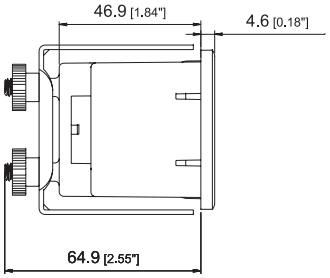
BAUSER instrument cluster type 808 – aesthetical, functional, well thought-out

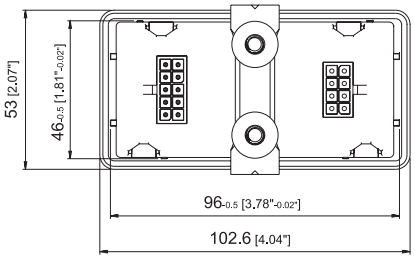
This standard instrument cluster is available in two different cutout dimensions. The aesthetic aspect defines completely new one of the most common casing forms made exciting by an attractive look and its special indication capability in European or American format. You can choose whether you wish to indicate the temperature in °C or °F, the speed in kilo-meter or miles per hour. Also typical for this instrument cluster type: The spacious, back lighted round arch LC-Display. Suit yourself and select if you will use the 21 segments of the bar graph for one indication or spread it and indicate 2 separate functions. On the display you also will find a 6-digit, 7-segment indication for operating hours, service values or the time. A further maximum of 10 coloured signal lamps can be added, which alert you in case of disturbances or limit values. On request a buzzer for an acoustic alarm and 2 optional front buttons can be integrated.

housing	plastic PC-ABS blend; black colour front side: chemical and UV resistant polyester foil viewing side: polycarbonate glass
LC-Display	2x10-segment bar graph for temperature and tank 6x7-segment indication for the following functions: 1. speed [km/h]/[mph], 2. service (max. 9999 h), 3. hour counter (max. 99999.9 h), 4. time, 5. volt, 6. revolution [rpm], 7. temperature [°C]/[°F], 8. fault codes
	backlight green-yellow
LED indication	max. 10 LEDs, connection configurable
inputs	max. 10x digital polarity selectable, 1x count, 2x resistance
operating voltage	max. 230 mA @ 12 V DC
current consumption	85 mA @ 36 V DC
ambient temperature	-40° C...+85° C
storage temperature	-40° C...+90° C
electrical connections	AMP-Tyco Mini-Universal-Mate-N-Lok splash proof sealed 10 poles and 8 poles
fixing	metal clamp with 2 screws
protection class	IP67 front, IP40 rear (optional IP65)
vibration resistance	EN 60068-2-64, SAE J1378
shock resistance	EN 60068-2-27, EN 60068-2-29, SAE J1378
EMC	EN 12895, DIN 40839-1, EN 13309
approvals	CE
options	customised front foil design customised LCD LCD back light blue viewing part with anti-scratch treatment GoreTM Membrane, IP65 rear connector: Molex Mini Fit Jr. time front buttons for setting the time and for scrolling buzzer FET output – negative connected CAN, CANopen or SAE J1939 protocol fixing wit 4 clamps (snap-in) – mounting depth 46.9 mm better readability with sun blend UL, cUL approvals cutout: 45.0 mm x 92.0 mm; [1.78 inch x 3.62 inch] indication of residual capacity of battery



general view





suited for cutout: 46+0,5 x 96+0,5; [1.81"+0.02" x 3.78"+0.02"]
option: 45+0,5 x 92+0,5 mm; [1.78"+0.02" x 3.62"+0.02"]

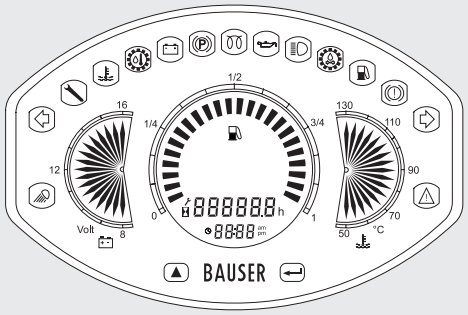
CAN | CANopen | SAE J1939
Digital and anlogue sensors

809

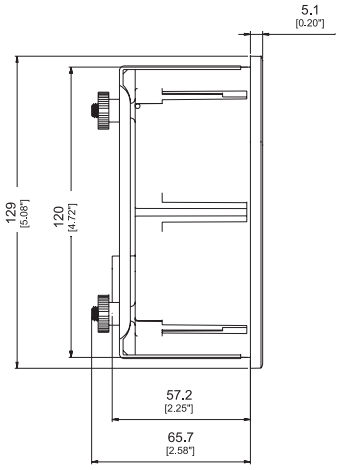
BAUSER instrument cluster type 809 – unconventional, innovative, save

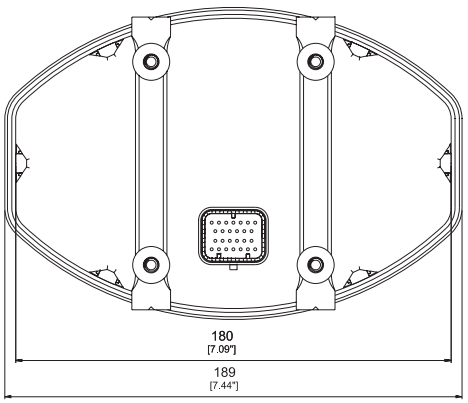
Mounted in mid-sized and bigger fork lift trucks, construction machines, utility vehicles, agricultural and forestry vehicles as well as in lots of other applications, this instrument cluster range gives each cockpit the unique look. Extravagant like the casing form is also the way of technical realisation with 2 half moon displays and one complete, spacious round display. Its spacious back lighted displays are equipped according to your specifications with a needle or a bar graph animation. Up to 15 vehicle functions and status information can be clearly demonstrated and thanks to the excellent brightness of their LEDs they can be perfectly read under the sun. Special advantages: The reset of the service values can be effected by the front buttons and with its high frontal IP protection even high pressure cleaning is no problem for these very robust solutions.

housing	plastic PC-ABS blend; black colour front side: chemical and UV resistant polyester foil viewing side: polycarbonate glass
LC-Display	2x17-segment needle for temperature, battery voltage (alternatively bar graph) 1x24-segment bar graph for tank (alternatively needle) 6x7-segment indication for the following functions: 1. speed [km/h]/[mph], 2. service (max. 9999 h), 3. hour counter (max. 99999.9 h), 4. time, 5. volt, 6. revolution [rpm], 7. temperature [°C]/[°F], 8. fault codes 4x7-segment indication for the time
	backlight green-yellow
LED indication	max. 15 LEDs, connection configurable
inputs	max. 16x digital polarity selectable, 2x count, 3x resistance
operating voltage	max. 450 mA @12 V DC
current consumption	300 mA @ 36 V DC
ambient temperature	-40° C...+85° C
storage temperature	-40° C...+90° C
electrical connections	Tyco Super Seal, 26 poles
fixing	two metal clamps with 4 screws
protection class	IP67 front, IP40 rear (optional IP65)
vibration resistance	EN 60068-2-64, SAE J1378
shock resistance	EN 60068-2-27, EN 60068-2-29, SAE J1378
EMC	EN 12895, DIN 40839-1, EN 13309
approvals	CE
options	customised front foil design customised LCD LCD backlight blue viewing part with anti-scratch treatment GoreTM Membrane, IP65 rear connector: Molex Minifit Jr., AMP-Tyco Mini-Universal-Mate-N-Lok time front buttons for setting the time and for scrolling buzzer FET outputs 1.5 A – positive connected relay outputs 3.0 A CAN, CANopen or SAE J1939 protocol fixing with 6 clamps (snap-in) – mounting depth 57.2 mm UL, cUL approvals indication of residual capacity of battery



general view





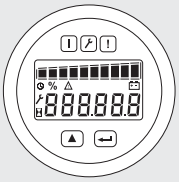
CAN | CANopen | SAE J1939
Digital and anlogue sensors

806

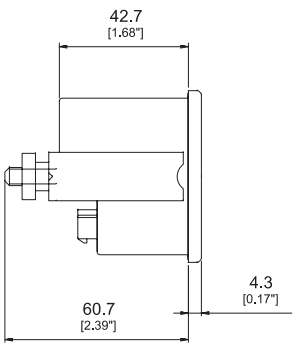
BAUSER instrument cluster type 806 – small, clever, compact, clear

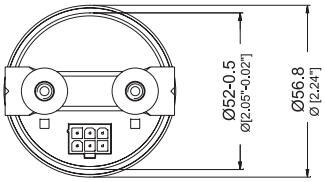
The casing of the all around solution with its 52 mm cutout is destined to all applications of cockpits with minimum available space and offers you maximum 3 LEDs and a back lighted LC-Display. This 6-digit indication gives you space for information such as operating hours and service values and the 10-segment bar graph is flexibly configurable to different indications such as battery discharge or fuel gauge level and vehicle temperatures. Optionally further functions can be integrated by a maximum of 2 frontal buttons. 3 signal lamps illuminate in your desired colours to alert you reliably of possible disturbances or limit values and if necessary the elevation function can be interrupted by an output.

housing	plastic PC-ABS blend; black colour front side: chemical and UV resistant polyester foil viewing side: polycarbonate glass
LC-Display	1x10-segment multi bar graph for battery discharge status 6x7-segment indication for the following functions : 1. hour counter (max. 99999.9 h), 2. service counter (max. 9999 h), 3. battery discharge indicator [%], 4. fault codes
LED indication	maximum 3 LEDs
inputs	CAN Bus
operating voltage	8...28 V DC
current consumption	max. 80 mA @12 V DC
ambient temperature	-40° C...+85° C
storage temperature	-40° C...+90° C
electrical connections	AMP-Tyco Mini-Universal-Mate-N-Lok splash proof sealed, 6 poles
fixing	metal clamp with 2 screws
protection class	IP67 front, IP40 rear (optional IP65)
vibration resistance	EN 60068-2-64, SAE J1378
shock resistance	EN 60068-2-27, EN 60068-2-29, SAE J1378
EMC	EN 12895, DIN 40839-1, EN 13309
approvals	CE
options	customised front foil design glass or plastic cover with front ring instead of front foil customised LC-Display LCD backlight blue viewing part with anti-scratch treatment connector: Molex Mini Fit Jr. front buttons for scrolling buzzer FET output 1.5 A – negative connected CANopen or SAE J1939 protocol UL, cUL approvals digital and analogue inputs indication of residual capacity of battery

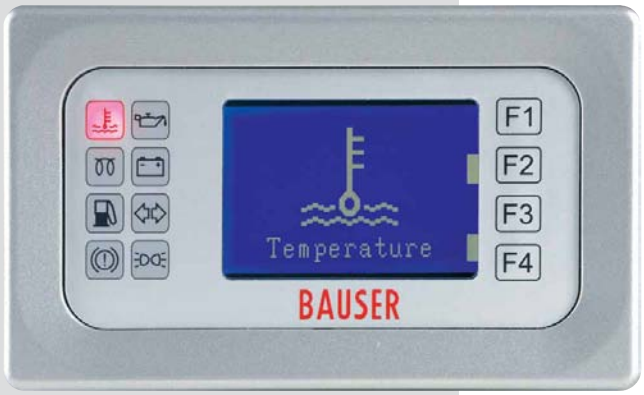


general view





suited for cutout: ø 52+0,5; [ø 2.05"+0.02"]



Grafik Display
CAN | CANopen | SAE J1939
Digital and anlogue sensors

811

BAUSER Graphic Display Type 811 – CANopen and SAE J1939

Robust, graphical display with CAN technology for mobile and stationary machines and utility vehicles in the Off-Highway sector.

The indication is realized with a graphical display in alphanumerical and graphical form and 8 LEDs.

The 4 buttons are used for settings and scrolling.

The graphic display supervise and visualise the data from engines via CAN, CANopen, SAE J1939 e.g.:

- speed
- revolution speed
- fuel level
- oil pressure
- water/ gear temperature
- hour meter and service counter
- error indication

application examples:	construction machines
	agricultural and forestry machines
	fork lifter trucks and transporters
	generators
	compressors
technical data:	CAN-, CANopen-, SAE J1939 protocol
	graphic display in yellow-green color
	high brightness LED indication
	LED indication and display readable even in direct sunlight
	brightness and contrast adjustable
	front buttons for setting and scrolling
	operating temperature -30° C to +70° C
	operating voltage 9 to 32 V DC
	shock and vibration resistant
	housing resistant against chemicals, UV and salty spray
	viewing part with anti-scratch treatment
	protection class IP67 front
	front dimension: 147 x 87 mm
options:	customised front foil design
	graphic display in blue color
	customised OEM software
	real time clock
	additional digital inputs
	relay outputs
	FET outputs
	buzzer

GSM | GPRS | CAN
Data remote control

Alarm modem for your special requirements

Do you have special requirements concerning remote control? Please send us your hard- and software requirements – we will solve it for you.

Features:

- cost-effective supervision and control from distance of utility vehicles, movable and stationary assets
- alarms on-event or data transmission on demand
- data transmission via SMS e.g. hours-run, service counters, GPS position data (optional)
- e@sy installation and device configuration via SMS or PC interface
- worldwide coverage due to Quad band technology
- digital inputs and relay outputs
- extremely robust plastic housing (IP65)
- high vibration and shock resistance
- voltage supply 10 to 30 V DC

Technical data:	GSM/GPRS modem
	digital inputs
	relay outputs
	internal battery for storage of buffered data
	CAN Bus Interface
Functional data:	Alarm SMS, triggered by digital inputs or internal counter threshold
	counter values sent via SMS
	counter reset via SMS
	set of the relay output by SMS commands or by »Free Call Mode«
	configuration via SMS (or PC interface)
	transmission of GPS position data via SMS
	anti-theft protection
	Geofencing – SMS if device leaves a predetermined area
	SMS if the battery power is removed
	transmission of CANopen / SAE J1939 error messages
Notes:	remote values reported automatically worldwide
	meter readings, machine counters, GPS position, etc. via SMS
	CANopen / SAE J1939 error messages via GPRS
	remote maintenance and comprehensive diagnostics for CAN devices (e.g. cars, trucks, etc)
	internal storage of data and error messages
	CAN values & diagnostic data,
	GPS data and routes
	meter readings, machine counters, etc. (for billing based upon usage)
	PC program and USB interface provided for
	easy device installation and configuration
	gathering of stored data for further processing

Advice:

For building and industrial applications, please refer our GSM Alarm Modem GAM 1 and GAM 2.

More details are available on our website www.bauser-control.de

BAUSER – Reliable day after day

Whether it concerns Counting Technique, Visualisation or Supervision, with BAUSER you are always one significant step ahead. No matter if instrument clusters or battery and time controllers, hour and pulse counters or GSM technologies for supervision from a distance. World wide in more than 50 countries.

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