QUALITROL® 149-400

SF$_6$ gas density monitors with remote output

Accurate SF$_6$ gas density monitor providing exceptional reliability

- Simplify your emissions reporting and avoid costly SF$_6$ fines with accurate gas measurement

- Avoid unexpected asset failure through a predictive maintenance approach; pair visual indication and 4-20 mA analog signal to indicate low gas density levels

- Rugged gauge design and corrosion resistant materials ensure product life

Product Summary

Description Provides local mechanical indication of levels of SF$_6$ gas as well as 4-20 mA analog remote output. Unit automatically compensates for gas pressure changes due to ambient temperature. Offers alarm and limit control with up to three factory set relays.

Application For use on high and medium voltage gas insulated circuit breakers (live and dead tank), switchgear bushings and transformers. For gas density monitoring applications that require local and remote indication and optimal relays for alarm and limit control.

QUALITROL®
Defining Reliability

QUALITROL 149-400 SF$_6$ gas density monitors with remote output

Accurate SF$_6$ gas density monitor providing exceptional reliability

- Large dial face with many standard and custom displays for clear visual indication of the SF$_6$ gas density
- Temperature compensated indication provides most accurate monitoring of gas levels within the tank
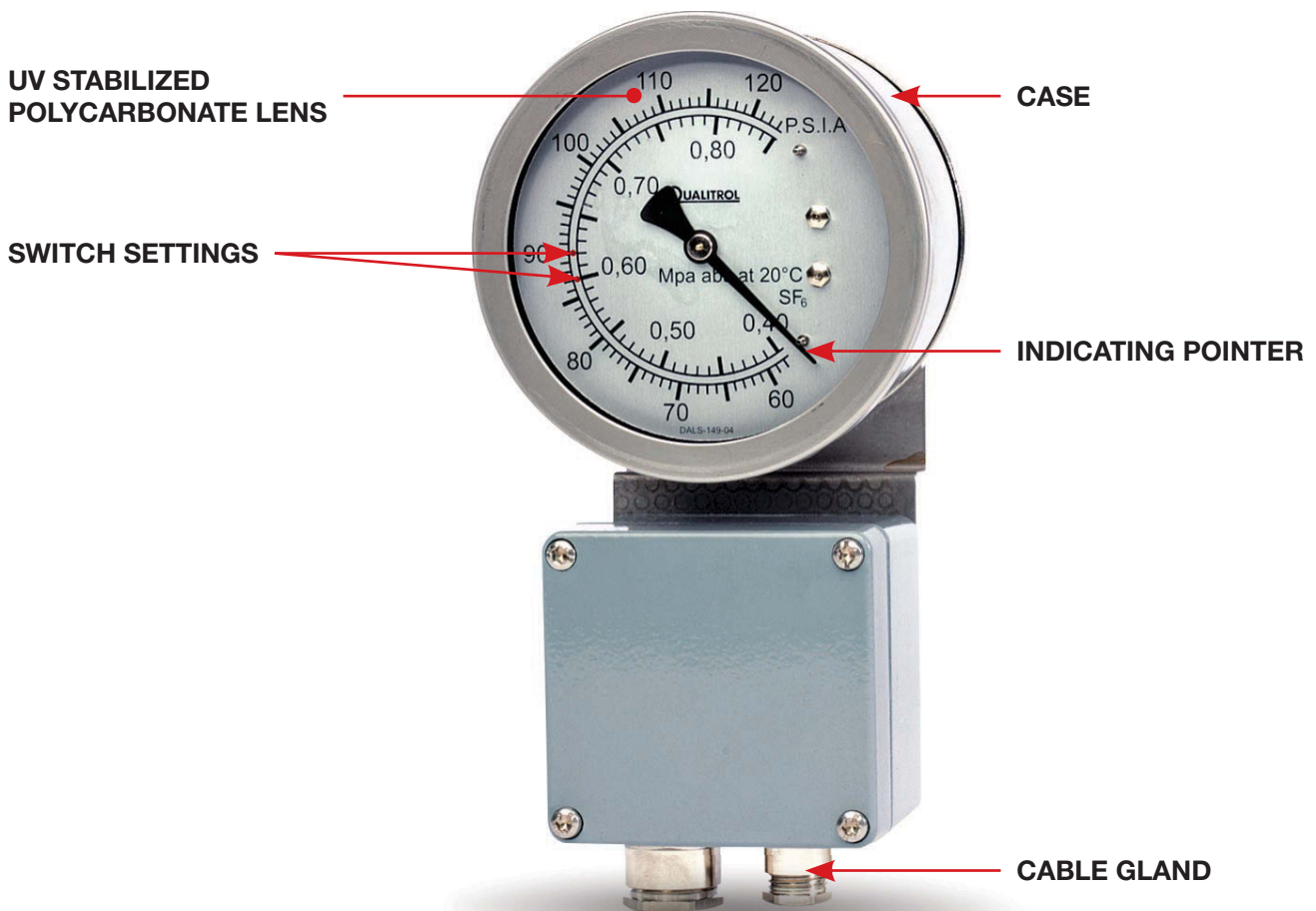- Measurement accuracy of ±2% of full scale

Avoid unexpected asset failure through a predictive maintenance approach; pair visual indication and 4-20 mA analog signal to indicate low gas density levels

- Visual indication of SF6 levels may be seen on the manual dial face of the instrument
- 4-20 mA analog output for integration into a SCADA system
- 3 Form A relays may be triggered when the density level drops below a pre-defined value

Rugged gauge design and corrosion resistant materials ensure product life

- Stainless steel and brass external parts offer protection against harsh environmental conditions
- Standard 5 year warranty
- Vented case with UV stabilized polycarbonate lens is moisture intrusion resistant

SF$_6$ gas density monitor device features

UV STABILIZED POLYCARBONATE LENS

SWITCH SETTINGS

CASE

INDICATING POINTER

CABLE GLAND

QUALITROL
Defining Reliability

TECHNICAL SPECIFICATIONS

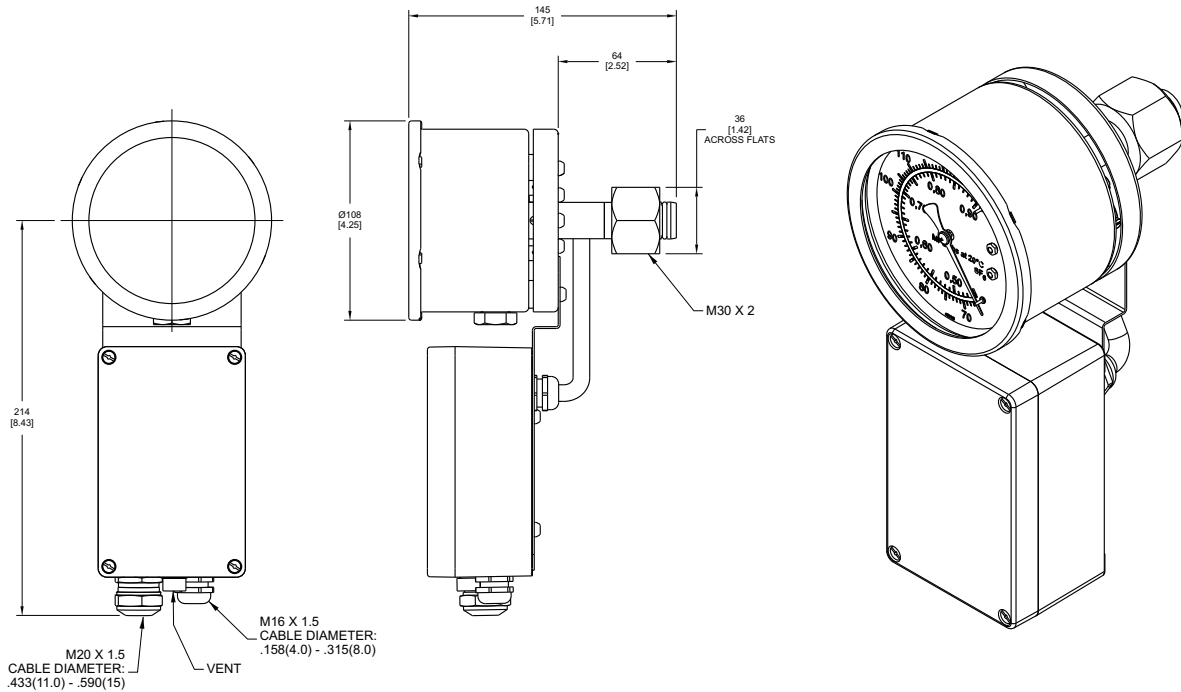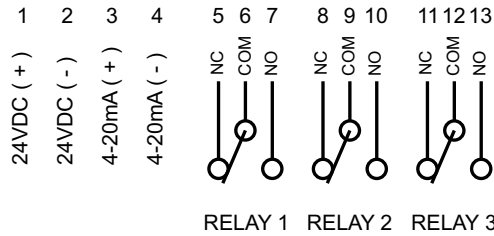|		
Power supply	Voltage	24 VDC, ±2 VDC
Accuracy	Indication	2% of max scale value within the full temperature range at fill pressure (dial reading) and ± 1% of max scale value at any pressure within scaled range (remote output)
	Alarm	1% of max scale value for the temperature range at any pressure within scaled range
Remote output		4-20 mA DC (max. resistive load 500 Ω)
Relays	Alarms	3 independent SPDT relays with user configurable setpoints, hysteresis, failsafe / non-failsafe operation, time delays
	Contact ratings	30 VDC, 2A, 60 W, NO only 110 VDC, 0.3 A, 33 W 220 VDC, 0.27 A, 60 W 125 VAC, 0.5 A, 62.5 W 250 VAC, 0.25 A, 62.5 W
Dielectric isolation	High-Pot	1500 VAC, 60 seconds to ground
Configuration	Local	USB type B connector Qualitrol ITM Manager software
Emissions	Conducted / radiated	EN 55022 / FCC Part 15
Immunity	Conducted / radiated	EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5,EN 61000-4-6, EN 61000-4-8
Mounting	Standard	Shock mounts
Temperature	Operating	-40 to +70° C
	Storage	-50 to +80° C
Humidity		90% non-condensing
Vibration		50/60 Hz @ .004 inch displacement
Shock		10 Gs half-sine, in 3 orthogonal planes
Enclosure	Protection	IP65

Don't see what you need?
Qualitrol regularly creates models with special customer requirements.
Contact your local sales representative or Qualitrol Applications Engineer
to review your special requirements.

Dimensions

145 [5.71]
64 [2.52]
36 [1.42] ACROSS FLATS
Ø108 [4.25]
M30 X 2
214 [8.43]
M16 X 1.5 CABLE DIAMETER: .158(4.0) - .315(8.0)
M20 X 1.5 CABLE DIAMETER: .433(11.0) - .590(15)
VENT

Wire schematic

1	2	3	4	5	6	7	8	9	10	11	12	13
24VDC (+)	24VDC (-)	4-20mA (+)	4-20mA (-)	NC	COM	NO	NC	COM	NO	NC	COM	NO

RELAY 1   RELAY 2   RELAY 3

QUALITROL® Field Services

QUALITROL® provides on-site commissioning/start-up and comprehensive maintenance contracts to all customers worldwide. To further improve reliability, an extended warranty is available on selected products commissioned by QUALITROL®.

QUALITROL® Educational Services

QUALITROL® professional training (designed to achieve hands-on performance based objectives) prepares operations, maintenance, and engineering personnel to install, test, configure, operate and maintain QUALITROL® products.

QUALITROL® Accelerated Delivery

QUALITROL® provides accelerated delivery on many products and services including replacements, spare parts and repairs.

About QUALITROL®

Established in 1945, with continual improvement at the core of our business, QUALITROL® provides smart utility asset condition monitoring across the globe. We are the largest and most trusted global leader for partial discharge monitoring, asset protection equipment and information products across generation, transmission and distribution. At QUALITROL® we are redefining condition monitoring technology for Electric utilities assets.

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