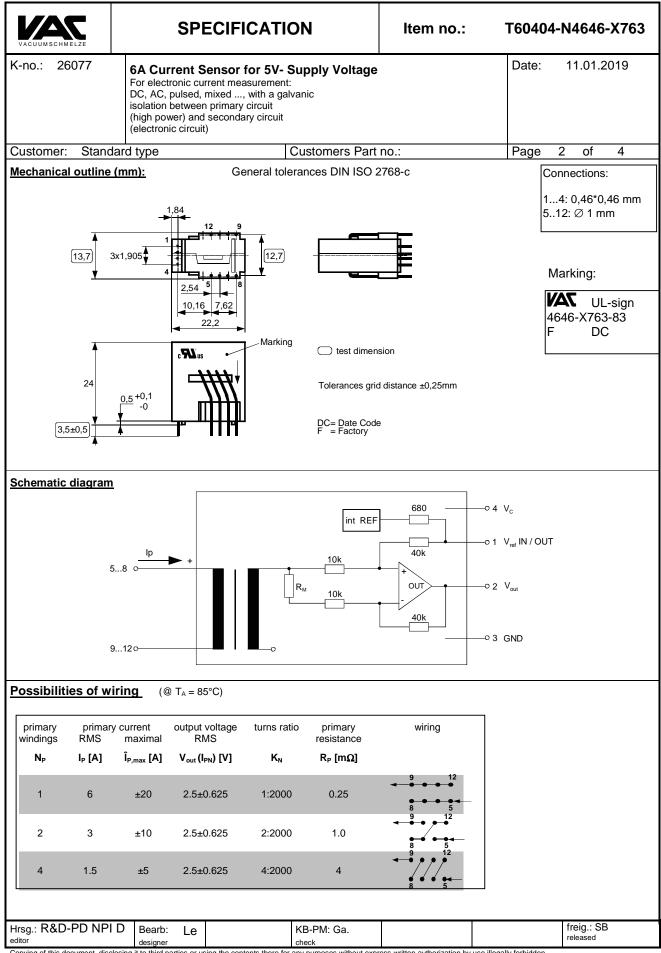
(-no.: 26077		IFICATION	lterr	n no.:	T60404	-N4646-X76
	<b>6A Current Sens</b> For electronic current DC, AC, pulsed, mixe isolation between prin (high power) and sec (electronic circuit)	ed, with a galvanic mary circuit	e		Date:	11.01.2019
Customer: Stand	lard type	Customers Par	rt no.:		Page	1 of 4
Description		cteristics		plication		
<ul> <li>Closed loop (compe Current Sensor with field probe</li> <li>Printed circuit board</li> <li>Casing and material</li> </ul>	nsation) magnetic mounting s UL-listed • Exce • Very • Shor • Very • Very	Illent accuracy Illent accuracy Iow offset current Iow temperature dependency and ent drift Iow hysteresis of offset current t response time f frequency bandwidth pact design uced offset ripple	Ma app	inly used fo blications: AC varial drives Static co Battery s Switched Power St	br stationary opera ble speed drives a nverters for DC m upplied application I Mode Power Su upplies for weldin uptible Power Sup	and servo motor notor drives ons pplies (SMPS) g applications
Electrical data – Ra	tinas					
I <sub>PN</sub>	Primary nominal r.m	n.s. current		6		А
V <sub>out</sub>	Output voltage @ I <sub>P</sub>			-	<sub>Ref</sub> ± (0.625*I <sub>P</sub> /I <sub>F</sub>	
V <sub>out</sub>	Output voltage @ I <sub>P</sub>				$R_{ef} \pm 0.0056$	V
V <sub>Ref</sub>	External Reference	-			4	V
	Internal Reference			2.	5 ± 0.005	V
K <sub>N</sub>	Turns ratio			1.	4 : 2000	
Accuracy – Dynami	ic performance data		min.	typ.	max.	Unit
P max	Max. measuring ran	ae	±20	.,6.	inux.	Unit
I <sub>P,max</sub> X	Max. measuring ran Accuracy @ I <sub>PN</sub> , T <sub>A</sub> :	0		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.7	%
Х	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> :	0		- <b>J</b> P.		
X ε <sub>L</sub>	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> = Linearity	= 25°C		.16.	0.7 0.1	%
Χ ε <sub>L</sub> V <sub>out</sub> - V <sub>Ref</sub>	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> : Linearity Offset voltage @ I <sub>P</sub> :	= 25°C =0, T <sub>A</sub> = 25°C	±20		0.7 0.1 ±5.3	% % mV
X ε <sub>L</sub> V <sub>out</sub> - V <sub>Ref</sub> ΔV <sub>o</sub> / V <sub>Ref</sub> / ΔT	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> = Linearity Offset voltage @ I <sub>P</sub> = Temperature drift of	= 25°C =0, T <sub>A</sub> = 25°C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> =	±20	6	0.7 0.1	% % mV ppm/°C
X ε <sub>L</sub> V <sub>out</sub> - V <sub>Ref</sub> ΔV <sub>o</sub> / V <sub>Ref</sub> / ΔT t <sub>r</sub>	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> Linearity Offset voltage @ I <sub>P</sub> Temperature drift of Response time @ 9	= 25°C =0, T <sub>A</sub> = 25°C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = 90% von I <sub>PN</sub>	±20	6 300	0.7 0.1 ±5.3	% % mV ppm/°C ns
X ε <sub>L</sub> V <sub>out</sub> - V <sub>Ref</sub> ΔV <sub>o</sub> / V <sub>Ref</sub> / ΔT	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> : Linearity Offset voltage @ I <sub>P</sub> = Temperature drift of Response time @ 9 Delay time at di/dt =	= 25°C =0, T <sub>A</sub> = 25°C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = 10% von I <sub>PN</sub> = 100 A/μs	±20 -4085°C	6	0.7 0.1 ±5.3	% % mV ppm/°C ns ns
X ε <sub>L</sub> ΔV <sub>out</sub> - V <sub>Ref</sub> ΔV <sub>o</sub> / V <sub>Ref</sub> / ΔT t <sub>r</sub> Δt (I <sub>P,max</sub> ) f	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> Linearity Offset voltage @ I <sub>P</sub> Temperature drift of Response time @ 9	= 25°C =0, T <sub>A</sub> = 25°C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = 10% von I <sub>PN</sub> = 100 A/μs	±20	6 300	0.7 0.1 ±5.3	% % mV ppm/°C ns
X ε <sub>L</sub> ΔV <sub>out</sub> - V <sub>Ref</sub> ΔV <sub>o</sub> / V <sub>Ref</sub> / ΔT t <sub>r</sub> Δt (I <sub>P,max</sub> ) f	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> : Linearity Offset voltage @ I <sub>P</sub> = Temperature drift of Response time @ 9 Delay time at di/dt =	= 25°C =0, T <sub>A</sub> = 25°C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = 10% von I <sub>PN</sub> = 100 A/μs	±20 -4085°C	6 300 200	0.7 0.1 ±5.3	% % mV ppm/°C ns ns
X $ε_L$ $V_{out} - V_{Ref}$ $\Delta V_o / V_{Ref} / \Delta T$ $t_r$ $\Delta t (I_{P,max})$ f <u>General data</u>	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> : Linearity Offset voltage @ I <sub>P</sub> = Temperature drift of Response time @ 9 Delay time at di/dt = Frequency bandwid	= 25°C =0, T <sub>A</sub> = 25°C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = 10% von I <sub>PN</sub> = 100 A/μs th	±20 -4085°C DC200	6 300	0.7 0.1 ±5.3 30	% % mV ppm/°C ns ns kHz
$\begin{array}{c} X \\ \epsilon_L \\ V_{out} - V_{Ref} \\ \overline{\Delta V_o} / V_{Ref} / \Delta T \\ t_r \\ \Delta t (I_{P,max}) \\ f \\ \hline \textbf{Seneral data} \\ \hline T_A \end{array}$	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> : Linearity Offset voltage @ I <sub>P</sub> = Temperature drift of Response time @ 9 Delay time at di/dt = Frequency bandwid	= 25°C =0, T <sub>A</sub> = 25°C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = 10% von I <sub>PN</sub> = 100 A/μs th emperature	±20 -4085°C DC200 min.	6 300 200	0.7 0.1 ±5.3 30 <b>max.</b> +85	% % mV ppm/°C ns ns kHz Unit
$\begin{array}{c} X \\ \epsilon_L \\ V_{out} - V_{Ref} \\ \overline{\Delta V_o} / V_{Ref} / \Delta T \\ t_r \\ \overline{\Delta t} (I_{P,max}) \\ f \end{array}$	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> Linearity Offset voltage @ I <sub>P</sub> Temperature drift of Response time @ 9 Delay time at di/dt = Frequency bandwid Ambient operating t Ambient storage ter	= 25°C =0, T <sub>A</sub> = 25°C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = 10% von I <sub>PN</sub> = 100 A/μs th emperature	±20 -4085°C DC200 min. -40	6 300 200 typ.	0.7 0.1 ±5.3 30 max.	% % mV ppm/°C ns ns kHz <b>Unit</b> °C °C
$X$ $\epsilon_{L}$ $V_{out} - V_{Ref}$ $\Delta V_{o} / V_{Ref} / \Delta T$ $t_{r}$ $\Delta t (I_{P,max})$ $f$ <b>General data</b> $T_{A}$ $T_{S}$ $m$	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> Linearity Offset voltage @ I <sub>P</sub> Temperature drift of Response time @ 9 Delay time at di/dt = Frequency bandwid Ambient operating t Ambient storage ter Mass	= 25°C =0, T <sub>A</sub> = 25°C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = 10% von I <sub>PN</sub> = 100 A/μs th emperature	±20 -4085°C DC200 min. -40 -40	6 300 200 typ.	0.7 0.1 ±5.3 30 <b>max.</b> +85 +105	% % mV ppm/°C ns ns kHz <b>Unit</b> °C
$X$ $\epsilon_{L}$ $V_{out} - V_{Ref}$ $\Delta V_{o} / V_{Ref} / \Delta T$ $t_{r}$ $\Delta t (I_{P,max})$ $f$ <b>General data</b> $T_{A}$ $T_{S}$ $m$ $V_{C}$	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> Linearity Offset voltage @ I <sub>P</sub> Temperature drift of Response time @ 9 Delay time at di/dt = Frequency bandwid Ambient operating t Ambient storage ter	= 25°C =0, $T_A$ = 25°C f $V_{out}$ @ I <sub>P</sub> =0, $V_{Ref}$ =2,5V, $T_A$ = 10% von I <sub>PN</sub> = 100 A/µs th emperature mperature	±20 -4085°C DC200 min. -40	6 300 200 typ.	0.7 0.1 ±5.3 30 <b>max.</b> +85	% % mV ppm/°C ns ns kHz Unit °C °C °C g
$X$ $\epsilon_{L}$ $V_{out} - V_{Ref}$ $\Delta V_{o} / V_{Ref} / \Delta T$ $t_{r}$ $\Delta t (I_{P,max})$ $f$ <b>General data</b> $T_{A}$ $T_{S}$ $m$	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> Linearity Offset voltage @ I <sub>P</sub> Temperature drift of Response time @ 9 Delay time at di/dt = Frequency bandwid Ambient operating t Ambient storage ter Mass Supply voltage Current consumptio Constructed and ma	= $25^{\circ}$ C =0, T <sub>A</sub> = $25^{\circ}$ C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = $100^{\circ}$ von I <sub>PN</sub> = $100 \text{ A/}\mu\text{s}$ th emperature mperature n anufactored and tested in acco	±20 -4085°C DC200 min. -40 -40 4.75	6 300 200 <b>typ.</b> 12 5 15 15	0.7 0.1 ±5.3 30 <b>max.</b> +85 +105 5.25	% % mV ppm/°C ns ns kHz <b>Unit</b> °C °C g V V mA
$X$ $\epsilon_{L}$ $V_{out} - V_{Ref}$ $\Delta V_{o} / V_{Ref} / \Delta T$ $t_{r}$ $\Delta t (I_{P,max})$ $f$ <b>General data</b> $T_{A}$ $T_{S}$ $m$ $V_{C}$	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> Linearity Offset voltage @ I <sub>P</sub> Temperature drift of Response time @ 9 Delay time at di/dt = Frequency bandwid Ambient operating t Ambient storage ter Mass Supply voltage Current consumptio Constructed and ma	= $25^{\circ}$ C =0, T <sub>A</sub> = $25^{\circ}$ C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = 10% von I <sub>PN</sub> = 100 A/µs th emperature nperature n anufactored and tested in acco n, Insulation material group 1	±20 -4085°C DC200 min. -40 -40 4.75	6 300 200 <b>typ.</b> 12 5 15 15	0.7 0.1 ±5.3 30 <b>max.</b> +85 +105 5.25	% % mV ppm/°C ns ns kHz <b>Unit</b> °C °C g V V mA
X $\epsilon_L$ $V_{out} - V_{Ref}$ $\Delta V_o / V_{Ref} / \Delta T$ $t_r$ $\Delta t (I_{P,max})$ f <b>General data</b> T <sub>A</sub> T <sub>S</sub> m V <sub>C</sub> I <sub>C</sub>	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> : Linearity Offset voltage @ I <sub>P</sub> = Temperature drift of Response time @ 9 Delay time at di/dt = Frequency bandwid Ambient operating t Ambient storage ter Mass Supply voltage Current consumptio Constructed and ma Reinforced insulatio	= $25^{\circ}$ C =0, T <sub>A</sub> = $25^{\circ}$ C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = 10% von I <sub>PN</sub> = 100 A/µs th emperature nperature n anufactored and tested in acco n, Insulation material group 1 ent without solder pad)	±20 -4085°C DC200 min. -40 -40 4.75	6 300 200 <b>typ.</b> 12 5 15 15	0.7 0.1 ±5.3 30 <b>max.</b> +85 +105 5.25	% % mV ppm/°C ns ns kHz Unit °C °C °C g V v mA
$ \begin{array}{c} X \\ \hline {} \\ \hline \\ \hline {} \\ \hline \hline \\ \hline \\ \hline \\ \hline \hline \\ \hline \\ \hline \hline \\ \hline \\ \hline \hline \hline \\ \hline \hline \hline \\ \hline \hline \hline \hline \\ \hline \hline \hline \hline \hline \\ \hline \hline$	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> : Linearity Offset voltage @ I <sub>P</sub> : Temperature drift of Response time @ 9 Delay time at di/dt = Frequency bandwid Ambient operating t Ambient storage ter Mass Supply voltage Current consumptio Constructed and ma Reinforced insulatio Clearance (compone Creepage (compone System voltage	= $25^{\circ}$ C =0, T <sub>A</sub> = $25^{\circ}$ C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = 10% von I <sub>PN</sub> = 100 A/µs th emperature nperature n anufactored and tested in acco n, Insulation material group 1 ent without solder pad)	±20 -4085°C DC200 min. -40 -40 4.75 ordance with , Pollution do 9.6 10.6 RMS	6 300 200 <b>typ.</b> 12 5 15 15	0.7 0.1 ±5.3 30 max. +85 +105 5.25 0-5-1 (Pin 1 – 41) 600	% % mV ppm/°C ns ns kHz Unit °C °C °C g V mA to Pin 5 – 12) mm mm V
$X$ EL Vout - VRef $\Delta V_o / V_{Ref} / \Delta T$ tr $\Delta t (I_{P,max})$ f General data $T_A$ Ts m Vc Ic Ic $S_{clear}$ S_{creep}	Accuracy @ I <sub>PN</sub> , T <sub>A</sub> : Linearity Offset voltage @ I <sub>P</sub> = Temperature drift of Response time @ 9 Delay time at di/dt = Frequency bandwid Ambient operating t Ambient storage ter Mass Supply voltage Current consumption Constructed and ma Reinforced insulation Clearance (component	= $25^{\circ}$ C =0, T <sub>A</sub> = $25^{\circ}$ C f V <sub>out</sub> @ I <sub>P</sub> =0, V <sub>Ref</sub> =2,5V, T <sub>A</sub> = $100^{\circ}$ von I <sub>PN</sub> = $100 \text{ A/}\mu\text{s}$ th emperature mperature n anufactored and tested in acco on, Insulation material group 1 ent without solder pad) nt without solder pad) overvoltage category 3	±20 -4085°C DC200 min. -40 -40 4.75 ordance with , Pollution de 9.6 10.6	6 300 200 <b>typ.</b> 12 5 15 15 EN 6180 egree 2	0.7 0.1 ±5.3 30 max. +85 +105 5.25 0-5-1 (Pin 1 – 41)	% % mV ppm/°C ns ns kHz Unit °C °C °C g V v mA to Pin 5 – 12) mm mm



VACUUMSCHMELZE		:	SPECIFICATION	ltem	no.:	T60404-M	N4646-X76
-no.: 2607	7	For electron DC, AC, pu isolation be	ent Sensor for 5V- Supply Volta nic current measurement: ulsed, mixed, with a galvanic etween primary circuit r) and secondary circuit circuit)	ige		Date:	11.01.2019
ustomer: S	Standa	rd type	Customers P	art no.:		Page 3	of 4
lectrical Data	1						
				min.	typ.	max.	Unit
V <sub>Ctot</sub>			supply voltage (without function)			7	V
lc			rrent with primary current	15mA	+Ip*KN+Vou	t/RL	mA
out,SC			lit output current		±20		mA
R <sub>P</sub>			e / primary winding @ T <sub>A</sub> =25°C		1		mΩ
Rs			v coil resistance @ T <sub>A</sub> =85°C			67	Ω
R <sub>i,Ref</sub>			sistance of Reference input		670		Ω
R <sub>i</sub> ,(V <sub>out</sub> )			istance of V <sub>out</sub>			1	Ω
RL			ecommended resistance of V <sub>out</sub>	1			kΩ
CL			ecommended capacitance of Vout			500	pF
$\Delta X_{Ti} / \Delta T$		•	are drift of X @ $T_A = -40 \dots +85 \ ^{\circ}C$		_	40	ppm/K
$\Delta V_0 = \Delta (V_{out} -$	V <sub>Ref</sub> )		y offset drift including:		5	15	mV
V <sub>0t</sub>		Longtermd			3		mV
V <sub>0T</sub>			are drift von $V_0 @ T_A = -40+85^{\circ}C$		3	7.5	mV
V <sub>0H</sub>			of $V_{out} @ I_P=0$ (after an overload of 10	x I <sub>PN</sub> )		7.5	mV
$\Delta V_0 / \Delta V_0$	VC		tage rejection ratio			1	mV/V
V <sub>oss</sub>			e (with 1 MHz- filter first order)		0	55	mV
Voss			e (with 100 kHz- filter first order)		9	15 4	mV
Voss		Unsetribble	e (with 20 kHz- filter first order)				mV
				secondary	2.5	-	
k		Maximum   Mechanica	possible coupling capacity (primary - al stress according to M3209/3	- secondary)	2.5 5	4 10 30	pF g
k	easurem	Maximum Mechanica Settings: 1	possible coupling capacity (primary -		5	10 30	pF
nspection (Me		Maximum   Mechanica Settings: 1 ent after temp	possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours perature balance of the samples at room		5	10 30 t characteristic)	pF g
k Ispection (Me V <sub>out</sub>	(V)	Maximum Mechanica Settings: 1	possible coupling capacity (primary - al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours		5	10 30	pF
k	(∨) (∨)	Maximum Mechanica Settings: 1 ent after temp M3011/6:	possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours perature balance of the samples at room Output voltage		5	10 30 t characteristic) 625±0,7%	pF g mV (SC)
ik Nout Vout V <sub>out</sub> -V <sub>Ref</sub> V <sub>d</sub>	(V) (V) (V)	Maximum   Mechanica Settings: 1 ent after temp M3011/6: M3226: M3014:	possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours perature balance of the samples at room Output voltage Offset voltage Test voltage, 1 s pin 1 – 4 vs. pin 5 – 12	temperature; SC	5	$\begin{array}{c} 10\\ 30\\ \hline \\ \text{characteristic)}\\ 625\pm0,7\%\\ \pm 5.3\\ 1.8\\ \end{array}$	pF g mV (SC) mV kV
ik Not Nout Vout	(V) (V) (V)	Maximum   Mechanica Settings: 1 ent after temp M3011/6: M3226:	possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours perature balance of the samples at room Output voltage Offset voltage Test voltage, 1 s pin 1 – 4 vs. pin 5 – 12 Partial discharge voltage acc.M302	temperature; SC	5	10 30 t characteristic) $625\pm0,7\%$ $\pm 5.3$ 1.8 1400	pF g mV (SC) mV kV V <sub>RMS</sub>
ik Nout Vout V <sub>out</sub> -V <sub>Ref</sub> V <sub>d</sub>	(V) (V) (V)	Maximum   Mechanica Settings: 1 ent after temp M3011/6: M3226: M3014:	possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours perature balance of the samples at room Output voltage Offset voltage Test voltage, 1 s pin 1 – 4 vs. pin 5 – 12	temperature; SC	5	$\begin{array}{c} 10\\ 30\\ \hline \\ \text{characteristic)}\\ 625\pm0,7\%\\ \pm 5.3\\ 1.8\\ \end{array}$	pF g mV (SC) mV kV
k Ispection (Me V <sub>out</sub> V <sub>out</sub> –V <sub>Ref</sub> V <sub>d</sub> V <sub>e</sub>	(V) (V) (V) (AQL	Maximum Mechanica Settings: 1 ent after temp M3011/6: M3226: M3014: - 1/S4)	possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours perature balance of the samples at room Output voltage Offset voltage Test voltage, 1 s pin 1 – 4 vs. pin 5 – 12 Partial discharge voltage acc.M302 with $V_{vor}$	temperature; SC	5	10 30 t characteristic) $625\pm0,7\%$ $\pm 5.3$ 1.8 1400	pF g mV (SC) mV kV V <sub>RMS</sub>
k Nout Vout Vd Ve Ye Ype Testing	(V) (V) (V) (AQL	Maximum   Mechanica Settings: 1 ent after temp M3011/6: M3226: M3014: - 1/S4) 4 to Pin 5 - 12	possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours perature balance of the samples at room Output voltage Offset voltage Test voltage, 1 s pin 1 – 4 vs. pin 5 – 12 Partial discharge voltage acc.M302 with $V_{vor}$	temperature; SC	5 = significant	10 30 a characteristic) 625±0,7% ± 5.3 1.8 1400 1750	pF g mV (SC) mV kV VRMS VRMS
k Nout Vout Vd Ve Ye Ype Testing	(V) (V) (V) (AQL	Maximum   Mechanica Settings: 1 ent after temp M3011/6: M3226: M3014: - 1/S4) 4 to Pin 5 - 12 HV transie	possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours perature balance of the samples at room Output voltage Offset voltage Test voltage, 1 s pin 1 – 4 vs. pin 5 – 12 Partial discharge voltage acc.M302 with $V_{vor}$ 2) nt test according to M3064 (1,2 µs / 5	temperature; SC	5 = significant	10 30 t characteristic) $625\pm0,7\%$ $\pm 5.3$ 1.8 1400	pF g mV (SC) mV kV V <sub>RMS</sub>
n <mark>spection</mark> (Me V <sub>out</sub> V <sub>out</sub> -V <sub>Ref</sub> V <sub>d</sub> V <sub>e</sub> <u>vpe Testing</u> V <sub>W</sub>	(V) (V) (V) (AQL	Maximum   Mechanica Settings: 1 ent after temp M3011/6: M3226: M3014: - 1/S4) 4 to Pin 5 - 12 HV transie 5 pulses ->	possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours perature balance of the samples at room Output voltage Offset voltage Test voltage, 1 s pin 1 – 4 vs. pin 5 – 12 Partial discharge voltage acc.M302 with V <sub>vor</sub> 2) nt test according to M3064 (1,2 µs / 5 pol. +, 5 pulses -> pol	temperature; SC	5 = significant n)	10 30 a characteristic) 625±0,7% ± 5.3 1.8 1400 1750	pF g mV (SC) mV kV VRMS VRMS kV
n <mark>spection</mark> (Me V <sub>out</sub> V <sub>out</sub> –V <sub>Ref</sub> V <sub>d</sub> V <sub>e</sub> ype Testing	(V) (V) (V) (AQL	Maximum   Mechanica Settings: 1 ent after temp M3011/6: M3226: M3014: - 1/S4) 4 to Pin 5 - 12 HV transie 5 pulses -> Testing vol Partial disc	possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours perature balance of the samples at room Output voltage Offset voltage Test voltage, 1 s pin 1 – 4 vs. pin 5 – 12 Partial discharge voltage acc.M302 with $V_{vor}$ 2) nt test according to M3064 (1,2 µs / 5	temperature; SC	5 = significant	10 30 a characteristic) $625\pm0,7\%$ $\pm 5.3$ 1.8 1400 1750 8	pF g mV (SC) mV kV VRMS VRMS
n <mark>spection</mark> (Me V <sub>out</sub> V <sub>out</sub> —V <sub>Ref</sub> V <sub>d</sub> V <sub>e</sub> <u>ype Testing</u> V <sub>W</sub> V <sub>d</sub>	(V) (V) (V) (AQL	Maximum   Mechanica Settings: 1 ent after temp M3011/6: M3014: - 1/S4) 4 to Pin 5 - 12 HV transie 5 pulses -> Testing vol	possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours perature balance of the samples at room Output voltage Offset voltage Test voltage, 1 s pin 1 – 4 vs. pin 5 – 12 Partial discharge voltage acc.M302 with $V_{vor}$ 2) nt test according to M3064 (1,2 µs / 3 > pol. +, 5 pulses -> pol. – Itage to M3014	temperature; SC	5 = significant n)	10 30 a characteristic) 625±0,7% ± 5.3 1.8 1400 1750 8 3.6	pF g mV (SC) mV kV VRMS VRMS kV kV
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n <mark>spection</mark> (Me V <sub>out</sub> V <sub>out</sub> —V <sub>Ref</sub> V <sub>d</sub> V <sub>e</sub> <u>ype Testing</u> V <sub>W</sub> V <sub>d</sub>	(V) (V) (V) (AQL	Maximum   Mechanica Settings: 1 ent after temp M3011/6: M3226: M3014: - 1/S4) 4 to Pin 5 - 12 HV transie 5 pulses -> Testing vol Partial disc with V <sub>vor</sub>	possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours perature balance of the samples at room Output voltage Offset voltage Test voltage, 1 s pin 1 – 4 vs. pin 5 – 12 Partial discharge voltage acc.M302 with $V_{vor}$ 2) nt test according to M3064 (1,2 µs / 3 > pol. +, 5 pulses -> pol. – Itage to M3014	temperature; SC	5 = significant n)	10 30 a characteristic) 625±0,7% ± 5.3 1.8 1400 1750 8 3.6 1400	pF g mV (SC) mV kV VRMS VRMS kV kV RMS
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ik Inspection (Me Vout Vout Vd Ve Ve Ve Vw Vd Vd Ve Pplicable down urrent direction: urther standards	(V) (V) (V) (AQL (Pin 1 - 4 <u>cument</u> : A positi s U	Maximum   Mechanica Settings: 1 ent after temp M3011/6: M3226: M3014: - 1/S4) 4 to Pin 5 - 12 HV transie 5 pulses -> Testing vol Partial disc with V <sub>vor</sub> Es ve output vol L 508 file E3	<ul> <li>possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours</li> <li>perature balance of the samples at room</li> <li>Output voltage</li> <li>Offset voltage</li> <li>Test voltage, 1 s</li> <li>pin 1 – 4 vs. pin 5 – 12</li> <li>Partial discharge voltage acc.M302 with V<sub>vor</sub></li> <li>2)</li> <li>nt test according to M3064 (1,2 µs / s – pol. +, 5 pulses -&gt; pol</li> <li>Itage to M3014</li> <li>charge voltage acc.M3024</li> </ul>	temperature; SC 24 50 µs-wave forr	5 = significant m) (5 s) of the arrow	10 30 a characteristic) 625±0,7% ± 5.3 1.8 1400 1750 8 3.6 1400 1750	pF g mV (SC) mV kV VRMS VRMS kV kV RMS
ik Inspection (Me Vout Vout Vd Ve Ve Ve Vw Vd Vd Ve Pplicable down urrent direction: urther standards	(V) (V) (V) (AQL (Pin 1 - 4 (Pin 1 - 4 (Pin 1 - 4 (AQL (AQL)	Maximum   Mechanica Settings: 1 ent after temp M3011/6: M3226: M3014: - 1/S4) 4 to Pin 5 - 12 HV transie 5 pulses -> Testing vol Partial disc with V <sub>vor</sub> 2 S ve output vol L 508 file E3 the current s	<ul> <li>possible coupling capacity (primary – al stress according to M3209/3 0 – 2000 Hz, 1 min/Oktave, 2 hours</li> <li>perature balance of the samples at room</li> <li>Output voltage</li> <li>Offset voltage</li> <li>Test voltage, 1 s</li> <li>pin 1 – 4 vs. pin 5 – 12</li> <li>Partial discharge voltage acc.M302 with V<sub>vor</sub></li> <li>2)</li> <li>nt test according to M3064 (1,2 µs / s – pol. +, 5 pulses -&gt; pol</li> <li>Itage to M3014</li> <li>charge voltage acc.M3024</li> </ul>	temperature; SC 24 50 µs-wave forr	5 = significant m) (5 s) of the arrow	10 30 a characteristic) 625±0,7% ± 5.3 1.8 1400 1750 8 3.6 1400 1750	pF g mV (SC) mV kV VRMS VRMS kV kV RMS

Customer: Explanation t <sub>r</sub> : Δt (I <sub>Pmax</sub> ): V <sub>0</sub> : U <sub>PD</sub> F U V <sub>vor</sub> E V V <sub>vor</sub> S V <sub>vor</sub> S V <sub>work</sub> V V <sub>oH</sub> :	$\frac{1}{10000000000000000000000000000000000$	For electronic cur DC, AC, pulsed, j isolation between (high power) and (electronic circuit type of the terms u ime (describe th I <sub>PN</sub> between a (describe the dy between I <sub>Pmax</sub> ar ge between V <sub>ou</sub> - 2,5V rge voltage (rec $\sqrt{2} * V_e / 1,5$ ge is the RMS v	rent measurement mixed, with a gal primary circuit secondary circuit ) sed in the table ne dynamic perfor rectangular curre mamic performan nd the output volt t and the rated re	Vanic Customers Part ts (in alphabetica rmance for the sp int and the output nce for the rapid c	<b>II order)</b> ecified measurement voltage $V_{OUt}$ (I <sub>p</sub> ) urrent pulse rate e.g s n a primary current ris f $V_{ref} = 2,5V$ .	Page 4 range), measured short circuit current e of di <sub>P</sub> /dt ≥ 100 A	:)
Explanation tr: Δt (I <sub>Pmax</sub> ): V <sub>0</sub> : U <sub>PD</sub> F L V <sub>vor</sub> E V V <sub>vor</sub> S V <sub>vor</sub> S V <sub>work</sub> V V <sub>oH</sub> :	n of several         Response ti         at $I_P = 0,9$ Delay time (         measured b         Offset voltag $V_o = V_{out}(0)$ Rated dischard $J_{PD}$ Defined voltag         cest in IEC 61	of the terms u ime (describe the $I_{PN}$ between a final describe the dy detween $I_{Pmax}$ are ge between $V_{out}$ - 2,5V rge voltage (rec $\sqrt{2} * V_e / 1,5$ ge is the RMS v	ised in the table ne dynamic perfo rectangular curre mamic performan nd the output volt t and the rated re	ts (in alphabetica rmance for the sp int and the output nce for the rapid c age V <sub>out</sub> (I <sub>Pmax</sub> ) with eference voltage o	<b>II order)</b> ecified measurement voltage $V_{OUt}$ (I <sub>p</sub> ) urrent pulse rate e.g s n a primary current ris f $V_{ref} = 2,5V$ .	range), measured short circuit current e of di <sub>P</sub> /dt ≥ 100 A	as delay time
t <sub>r</sub> : $\Delta t (I_{Pmax}):$ $V_0:$ $U_{PD}$ F $U_{Vor}$ E $V_{vor}$ E $V_{vor}$ V $V_{sys}$ S $V_{work}$ V $V_{0H}:$	Response ti at $I_P = 0.9$ Delay time ( measured b Offset voltar $V_0 = V_{out}(0)$ Rated dischard $J_{PD}$ = Defined voltar est in IEC 61	time (describe the $I_{PN}$ between a (describe the dy between $I_{Pmax}$ ar ge between $V_{ou}$ - 2,5V rge voltage (rec $\sqrt{2} * V_e / 1,5$ ge is the RMS v	ne dynamic perfo rectangular curre ynamic performar nd the output volt t and the rated re	rmance for the sp nt and the output nce for the rapid c age V <sub>out</sub> (I <sub>Pmax</sub> ) with eference voltage o	ecified measurement voltage V <sub>OUt</sub> (I <sub>p</sub> ) urrent pulse rate e.g s n a primary current ris f V <sub>ref</sub> = 2,5V.	short circuit current e of di <sub>P</sub> /dt ≥ 100 A	:)
Δt (I <sub>Pmax</sub> ): V <sub>0</sub> : U <sub>PD</sub> F U V <sub>vor</sub> E t V V <sub>sys</sub> S V <sub>work</sub> V V <sub>oH</sub> :	at $I_P = 0.9$ Delay time ( measured b Offset voltar $V_o = V_{out}(0)$ Rated dischar $J_{PD} =$ Defined voltar est in IEC 61	$I_{PN}$ between a (describe the dynamic etween $I_{Pmax}$ and $I_{Pmax}$ are ge between $V_{ou}$ - 2,5V rge voltage (reconstructed on the second s	rectangular curre vnamic performar nd the output volt t and the rated re	nt and the output nce for the rapid c age V <sub>out</sub> (I <sub>Pmax</sub> ) with eference voltage o	voltage V <sub>OUt</sub> (I <sub>p</sub> ) urrent pulse rate e.g s n a primary current ris f V <sub>ref</sub> = 2,5V.	short circuit current e of di <sub>P</sub> /dt ≥ 100 A	:)
V <sub>0</sub> : U <sub>PD</sub> FU V <sub>vor</sub> Ev V <sub>sys</sub> S V <sub>work</sub> V V <sub>oH</sub> :	measured b Offset voltar $V_o = V_{out}(0)$ Rated dischard $J_{PD} =$ Defined voltar est in IEC 61	etween $I_{Pmax}$ ar ge between $V_{ou}$ - 2,5V rge voltage (rec $\sqrt{2} * V_e / 1,5$ ge is the RMS v	nd the output volt $_{\rm t}$ and the rated re	age V <sub>out</sub> (I <sub>Pmax</sub> ) with	n a primary current ris f V <sub>ref</sub> = 2,5V.	e of di <sub>P</sub> /dt ≥ 100 A	
U <sub>PD</sub> FU V <sub>vor</sub> E V <sub>sys</sub> S V <sub>work</sub> V V <sub>0H</sub> :	$V_o = V_{out}(0)$ Rated dischal $J_{PD} =$ Defined voltagest in IEC 61	- 2,5V rge voltage (rec : √2 * V <sub>e</sub> / 1,5 ge is the RMS v					
V <sub>vor</sub> E tr V V <sub>sys</sub> S V <sub>work</sub> V V <sub>0H</sub> :	J <sub>PD</sub> = Defined voltagest in IEC 61	$= \sqrt{2} \times V_e / 1,5$ ge is the RMS v	curring peak volta	ige separated by t	ha inculation)		
te V V <sub>sys</sub> S V <sub>work</sub> V V <sub>0H</sub> :	est in IEC 61				ne insulation) proved	with a sinusoidal v	oltage V <sub>e</sub>
V <sub>sys</sub> S V <sub>work</sub> V V <sub>0H</sub> :				dal voltage with p	eak value of 1,875 * U	$J_{PD}$ required for pa	rtial discharge
V <sub>work</sub> V V <sub>0H</sub> :	V <sub>vor</sub> =	: 1,875 *U <sub>PD</sub> / √	2				
V <sub>0H</sub> :	System volta	ge RMS val	ue of rated volta	ge according to IE	C 61800-5-1		
	Working volta	ge voltage a	ccording to IEC 6	61800-5-1 which o	ccurs by design in a c	circuit or across ins	sulation
	Zero variatio	on of V <sub>o</sub> after ov	verloading with a	DC of tenfold the	rated value		
V <sub>0t</sub> :	Long term o	Irift of V <sub>o</sub> after 1	00 temperature of	cycles in the range	e -40 bis 85 °C.		
X:				nspection at RT, o	lefined by		
	X =100	$\left  \frac{V_{\text{out}}(I_{PN})}{0,623} \right $	$\frac{-V_{out}(0)}{5V} - 1$	%			
X <sub>ges</sub> (I <sub>PN</sub> ):					$\frac{V_{out} (I_{PN}) - V_{ref}}{0,625 V} - 1$		rement I <sub>PN</sub>
ε <sub>L</sub> :	Linearity fau	It defined by	$\varepsilon_{\rm L} = 100 \cdot \left  \frac{\rm I}{\rm I_{\rm I}} \right $	$\frac{P}{P_{N}} = \frac{V_{out}(I_{P}) - V_{out}}{V_{out}(I_{PN}) - V_{out}}$	$\left  \begin{array}{c} V_{out}(0) \\ V_{out}(0) \end{array} \right  \%$		
Hrsg.: R&D·		Bearb: Le		KB-PM: Ga.		fre	eig.: SB