

## Lilaas control lever - LF90

Lilaas offers a wide range of high quality type approved multipurpose levers for single/double propulsion and thruster control.

Below you will find a simple technical description of various basic LF90 models.



On single thruster controls the aft handle and attached mechanics are removed.

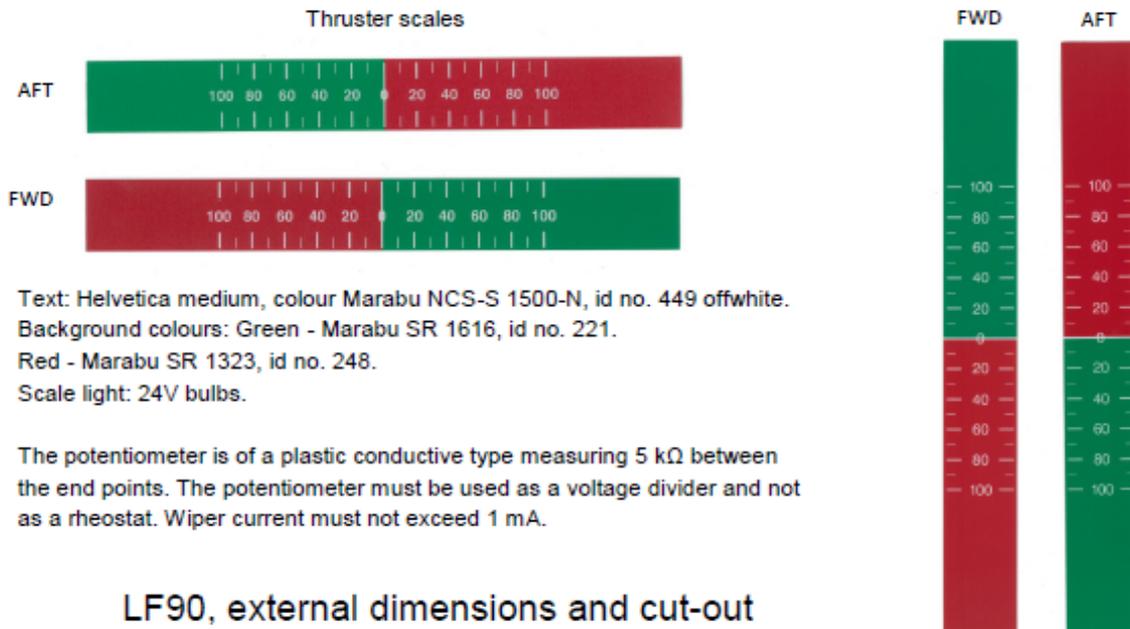
On single propulsion controls the left handle and attached mechanics are removed.

Specification details basic versions	
Materials / Finish	Steel A2, Al, POM, alodine, powder coating
Weight (net)	0,6 - 0,9 kg
Movement, handle / electrical	$\pm 60^\circ / 300^\circ$
Detent	In zero
Potentiometers	Single 5 k $\Omega$ , linear
Termination	16 pins contact with plug
Integrated scale light	28V, bulb
IP grade	With panel plate, 66
Type approval: EN/IEC 60945, ABS, BV, DNV, GL, KR, LR, NK, RINA, RS, CRS	
For standard scales, external dimensions and cut-out, see page 2. For customization and options see page 3.	

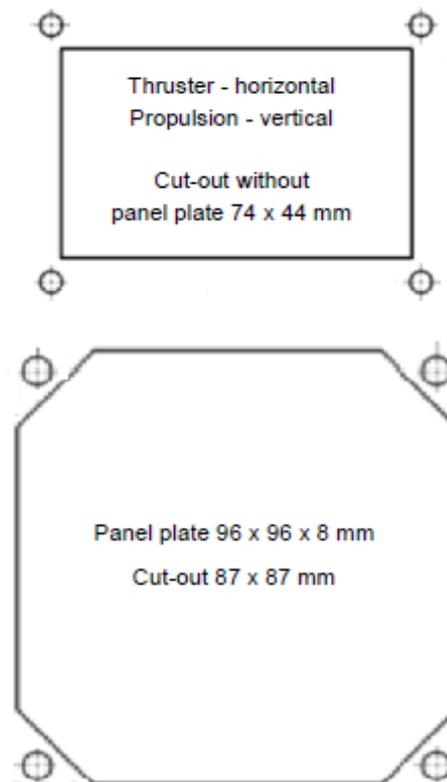
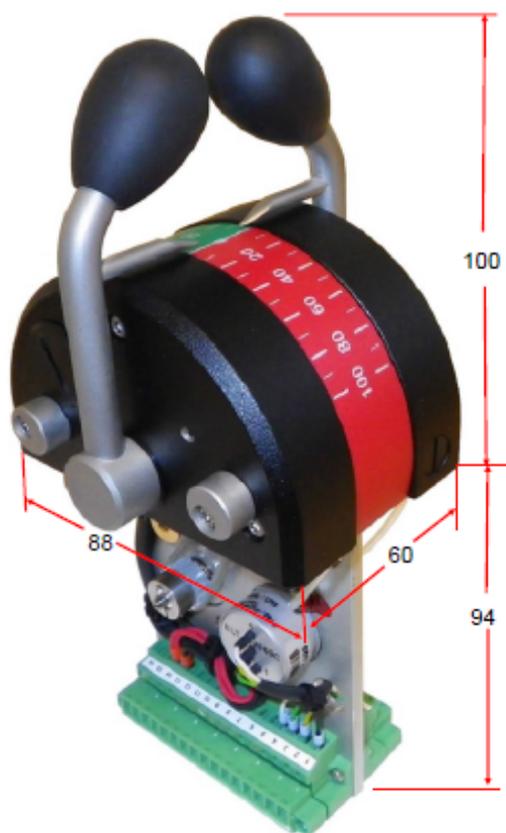
Elma B.V., Sterrenbergweg 50, 3769 BT Soesterberg, Netherlands, Tel: +31 (0)346 35 60 60,  
E-mail: [lilaas@elmabv.nl](mailto:lilaas@elmabv.nl)

**For more info, see our website <http://www.lilaas-elma.com>**

Lilaas standard scales for LF90 control levers:



LF90, external dimensions and cut-out



Lilaas LF120 and LF180 are larger versions of this controller.

Panel plate is standard on motorized controllers. Vertical dimensions motorized controller: 108 mm above and 92 mm below console panel.

### Lilaas LF90 basic models:

<p>Propulsion single FWD LF90S-01-01</p> 	<p>Propulsion double FWD LF90D-01-04</p> 	<p>Thruster single FWD LF90S-01-09</p> 	<p>Thruster double FWD LF90D-01-03</p> 
<p>Propulsion single AFT LF90S-01-103</p> 	<p>Propulsion double AFT LF90D-01-63</p> 	<p>Thruster single AFT LF90S-01-16</p> 	<p>Thruster double AFT LF90D-01-05</p> 

Do you need an extended version? To simplify the customization process, please fill in your request to Elma B.V. in de Spec your request form below and forward it to [lilaas@elmabv.nl](mailto:lilaas@elmabv.nl). We will revert with price and availability.

#### Options, other than standard

- |                         |                                 |
|-------------------------|---------------------------------|
| Panel plate 96 x 96 mm  | Panel plate custom              |
| Handle / shaft          | Handle interlock traight handle |
| Limited handle movement | Scale                           |
| Potentiometer           | Detents                         |
| Springloaded return     | Micro switch                    |
| Motorized               | El shaft                        |

Company

Contact person

E-mail

Telephone

Remarks



Lilaas AS is a world leading manufacturer of various types of control levers and joysticks for marine and offshore us.

As a result of unique design, top-grade materials and thorough test procedures, we produce products of high quality that requires a minimum of service and maintenance.

The control units from Lilaas include levers, controlling mechanism and accompanying electronics.

The products range from simple, one-axis control levers in different sizes, hand wheels and rudder controls to azimuth control units and multi-axis joysticks.

All units may be delivered motorised on all axes and with several optional features. The products comply with stringent certification requirements.

All kinds of vessels, from small fishing boats and ferries, via supply vessels to large tankers and cruise ships may be manoeuvred by control levers from Lilaas.

The products are certified by DNV and the company is certified under NS-EN ISO 9001-2008.

## **Elma B.V.**

Sterrenbergweg 50, 3769 BT Soesterberg, Netherlands, Tel: +31 (0)346 35 60 60

**E-mail: [lilaas@elmabv.nl](mailto:lilaas@elmabv.nl)**

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