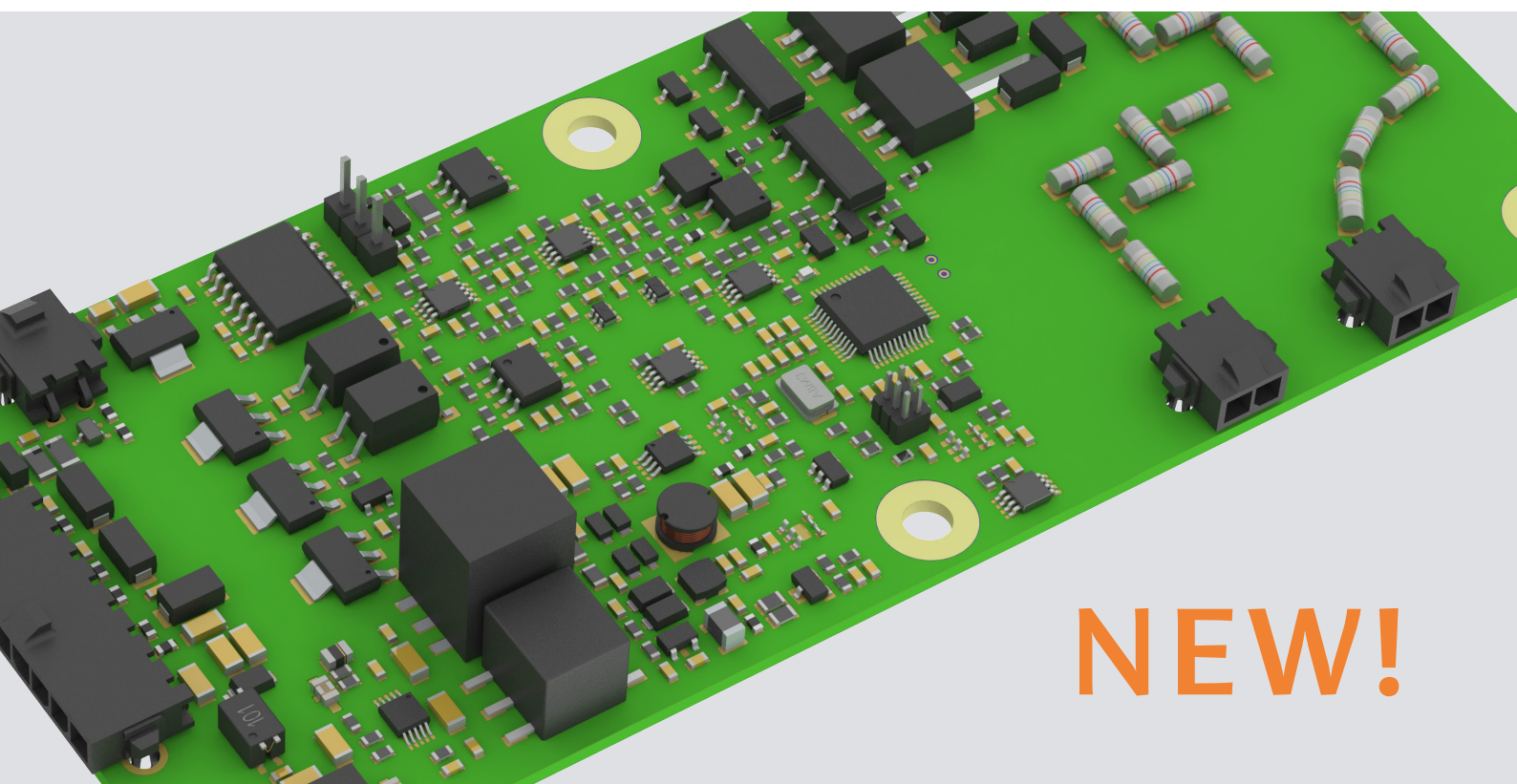


Trafo Ω x Superintend[®]

IM-07DCCT_24 FOR EV INSTALLATIONS.

IM-07DCCT.CCS_24 FOR CCS CHARGING SYSTEM.

IM-07DCCT.MCS_24 FOR MCS CHARGING SYSTEM.



NEW!

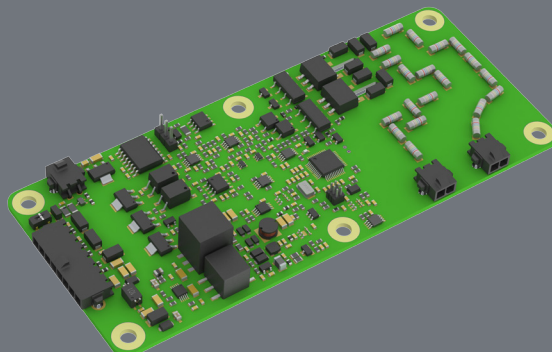
Electric
Vehicles

IMD Insulation
Monitoring device

Insulation Monitoring device IM-07DCCT for Electric vehicles and charging stations

NEW!

IM-07DCCT for EV installations
 IM-07DCCT.CCS for CCS charging system.
 IM-07DCCT.MCS for MCS charging system.



- Measurement method: pulse
- For voltages up to 1250 VDC
- Monitoring of system voltage
- Short circuit proof and galvanically isolated outputs for system status
 - system OK or alarm
 - indication of insulation resistance with PWM signal
- CAN bus interface
- Disconnection functionality of HV connectors at EV versions.

Monitored circuit

DC Voltage range	1000V (EV and CCS) / 1250V (MCS)
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Auxiliary supply voltage

DC supply voltage	24 VDC
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Monitoring functions

Insulation resistance between HV circuit and earth
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Connection of the earth wires

System voltage level

Self-test

Outputs

Status output	· High side (external pull-down resistor required)
	· High = system ok, insulation resistance above alarm level
	· Low = alarm situation (insulation resistance below alarm level, system fault, earth wire disconnected, system undervoltage or supply voltage disconnected)

PWM output	· Low side (external pull-up resistor required)
	· High side (external pull-down resistor required)
	· Indication of the measured insulation resistance and possible fault conditions

CAN bus interface	High speed CAN, internal terminating resistor 120 Ω
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Outputs are short circuit proof and galvanically isolated from the HV side

Alarm parameters (set at factory or with the CAN bus interface)

Insulation resistance response value R_{an}	50k Ω ...1M Ω
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Insulation resistance response value hysteresis	5 %
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Undervoltage detection threshold	OFF / 20...1000V
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Averaging factor	1...10
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Measuring specifications

Measuring range	0k Ω ...>10M Ω
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Measuring voltage U_M	$\pm 35V$
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System leakage capacitance C_e (nominal measurement specifications)	$\leq 30\mu F$ (MCS)
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Other details

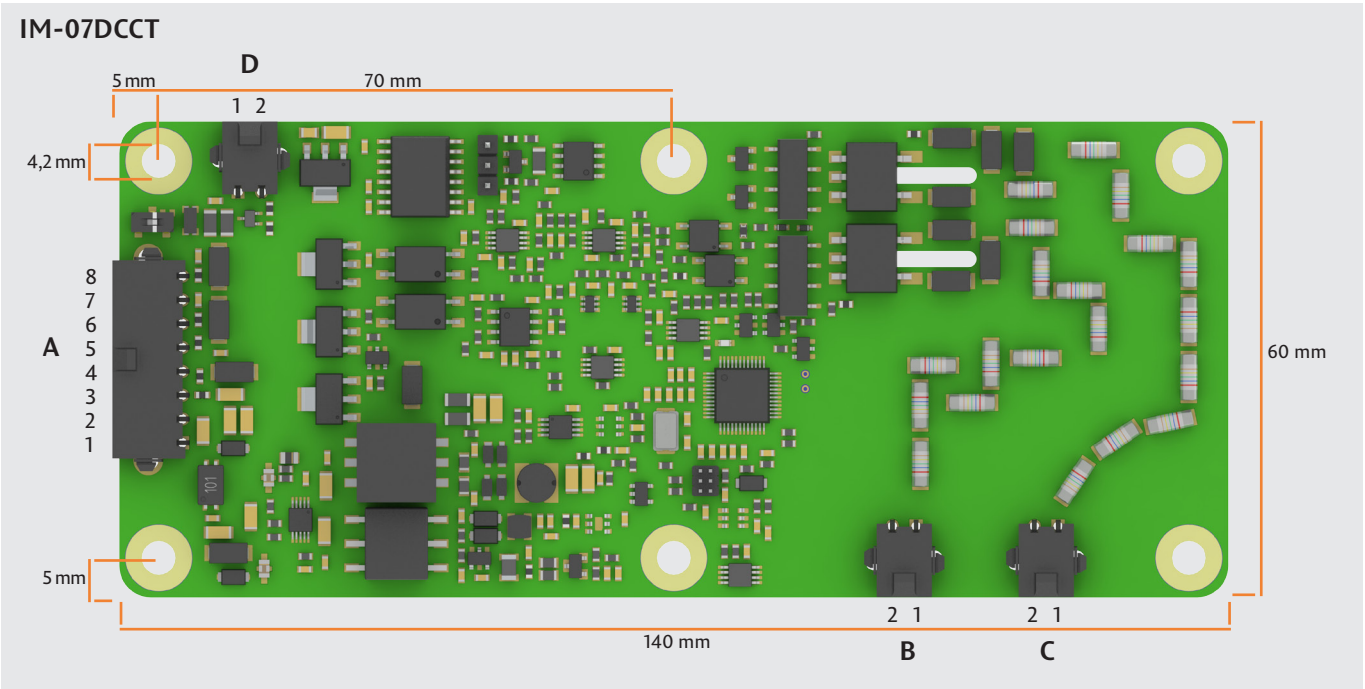
Operating temperature	-40...+70°C
Operating humidity (max.)	95% without condensation
Mounting	M4 metal screws
Maximum dimensions - Height	15mm
Maximum dimensions - Width	60mm
Maximum dimensions - Length	140mm
Weight	43g

Standards

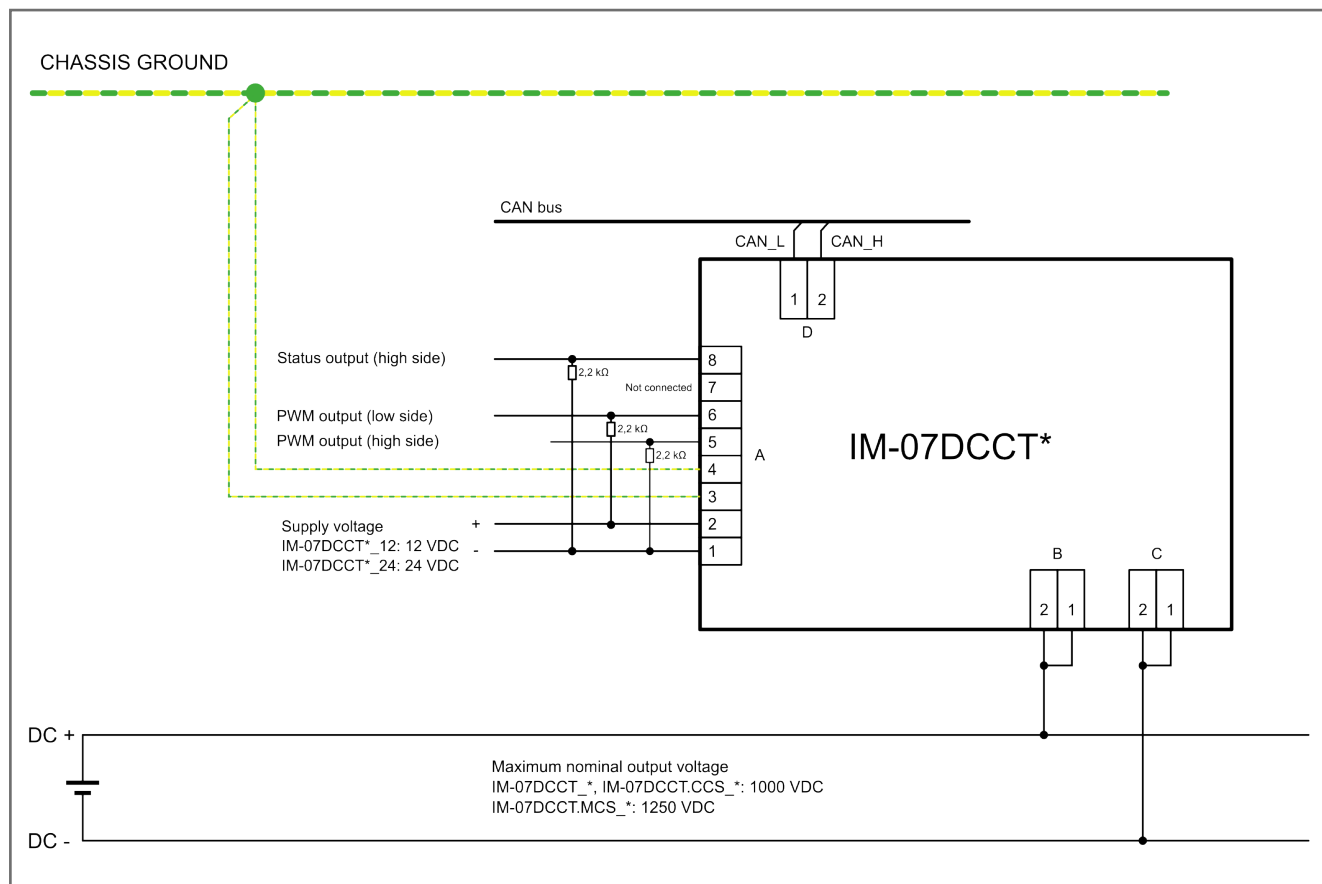
		IM-07DCCT	IM-07DCCT.CCS	IM-07DCCT.MCS
Measurements	IEC 61557-8:2014 (requires alarm indicator implemented at the customer's installation)	x	x	x
Safety	IEC 61010-1:2010 (3rd Edition), IEC 60664-1	x	x	x
EMC	IEC 61326-2-4 ISO 10605	x x	x	x
Electrically propelled road vehicles – Safety specifications	ISO 6469-3:2021	x		
Road vehicles – Environmental conditions and testing for electrical and electronic equipment	ISO 16750-1, ISO 16750-2, ISO 16750-3	x		
Environmental tests	IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-30, IEC 60068-2-38, IEC 60068-2-64	x		
Electric vehicle conductive charging system – Part 23: DC electric vehicle supply equipment	IEC 61851-23:2023		x	
Electric vehicle conductive charging system – Part 23-3: DC electric vehicle supply equipment – Megawatt charging systems	IEC 61851-23-3:2026			x

Connectors

A	PCB connector type	TE Connectivity Micro MATE-N-LOK 2-1445088-8
	Crimp contacts	8 x TE Connectivity Micro MATE-N-LOK 1-794606-1
	Housing for crimp contacts	TE Connectivity Micro MATE-N-LOK 1445022-8
	Pin 1	Negative supply voltage
	Pin 2	Positive supply voltage
	Pin 3	Chassis ground
	Pin 4	Chassis ground (must be separate wire)
	Pin 5	PWM output (high side)
	Pin 6	PWM output (low side)
	Pin 7	not connected
	Pin 8	Status output (high side)
B	PCB connector type	TE Connectivity Micro MATE-N-LOK 2-1445088-2
	Crimp contacts	2 x TE Connectivity Micro MATE-N-LOK 1-794606-1
	Housing for crimp contacts	TE Connectivity Micro MATE-N-LOK 1445022-2
	Pin 1	HV line + (M2)
	Pin 2	HV line + (M2)
C	PCB connector type	TE Connectivity Micro MATE-N-LOK 2-1445088-2
	Crimp contacts	2 x TE Connectivity Micro MATE-N-LOK 1-794606-1
	Housing for crimp contacts	TE Connectivity Micro MATE-N-LOK 1445022-2
	Pin 1	HV line – (M1)
	Pin 2	HV line – (M1)
D	PCB connector type	TE Connectivity Micro MATE-N-LOK 2-1445088-2
	Crimp contacts	2 x TE Connectivity Micro MATE-N-LOK 1-794606-1
	Housing for crimp contacts	TE Connectivity Micro MATE-N-LOK 1445022-2
	Pin 1	CAN_L
	Pin 2	CAN_H



Insulation surveillance system IM-07DCCT* for electric vehicles and charging stations



Muuntosähkö

Trafox is a brand of Muuntosähkö Oy. We develop, manufacture and customise high-quality transformers, chokes, filters and Trafox Superintend® monitoring devices for a large number of applications.

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