October 12, 2018

PCN
Change at Rast connector of EPCOS NTC thermistors

To further improve the EPCOS NTC thermistor series B57276K* and B57276Z* several changes at the Rast connectors of these sensors will be introduced. Details can be found in the annex.

Affected products

Ordering code	Ordering code
B57276K0104A001	B57276K0203A003
B57276K0104A002	B57276K0482A005
B57276K0104A004	B57276K0482A007
B57276K0123A024	B57276K0482A009
B57276K0123A027	B57276K0482A012
B57276K0123A028	B57276K0482A205
B57276K0123A032	B57276Z0103A001
B57276K0123A228	B57278Z0104A004
B57276K0203A001	-

The changes have no impact on form, fit, function, quality, reliability and lead time of the affected products.

During a transitional period affected sensors can be shipped from both the existing and new Rast connector within a single shipment.

Scheduled date of introduction: March 1, 2019

Enclosure PCN (ID No. T123/14)

1) T122/0202 - Rast 2.5+ with bar
2) T122/0301 - Rast 5 4.8 x 0.8
3) T122/0302 - Rast 2.5 no bar
4) T122/0303 - Rast 5 6.3 x 0.8

Contact Jens Eisenbacher, TPS NTC PM, Berlin

Customers are asked to address inquiries directly to their sales contacts.

Product / Process Change Notification

1. ID No.: T123/14		**2. Date of announcement:** October 12, 2018	
3. Product / product group: EPCOS NTC thermistors K/Z 27 series	**Old ordering code:** B57276K0104A001 B57276K0104A002 B57276K0104A004 B57276K0123A024 B57276K0123A027 B57276K0123A028 B57276K0123A032 B57276K0123A228 B57276K0203A001 B57276K0203A003 B57276K0482A005 B57276K0482A007 B57276K0482A009 B57276K0482A012 B57276K0482A205 B57276Z0103A001 B57278Z0104A004	**New ordering code:** No change	**Customer part number:**

4. Description of change:

To improve competitivenes of K276 product series, several changes have been made for Rast connector.

For details please refer to presentation in the annex:

1) T122/0202 - Rast 2.5+ with bar
2) T122/0301 - Rast 5 4.8x0.8
3) T122/0302 - Rast 2.5 no bar
4) T122/0303 - Rast 5 6.3x0.8

5. Effect on the product or for the customer (benefit, quality, specification, lead time):

No negative effects on product performance, quality and lead time.

For detail changes please refer to presentation in the annex:

6. Quality assurance measures / risk assessment:

Validation tests have been performed on representative types and successfully passed (for details please refer to presentation in the annex).

VDE approval is expected by February 2019 (only applicable for type with VDE approval, please refer to VDE database – certification number 40024107)

UL approval is available (only applicable for type with UL approval, please refer to UL database XGPU2.E69802 - THERMISTOR-TYPE DEVICES – COMPONENT)

Lot by lot process controls via IPQC and QA outgoing inspection according to control plan will be performed in the same way as for the running types.

New delivery will be labelled with V4 (eg. B57276KxxxxAxxxVx4)

7. Scheduled date of change: March 1, 2019

8. Estimated date of first delivery of changed product: March 1, 2019

If TDK Electronics AG does not receive notification to the contrary within a period of 10 weeks, TDK Electronics AG assumes that the customer agrees to the change. For an interim period we cannot rule out that old as well as new products will be shipped.

Quality Management Name Philipp Schmidt-Weber	Signature signed Schmidt-Weber
Product Marketing Name Jens Eisenbacher Tel. +49 30 890 4055 5125 Email jens.eisenbacher@tdk-electronics.tdk.com	Signature signed Eisenbacher

Customer feedback
Customer acknowledgement Signature

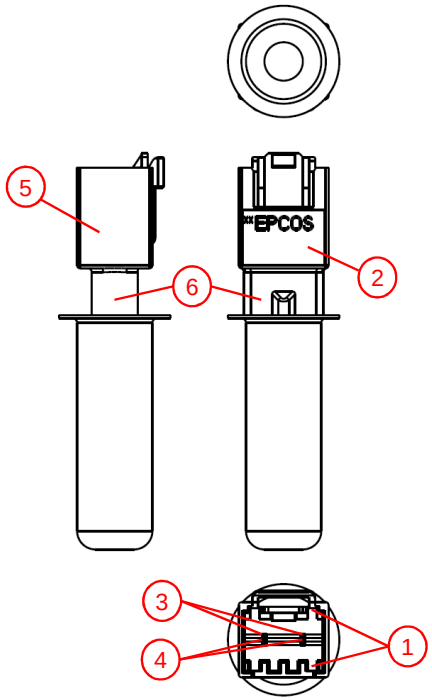
Attracting Tomorrow

Rast 2.5+ with bar

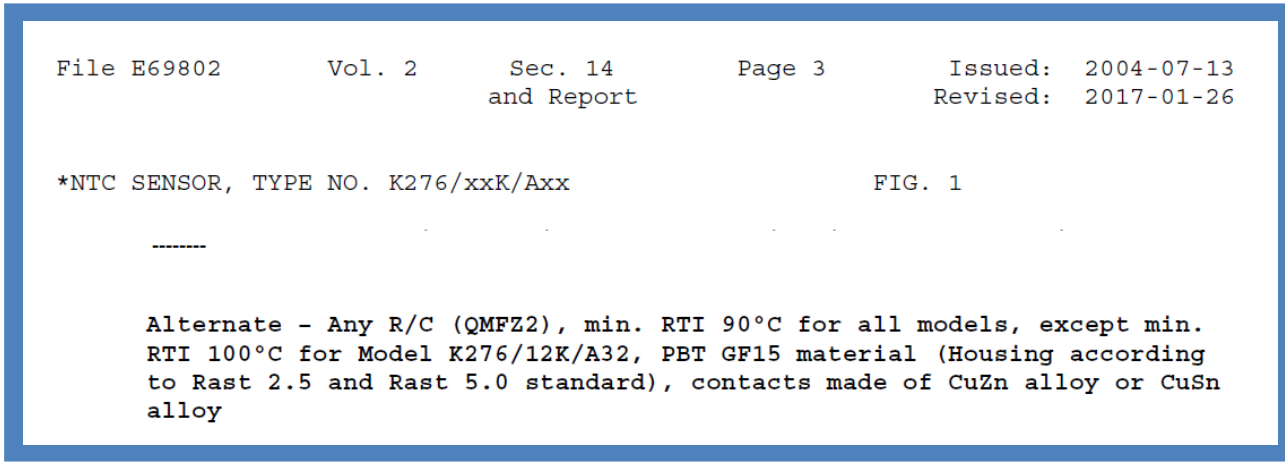
Type : K276
PN : T122/0202

[TDK-EPC AG & Co. KG]
A TDK Group Company
[Temperature & Pressure Business Group] • [TPS NTC PD S]
[Berlin, Germany]
[September 11, 2018]

Modification compare to existing connector

Rast 2.5+ with bar	Changes compare to existing connector
	1. Change to Rast 2.5+ to enable the usage of double keying IDC connector (Rast 2.5 still usable) 2. Remove VDE embossed marking and change it with inkjet printing (only applicable with a type which already have VDE embosed marking) 3. Change pin material from Copper Alloy CuSn6 to Brass Alloy H65 (CuZn36) 4. Change pin assembly from over molding into tight fit insertion process 5. Introduce new alternative for existing PBT material 6. Change the shape of potted connector area in order to have bigger coverage of contact with potting material

UL approval and VDE approval



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*NTC SENSOR, TYPE NO. K276/xxK/Axx FIG. 1

Alternate - Any R/C (QMFZ2), min. RTI 90°C for all models, except min. RTI 100°C for Model K276/12K/A32, PBT GF15 material (Housing according to Rast 2.5 and Rast 5.0 standard), contacts made of CuZn alloy or CuSn alloy

UL approval available
(Only applicable for type with UL approval, please refer to UL database XGPU2.E69802 - THERMISTOR-TYPE DEVICES – COMPONENT)

VDE Prüf- und Zertifizierungsinstitut

Aktenzeichen: File reference:	5020568-4791-0001/217287	Ausweis-Nr.: Certificate No.:	40024107	Anlage Nr.: Appendix No.:	1_400	Seite: Page:	1 / 1	Datum: Date:	2016-07-12

Diese Anlage ist Bestandteil des Genehmigungsausweises. *This appendix is part of the certificate.*

Stecker / Connector	ST_1	PBT [redacted] PBT [redacted]	Rast 2,5

VDE

VDE Prüf- und Zertifizierungsinstitut GmbH – EC2
VDE Testing and Certification Institute – EC2

VDE approval is Ongoing
(Only applicable for type with VDE approval, please refer to VDE database – certification number 40024107)
Finish date confirmed by VDE on February 2019

Reliability test (Representative product K276/4.8k)

Item	Test Description	Pass Criteria	Result
Storage in dry heat	Storage at upper category temperature Temperature : 130 °C; duration : 3 weeks	$\Delta R_{25}/R_{25} < 2\%$	PASS
Storage in coldness	Storage at lower category temperature Temperature : -10 °C; duration : 1000 h	$\Delta R_{25}/R_{25} < 1.5\%$	PASS
Storage in damp heat, steady state	Temperature of air: 40 °C Relative humidity of air: 93 % Duration: 56 days	$\Delta R_{25}/R_{25} < 1\%$	PASS

Reliability test (Representative product K276/4.8k)

Item	Test Description	Pass Criteria	Result
Vibration Test	Test in compliance with DIN IEC 60068-2-6 in X; Y; Z axis with original attachment / packed for dispatch Continous load with varying frequency Frequency: 5Hz - 500Hz - 5Hz Frequency cycles: 20 Amplitude / acceleration: 7.5 mm (5-8Hz) / 2g (8-500Hz) Continuous load at fixed frequency In resonance: 30min±1min	No malfunction No detachment of sealing compound No detachment of contact	PASS
Impact Load	Test in compliance with DIN IEC 60068-2-27 in X; Y; Z axis with original attachment / packed ready for dispatch Shock form : Half sine wave form Shock acceleration: 294m/s2 (30g) Shock duration : 6ms Number of loads : 10	No malfunction No detachment of sealing compound No detachment of contact	PASS

Reliability test (Representative product K276/4.8k)

Item	Test Description	Pass Criteria	Result
Rapid change of temperature	Lower test temperature: -10°C (time : 5 min) Upper test temperature: 100°C (time: 5 min) Time to change from lower to upper temperature : < 30 sec; Number of cycles: 5000 Medium: oil Dip before flange of metal case (approx 25mm)	$\Delta R_{25}/R_{25} < 2.5\%$	PASS
Voltage proof test	The sensors are placed in a vessel containing metallic balls of 1 mm diameter (with total immersed head) at ambient temperature, max relative humidity 75% The applied voltage is 3750Vac/1min	No flash over	No Flash Over
Insulation test	The sensors are placed in a vessel containing metallic balls of 1 mm diameter (with total immersed head) at ambient temperature, max relative humidity 75% The applied voltage is 500 VDC.	Above 1000MΩ	> 1000MΩ

Reliability test (Representative product K276/4.8k)

Item	Test Description	Pass Criteria	Result
Mechanical test	Tongue in the plastic body shall resist to a compression force Force : 10 N Duration : 60s.	No break	No break
Thermal Characteristic measurement	Response time Medium : water	≤ 20s*) *) typical value	PASS
Printing wire resistance	Wipe the printing with a cloth soaked in alcohol	Printing still visible	Printing still visible

Reliability test (New PBT material)

Item	Test Description	Pass Criteria	Result
Comparative Tracking Index	The specimens were tested with surfaces as original condition submitted. 100 drops on the top of the specimens (IEC 60112:2003)	PASS	The specimens complied to the requirements of tracking test CTI 250V
Ball Pressure Test	The specimens were tested with surfaces as original condition submitted, the test temperature 125°C (IEC 60695-10-2:2014)	PASS	The specimens complied to the requirements of ball pressure at 125°C
Glow Wire Test	The specimens were tested with the test surfaces arranged vertically and the glow-wire tip was applied at right-angles for 30s at temperatures 850°C and 650°C (60695-2-11:2014)	PASS	The specimens complied to the requirements of glow-wire test at 850°C & 650°C

Project Plan and Update Status

- VDE approval → February’ 2019
- PCN Submission → CW38’2018
- Sample delivery and ISIR on request
- TDK SOP → March’2019

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Rast 5 4.8x0.8

Type : K276
PN : T122/0301

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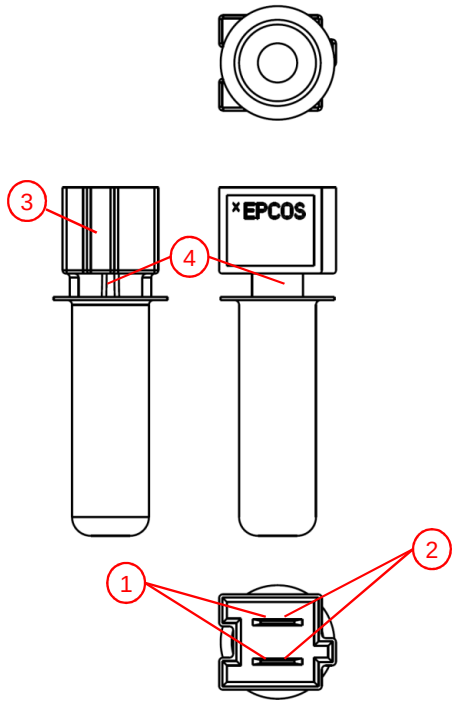
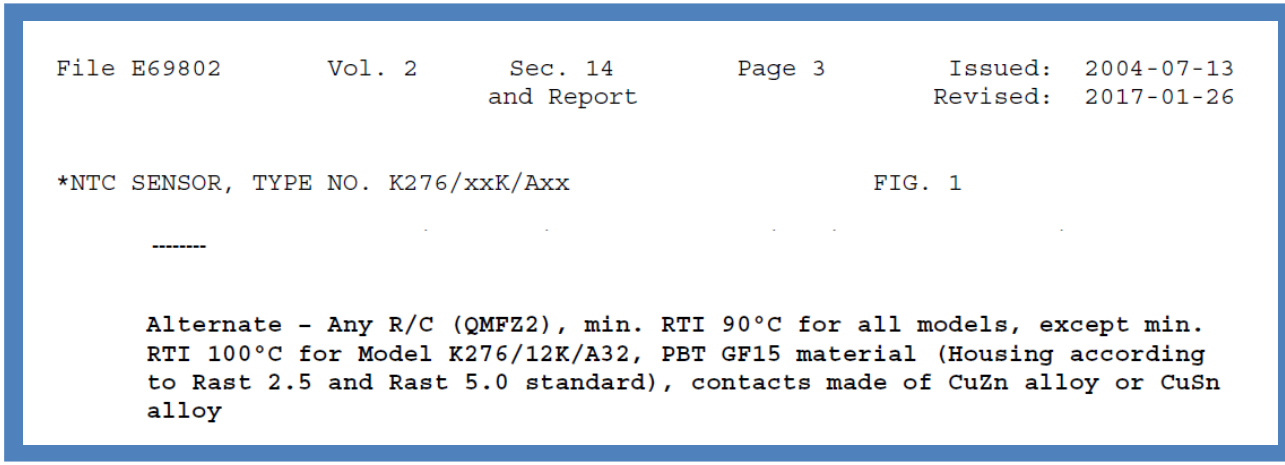
[Temperature & Pressure Business Group] • [TPS NTC PD S]
[Berlin, Germany]
[September 11, 2018]

Modification compare to existing connector

Rast 5 6.3x0.8	Changes compare to existing connector
	1. Change pin material from Copper Alloy CuSn6 to Brass Alloy H65 (CuZn36) 2. Change pin assembly from over molding into tight fit insertion process 3. Introduce new alternative for existing PBT material 4. Change the shape of potted connector area in order to have bigger coverage of contact with potting material

UL approval and VDE approval



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*NTC SENSOR, TYPE NO. K276/xxK/Axx FIG. 1

Alternate - Any R/C (QMFZ2), min. RTI 90°C for all models, except min. RTI 100°C for Model K276/12K/A32, PBT GF15 material (Housing according to Rast 2.5 and Rast 5.0 standard), contacts made of CuZn alloy or CuSn alloy

UL approval available
(Only applicable for type with UL approval, please refer to UL database XGPU2.E69802 - THERMISTOR-TYPE DEVICES – COMPONENT)

VDE Prüf- und Zertifizierungsinstitut

Aktenzeichen: File reference:	5020568-4791-0001/217287	Ausweis-Nr.: Certificate No.:	40024107	Anlage Nr.: Appendix No.:	1_400	Seite: Page:	1 / 1	Datum: Date:	2016-07-12

Diese Anlage ist Bestandteil des Genehmigungsausweises. *This appendix is part of the certificate.*

Stecker / Connector	ST_1	PBT [redacted] PBT [redacted]	Rast 2,5

VDE

VDE Prüf- und Zertifizierungsinstitut GmbH – EC2
VDE Testing and Certification Institute – EC2

VDE approval is Ongoing
(Only applicable for type with VDE approval, please refer to VDE database – certification number 40024107)
Finish date confirmed by VDE on February 2019

Reliability test (Representative product K276/12k)

Item	Test Description	Pass Criteria	Result
Storage in dry heat	Storage at upper category temperature Temperature : 130 °C; duration : 3 weeks	$\Delta R_{25}/R_{25} < 2\%$	PASS
Storage in coldness	Storage at lower category temperature Temperature : -10 °C; duration : 1000 h	$\Delta R_{25}/R_{25} < 1.5\%$	PASS
Storage in damp heat, steady state	Temperature of air: 40 °C Relative humidity of air: 93 % Duration: 56 days	$\Delta R_{25}/R_{25} < 1\%$	PASS

Reliability test (Representative product K276/12k)

Item	Test Description	Pass Criteria	Result
Rapid change of temperature	Lower test temperature: -10°C (time : 5 min) Upper test temperature: 100°C (time: 5 min) Time to change from lower to upper temperature : < 30 sec; Number of cycles: 5000 Medium: oil Dip before flange of metal case (approx 25mm)	$\Delta R_{25}/R_{25} < 2.5\%$	PASS
Voltage proof test	The sensors are placed in a vessel containing metallic balls of 1 mm diameter (with total immersed head) at ambient temperature, max relative humidity 75% The applied voltage is 3750Vac/1min	No flash over	No Flash Over
Insulation test	The sensors are placed in a vessel containing metallic balls of 1 mm diameter (with total immersed head) at ambient temperature, max relative humidity 75% The applied voltage is 500 VDC.	Above 1000MΩ	> 1000MΩ

Reliability test (Representative product K276/12k)

Item	Test Description	Pass Criteria	Result
Vibration Test	Test in compliance with DIN IEC 60068-2-6 in X; Y; Z axis with original attachment / packed for dispatch Continous load with varying frequency Frequency: 5Hz - 500Hz - 5Hz Frequency cycles: 20 Amplitude / acceleration: 7.5 mm (5-8Hz) / 2g (8-500Hz) Continuous load at fixed frequency In resonance: 30min±1min	No malfunction No detachment of sealing compound No detachment of contact	PASS
Impact Load	Test in compliance with DIN IEC 60068-2-27 in X; Y; Z axis with original attachment / packed ready for dispatch Shock form : Half sine wave form Shock acceleration: 294m/s2 (30g) Shock duration : 6ms Number of loads : 10	No malfunction No detachment of sealing compound No detachment of contact	PASS

Reliability test (Representative product K276/12k)

Item	Test Description	Pass Criteria	Result
Mechanical test	Pull out force both connector together Force : 50 N	No break	No break
Thermal Characteristic measurement	Response time Medium : water	≤ 20s*) *) typical value	PASS
Printing wire resistance	Wipe the printing with a cloth soaked in alcohol	Printing still visible	Printing still visible

Reliability test (New PBT material)

Item	Test Description	Pass Criteria	Result
Comparative Tracking Index	The specimens were tested with surfaces as original condition submitted. 100 drops on the top of the specimens (IEC 60112:2003)	PASS	The specimens complied to the requirements of tracking test CTI 250V
Ball Pressure Test	The specimens were tested with surfaces as original condition submitted, the test temperature 125°C (IEC 60695-10-2:2014)	PASS	The specimens complied to the requirements of ball pressure at 125°C
Glow Wire Test	The specimens were tested with the test surfaces arranged vertically and the glow-wire tip was applied at right-angles for 30s at temperatures 850°C and 650°C (60695-2-11:2014)	PASS	The specimens complied to the requirements of glow-wire test at 850°C & 650°C

Project Plan and Update Status

- VDE approval → February’ 2019
- PCN Submission → CW38’2018
- Sample delivery and ISIR on request
- TDK SOP → CW09’2019

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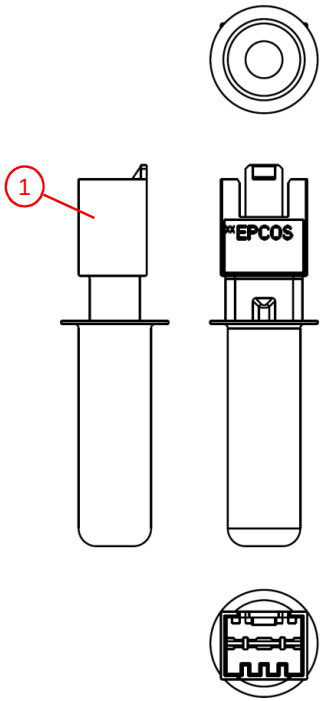
Rast 2.5 no bar

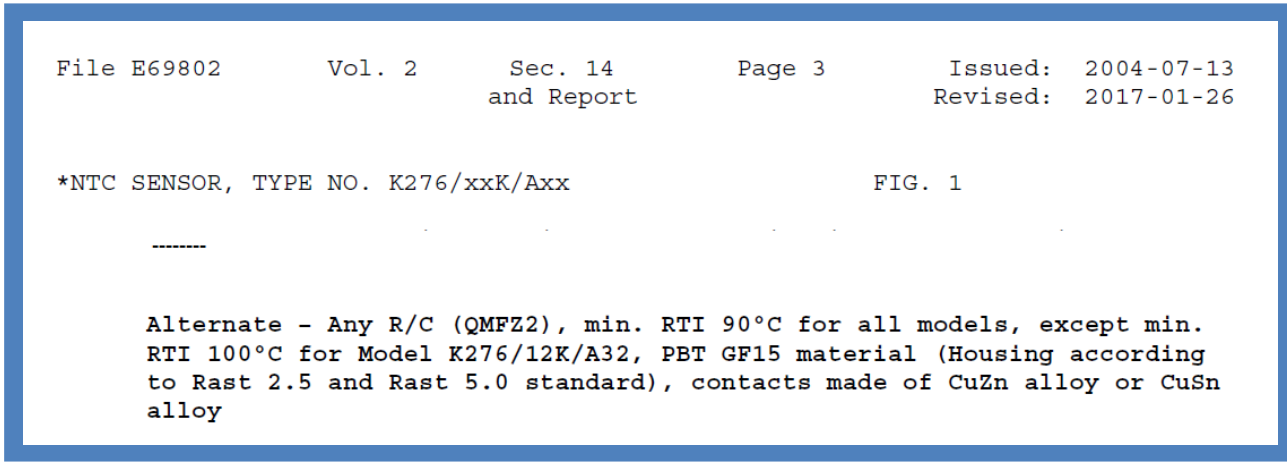
Type : K276
PN : T122/0302

[TDK-EPC AG & Co. KG]
A TDK Group Company
[Temperature & Pressure Business Group] • [TPS NTC PD S]
[Berlin, Germany]
[September 09, 2018]

Modification compare to existing connector

Rast 2.5+ with bar	Changes compare to existing connector
	1. Introduce new alternative for existing PBT material

UL approval and VDE approval



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*NTC SENSOR, TYPE NO. K276/xxK/Axx FIG. 1

Alternate - Any R/C (QMFZ2), min. RTI 90°C for all models, except min. RTI 100°C for Model K276/12K/A32, PBT GF15 material (Housing according to Rast 2.5 and Rast 5.0 standard), contacts made of CuZn alloy or CuSn alloy

UL approval available
(Only applicable for type with UL approval, please refer to UL database XGPU2.E69802 - THERMISTOR-TYPE DEVICES – COMPONENT)

VDE Prüf- und Zertifizierungsinstitut

Aktenzeichen: File reference:	5020568-4791-0001/217287	Ausweis-Nr.: Certificate No.:	40024107	Anlage Nr.: Appendix No.:	1_400	Seite: Page:	1 / 1	Datum: Date:	2016-07-12

Diese Anlage ist Bestandteil des Genehmigungsausweises. *This appendix is part of the certificate.*

Stecker / Connector	ST_1	PBT [redacted] PBT [redacted]	Rast 2,5

VDE

VDE Prüf- und Zertifizierungsinstitut GmbH – EC2
VDE Testing and Certification Institute – EC2

VDE approval is Ongoing
(Only applicable for type with VDE approval, please refer to VDE database – certification number 40024107)
Finish date confirmed by VDE on February 2019

Reliability test (Representative product K276/4.8k)

Item	Test Description	Pass Criteria	Result
Storage in dry heat	Storage at upper category temperature Temperature : 130 °C; duration : 3 weeks	$\Delta R_{25}/R_{25} < 2\%$	PASS
Storage in coldness	Storage at lower category temperature Temperature : -10 °C; duration : 1000 h	$\Delta R_{25}/R_{25} < 1.5\%$	PASS
Storage in damp heat, steady state	Temperature of air: 40 °C Relative humidity of air: 93 % Duration: 56 days	$\Delta R_{25}/R_{25} < 1\%$	PASS

Reliability test (Representative product K276/4.8k)

Item	Test Description	Pass Criteria	Result
Vibration Test	Test in compliance with DIN IEC 60068-2-6 in X; Y; Z axis with original attachment / packed for dispatch Continous load with varying frequency Frequency: 5Hz - 500Hz - 5Hz Frequency cycles: 20 Amplitude / acceleration: 7.5 mm (5-8Hz) / 2g (8-500Hz) Continuous load at fixed frequency In resonance: 30min±1min	No malfunction No detachment of sealing compound No detachment of contact	PASS
Impact Load	Test in compliance with DIN IEC 60068-2-27 in X; Y; Z axis with original attachment / packed ready for dispatch Shock form : Half sine wave form Shock acceleration: 294m/s2 (30g) Shock duration : 6ms Number of loads : 10	No malfunction No detachment of sealing compound No detachment of contact	PASS

Reliability test (Representative product K276/4.8k)

Item	Test Description	Pass Criteria	Result
Rapid change of temperature	Lower test temperature: -10°C (time : 5 min) Upper test temperature: 100°C (time: 5 min) Time to change from lower to upper temperature : < 30 sec; Number of cycles: 5000 Medium: oil Dip before flange of metal case (approx 25mm)	$\Delta R_{25}/R_{25} < 2.5\%$	PASS
Voltage proof test	The sensors are placed in a vessel containing metallic balls of 1 mm diameter (with total immersed head) at ambient temperature, max relative humidity 75% The applied voltage is 3750Vac/1min	No flash over	No Flash Over
Insulation test	The sensors are placed in a vessel containing metallic balls of 1 mm diameter (with total immersed head) at ambient temperature, max relative humidity 75% The applied voltage is 500 VDC.	Above 1000MΩ	> 1000MΩ

Reliability test (Representative product K276/4.8k)

Item	Test Description	Pass Criteria	Result
Mechanical test	Tongue in the plastic body shall resist to a compression force Force : 10 N Duration : 60s.	No break	No break
Thermal Characteristic measurement K276 / 12k	Response time Medium : water	≤ 20s*) *) typical value	PASS
Thermal Characteristic measurement Z278 / 20k	Response time Medium : water	< 4s*) *) typical value	PASS
Printing wire resistance	Wipe the printing with a cloth soaked in alcohol	Printing still visible	Printing still visible

Reliability test (New PBT material)

Item	Test Description	Pass Criteria	Result
Comparative Tracking Index	The specimens were tested with surfaces as original condition submitted. 100 drops on the top of the specimens (IEC 60112:2003)	PASS	The specimens complied to the requirements of tracking test CTI 250V
Ball Pressure Test	The specimens were tested with surfaces as original condition submitted, the test temperature 125°C (IEC 60695-10-2:2014)	PASS	The specimens complied to the requirements of ball pressure at 125°C
Glow Wire Test	The specimens were tested with the test surfaces arranged vertically and the glow-wire tip was applied at right-angles for 30s at temperatures 850°C and 650°C (60695-2-11:2014)	PASS	The specimens complied to the requirements of glow-wire test at 850°C & 650°C

Project Plan and Update Status

- VDE approval → February’ 2019
- PCN Submission → CW38’2018
- Sample delivery and ISIR on request
- TDK SOP → CW09’2019

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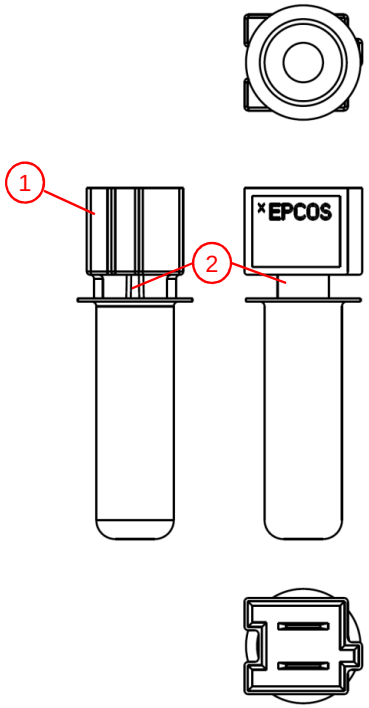
Rast 5 6.3x0.8

Type : K276
PN : T122/0303

[TDK-EPC AG & Co. KG]
A TDK Group Company
[Temperature & Pressure Business Group] • [TPS NTC PD S]
[Berlin, Germany]
[September 11, 2018]

Modification compare to existing connector

Rast 5 6.3x0.8	Changes compare to existing connector
	1. Introduce new alternative for existing PBT material 2. Change the shape of potted connector area in order to have bigger coverage of contact with potting material

UL approval and VDE approval

File E69802 Vol. 2 Sec. 14 and Report Page 3 Issued: 2004-07-13 Revised: 2017-01-26

*NTC SENSOR, TYPE NO. K276/xxK/Axx FIG. 1

Alternate - Any R/C (QMFZ2), min. RTI 90°C for all models, except min. RTI 100°C for Model K276/12K/A32, PBT GF15 material (Housing according to Rast 2.5 and Rast 5.0 standard), contacts made of CuZn alloy or CuSn alloy

UL approval available
(Only applicable for type with UL approval, please refer to UL database XGPU2.E69802 - THERMISTOR-TYPE DEVICES – COMPONENT)

VDE Prüf- und Zertifizierungsinstitut

Aktenzeichen: File reference:	5020568-4791-0001/217287	Ausweis-Nr.: Certificate No.:	40024107	Anlage Nr.: Appendix No.:	1_400	Seite: Page:	1 / 1	Datum: Date:	2016-07-12

Diese Anlage ist Bestandteil des Genehmigungsausweises. *This appendix is part of the certificate.*

Stecker / Connector	ST_1	PBT [redacted] PBT [redacted]	Rast 2,5

VDE

VDE Prüf- und Zertifizierungsinstitut GmbH – EC2
VDE Testing and Certification Institute – EC2

VDE approval is Ongoing
(Only applicable for type with VDE approval, please refer to VDE database – certification number 40024107)
Finish date confirmed by VDE on February 2019

Reliability test (Representative product K276/4.8k)

Item	Test Description	Pass Criteria	Result
Storage in dry heat	Storage at upper category temperature Temperature : 130 °C; duration : 3 weeks	$\Delta R_{25}/R_{25} < 2\%$	PASS
Storage in coldness	Storage at lower category temperature Temperature : -10 °C; duration : 1000 h	$\Delta R_{25}/R_{25} < 1.5\%$	PASS
Storage in damp heat, steady state	Temperature of air: 40 °C Relative humidity of air: 93 % Duration: 56 days	$\Delta R_{25}/R_{25} < 1\%$	PASS

Reliability test (Representative product K276/4.8k)

Item	Test Description	Pass Criteria	Result
Rapid change of temperature	Lower test temperature: -10°C (time : 5 min) Upper test temperature: 100°C (time: 5 min) Time to change from lower to upper temperature : < 30 sec; Number of cycles: 5000 Medium: oil Dip before flange of metal case (approx 25mm)	$\Delta R_{25}/R_{25} < 2.5\%$	PASS
Voltage proof test	The sensors are placed in a vessel containing metallic balls of 1 mm diameter (with total immersed head) at ambient temperature, max relative humidity 75% The applied voltage is 3750Vac/1min	No flash over	No Flash Over
Insulation test	The sensors are placed in a vessel containing metallic balls of 1 mm diameter (with total immersed head) at ambient temperature, max relative humidity 75% The applied voltage is 500 VDC.	Above 1000MΩ	> 1000MΩ

Reliability test (Representative product K276/4.8k)

Item	Test Description	Pass Criteria	Result
Vibration Test	Test in compliance with DIN IEC 60068-2-6 in X; Y; Z axis with original attachment / packed for dispatch Continous load with varying frequency Frequency: 5Hz - 500Hz - 5Hz Frequency cycles: 20 Amplitude / acceleration: 7.5 mm (5-8Hz) / 2g (8-500Hz) Continuous load at fixed frequency In resonance: 30min±1min	No malfunction No detachment of sealing compound No detachment of contact	PASS
Impact Load	Test in compliance with DIN IEC 60068-2-27 in X; Y; Z axis with original attachment / packed ready for dispatch Shock form : Half sine wave form Shock acceleration: 294m/s2 (30g) Shock duration : 6ms Number of loads : 10	No malfunction No detachment of sealing compound No detachment of contact	PASS

Reliability test (Representative product K276/4.8k)

Item	Test Description	Pass Criteria	Result
Mechanical test	Pull out force both connector together Force : 50 N	No break	No break
Thermal Characteristic measurement	Response time Medium : water	≤ 20s*) *) typical value	PASS
Printing wire resistance	Wipe the printing with a cloth soaked in alcohol	Printing still visible	Printing still visible

Reliability test (New PBT material)

Item	Test Description	Pass Criteria	Result
Comparative Tracking Index	The specimens were tested with surfaces as original condition submitted. 100 drops on the top of the specimens (IEC 60112:2003)	PASS	The specimens complied to the requirements of tracking test CTI 250V
Ball Pressure Test	The specimens were tested with surfaces as original condition submitted, the test temperature 125°C (IEC 60695-10-2:2014)	PASS	The specimens complied to the requirements of ball pressure at 125°C
Glow Wire Test	The specimens were tested with the test surfaces arranged vertically and the glow-wire tip was applied at right-angles for 30s at temperatures 850°C and 650°C (60695-2-11:2014)	PASS	The specimens complied to the requirements of glow-wire test at 850°C & 650°C

Project Plan and Update Status

- VDE approval → February’ 2019
- PCN Submission → CW38’2018
- Sample delivery and ISIR on request
- TDK SOP → CW09’2019

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