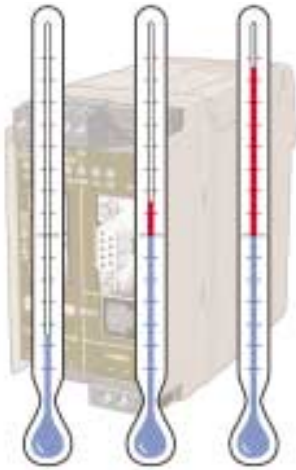


# General Technical Information



General technical information and classification of the environmental conditions that Westermo products withstand, at operation, storage and transport, unless otherwise specified in the product installation manual.

## DIN-rail products

Environment Industrial, stationary use

Location Totally weather protected enclosed location.

In some products and in certain respects there may be different environmental and mechanical conditions.

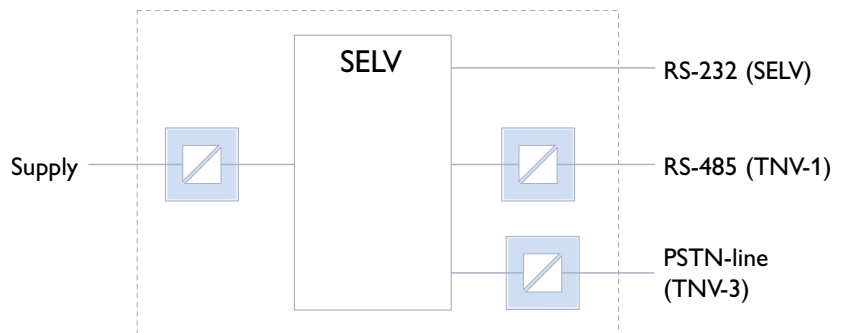
## Environmental and mechanical conditions

Factor	Requirement		Comments
	Severity	Standard	
Temperature Operating	+5 to +55°C (+41 to 131°F) -25 to +70°C* (-13 to 158°F*)	IEC 721-3-3	
Temperature Storage & transport	-25 to +70°C (-13 to 158°F)	IEC 721-3-1/2	
Relative humidity Operating	5 to 95%, non-condensing	IEC 721-3-3	Do not use until temperature and humidity have stabilized
Relative humidity Storage & transport	5 to 95% condensation allowed outside packaging	IEC 721-3-1/2	Product in packaging
Airborne contaminants severity level	G2 (1000 Å=0.1 µm) Moderate	ISA 71.04	Product installed in IP 21 enclosure, or better, with limited air flow (no fan)

\* Extended temperature range

## Electrical conditions

Factor	Requirement		Comments
	Severity	Standard	
Emission	EN 61000-6-3 Residential	EN 55022 class B	
Immunity	EN 61000-6-2 Industrial	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8 EN 61000-4-11	
	Information Technology Equipment	EN 55024	
Power supply (LV) Rated voltage range	12 to 48 VDC		
Operating voltage range	9.6 to 57.6 VDC		
Power supply (HV) Rated voltage range	95–240 VAC 110–250 VDC		
Operating voltage range	85.5–264 VAC 88–300 VDC		
Rated Power supply frequency range	48 – 62 Hz		
Reverse polarity protection	Yes		
Short circuit protection	As a part of the building installation		
TNV-3	Maximum 70.7 V peak / 120 VDC		PSTN or similar
TNV-1	Maximum 42.4 V peak / 60 VDC		RS-422/485, Ethernet or similar
SELV	Maximum 42.4 V peak / 60 VDC		RS-232 or similar



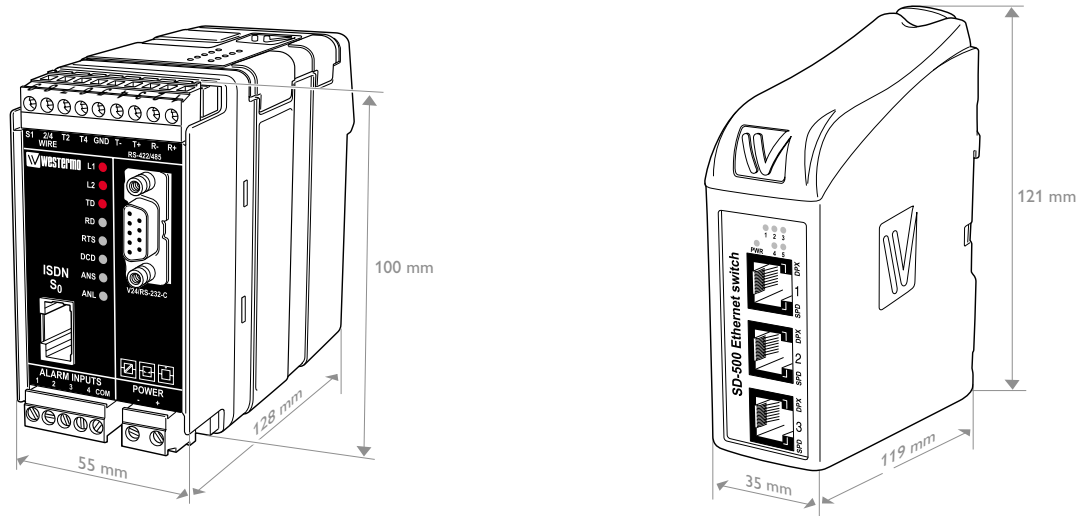
### Safety conditions

Factor	Requirement		Comments
	Severity	Standard	
Electrical safety	Information technology equipment	EN 60 950	
Service life	10 years		
Supply connection	Permanently connected		
Accessibility	Restricted access location		Access, by service personnel and by tool
Maintenance	No		
Isolation Circuit	To Circuit(s)		Electric strength
Supply	All other		≥1 kVAC
Supply HV	All other		3 kVAC
SELV	TNV-1, TNV-3		1 kVAC
TNV-1	TNV-3		1 kVAC
TNV-1	TNV-1		1 kVAC
TNV-3	TNV-3		1 kVAC

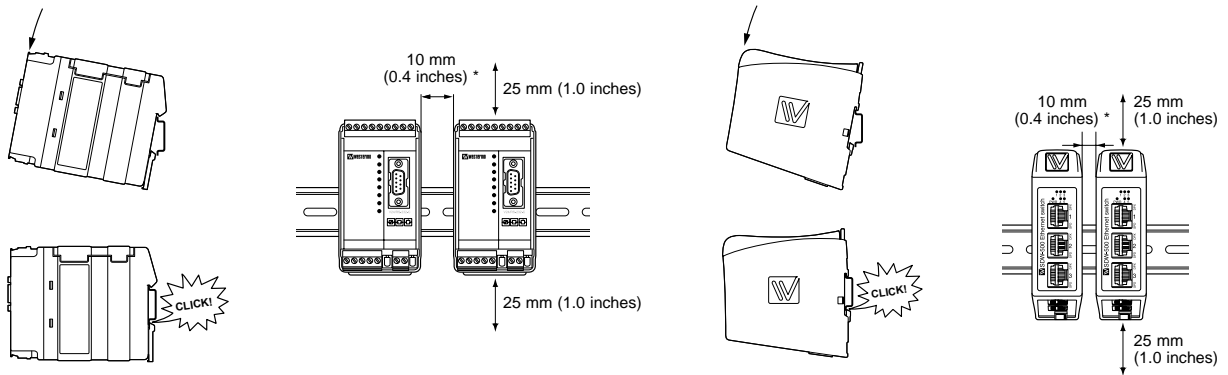
### Installation conditions

Installation	Inst. Cat	Cable type	Port	Comments
Power supply	II		Power	
Power supply (HV)	II		Power	
TNV-3 (<70.7 V <sub>p</sub> 120 VDC)	I	Unshielded	Signal balanced	PSTN or similar
TNV-1 (<42.4 V <sub>p</sub> 60 VDC)	I	Twisted pair, unshielded	Signal balanced	RS-422/485, Ethernet or similar
SELV (<42.4 V <sub>p</sub> 60 VDC)	I	Unshielded	Signal	RS-232 or similar

## DIN-rail versions



## Mounting



## Enclosure

Factor	Severity	Standard	Comments
Dimension (W x H x D) mm (in)	55 x 100 x 128 (2.17 x 3.94 x 5.04) 35 x 121 x 119 (1.43 x 4.76 x 4.69)		2 card DIN-rail 1 card DIN-rail
Weight kg (pounds)	< 0.6 (<1.3)		
Mounting	35 mm DIN-rail	EN 60715 (EN 50022)	Snap on mounting
Degree of protection	IP 20	IEC 529	
Cooling	Convection, spacing: 10 mm (0.4 in) (left/right) * 25 mm (1.0 in) (above/below)		Spacing (left/right) recommended for full operating temperature range
Enclosure material	PC / ABS		
Fire rating	Flammability class V-0	UL 94	