

Multi-level thermocouple, type

“T-M 15 (20,25,32,45,54,63...) FHaKa“

Rigid design with
custom-manufactured connection option



Set-up:

Thermocouples 1(or number n=x) Type “J”, “K” und “N”, performance according to DIN EN 60584, Tolerance class 1 or 2, insulated or ground-welded, designed as MI cable, insulation made of highly compressed magnesium powder.

Installed in a protective fitting made of stainless steel or Inconel, e.g. with connection flange, neck tube and connection box made of stainless steel, aluminium or plastic with cable screw connections and installed series terminals, measurement transmitters are also possible. If required the cable screwed connections can also be replaced by various plug versions.

Other process connections or designs not listed here, can also be supplied. (For other options, please refer to the worksheet).

Specification of thermocouples and max. recommended temperature load for element type:

Fe-CuNi, “J” sleeve	NiCr-Ni, “K”	NiCrSi-NiSi, “N”	protection
600°C	600°C	600°C	Stainless steel
600°C	800°C	800°C	Alloy 600

For an improved response time the components can be connected under certain conditions with the inner walls of the protection sleeve; see special designs section or ask our technical customer service department.

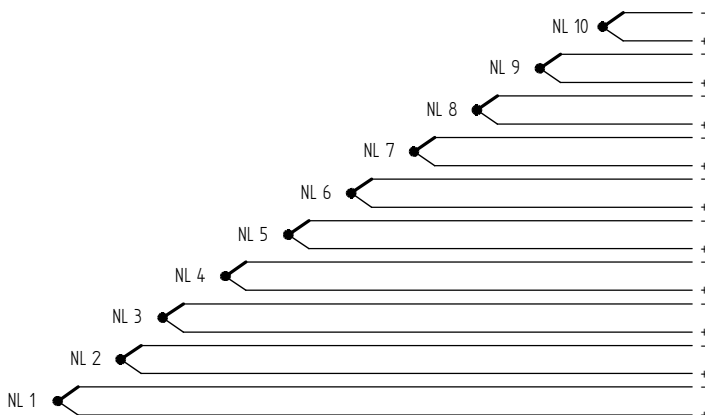
Areas of application:

Chemicals: in vessels & reactors

Petrochemicals: In catalyst filling
and in distillation columns

Research: In laboratories and technical facilities
for media such as gases, vapours and
liquids

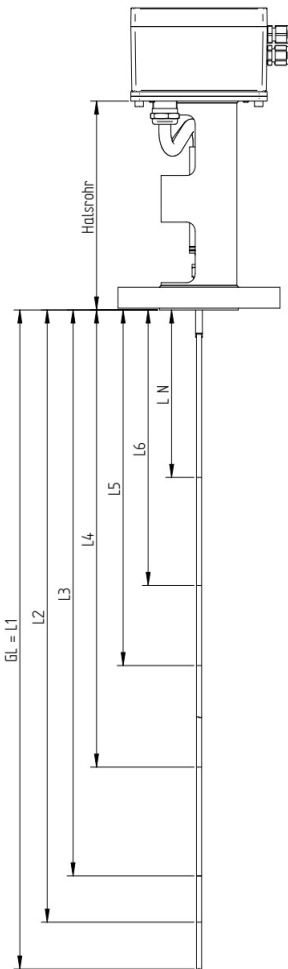
Example type of wiring:



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Possible number of measuring points with single element “T-Ma 05”:

Protection sleeve	n ~ measuring points	Lmax./metres	Mat.
1.5*0.15mm	≤3	3.0m	VA/Inco*
2.0*0.2mm	≤7	3.0m	VA/Inco*
2.5*0.2mm	≤11	3.0m	VA/Inco*
3.0*0.2mm	≤19	10/3m	VA/Inco*
3.2*0.2mm	≤23	10/3m	VA/Inco*
3.5*0.2mm	≤28	10/3m	VA/Inco*
4.0*0.5mm	≤26	25/25m	VA/Inco*
4.5*0.5mm	≤36	25/25m	VA/Inco*
5.0*0.5mm	≤48	25/25m	VA/Inco*
6.35*0.89mm	≤64	25/25m	VA/Inco*
7.0*1.0mm	≤77	25/25m	VA/Inco*

** if available*

Protective tube diameter D:

indicate acc. table
Ø Diameter _____
max. protection sleeve length up to
Process connection _____

Protective tube material:

1.4301/1.4541 |☺|
1.4404/1.4571 |☺|
2.4816 (Inconel) |☺|
other _____

Process connection:

Nozzle _____
Compression Fitting _____
Flange _____
other _____

Material:

1.4301/1.4541 |☺|
1.4404/1.4571 |☺|
2.4816 (Inconel) |☺|
other _____

Nominal length NL: Document measuring point distribution here,
or attach enquiry in separate file/sheet.

Neck tube:

welded self-supporting
with flange |☺|
with union cap |☺|
or with 2*M16 threaded rods
for height adjustment |☺|

Connection box

Plastic |☺|
Aluminium |☺|
Stainless steel |☺|
Protection type IP54 |☺|
Protection type IP65 |☺|
other _____

Transmitter

INOR |☺|
PR electronics |☺|
other _____
ATEX Ex nA |☺|
ATEX Ex e |☺|
ATEX Ex ia |☺|
other _____

Please enter additional information for version with connection boxes here:

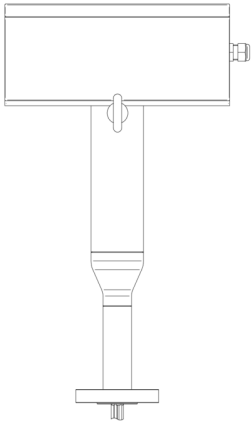
(Example: number and size of input screwed connections, number and design of required fittings such as plug connections or assembly aid etc.)

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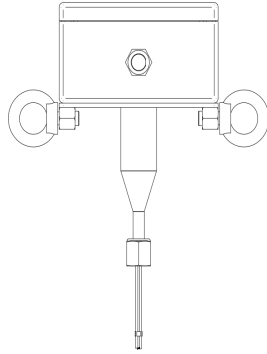
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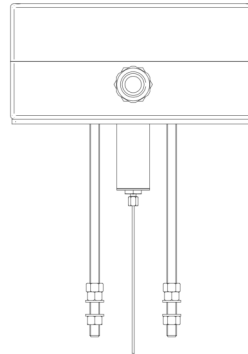
Example
with flange



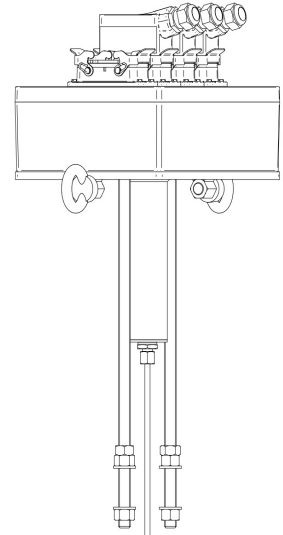
Example
with union cap



Example
with threaded rods



Example
with plug connection



optionally instead of connection box with transition dome for
Connected Lemosa coupling directly in dome (box):

Lemosa recessed box:

Lemosa housing Size: depending on number of measuring points – specification by KMP
Plug ☺ receptacle ☺

optionally instead of a connection box with transition dome inc. extension leads with/without assembled plug system:

connected thermoelectric lead:

Insulation silicone ☺ Shielding Yes ☺ Ferrules ☺
Teflon ☺ No ☺ other _____
Glass silk ☺

lead length:

KL=350mm ☺
KL=1500mm ☺
KL=3000mm ☺
other _____

Plug-in connection with thermal plug

Mini (flat) Plug ☺ receptable ☺
Standard (round) Plug ☺ receptable ☺
without plug; otherwise only ferrules ☺
other _____

Plug-in connection with Lemosa plug:

Housing size 0 ☺ size 1 ☺
Plug ☺ receptable ☺
other _____

Temperature load: Measurement point: from _____ to _____ °C environment/connection cable: _____ °C

Sheathed - thermocouple:

Fe-CuNi "J" ☺
NiCr-Ni "K" ☺
NiCrSi-NiSi "N" ☺
Other _____

Tolerance class:

Class "2" ☺
Class "1" ☺
other _____

Measuring point:

welded insulated ☺
base welded ☺

Company/Sender: _____
Contact: _____
Street/Town: _____
Email address: _____

Your Ref.-No.: _____
Quantity: _____
Delivery time: _____
Telephone: _____