

EPHY MESS

Gesellschaft für Elektro-Physikalische Meßgeräte mbH



Electric Band Heaters

Leuchtturm
Automation

www.ephy-mess.de

深圳市朝瑞自动化系统有限公司



Contents

1. Electric Band Heaters	2
1.1 Electric Band Heater type Heat xx zGS	2
1.2 Table of deliverable standard versions type EM-Heat xx zGS	4
2. Electric Band Heater for hazardous areas	5
2.1 Electric Band Heater with Ex e approval	5
2.2 Self Limiting Band Heater with Ex e approval	7

Leuchtturm
Automation



FOREWORD / REMARKS

Electric Band Heaters as shown in this catalogue are for use in electric motors. They prevent in cold environment damage and the occurrence of condensate caused by frost. Types as shown are our standards. In our scope of supply we have one standard type electively with and without glass silk insulation and two versions for use in hazardous areas.

Customized versions in respect to power, heater band length and voltage are possible on request

1. Electric Band Heater

1.1 Electric Band Heater type EM Heat xxx zGS

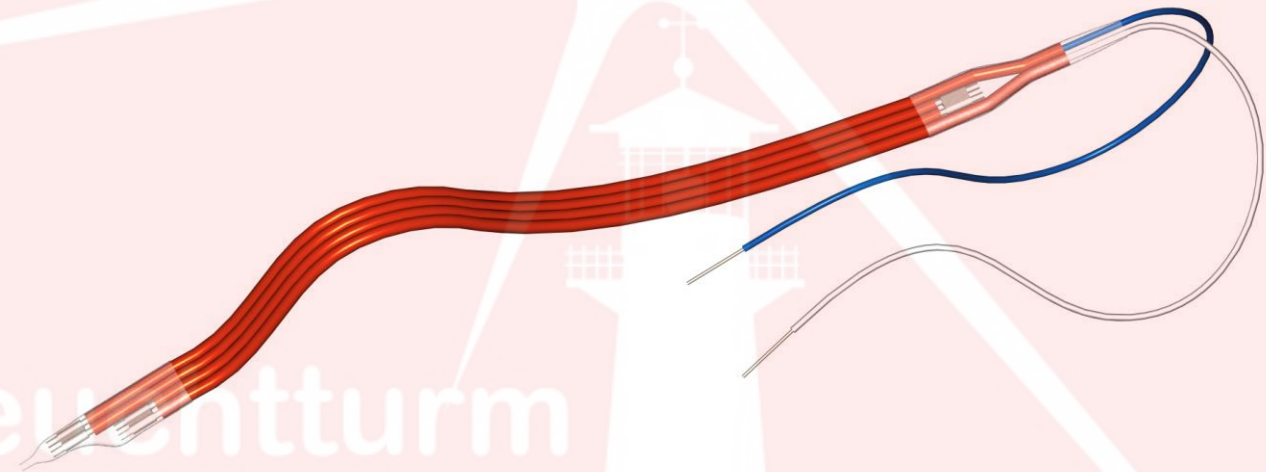


Fig. 1: Heat 27W oGS - 230V -0,29 - 500

Specification

Electric band heater HEAT xxx zGS

Order code:

HEAT xxx zGS - U - HL - KL

xxx	=	power in [W]
z	=	m with
z	=	o without
GS	=	glass silk tube
U	=	operating voltage [V]
HL	=	length of the heating band [m]
KL	=	length of the supply line [mm]

Construction

Resistance wire of CuNi or NiCr alloy looped on glass silk according to DIN 0254, with silicon insulated.
Electively with or without additional glass silk insulation
Fix connected supply line insulated with Teflon.

Insulation heating wire

Silicone



Dimension	mGS	oGS
width*)	approx. 11mm	approx. 9.5mm
height*)	approx. 3.5mm	approx. 2.5mm
length:	<u>acc. table 1</u>	<u>acc. table 1</u>
*) heating band ends are thicker because of insulation		
Temperature range	-40° C ... +180°C	
Glass silk tube	electively with*) or without *) For VPI process it must be used a version with glass silk tube (mGS)	
Operating voltage	115V 230V 254V (other voltages on request)	
Power	<u>acc. tab. 1</u> (other power on request)	
Dielectric strength	2kV / AC 50Hz / 20sec.	
Bending radius	≥10mm	
Supply line	single litz wire, Teflon insulated	
Design	<u>acc.tab.1</u>	
Colour code	AWG 20/7 Cu. verz.	
Cross section	500mm	
Length (standard)	≥ 25N (litz wire/heating band)	
Tensile strength		
Online inquiry	http://www.ephy-mess.de/en/contact/contact-form/	

Leuchtturm
Automation



1.2 Table of deliverable standard versions type HEAT xxx zGS

Voltage [V]	Power [W]	Length of heating band [m] ±5%	Color code of the supply line
230	12	0.26	grey/green
230	13	0.25	grey/orange
230	20	0.68	brown/brown
230	25	0.3	blue/green
230	25	0.43	blue/black
230	25	0.5	blue/brown
230	26	0.79	green/yellow
230	27	0.29	blue/white
230	40	0.68	blue/purple
230	40	1.01	blue/yellow
230	42	1.01	white/yellow
230	50	1.06	red/brown
230	65	1.47	green/white
230	67	1.47	green/brown
230	75	1.7	yellow/brown
230	76	2.3	yellow/yellow
230	77	0.7	blue/blue
230	100	1.7	black/green
230	100	1.85	black/brown
230	100	2.0	black/black
230	100	2.05	black/yellow
115	12	0.25	purple/brown
115	12.5	0.37	purple/black
115	12.5	0.25	white/brown
115	24	0.3	purple/grey
115	25	0.43	purple/purple
115	25	0.5	purple/green
115	27	0.5	green/green
115	39	1.01	purple/red
115	42	1.01	red/grey
115	45	0.72	red/black
115	50	1.06	purple/white
115	100	2.0	orange/green
115	115	1.7	orange/white
254	13	0.3	Blue/orange
254	22	0.43	blue/red
254	50	1.05	red/yellow
254	50	1.3	red/red

Tab. 1: deliverable standard versions



2. Electric Band Heater for hazardous areas

2.1 Electric Band Heater HEAT xxx with Ex e approval

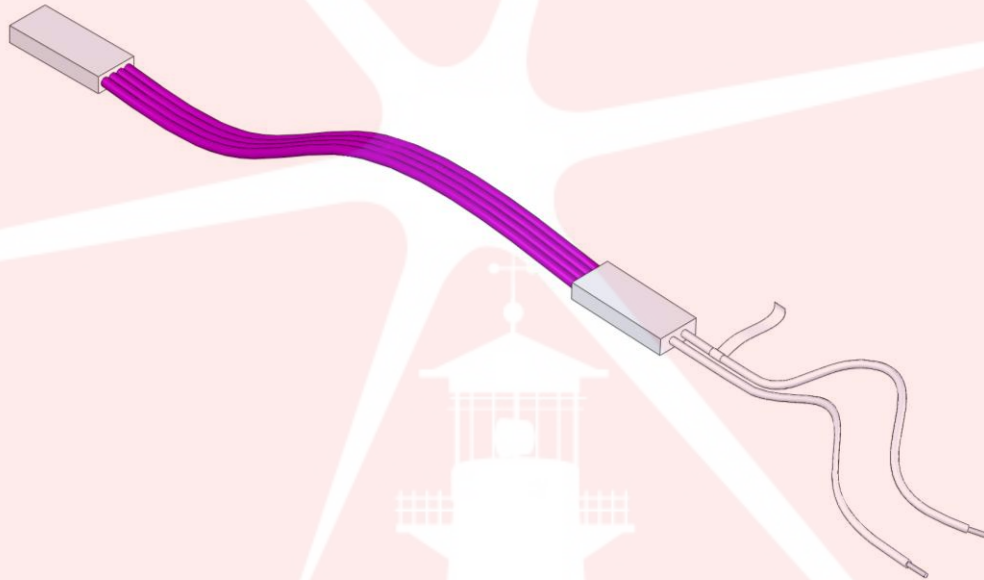


Fig. 2: EM-Heat 25 oGS – 230 -300 - 500 Ex

Specification

Electric band heater ATEX: HEAT xxx - SSH
 Electric band heater TR: PR-HEI-EX-HEAT-SSH-xxx

Order code:

ATEX: HEAT xxx SSH - U - HL - KL
 TR: PR-HEI-EX-HEAT-SSH-xxx - U - HL - Exe - KL

xxx = power in [W]
 U = operating voltage [V]
 HL = length of the heating band [m]
 KL = length of the supply line [mm]

Construction

Resistance wire of CuNi or NiCr alloy looped on glass silk according to DIN 0254, with silicon insulated.
 Electively with or without additional glass silk insulation
 Fix connected supply line insulated with Teflon.

Type of protection

ATEX: II 2G Ex eb IIC
 TR: Ex e IIU

Insulation heating wire

Silicone

Dimension

	mGS	oGS
width*)	approx. 11mm	approx. 9.5mm
height*)	approx. 3.5mm	approx. 2.5mm
length:	<u>acc. table 1</u>	<u>acc. table 1</u>

*) heating band ends are thicker because of insulation



Temperature range	-50°C ... +180°C
Glass silk tube	electively with*) or without *) For VPI process it must be used a version with glass silk tube (mGS)
Operating voltage	≤ 230V (other voltages on request)
Power	8W ...100W
Dielectric strength	2kV / AC 50Hz / 20 sec.
Bending radius	≥10mm
Supply line	
Design	single litz wire, Teflon insulated
Colour code	WH/WH
Cross section	AWG 16/19 copper tinned.
Length (standard)	500mm
Tensile strength	≥ 25N (litz wire/heating band)

Order key:

SSH xxx / HL (dxbxl) / KL

SSH xxx	U	HL	KL	
				cable length in mm
				dimensions mm (d/b/l)
				supply voltage V
				power W



2.2 Self Limiting Band Heater with Ex e approval

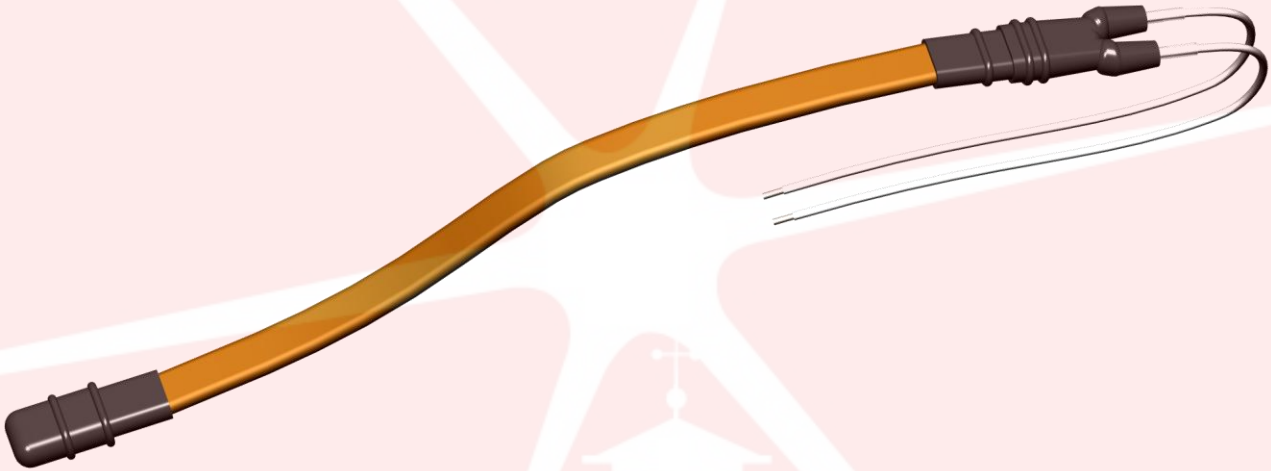


Fig. 3: Self Limiting Band Heater HEAT-SBSSH

Specification

Self Limiting Band Heater ATEX: HEAT-SBSSH
Self Limiting Band Heater TR: PR-HEI-EX-HEAT-SBSSH

Order code:

ATEX: HEAT - yyy - SBSSH - U - xx - HL - Exe - KL
TR: PR-HEI-EX-HEAT-SBSSH-yyy - U - xx - HL - Exe - KL

yyy = power in [W]
U = operating voltage [V]
xx = heating power in W/m
HL = length of the heating band [m]
KL = length of the supply line [mm]

Design

Parallel supply line, heating element of intermetallic plastic compound, shielding harness of solder plated copper wires, outer cover made of FEP, fix connected supply line

Type of protection

ATEX: II 2G Ex eb IIC T3
TR: 2 Ex e II T3 X

Operating temperature

-40°C ... +150°C max. 210°C switched off

Ambient temperature

up to 210°C switched off

Operating voltage

230 V, 50 - 60 Hz

Dielectric strength

2kV / AC 50Hz / 20 sec.



Heating power

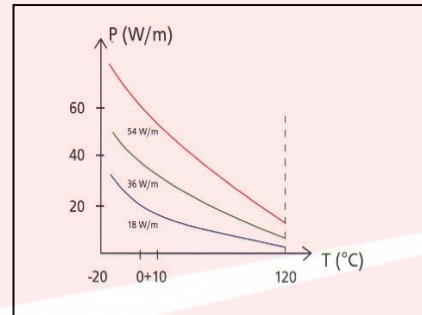
20 W/m SBSSH-xx_20
 30 W/m SBSSH-xx_30
 45 W/m SBSSH-xx_45
 60 W/m SBSSH-xx_60

Bending radius

≥ 25 mm (over the flat band side)

Supply line

Design single litz wires or hose line
 Color code acc. customer request
 Cross section 1 mm²
 Length (standard) 500mm
 Tensile strength ≥ 25N (supply line/heating band)



Order Code:

SBSSH yyy	U	xx	HL	Ex e	KL	cable length in mm
						information regarding ATEX
						dimensions in mm (d/b/l)
						heating power in W/m
						supply voltage in V
						power in W

Leuchtturm Automation

EPHY MESS

Gesellschaft für Elektro-Physikalische Meßgeräte mbH



Berta-Cramer-Ring 1
D-65205 Wiesbaden
Tel.: 06122 / 9228-0
Fax: 06122 / 9228-99
www.ephy-mess.de

深圳市朝瑞自动化系统有限公司