

Watertight marine instruments with illumination

Types DLQW72 and DLQW96


4921250050F



- *DLQW72: Bezel dimension Q78 for IP66 proof switchboard front*
- *DLQW96: Bezel dimension Q102 for IP66 proof switchboard front*
- *Custom-designed coloured scales on black base*
- *LED illumination (long life)*
- *Separate pointer illumination*
- *Colour spectrum constant throughout dimmer range*
- *Shock resistant up to 50 g*
- *Approved according to the European Marine Directive*



General technical specifications

Instruments are designed according to below mentioned standards		Standards
Accuracy	Class 1.5 (-10...15...30...55°C) Linear scales: ±1.5% of Full Scale value (FS) Non-linear scales: ±1.5% of scale length	EN 60051 and IEC 51
Instrument sizes	102 x 102 mm	
Scale/pointer	Scale material: Acrylic  Triangular pointer Yellow/white	DIN 43802 (standard pointer)
Glass	Antiglare glass	
Mounting angle	Standard: Vertical (90 ±5°), however, may be mounted at any angle 0...150° to horizontal, without this affecting the calibration	DIN 16257
Compass safety distance	To be mounted at least 1 metre from the compass	IEC 945 and EN 60945
Measuring ranges	See page 3 Others on request	DIN 43701
Protection		
(Housings)	From front IP66	From rear IP52
(Terminals)		IP20
Climate	Class H U E Short term condensing allowed Max. 95% RH: Max. 30 days per year Max. 85% RH: Remaining days Max. 75% RH: Average per year	DIN 40040
Temperature	Nominal: -10...55°C Operating: -25...60°C Storage: -25...65°C Influence: Max. ±1.5% within -10...55°C	EN 60051 and IEC 51
Panel influence	The accuracy is affected neither by the material nor by the thickness of the panel	EN 60051 and IEC 51
Shock test	18 x 50g half sine (11ms)	IEC 68-2-27, Test: Ea
Vibrations	3...13.2Hz: 2 mm 13.2-100Hz: 0.7g	GL + LR: Test 1 DNV: Class A
Materials	All outer materials are self-extinguishing	UL94 (V1)
Safety	300V – CAT. III Pollution deg. 2	EN 61010-1
EMC	CE marked for residential, commercial and light industry plus industrial environment	EN 50081-1/2 and EN 50082-1/2

Description

Type	Scale base colour			Possible colour combinations figures/division lines				Pointer		
	White	Black						Standard		Triangular
		No trans-illuminated section	Yellow trans-illuminated section	Black	Yellow/white	Red	Green	Black NB*	Yellow NY*	Yellow/white PY*/PW*
DLQW72/96-pc-PY* Quadratic 240° -pc: center pointer										
Coloured division lines and figures are transilluminated. The pointer is triangular and illuminated.										

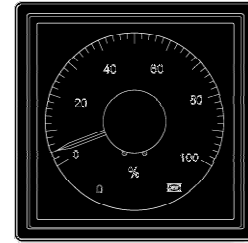
Technical specifications

Standard measuring ranges • Voltage			Standard measuring ranges • Current		
Lowest range	Highest range	Load	Lowest range	Highest range	Load
0...1V DC	0...100V DC	0.5k Ω /V	0...1mA DC	0...100mA DC	0.6V
-0.5...0...0.5 V DC	-100...0...100V DC	1k Ω /V	-0.5...0...0.5mA DC	-100...0...100mA DC	0.3V
			4...20mA		1.6V

The instruments are fitted with a potentiometer with a slotted screw for adjustment of the measuring range (adjustment of ranges 0...1mA, -0.5...0...0.5mA, 4...20mA and other suppressed measuring ranges is not possible). The potentiometer is accessible from the rear of the instrument and is marked "INSTR. ADJ.". Standard adjustment range: $\pm 10\%$ (on request: Up to $\pm 50\%$).

Consumption Illumination	DLQW72-pc	DLQW96-pc
Type -PY/PW	60mA/24V	110mA/24V

Illumination: 24V DC/AC. Adjustment range: 5...30V.



DLQW96-pc-PY

Connection: Quadratic instruments: Screw terminals for measuring signal and illumination:
Max. 2.5 mm² (multi-stranded), max. 4.0 mm² (single stranded).
Alternative connection: Male/female connector for 26 AWG cable.

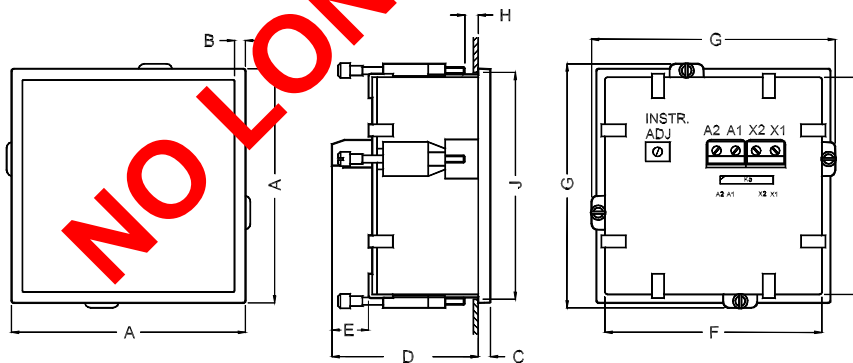
If required by the class, suitable protection against voltage transients (surge protectors) must be built into the power supply (e.g. light dimmer unit) to the instrument illumination input.

Due to different construction principles, the visual appearance of the DLQW72 differs slightly from that of the DLQW96. The fundamental design is similar, but the user must acknowledge these differences:

- Housing: DLQW72: Plastic surroundings and bezel and glass window. Glass is sealed with silicone to ensure IP class. Black cover printed directly on window (glass).
DLQW96: Complete moulded plastic housing including window. The all-in-one moulding process ensures the IP class. No print on window, but special cover plate inside housing.
- Gasket: DLQW72: Black, stamped close-cell rubber gasket. Gasket is visible when mounted (side-view).
DLQW96: Blue moulded neopren rubber gasket. Gasket is not visible when mounted.

Dimensions

All dimensions in mm



Connection, instr.:

A1 +
A2 -

Connection, illum.:

X1: 24V AC/DC
X2: 24V AC/DC

DLQW

Type	A	B	C	D	E	F	G	H (max.)	J	Weight (kg)
DLQW72	78 x 78	5.3	5.7	63.3	19	65 x 65	78	12	68 x 68 +0.7	0.210
DLQW96	102 x 102	5.3	5.7	68.3	19	90 x 90	103	12	92 x 92 +0.8	0.250

Order specifications

Examples:	Type	Scale	Measuring range
	DLQW96-pc-PY	0...100%	0...10V DC
When ordering new scales, always forward detailed drawing.			

Due to our continuous development we reserve the right to supply equipment which may vary from the described.



DEIF A/S, Frisenborgvej 33
DK-7800 Skive, Denmark

Tel.: +45 9614 9614, Fax: +45 9614 9615
E-mail: deif@deif.com, URL: www.deif.com

