Attachment no 7  
[place], on ………..[•] year

| Contractor:  [Name / address /  court register number /  Tax number  Statistical number  / contact person / e-mail address / phone ] |
| --- |

Employer: VIGO System Spółka Akcyjna with its registered office in Ożarów Mazowiecki, ul. Poznańska 129/133, 05-850 Ożarów Mazowiecki, entered into the Register of Entrepreneurs of the National Court Register kept by the District Court for the Capital City of Warsaw Warsaw in Warsaw, 14th Commercial Division of the National Court Register, under KRS number 0000113394, with Tax Identification Number (NIP): 5270207340, REGON: 010265179, with share capital of PLN 729,000.00 (fully paid up)

**PROPOSAL FORM**

**FOR REQUEST FOR PROPSOALS OF 2nd August 2021 No. SDM-WG/34**

**changed on 9 August 2021**

I, the undersigned **……………………** [•], acting as **……………………** [•] (hereinafter referred to as: "Contractor"), in response to the request for proposals of 2 August 2021 number SDM-WG/34 (hereinafter: "Offer Request"), hereby I submit an offer for thermoelectric coolers according to the description of the subject of the order (hereinafter referred to as the "Order") for the comprehensive implementation by VIGO System Spółka Akcyjna with headquarters in Ożarów Mazowiecki (hereinafter referred to as the "Ordering Party") of the project called "Sensors for industry 4.0 and IoT"; as part of the competition Path for Mazovia / 2019, application number: MAZOWSZE / 0090 / 19, the grant agreement of December 3, 2019, No. MAZOWSZE / 0090 / 19-00 concluded with the National Center for Research and Development.

**1. Offered price of the subject of the Order**

* 1. **Net price: …………………… [•] (in words: …………………… [•]).**
  2. **Gross price: …………………… [•] (in words: …………………… [•]).**
  3. **Value of VAT: …………………… [•] (in words: …………………… [•]).**

**The description of the offer constitutes an attachment to the offer.**

1. Detailed description of the subject of the order
   1. Offered price of the subject of the order in part indicated in attachment 1 to the Request for Proposals
      1. Net price: ………………… **[•]**………………(in words: ……………… **[•]**).
      2. Gross price: ………………**[•]**……………….(in words: ………………**[•]**).
      3. Value of VAT: …………….[**•**] ……………….. (in words: ……………[**•**]).
      4. Compatibility table (to be completed in the free fields with: Yes/no)

| Product name | | Parameter | Specification | Yes/no |
| --- | --- | --- | --- | --- |
| Thermoelectric cooler 3TE on TO8 – 12 pin – 3MC04-044-10-M | Cooler Parameters (measurement conditions - 300 K, vacuum) | Ceramics material | Al2O3, top ceramics of the cooler polished |  |
| Assembly of the TEC | RoHS lead-free solder  Tmelt (melting temperature) not lower than 230 ° C |  |
| Electrical connections of the cooler | One uninsulated AWG-32 wire soldered per each terminal of the TEC |  |
| Top stage dimensions | Not less than 2.4 x 2.4 mm |  |
| Bottom stage dimensions | 6,4±0,1 mm x 6,4±0,1 mm |  |
| Height of the cooler | 5,3±0,15 mm |  |
| ΔTmax K (measurement in a vacuum, 300K) | Not less than 114 K |  |
| Qmax W  (measurement in vacuum, 300K) | Not less than 0,27 W |  |
| Imax A  Umax V (measurement in vacuum, 300K) | 0,6±0,06 A  3,6±0,4 V |  |
| Header TO-8 12 pin parameters | Header type | TO8 |  |
| Number of the pins | 12 pin, including 1 ground pin (pin 11) |  |
| Header material | Kovar (alloy complying with ASTM F-15) |  |
| Metallization of the header | 1.Ni layer - metallization thickness 1.27-3.8 μm  2. Au layer - metallization thickness> 1.27 μm |  |
| Pin material | Kovar (alloy complying with ASTM F-15) |  |
| Metallization of the pins | 1.Ni layer - metallization thickness 1.27-3.8 μm  2. Au layer - metallization thickness> 1.27 μm |  |
| Mounting screw | Screw material - CRS (cold rolled steel)  Bolt thread - 4-40 UNC  Screw length - 6.4 ± 0.2 mm |  |
| Header sealing | Electrically non-conductive, non-transparent, helium leakage of a sealing material less than  10-8 mbar \* l / s - e.g. Corning 7052 or equivalent |  |
| The internal length of the pins (from the mounting surface of the cooler) | 2,54±0,1 mm |  |
| Pin surface roughness | Ra 0.8 or better |  |
| The outer length of the pins (from the surface with the thread mounted) | 7,9±0,25 mm |  |
| Features of the set: cooler on the header | The method of mounting the TEC to the header | Soldering, RoHS lead-free solders, melting point >200C |  |
| The connection between TEC wires and pins | TEC terminal wires soldered to pins 2 (+) and 8 (-) of the header  RoHS lead-free solders with a melting point >200C |  |
| Position tolerance between TEC and header | The error in the position of the centre of the top stage of the TEC relative to the axis defined by the rim of a 13,4 mm diameter have to be less than 200 μm |  |
| ACR (cooler mounted to a header, measurement under vacuum, 300K) | 5,75±0,58 Ω |  |

* 1. Offered price of the subject of the order in part indicated in attachment 2 to the Request for Proposals
     1. Net price: ………………… **[•]**………………(in words: ……………… **[•]**).
     2. Gross price: ………………**[•]**……………….(in words: ………………**[•]**).
     3. Value of VAT: …………….[**•**] ……………….. (in words: ……………[**•**]).
     4. Compatibility table (to be completed in the free fields with: Yes/no)

| Product name | | Parameter | Specification | Yes/no |
| --- | --- | --- | --- | --- |
| Thermoelectric cooler 3TE on TO8 – 12 pin – 3MC06-050-15-M | Cooler Parameters (measurement conditions - 300 K, vacuum) | Ceramics material | Al2O3, top ceramics of the cooler lapped |  |
| Assembly of the TEC | RoHS lead-free solder  Tmelt (melting temperature) not lower than 230 ° C |  |
| Electrical connections of the cooler | One uninsulated AWG-30 wire soldered per each terminal of the TEC |  |
| Top stage dimensions | Not less than 2,5 x 6,5 mm  The longer dimension of the upper stage of the cooler is parallel to the axis defined by the positions of the wires supplying the cooler |  |
| Bottom stage dimensions | 8±0,1 mm x 8±0,1 mm |  |
| Height of the cooler | 6,8±0,15 mm |  |
| ΔTmax K (measurement in a vacuum, 300K) | Not less than 110 K |  |
| Qmax W  (measurement in vacuum, 300K) | Not less than 0,58 W |  |
| Imax A  Umax V (measurement in vacuum, 300K) | 0,8±0,04 A  3,6±0,2 V |  |
| Header TO-8 12 pin parameters | Header type | TO8 |  |
| Number of the pins | 12 pin, including 1 ground pin (pin 11) |  |
| Header material | Kovar (alloy complying with ASTM F-15) |  |
| Metallization of the header | 1.Ni layer - metallization thickness 1.27-3.8 μm  2. Au layer - metallization thickness> 1.27 μm |  |
| Pin material | Kovar (alloy complying with ASTM F-15) |  |
| Metallization of the pins | 1.Ni layer - metallization thickness 1.27-3.8 μm  2. Au layer - metallization thickness> 1.27 μm |  |
| Mounting screw | Screw material - CRS (cold rolled steel)  Bolt thread - 4-40 UNC  Screw length - 6.4 ± 0.4 mm |  |
| Header sealing | Electrically non-conductive, non-transparent, helium leakage of a sealing material less than  10-8 mbar \* l / s - e.g. Corning 7052 or equivalent |  |
| The internal length of the pins (from the mounting surface of the cooler) | 2,54±0,13 mm |  |
| Pin surface roughness | Ra 0.8 or better |  |
| The outer length of the pins (from the surface with the thread mounted) | 7,9±0,25 mm |  |
| Features of the set: cooler on the header | The method of mounting the TEC to the header | Soldering, RoHS lead-free solders, melting point >200C |  |
| The connection between TEC wires and pins | TEC terminal wires soldered to pins 12 (+) and 10 (-) of the header  RoHS lead-free solders with a melting point >200C |  |
| Position tolerance between TEC and header | The error in the position of the centre of the top stage of the TEC relative to the axis defined by the rim of a 13,4 mm diameter have to be less than 200 μm |  |
| ACR (cooler mounted to a header, measurement under vacuum, 300K) | 4,6±0,45 Ω |  |

* 1. Offered price of the subject of the order in part indicated in attachment 3 to the Request for Proposals
     1. Net price: ………………… **[•]**………………(in words: ……………… **[•]**).
     2. Gross price: ………………**[•]**……………….(in words: ………………**[•]**).
     3. Value of VAT: …………….[**•**] ……………….. (in words: ……………[**•**]).
     4. Compatibility table (to be completed in the free fields with: Yes/no)

| Product name | | Parameter | Specification | Yes/no |
| --- | --- | --- | --- | --- |
| Thermoelectric cooler 3TE on TO8 – 16 pin – 3MDC06-050-15-M | Cooler Parameters (measurement conditions - 300 K, vacuum) | Ceramics material | Al2O3, top ceramics of the cooler lapped |  |
| Assembly of the TEC | RoHS lead-free solder  Tmelt (melting temperature) not lower than 230 ° C |  |
| Electrical connections of the cooler | One uninsulated AWG-30 wire soldered per each terminal of the TEC |  |
| Top stage dimensions | Not less than 2,5 x 6,5 mm  The longer dimension of the upper stage of the cooler is parallel to the axis defined by the positions of the wires supplying the cooler |  |
| Bottom stage dimensions | 8±0,1 mm x 8±0,1 mm |  |
| Height of the cooler | 6,8±0,15 mm |  |
| ΔTmax K (measurement in a vacuum, 300K) | Not less than 110 K |  |
| Qmax W  (measurement in vacuum, 300K) | Not less than 0,55 W |  |
| Imax A  Umax V (measurement in vacuum, 300K) | 0,8±0,04 A  3,6±0,18 V |  |
| Header TO-8 16 pin parameters | Header type | TO8 |  |
| Number of the pins | 16 pin |  |
| Header material | Kovar (alloy complying with ASTM F-15) |  |
| Metallization of the header | 1.Ni layer - metallization thickness 1.27-3.8 μm  2. Au layer - metallization thickness> 1.27 μm |  |
| Pin material | Kovar (alloy complying with ASTM F-15) |  |
| Metallization of the pins | 1.Ni layer - metallization thickness 1.27-3.8 μm  2. Au layer - metallization thickness> 1.27 μm |  |
| Mounting screw | Screw material - CRS (cold rolled steel)  Bolt thread - 4-40 UNC  Screw length - 7.4 ± 0.4 mm |  |
| Header sealing | Electrically non-conductive, non-transparent, helium leakage of a sealing material less than  10-8 mbar \* l / s - e.g. Corning 7052 or equivalent |  |
| The internal length of the pins (from the mounting surface of the cooler) | 2,6±0,13 mm |  |
| Pin surface roughness | Ra 0.8 or better |  |
| The outer length of the pins (from the surface with the thread mounted) | 7,4±0,13 mm |  |
| Features of the set: cooler on the header | The method of mounting the TEC to the header | Soldering, RoHS lead-free solders, melting point >200C |  |
| The connection between TEC wires and pins | TEC terminal wires soldered to pins 1 (+) and 12 (-) of the header  RoHS lead-free solders with a melting point >200C |  |
| Position tolerance between TEC and header | The error in the position of the centre of the top stage of the TEC relative to the axis defined by the rim of a 13,4 mm diameter have to be less than 200 μm |  |
| ACR (cooler mounted to a header, measurement under vacuum, 300K) | 4,5±0,45 Ω |  |

* 1. Offered price of the subject of the order in part indicated in attachment 4 to the Request for Proposals
     1. Net price: ………………… **[•]**………………(in words: ……………… **[•]**).
     2. Gross price: ………………**[•]**……………….(in words: ………………**[•]**).
     3. Value of VAT: …………….[**•**] ……………….. (in words: ……………[**•**]).
     4. Compatibility table (to be completed in the free fields with: Yes/no)

| Product name | Parameter | Specification | Yes/no |
| --- | --- | --- | --- |
| Header  TO8-12 pin | Header type | TO8 |  |
| Number of the pins | 12 pin, including 1 ground pin (pin 11) |  |
| Header material | Kovar (alloy complying with ASTM F-15) |  |
| Metallization of the header | 1.Ni layer - metallization thickness 1.27-3.8 μm  2. Au layer - metallization thickness> 1.27 μm |  |
| Pin material | Kovar (alloy complying with ASTM F-15) |  |
| Metallization of the pins | 1.Ni layer - metallization thickness 1.27-3.8 μm  2. Au layer - metallization thickness> 1.27 μm |  |
| Mounting screw | Screw material - CRS (cold rolled steel)  Bolt thread - 4-40 UNC  Screw length - 6.4 ± 0.2 mm |  |
| Header sealing | Electrically non-conductive, non-transparent, helium leakage of a sealing material less than  10-8 mbar \* l / s - e.g. Corning 7052 or equivalent |  |
| The internal length of the pins (from the mounting surface of the cooler) | 2,54±0,1 mm |  |
| Pin surface roughness | Ra 0.8 or better |  |
| The outer length of the pins (from the surface with the thread mounted) | 7,8±0,3 mm |  |

* 1. Offered price of the subject of the order in part indicated in attachment 5 to the Request for Proposals
     1. Net price: ………………… **[•]**………………(in words: ……………… **[•]**).
     2. Gross price: ………………**[•]**……………….(in words: ………………**[•]**).
     3. Value of VAT: …………….[**•**] ……………….. (in words: ……………[**•**]).
     4. Compatibility table (to be completed in the free fields with: Yes/no)

| Product name | Parametrer | Specification | Yes/no |
| --- | --- | --- | --- |
| Header TO39-8pin | Header type | TO39 |  |
| Number of the pins | 8 pin |  |
| Header material | Kovar (alloy complying with ASTM F-15) |  |
| Metallization of the header | 1. Ni layer - metallization thickness 1.27-3.8 μm  2. Au layer - metallization thickness >1.27 μm |  |
| Pin material | Kovar (alloy complying with ASTM F-15) |  |
| Metallization of the pins | 1. Ni layer - metallization thickness 1.27-3.8 μm  2. Au layer - metallization thickness > 1.27 μm |  |
| Header sealing | Electrically non-conductive, non-transparent, helium leakage of a sealing material less than  10-8 mbar \* l / s - e.g. Corning 7052 or equivalent |  |
| Pin spacing diameter | 5,08±0,05 mm |  |
| Pin diameter | 0,45±0,05 mm |  |
| The internal length of the pins (from the mounting surface of the cooler) | 0,4±0,13 mm |  |
| Pin surface roughness | Ra 0.8 or lower |  |
| The outer length of the pins (from the surface with the thread mounted) | 13,5±0,13 mm |  |
| Other features of the header | Following Annex 1 |  |

* 1. Offered price of the subject of the order in part indicated in attachment 6 to the Request for Proposals
     1. Net price: ………………… **[•]**………………(in words: ……………… **[•]**).
     2. Gross price: ………………**[•]**……………….(in words: ………………**[•]**).
     3. Value of VAT: …………….[**•**] ……………….. (in words: ……………[**•**]).
     4. Compatibility table (to be completed in the free fields with: Yes/no)

| Product name | | Parameter | Specification | Yes/no |
| --- | --- | --- | --- | --- |
| Thermoelectric cooler 3TE on TO8 – 12 pin – 3MC06-071-15-M3MC06-071-15-M | Cooler Parameters (measurement conditions - 300 K, vacuum) | Ceramics material | Al2O3, top ceramics of the cooler lapped |  |
| Assembly of the TEC | RoHS lead-free solder  Tmelt (melting temperature) not lower than 230 ° C |  |
| Electrical connections of the cooler | One uninsulated AWG-30 wire soldered per each terminal of the TEC |  |
| Top stage dimensions | 8±0,1 mm x 8±0,1 mm |  |
| Bottom stage dimensions | 8±0,1 mm x 8±0,1 mm |  |
| Height of the cooler | 6,6±0,15 mm |  |
| ΔTmax K (measurement in a vacuum, 300K) | Not less than 110 K |  |
| Qmax W  (measurement in vacuum, 300K) | Not less than 0,68 W |  |
| Imax A  Umax V (measurement in vacuum, 300K) | 0,9±0,09 A  6±0,6 V |  |
| Header TO-8 16 pin parameters | Header type | TO8 |  |
| Number of the pins | 16 pin |  |
| Header material | Kovar (alloy complying with ASTM F-15) |  |
| Metallization of the header | 1.Ni layer - metallization thickness 1.27-3.8 μm  2. Au layer - metallization thickness> 1.27 μm |  |
| Pin material | Kovar (alloy complying with ASTM F-15) |  |
| Metallization of the pins | 1.Ni layer - metallization thickness 1.27-3.8 μm  2. Au layer - metallization thickness> 1.27 μm |  |
| Mounting screw | Screw material - CRS (cold rolled steel)  Bolt thread - 4-40 UNC  Screw length - 7.4 ± 0.4 mm |  |
| Header sealing | Electrically non-conductive, non-transparent, helium leakage of a sealing material less than  10-8 mbar \* l / s - e.g. Corning 7052 or equivalent |  |
| The internal length of the pins (from the mounting surface of the cooler) | 2,6±0,13 mm |  |
| Pin surface roughness | Ra 0.8 or better |  |
| The outer length of the pins (from the surface with the thread mounted) | 7,4±0,13 mm |  |
| Features of the set: cooler on the header | The method of mounting the TEC to the header | Soldering, RoHS lead-free solders, melting point >200C |  |
| The connection between TEC wires and pins | TEC terminal wires soldered to pins 13 (-) and 16 (+) of the header  RoHS lead-free solders with a melting point >200C |  |
| Position tolerance between TEC and header | The error in the position of the centre of the top stage of the TEC relative to the axis defined by the rim of a 13,4 mm diameter have to be less than 200 μm |  |
| ACR (cooler mounted to a header, measurement under vacuum, 300K) | 6,05±0,3 Ω |  |

1. **Deadline for binding offers**

The period of being bound by this offer is 30 days from the deadline for submitting offers specified in the Request for Proposals.

1. **Contact person on the part of the Contractor**

**……………………** [•], telephone **……………………** [•],**……………………** e-mail [•].

1. **Contractors statements**
   1. **The Contractor declares that he has read the Inquiry, including in particular the terms of the Order performance contained in point 13 of the Inquiry, and does not raise any objections to it and has all the information necessary to prepare this offer and perform the Order.**
   2. The Contractor declares that:

a. Has the authority to perform specific activities or activities, if the law imposes an obligation to have them;

b. has the necessary knowledge, experience and technical and human potential to perform the Order;

c. is in an economic and financial situation ensuring the performance of the Order;

d. is not in arrears with taxes, fees and social security contributions.

* 1. If this offer is found to be the most advantageous, the Contractor undertakes to execute the order at the time and place resulting from the inquiry.
  2. The Contractor undertakes to perform the Order described in the Inquiry, in accordance with the requirements of the Inquiry, applicable regulations and due diligence.
  3. The Contractor declares that:
     1. the offered product complies with the specification specified in the description of the subject of the contract in each of the parameters listed therein,
     2. will deliver the product within the time limit specified in the request for proposals,
     3. he is not an entity related to the Ordering Party, liable to exclusion from the contract award procedure in accordance with point 5 of the Request for Proposals
  4. **Documents constituting attachments to this offer constitute its integral part.**

**For the Contractor**:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Attachments:

1. Copy from the Contractor's National Court Register / Copy from the Contractor's CEIDG / other registration document or other the official registered document indicating management bodies appropriate for the Contractor – according to the requirements of Inquiry ;
2. Power of attorney (if the offer is submitted by a proxy)
3. description of submitted bids