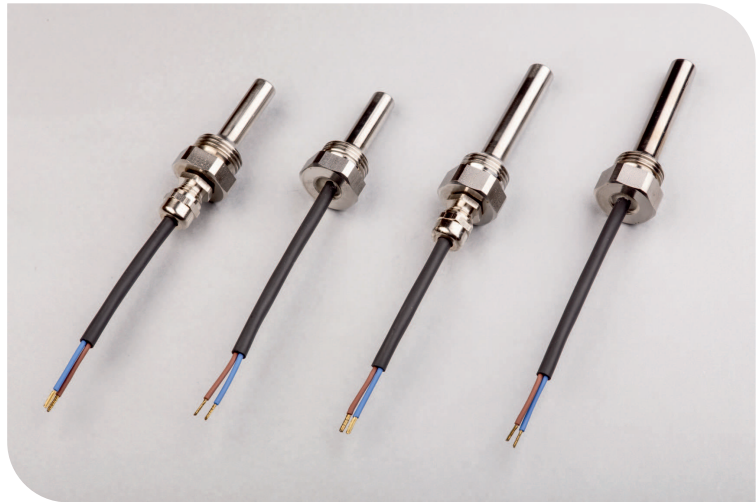


ESH-Series Overview

Features

- Wide variety of applications
- Compact design
- Exceptionally resistant stainless steel housing
- Robust construction
- Optimal heat transfer
- Available in different power - / temperature levels
- IP68 (with cable gland) ***

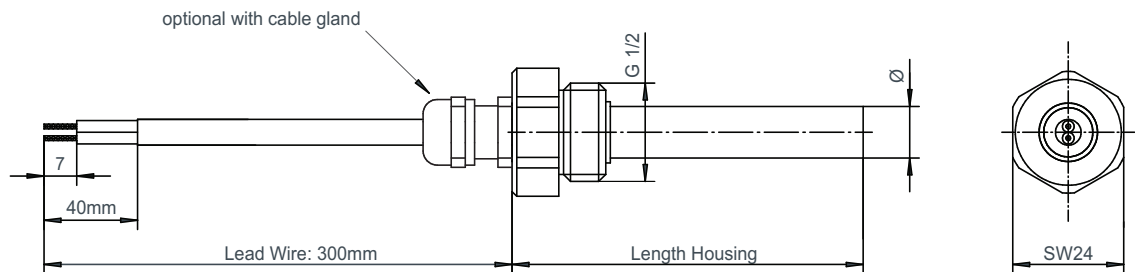


Type	Ø	Length of Housing	Power * ± 10%	Surface Temperature ± 10°C	Order No. **
ESH-110-75-XX (110-240V)	11mm	75mm	36W	85°C	395224,01 (02)
			46W	105°C	395225,01 (02)
			78W	160°C	395226,01 (02)
			97W	220°C	395227,01 (02)
ESH-110-75-XX (12-24V)	11mm	75mm	28W	75°C	395228,01 (02)
			40W	105°C	395229,01 (02)
			74W	160°C	395230,01 (02)
			98W	220°C	395231,01 (02)
ESH-100-55-XX (110-240V)	10mm	55mm	24W	80°C	395232,01 (02)
			32W	105°C	395233,01 (02)
			56W	155°C	395234,01 (02)
			78W	215°C	395235,01 (02)
ESH-100-55-XX (12-24V)	10mm	55mm	17W	70°C	395236,01 (02)
			23W	105°C	395237,01 (02)
			49W	150°C	395238,01 (02)
			68W	210°C	395239,01 (02)

* Power measured in ice water (~ 0 °C)

** Available without cable fitting (Order No: xxx,01) or **glanded** (O.No: xxx,02; see drawing)

*** IP68 Test Conditions: Heater immersed in a 2m column of water for 48 Hrs



Electrical grounding has to be ensured by assembly.

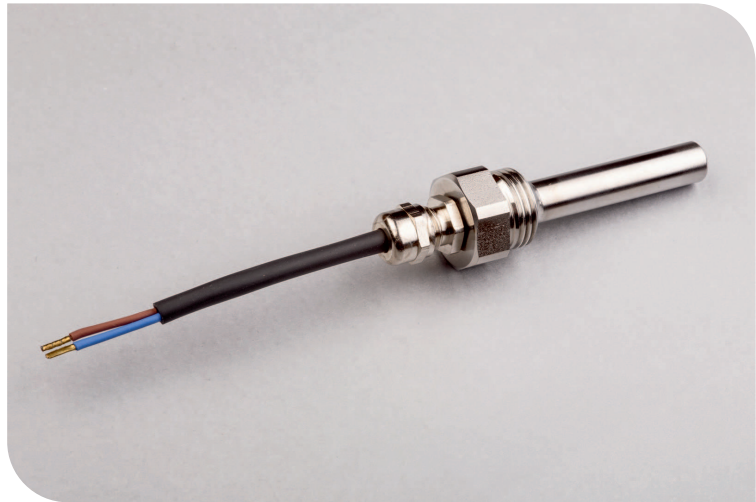
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ESH-Series (ESH-110-75-XX-I/300)

Features

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- Compact design
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- Robust construction
- Optimal heat transfer
- Available in different power - / temperature levels
- IP68 (with cable gland) ***

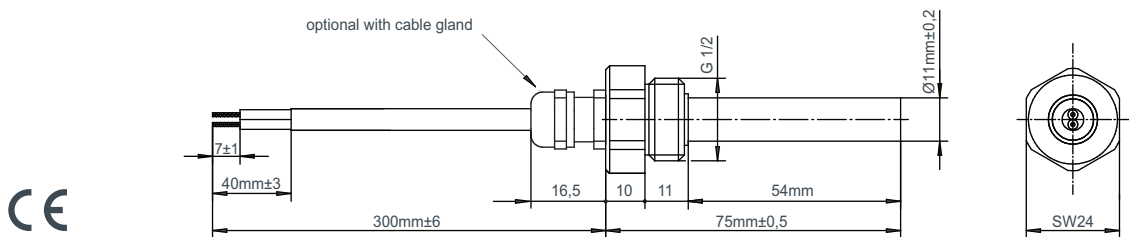


Type, SampleNr.	ESH (PTC-Liquid Heater)			
	ESH-110-75-35-I/300; Nr. 1884	ESH-110-75-35-I/300; Nr. 1885	ESH-110-75-35-I/300; Nr. 1886	ESH-110-75-28-I/300; Nr. 1887
Operating Voltage	110-240V			
Nominal Voltage	230V			
Power * ±10%	36W	46W	78W	97W
Surface Temperature ±10°C measured on free air (~ 25°C) without airflow	85°C	105°C	160°C	220°C
max. Inrush Current	1,5A	2A	4,5A	3A
Resistance at 25°C	305 - 630Ω	305 - 630Ω	215 - 450Ω	655 - 1180Ω
Max. Ambient Temperature	+70°C			
Diameter Housing	11mm			
Length Housing	75mm			
Material Housing	stainless steel			
Wire Type	silicone-insulated multi-conductor cable 2x0,5mm ² , Cu-tinned			
Wire Length	300mm			
Connection	wire end ferrule, CuZn unplated			
Protection Class / Insulation Test Voltage	I / 2.500V			
Order Nr. **	395224,01 (02)	395225,01 (02)	395226,01 (02)	395227,01 (02)

* Power measured in ice water (~ 0 °C)

** Available without cable fitting (Order No: xxx,01) or **glanded** (O.No: xxx,02; see drawing)

*** IP68 Test Conditions: Heater immersed in a 2m column of water for 48 Hrs



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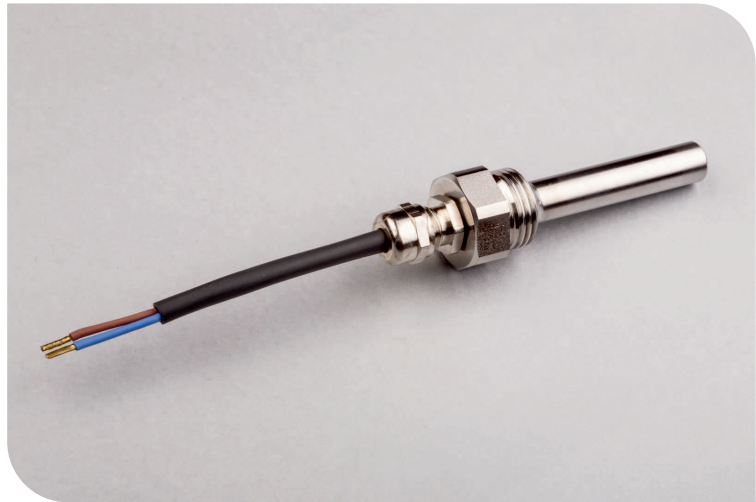
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ESH-Series (ESH-110-75-XX-I/300)

Features

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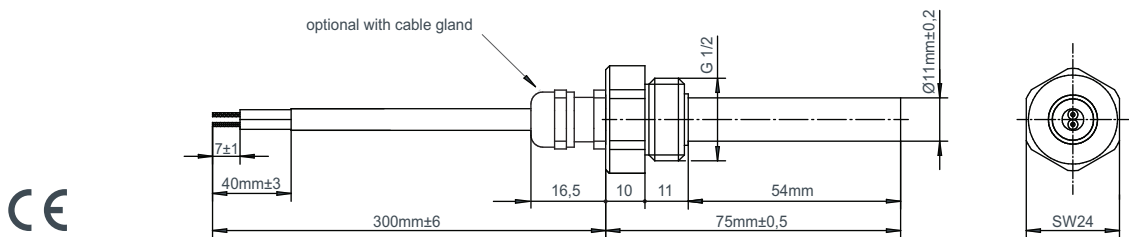


Type, SampleNr.	ESH (PTC-Liquid Heater)			
	ESH-110-75-35-I/300; Nr. 1892	ESH-110-75-33-I/300; Nr. 1893	ESH-110-75-33-I/300; Nr. 1894	ESH-110-75-33-I/300; Nr. 1895
Operating Voltage	12-24V			
Nominal Voltage	24V			
Power * ±10%	28W	40W	74W	98W
Surface Temperature ±10°C measured on free air (~ 25°C) without airflow	75°C	105°C	160°C	220°C
max. Inrush Current	8A	4A	28A	34A
Resistance at 25°C	4 -10Ω	11 - 21Ω	1 - 3Ω	2 - 7Ω
Max. Ambient Temperature	+70°C			
Diameter Housing	11mm			
Length Housing	75mm			
Material Housing	stainless steel			
Wire Type	silicone-insulated multi-conductor cable 2x0,5mm ² , Cu-tinned			
Wire Length	300mm			
Connection	wire end ferrule, CuZn unplated			
Insulation Test Voltage	500V			
Order Nr. **	395228,01 (02)	395229,01 (02)	395230,01 (02)	395231,01 (02)

* Power measured in ice water (~ 0 °C)

** Available without cable fitting (Order No: xxx,01) or **glanded** (O.No: xxx,02; see drawing)

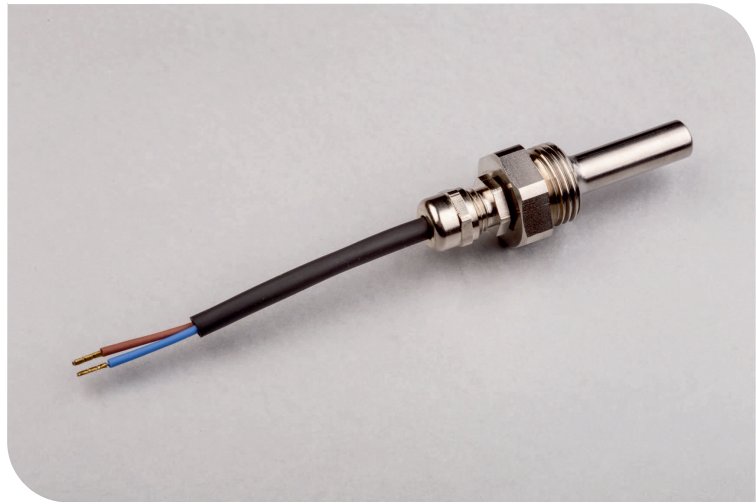
*** IP68 Test Conditions: Heater immersed in a 2m column of water for 48 Hrs



ESH-Series (ESH-100-55-XX-I/300)

Features

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- Robust construction
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- Available in different power - / temperature levels
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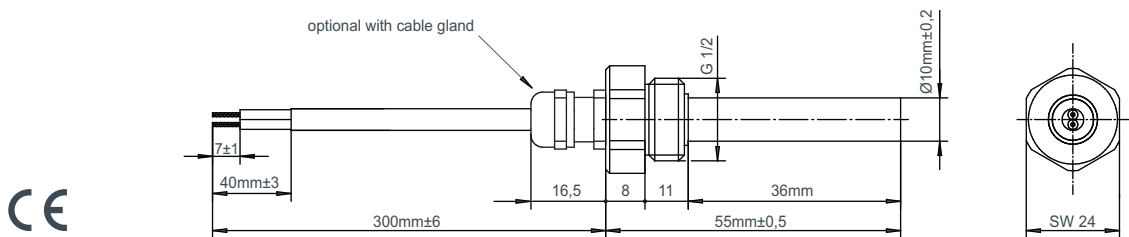


Type, SampleNr.	ESH (PTC-Liquid Heater)			
	ESH-100-55-23-I/300; Nr. 1896	ESH-100-55-23-I/300; Nr. 1897	ESH-100-55-23-I/300; Nr. 1898	ESH-100-55-22-I/300; Nr. 1899
Operating Voltage	110-240V			
Nominal Voltage	230V			
Power * ±10%	24W	32W	56W	78W
Surface Temperature ±10°C measured on free air (~ 25°C) without airflow	80°C	105°C	155°C	215°C
max. Inrush Current	3A	2,5A	3A	2,5A
Resistance at 25°C	455 - 945Ω	455 - 945Ω	325 - 675Ω	830 - 1490Ω
Max. Ambient Temperature	+70°C			
Diameter Housing	10mm			
Length Housing	55mm			
Material Housing	stainless steel			
Wire Type	silicone-insulated multi-conductor cable 2x0,5mm ² , Cu-tinned			
Wire Length	300mm			
Connection	wire end ferrule, CuZn unplated			
Protection Class / Insulation Test Voltage	I / 2.500V			
Order Nr. **	395232,01 (02)	395233,01 (02)	395234,01 (02)	395235,01 (02)

* Power measured in ice water (~ 0 °C)

** Available without cable fitting (Order No: xxx,01) or **glanded** (O.No: xxx,02; see drawing)

*** IP68 Test Conditions: Heater immersed in a 2m column of water for 48 Hrs



Electrical grounding has to be ensured by assembly.

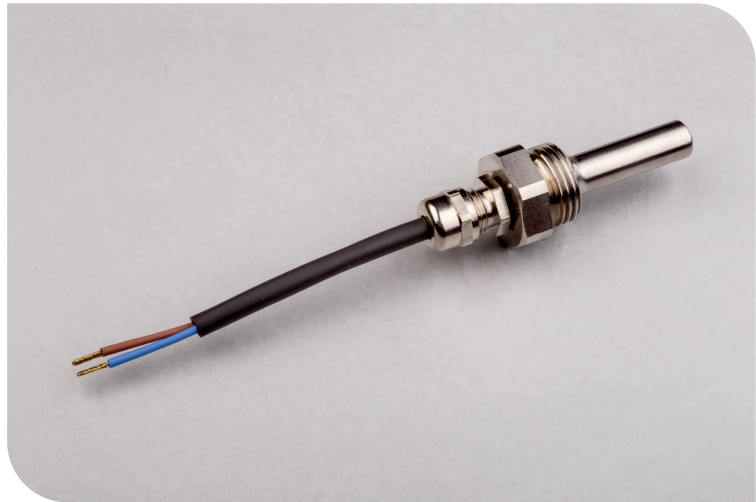
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ESH-Series (ESH-100-55-XX-I/300)

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- IP68 (with cable gland) ***



Type, SampleNr.	ESH (PTC-Liquid Heater)			
	ESH-100-55-23-I/300; Nr. 1904	ESH-100-55-22-I/300; Nr. 1905	ESH-100-55-22-I/300; Nr. 1906	ESH-100-55-22-I/300; Nr. 1907
Operating Voltage	12-24V			
Nominal Voltage	24V			
Power * ±10%	17W	23W	49W	68W
Surface Temperature ±10°C measured on free air (~ 25°C) without airflow	70°C	105°C	150°C	210°C
max. Inrush Current	5,5A	3A	24A	26A
Resistance at 25°C	6 - 14Ω	16 - 32Ω	2 - 5Ω	3 - 10Ω
Max. Ambient Temperature	+70°C			
Diameter Housing	10mm			
Length Housing	55mm			
Material Housing	stainless steel			
Wire Type	silicone-insulated multi-conductor cable 2x0,5mm ² , Cu-tinned			
Wire Length	300mm			
Connection	wire end ferrule, CuZn unplated			
Insulation Test Voltage	500V			
Order Nr. **	395236,01 (02)	395237,01 (02)	395238,01 (02)	395239,01 (02)

* Power measured in ice water (~ 0 °C)

** Available without cable fitting (Order No: xxx,01) or **glanded** (O.No: xxx,02; see drawing)

*** IP68 Test Conditions: Heater immersed in a 2m column of water for 48 Hrs

