

EG21, EGS21, ES series

Electric Gauges, Switchgages & Senders

The Murphy EG21 gauge and EGS21 Switchgage[®] range takes the electric gauge to new heights, with leading-edge technology and proven reliability. With our proven EG Air Core Movement design, the EG(S)21 series offers superior operation, reading accuracy, back-lighting and installation. The EG(S)21 gives you the assurance of highest reliability and service.

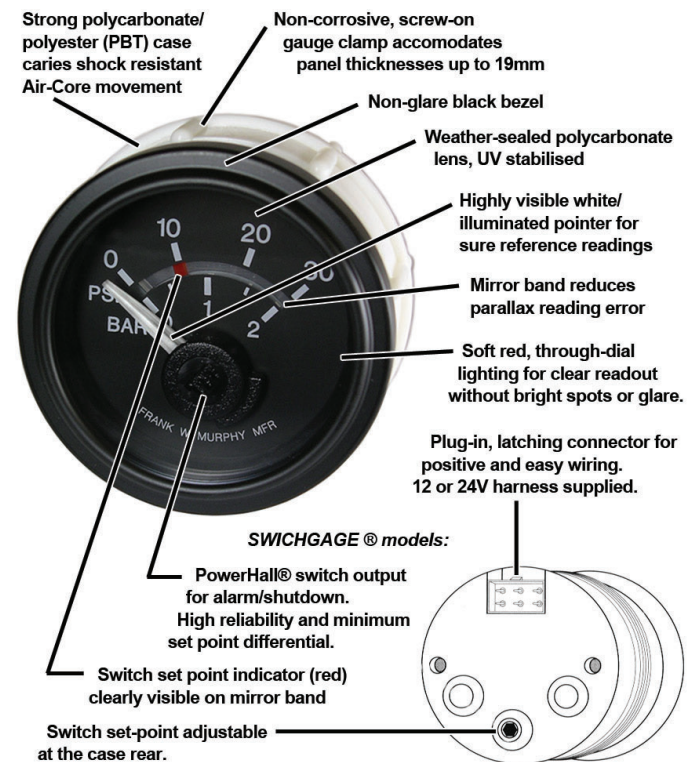
These rugged, environmentally sealed gauges exceed the rigid SAE J1810 standard for reliable operation in rough off-road and power environments. Corrosion resistant materials are used throughout, making the gauges highly suited for marine and other environmentally sensitive applications. Soft, non-glare dial and pointer illumination is provided by "cold light" LED: when powered, the white scale lettering and clear pointer become soft red. Standard EMEA-region models feature a non-glare, SAE low profile black bezel.

EGS21 Switchgage[®] models have all the features of the EG21 gauge, plus an adjustable set-point PowerHall[®] switch output for operating alarms or equipment shutdown. The trip point is adjustable over 90% of the scale and has a set point indicator visible on the gauge face.

EG(S)21 gauges and Switchgages are driven by equipment-mounted ES series resistive senders for pressure, temperature and fuel level measurement, available in 1-wire (ground return) and 2-wire (insulated return) variants.



Features



All specifications, descriptions and part codes are for standard EMEA region models with SAE black bezels. For models available in other regions, see separate literature.

PowerHall[®] is a registered trademark of Allegro MicroSystems Inc.

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FM 29422 (UK)

Specifications

Gauge

Movement: air core, silicon dampened pointer

Scale: black background, white markings and clear pointer (red when illuminated)

Swichgag® setting (EGS only): red bar visible on mirror band, adjusted from gauge rear (1/16 in. hex type Allenkey)

Electrical

Supply voltage: 10–16V (12V units), 20–32V (with 24V wiring harness)

Overvolts protection: 200% of nominal for 5 mins, SAE J1810 (excludes EGS Powerhall® switch)

Reverse DC protection: 100% reverse DC polarity, continuous

Swichgag output (EGS only): Powerhall® switch, normally open, closing to battery negative (active on low pressure, fuel and volts, and high temperature and amps). Rated 300mA continuous. Output saturation voltage 1.3-2.3V @ 25°C/77°F – may require conditioning to work with logic inputs.

Connection: plug connector and wire leads (supplied), 18 AWG (1.0mm²) x 200mm

Physical

Case: polyester (PBT), impact and weather resistant with screw-on mounting clamp

Lens: clear polycarbonate, UV stabilised

Bezel: SAE low profile matt black, non-glare.

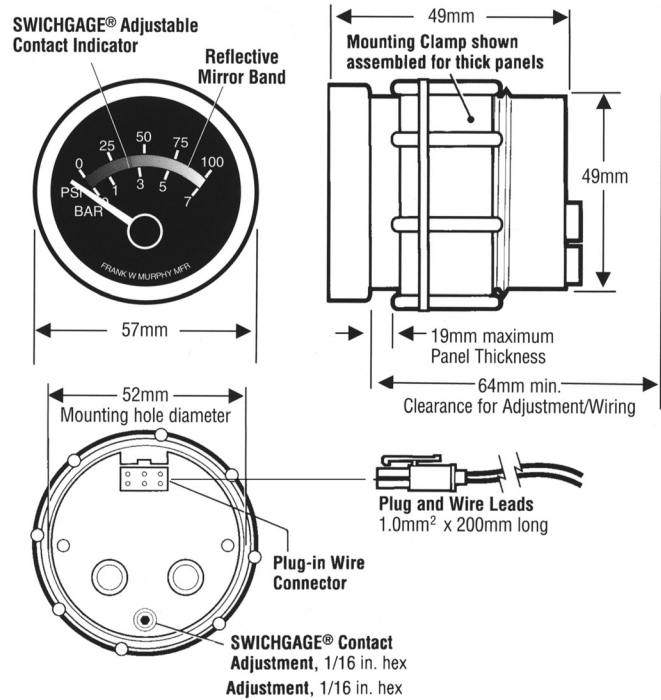
Operating temperature: -40 to +85 °C / -40 to +185 °F

Storage temperature: -60 to +85 °C / -77 to +185 °F

Weight: approx 100 – 150 g (including harness)

Environmental and test: SAE J1810

Dimensions



How to Order

Gauges (EG21) and Swichgages (EGS21).

Part numbers below include a connector plug and 200mm wiring harness for use with either 12V or 24V DC power supplies. Part numbers for gauge/Swichgag (12 VDC) heads without plug & harness are also available on request.

	EG21, 12V	EG21, 24V	EGS21, 12V	EGS21, 24V
Pressure				
0 - 100 PSI / 0 - 7 bar	05.70.2326	05.70.2327	05.70.2340	05.70.2341
0 - 400 PSI / 0 - 28 bar	n/a	n/a	05.70.2346*	05.70.2347*
0 - 28 bar	n/a	n/a	05.70.2348*	05.70.2349*
Temperature				
40 - 120°C	10.70.1310	10.70.1311	10.70.1312	10.70.1313
60 - 150°C	10.70.1314	10.70.1315	10.70.1316	10.70.1317
Other				
Fuel level: E - ¼ - ½ - ¾ - F	15.70.0512	15.70.0513	15.70.0514	15.70.0515
DC volts: 8 - 18V, 16 - 36V	65.70.0130*	65.70.0131*	65.70.0132*	n/a
DC amps: -60 / 0 / +60 A	65.70.0134*	65.70.0140*	n/a	n/a

Resistive senders (ES2, ESD, ES).

Range	Thread †	ES2 series 2 wire, insulated return	ESD series 2 wire, insulated return, drives 2 gauges	ES series 1 wire, ground return
Pressure				
30 PSI / 2 bar	1/8" NPT	00.00.3039	n/a	n/a
100 PSI / 7 bar	1/8" NPT	00.00.3042	00.00.3055	00.00.3029
400 PSI / 28 bar	1/8" NPT	B1078	n/a	n/a
Temperature				
120/150°C (250/300F)	1/2" NPT	10.09.0050‡	10.09.0066‡	00.00.3034
120/150°C (250/300F) †	5/8" UNF †	10.09.0051‡	10.09.0065‡	00.00.3088
120/150°C (250/300F)	1/8" NPT	10.09.0069‡	10.09.0067‡	00.00.3084
Fuel				
Tank depth 150 - 600mm		00.00.3037	00.00.3050	00.00.3024

* These part codes may be subject to minimum order quantities – check stock availability.

† See table right for thread adaptors, available separately for use with standard 5/8" UNF temperature senders.

‡ These part numbers include a rubber dust boot.

Sender thread adaptors

For use with 5/8" UNF temperature senders:

1/2" NPT	10.05.0131
3/4" NPT	10.05.0105
1/4" NPT	10.05.0167
3/8" NPT	10.05.0069
5/8" UNF	10.00.2452
3/8" BSPT	10.05.0284
1/2" BSPT	10.05.0330
M14 x 1.5	10.00.2442
M16 x 1.5	10.00.2444
M18 x 1.5	10.00.2443
M20 x 1.5	10.00.2446
M22 x 1.5	10.00.2445
M24 x 1.5	10.00.2449