

3.6 Isolation Monitoring

ESU-D2R

DC Isolation monitoring | 1 NO + 2 CO

Power supply

Nominal voltage	24 ... 48 V UC
Operating voltage range	16.8 ... 60 V
Power consumption AC / DC	2 VA / 2 W
Rated frequency	0, 40 ... 60 Hz

Measuring circuit

Measured parameters	Ω
Monitoring functions	under, ground fault
Rated DC voltage U+ / U-	60 V
Overvoltage setting range	> 60 VDC
Circuit / ground resistance measurement range	1 ... 50 k Ω
Pre alarm setting range	4 ... 30 k Ω
Main alarm	≤ 4 k Ω
Alarm delay	0.1 ... 10 s

Main circuit

Number of contacts	1 NO + 2 CO
Contact material	AgNi
Rated voltage	250 V AC
Rated current	5 A
Minimum load	10 mA, 12 V
Rated load DC	fig. 2
Rated load AC-1	1250 VA
Mechanical endurance (cycles)	5 000 000
Electrical endurance at rated load AC-1 (cycles)	1 000 000

Insulation

Pollution degree	2
Overvoltage category	III

General data

Ambient temperature storage (no ice)	-40 ... 85 °C
Ambient temperature operation railway version	-40 ... 70 °C
Conductor cross section	2.5 mm ² , 2 x 1.5 mm ²
Nominal screw torque	0.5 Nm
Dimension	fig. 4
Weight	250 g
Protection degree	IP 20
Housing material	PC

Product reference

Description	Type	24-48
DC Isolation monitoring, railway version	ESU-D2.C2354/UC...V	✓

Other voltages on request. Please contact support@comatreleco.com.

"..." list control circuit voltage to complete product references.

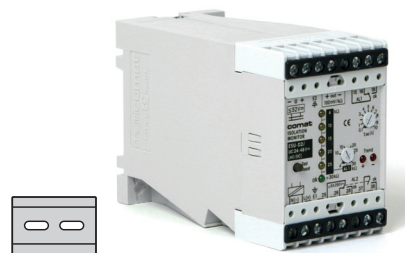


fig. 1. Wiring diagram

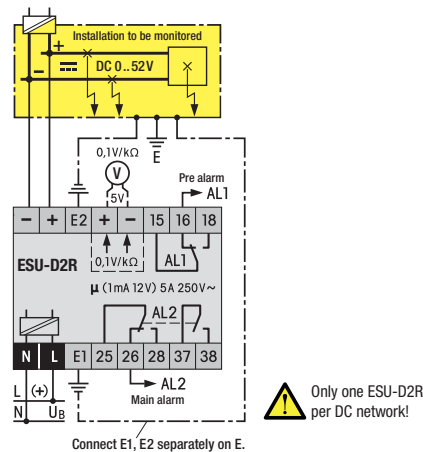


fig. 2. DC load limit curve

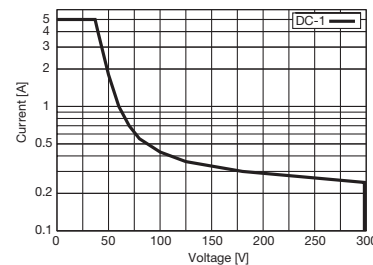
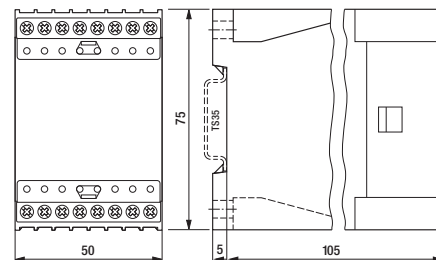


fig. 3. Dimension (mm)



Standards and approvals

Standards	IEC/EN 60947; EN 61000-6-2; EN 61000-3
Railway standards	EN 50155

Approvals

	Description	MRM11	MRM11R	MRM32	MRM32R	MRU11	MRU32	MV53	SSU34	SSU31	SSU33L	MRI11	MRI32	TSR19	ESU-D2R	CT515R	CT524R	
Monitoring	One phase voltage monitoring	●	●			●		●										
	Three phase voltage monitoring			●	●		●		●		●							
	Four channel voltage measuring																	
	DC Voltage monitoring	●	●	●	●	●	●										●	
	One phase current monitoring	●	●										●					
	Three phase current monitoring			●	●									●				
	Four channel current measuring																	
	DC current monitoring	●	●	●	●								●	●			●	
	Phase failure			●	●		●		●	●	●							
	Phase sequence monitoring			●	●		●		●	●	●							
	Phase angle monitoring / measuring*			●	●		●		●		●							
	Differential voltage monitoring / measuring*								●		●							
	Neutral failure monitoring								●		●							
	Frequency monitoring / measuring*	●	●	●	●	●	●		●		●	●						
	Apparent power monitoring / measuring*	●	●	●	●													
	Active power monitoring / measuring*	●	●	●	●													
	Power factor monitoring / measuring*	●	●	●	●													
	Active energy measuring																	
	THDI / THDU measuring																	
	PTC monitoring														●			
Earth failure monitoring															●			
Functions	Threshold „over“ exceeded fig. 3.	●	●	●	●	●	●	●	●		●	●	●	●		●	●	
	Theshold „under“ exceeded fig. 4.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	„Inside“ band entered fig. 2.	●	●	●	●	●	●					●	●			●	●	
	„Outside“ band entered fig. 1.	●	●	●	●	●	●					●	●			●	●	
	Alarm on-delay	●	●	●	●	●	●	●	●		●	●	●		●	●	●	
	Alarm off-delay	●	●	●	●	●	●	●					●	●				
	Latching alarm output function	●	●	●	●	●	●						●	●	●			
	Threshold selectable	●	●	●	●	●	●	●	●				●	●	●	●	●	
	Threshold fixed									●	●				●			
Power supply	Supply isolated from measuring circuit	●	●	●	●	●	●					●	●	●	●			
	Supply from measure circuit							●	●	●	●					●	●	
Mounting	DIN rail mounting	●	●	●	●	●	●	●	●			●	●		●			
	Housing according IEC/EN 43880 (electrical distribution mounting)	●	●	●	●	●	●	●				●	●					
	Plug-in (socket mounting)									●	●	●		●		●	●	

