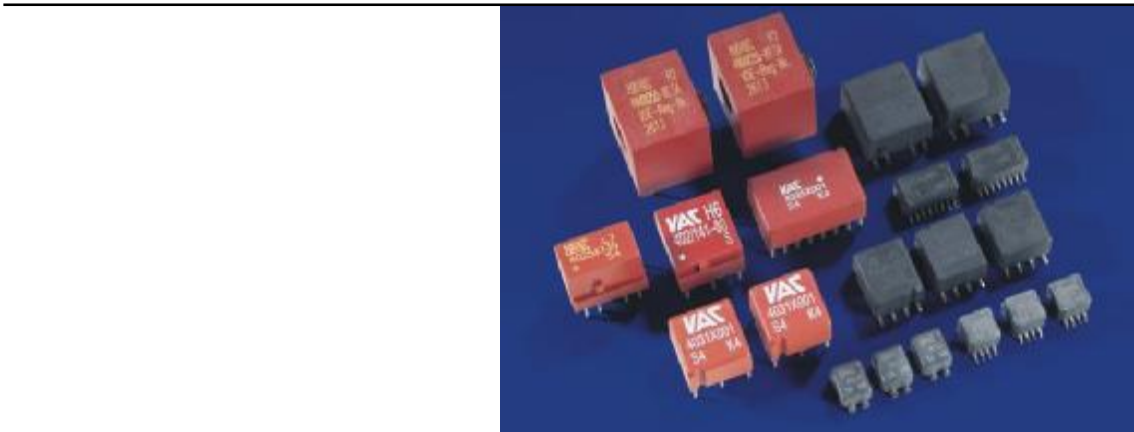


Power Line Communication Coupling Transformers



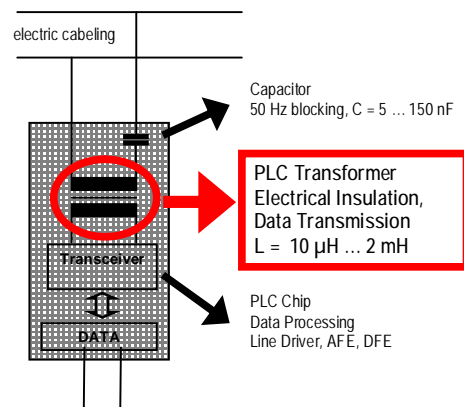
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Introduction

The PLC (Power Line Communication) will become one of the most interesting and various technology in the next few years. AMR (Automatic Meter Reading) for watt-hour-meters, water meters, gas meters, etc will become very important for controlling and economical use of the resources world wide. With PLC it can give the end-user a constant overview about the consumption and the possibility to plan economical. The general energy suppliers have the opportunity to control user-groups up to a single end-user in short time-steps. They can reduce the energy spikes up to a harmonic operation of their power stations. Home automation and PC home networking will be additional applications for PLC. The interaction between the domestic appliances and the energy meters will make the economical use perfect.

For PLC it's necessary to have a coupling transformer for the data transmission between the electric cabling and the transceiver. Its inductance has a value between 10 μH ... 2 mH and its electrical insulation (0,5 - 6kV reinforced or operational) depends on its application. The capacitor in the system is for blocking the 50 Hz or 60Hz currents.



Based on our own developed and produced amorphous material VAC offers a complete product range of PLC coupling transformers for low and high bit rate applications. Please look at the internet pages at www.vacuumschmelze.com and find your used PCL chipset and we will present you our PLC transformers in different designs. Beside the standard PLC transformer VAC also develops PLC transformer with individual requirements. The PLC transformers are manufactured by VAC in process and cost optimized plants. Our in-depth knowledge of the application fields and technical requirements puts us in a position to find the ideal solution and turns this into a competitive product.

The advantages of VAC PLC coupling transformers are:

- Excellent transmission characteristics
- High saturation current, Low THD
- Matching transformer for leading IC's with all PLC standards
- Compact designs, different casings (SMD, PTH high, PTH flat)
- Insulation according to EN 60950 / UL 1950

Technical characteristics:

Order-Nr. T60403-K	Turns ratio	Inductance (mH)	Freq. Range (MHz)	HV test (kVrms)	Design
5024-X044	1 : 1	1,4	0,001 - 1	3 *	SMD
4081-X004					PTH flat
4085-X004					PTH high
5024-X090	1 : 1 : 2	0,88	0,001 - 1	3 *	SMD
5024-K24313 ⁺	1 : 1	0,75	0,001 - 1	0,5	SMD
4096-X046 ⁺⁺	1 : 1	1,3	0,001 - 1	6 *	PTH
4096-X047	1 : 1	1,3	0,001 - 1	6 *	PTH
4021-X137	1 : 1	1,65	0,001 - 1	6 *	PTH
5024-X078	1 : 1	2,5	0,001 - 1	3 *	SMD
4031-X009	2 : 1	1,0	0,001 - 1	6 *	PTH
4325-X017	5 : 1 : 1	0,227	0.095 - 0.1485	4 *	PTH

Cross-reference-list:

Order-Nr. T60403-K	Echelon		RENESAS	STM		YITRAN
	PLT-21, PLT-22	PLT3120, PLT3150	M16C/6S	ST7536, ST7537	ST7538, ST7540	IT800
5024-X044	x	x		x	x	x
4081-X004						
4085-X004						
5024-X090		x	x		x	x
5024-K24313 ⁺		x				
4096-X046 ⁺⁺	x	x			x	x
4096-X047	x	x			x	x
4021-X137	x	x			x	
5024-X078	x	x			x	x
4031-X009					x	
4325-X017				x		

Technical details on request.

* reinforced insulation accord. to EN60950

+ under development

++ phase out type, replaced by 4096-X047

Technical characteristics:

Order-Nr. T60403-K	Turns ratio	Inductance (uH)	Freq. Range (MHz)	HV test (kVrms)	Design
5024-X043	1 / 1 : 1 / 1	23	1 - 30	3 *	SMD
4081-X003					PTH flat
4085-X003					PTH high
5024-K23658 ⁺	1 : 1 : 1	14	4 - 21	3 *	SMD
5024-K24824 ⁺	1 : 1 : 1 : 1	23	4 - 30	3 *	SMD
4031-X008	1 : 1 : 1 : 1	40	1 - 30	3 *	PTH
5011-K23560 ⁺	1,67 : 1	30	1 - 30	1	SMD

Cross-reference-list:

Order-Nr. T60403-K	DS2 DSS4200+DSS7500, DSS900X+DSS7700	Intellon INT51X1, INT5200, INT5500, INT6000	YITRAN ITM1, ITM10
5024-X043	x		x
4081-X003			
4085-X003			
5024-K23658 ⁺		x	
5024-K24824 ⁺	x	x	x
4031-X008	x	x	x
5011-K23560 ⁺	x		

Technical details on request.

* reinforced insulation accord. to EN60950
+ under development

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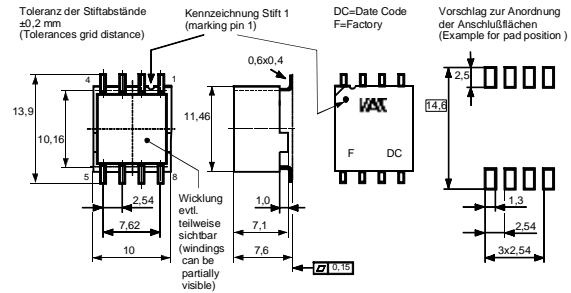


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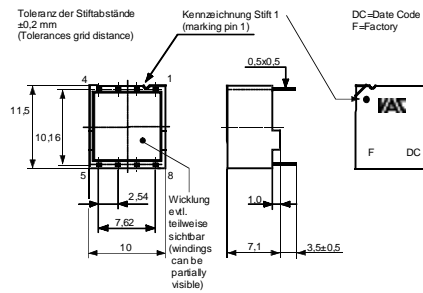


Standard Casings for VAC PLC Transformers

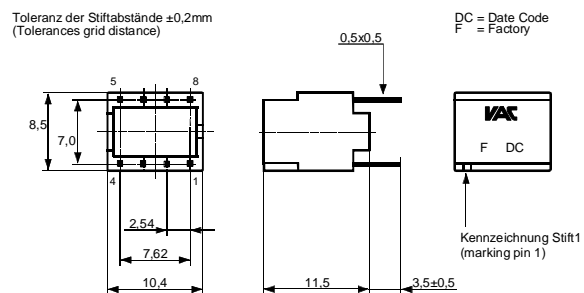
- SMD flat (5024-...)



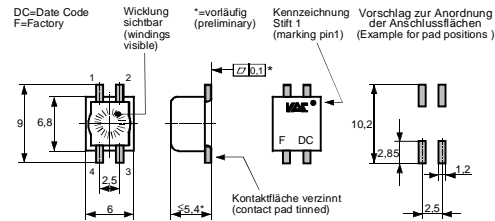
- PTH flat (4081-...)



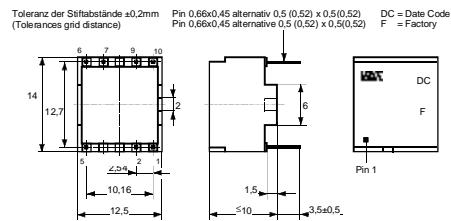
- PTH high (4085-...)



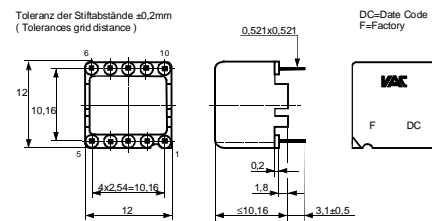
- SMD (5011...)



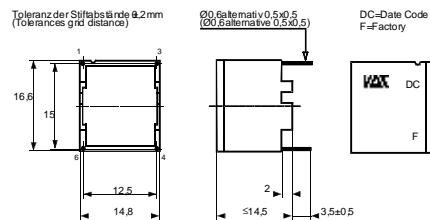
- PTH (4021-...)



- PTH (4031-...)



- PTH (4096-...)



- PTH (4325-...)

