

August 14, 2015

## Product change

### **New neon-free and neon-reduced gas mixtures for low-voltage types of EPCOS surge arresters**

Prices for neon gas prices have risen sharply on the global market. For this reason, the low-voltage types (90 V) of EPCOS surge arresters will be filled with neon-free or neon-reduced gas mixtures, depending on type. Affected are the A8, N8, M5, ES, EN, EZ and S8 series of arresters, which are produced in our plant in Xiaogan, China.

The price increases for neon gas are a result of a significant shortage in the worldwide supply chain. Already, they have reached a level that is up to 30 times higher than just a few months ago. There are indications that these high prices will continue to increase even further. TDK is working intensively on developing neon-free arresters with minimal impact on our customers.

The arc and glow voltage of some types of the affected surge arresters, which are filled with neon-free or neon-reduced gas mixtures, will increase slightly. The associated data sheets are being updated accordingly. Other electrical and mechanical characteristics are unchanged. The type designations, ordering codes and delivery times likewise remain unchanged. The affected ordering codes are listed in the annex. The qualification was successfully performed according to internal green-light release guidelines.

Scheduled date of introduction: Nov 16, 2015

Samples are available on request.

**Enclosure** PCN (ID No. PPD11/T120)  
Annex: list of affected products

**Contact** Wong Huan Chee, PPD AB PM, Johor Bahru

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

## Product / Process Change Notification

<b>1. ID No.:</b> PPD11/ T120		<b>2. Date of announcement:</b> August 14, 2015	
<b>3. Product / product group:</b> A8/ N8/ M5/ ES/ EN/ EZ/ S8 surge arresters	<b>Old ordering code:</b> See annex	<b>New ordering code:</b> N/A	<b>Customer part number:</b>
<b>4. Description of change:</b> <p>Due to the strong increase of neon gas prices on the global market, the low-voltage types (90 V) of the A8, N8, M5, ES, EN, EZ, and S8 series of EPCOS surge arresters, which are produced in our plant in Xiaogan, China, will be filled with neon-free or neon-reduced gas mixtures, depending on type.</p>			
<b>5. Effect on the product or for the customer (benefit, quality, specification, lead time):</b> <p>Breakdown voltage stability after reflow soldering is improved by this change. The arc and glow voltage of some types will increase slightly. This will be documented in an update of the data sheets. The higher arc voltage is an advantage for protection applications with DC voltage.</p> <p>Other electrical and mechanical characteristics are not affected by these changes.</p> <p>The type designations, ordering codes and delivery times remain unchanged. The affected types are listed in the annex.</p>			
<b>6. Quality assurance measures / risk assessment:</b> <p>The qualification is in accordance with our internal green-light quality procedure. The investigations for internal release showed no effects on the mechanical characteristics as a consequence of the change described in item 4. The established control plans will consequently not be changed. All quality assurance measures will be maintained.</p> <p>Samples are available on request.</p>			
<b>7. Scheduled date of change:</b> November 16, 2015			
<b>8. Estimated date of first delivery of changed product:</b> November 16, 2015 <p>If EPCOS does not receive notification to the contrary within a period of 10 weeks, EPCOS 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.</p>			
Quality Management Name Markus Weiglhofer		Signature signed Weiglhofer	
Product Marketing Name Wong Huan Chee Tel. +607 3566 666 Email huanchee.wong@epcos.com		Signature signed Wong	

<b>Customer feedback</b>	
Customer acknowledgement	Signature

**Annex to UPtoDATE 150814AB1 of August 14, 2015 /**

**New neon-free and neon-reduced gas mixtures for low-voltage types of EPCOS surge arresters**

**Affected products**

Type	Ordering Code
A80-C90X	B88069X1410C102
A80-C90X	B88069X1410C103
A80-C90X	B88069X1410T602
A80-C90XSMD	B88069X1630T602
A81-C90XB	B88069X2771C502
A81-A90XB2	B88069X8151C502
A81-C90X	B88069X1380S102
A81-C90X	B88069X1360C103
A81-C90XG	B88069X3840T502
A81-C90XAD	B88069X5430C502
A81-C90XSL	B88069X3481T602
A81-C90XSL	B88069X3481T702
A81-C90XSMD	B88069X1370T352
A81-C90XSMD	B88069X7891T352
A81-C90XSMDE	B88069X1340T352
A82-C90X	B88069X8751S102
A82-C90X	B88069X8751T502
A84-C90X	B88069X6150C103
N80-A90XL	B88069X8401C103
N80-A90XSMD	B88069X4791T602
N80-C90X	B88069X4890C103
N81-A90X	B88069X4880S102
N81-A90XG	B88069X5030T502
M50-C90X	B88069X1590C253
M50-C90X	B88069X6161T103
M51-C90X	B88069X5010S102
M51-C90X	B88069X5010C102
M51-C90XG	B88069X5020T103
M51-C90XSL	B88069X1590C253
M51-C90XSL	B88069X6781T902
M51-C90XSL2	B88069X3743T902
M50-C90XSMD	B88069X1640T902
M50-C90XSMD	B88069X4021T902
M50-C90XSMD	B88069X1640T103
M51-C90XF	B88069X2351C102
M51-A90XC1	B88069X5601B502
M51-A90XSF SMD	B88069X7231B502
M51-C90XSMD	B88069X4760T902

M51-C90XSMD2	B88069X5380T902
ES90XSMD	B88069X6241T902
ES90XP	B88069X5151B502
ES90XPA	B88069X7621B502
ES90XP1	B88069X9621B502
ES90XN	B88069X4421T103
EN90XSMD	B88069X6201T702
EN0-A90XSMD2	B88069X8961T702
EZ0-A90XFSMD	B88069X8781T902
EZ0-A90XSMD	B88069X6051T902
EZ0-A90XSMD4	B88069X3833T902
EZ3-A90X	B88069X4991B502
EZ3-A90XF4A	B88069X8501B502
S80-A90X	B88069X1673T602
S80-A90X	B88069X2293T602
S80-A90X	B88069X2703T602