# **Product Information**

www.vdo.com

## Viewline Rudder gauges

#### Description

Gauge to indicate rudder angle (rudder position).



#### **Features**

- \_ Integrated Warning LED.
- \_ Changeable Frontbezels.
- \_ LED Illumination
- \_ Flush mount possibility
- \_ High reliability

## Concept

Housing PC; flame retarding (UL94)

Bezel PC or ABS; several colors and shapes (see table)

Lens PMMA; double lens

Dial backlit; different colors (see table)

Pointer backlit, white on black dials; red on white dials

Illumination Dial: LED amber (605nm)

Pointer: LED red (632nm)

Warning LED red (632nm)

Mounting spinlock Nut; locking height 0,5mm – 20mm,

optional Studs and Bracket; locking height 2 - 15mm

Connection 8 pin MQS connector system



#### Viewline Rudder gauges

**Technical Data** 

Installation depth 50mm

Installation diameter 52mm, 85mm (see table)

Deflection angle 90°

Operating Voltage 10 – 16 Volt

Accuracy < 3,6 angular degrees

Current consumption < 140 mA, including Warning LED

Operating temperature -30°C to +80°C; plated bezels (chrome) -30°C to +70°C

Storage temperature -40°C to +80°C for 48h; plated bezels (chrome) -40°C to +70°C

+90°C for 1h

Temperature shock Range -40°C to +85°C; plated bezels (chrome) -40°C to +70°C

Transformation time 10 seconds

Retention time 2h

Climatic test Range +25°C to +55°C

Rel. Humidity 95%

EMC in conformity with DIN\_EN 61000-6-3

DIN\_EN 61000-6-1 DIN\_EN 61000-6-4 DIN\_EN 61000-6-2

Standards EN 60945

GL, Category C, F (under preparation)

Vibration Sinus 2g; 10-500Hz; duration 16h

Noise 3g; 10-1000Hz, duration 8h

Mechanical shock continuous 25g; 6ms; 1Hz

Single shock 100g; 11ms Free fall 1m; 3 times

Chemical resistance against - preservative agent

- preservative agent remover

cold cleanermethylated spiritinterior cleaner

- drinks containing caffeine and tannin

Nominal position NL 0 to NL 85 (DIN16257)

Protection class according to IEC 60529

Front: IP67 (in Nominal position) Rear: IP52 (in Nominal position)

Reverse polarity protection yes, 5 minute

Over voltage protection yes, 24V for1 minute



#### available Gauges:

No. packed	No. unpacked	colour	Diameter	Measurement range	ISO Symbol	Voltage	Sensor type	Double lens
A2C60100327	A2C53192577	Black	52mm	45°Port to 45° Starboard	Ship	12V	VDO Rudder sensor	yes
A2C60100328	A2C53192578	white	52mm	45°Port to 45° Starboard	Ship	12V	VDO Rudder sensor	yes
A2C59510106	A2C53194714	Black	85mm	45°Port to 45° Starboard	Ship	12 – 24V	VDO Rudder sensor	yes
A2C59510107	A2C53194715	white	85mm	45°Port to 45° Starboard	Ship	12 – 24V	VDO Rudder sensor	yes

## Accessories:

A2C59510221	VL Dropping resistor 24V without connector (for 52mm Gauges)
A2C59510886	VL Makepoint switch 12V (for 52mm Gauges)
A2C59510854	VL Mounting Kit (studs and brackets) 52, 85, 110mm
A2C59510864	VL Mounting bracket flush mount
A2C53215640	VL Sealing Ring 52mm flush mount
A2C53215641	VL Sealing Ring 85mm flush mount
A2C59510847	Bush housing, 8-pin
A2C53324664	Protective connector cap, 8-pin
Tyco No. 539635-1	Hand pliers
Tyco No. 539682-2	Tool for hand pliers.
Tyco No. 1355718-1	Single contacts 0.14 – 0.22 mm² tin plated
Tyco No. 963729-1	Single contacts 0.5 – 0.75 mm² tin plated
Tyco No. 1355717-1	Strip 0.14 – 0.22 mm² tin plated
Tyco No. 928999-1	Strip 0.25 – 0.5 mm² tin plated
Tyco No. 963715-1	Strip 0.5 – 0.75 mm² tin plated

## Bezels 52mm

	black	black nickel	brush aluminium	chrome	gold	white
flat	A2C53186040	A2C53293468	A2C53293480	A2C53186023	A2C53293482	A2C53186022
round	A2C53186027	A2C53293494	A2C53293495	A2C53186029	A2C53293496	A2C53186028
triangle	A2C53186024	A2C53293545	A2C53293546	A2C53186026	A2C53293548	A2C53186025

## Bezels 85mm

	black	black nickel	brush aluminium	chrome	gold	white
flat	A2C53192911	A2C53293487	A2C53293488	A2C53192910	A2C53293490	A2C53192912
round	A2C53192913	A2C53293541	A2C53293499	A2C53192914	A2C53293540	A2C53192916
triangle	A2C53192917	A2C53293549	A2C53293560	A2C53192918	A2C53293561	A2C53192920