

Model

VDIS01 PLUS

TYPE CONFORMITY CERTIFICATE N° 24/1317P_IND

Description



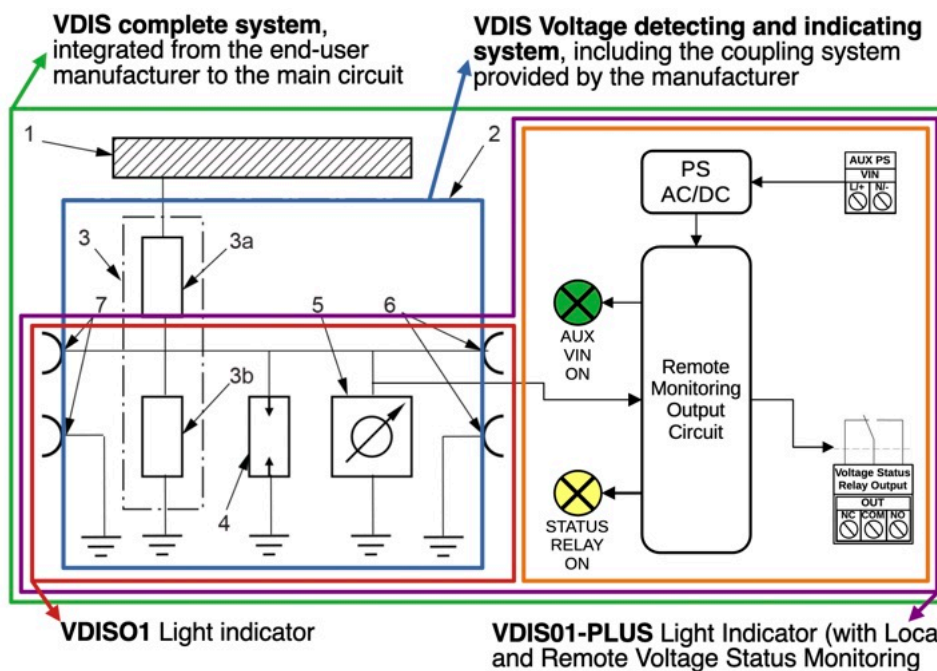
The **voltage detecting and indication system** is a fixed visual presence-voltage detection device for High/Medium-Voltage electrical distribution boards compliances with product standard IEC 62271-213.

Our VDIS01 is **type conformity certified**: CERTIFICATE N° 24/1317P_IND by SGS Accredia.

IEC 62271-213:2021 is applicable to the voltage detecting and indicating system (VDIS) to be installed on indoor and outdoor high/medium-voltage equipment. **VDIS01-PLUS indicator is part of "integrated VDIS system"** which includes the coupling system and the connection with main circuit, both integrated by the end-user manufacturer.

EN 62271-213 Typical structure of an integrated VDIS system

The product standard EN 62271-213:2021 defines the technical requirements of "integrated VDIS system" or "complete VDIS" with reference to a typical configuration in which components are integrated into a high voltage end application.



1. Main circuit; 2. VDIS Voltage detecting and indicating system; 3. Coupling system; 3a. Coupling element; 3b. Adjustment element (optional); 4. Voltage limiting element; 5. Indicator; 6. Testing point (including earthing socket - outlet); 7. Connecting point (optional)

Features	
▪ The visual indications are LED of amber colour for voltage presence. ▪ Connections points to phases L1, L2, L3 and grounding PE are available on the back by fast-on type connections and as testing points on the front by plug bushing type connections (diameter 4mm, length 19mm, pitch between each phase bushing and the single earth point 14mm). ▪ Green led for auxiliary power presence ▪ Output relay for remote voltage presence indication ▪ Yellow led for voltage presence ▪ Panel mounting (two mounting holes) ▪ Rear fast-on connections points 4mm ▪ Front bushings; testing points with a diam. of 4mm	

#	Electrical specifications	Unit	Value	Rev
1.	Phase Voltage range - U_N	kVac	24 -36	
2.	Line Frequency	Hz	47 ~ 53	
3.	Indicator	--	3 LED – amber colour	
4.	Angle of view (vs centre line)	degree	30°	
5.	Threshold on-current IVDS – I_t	uA	1,67 – 2,5uA	
6.	Threshold on Voltage - IVDS – U_T (range)	VAC	4V (4-5VAC)	
7.	Impedence IVDS - X_C range	OHM	2 – 2,4 MEG	
8.	Nr ground connections (total) - back panel	--	1x Faston 0,8x6,35	
9.	Nr phase connections - for each phase - back panel	--	3x Faston 0,8x6,35	
10.	Nr ground bushing (total) – front panel Testing point	--	1x Bushing diam 4 mm x 19 mm	
11.	Nr phase bushings - for each phase - front panel Testing point	--	3x Bushing diam 4 mm x 19 mm	
12.	Auxiliary Power supply VIN 230 VAC +/- 10% 50 Hz NOT NECESSARY FOR VOLTAGE DETECTION	--	1x Pluggable Terminal Blocks 2P 5.08MM (Male on product side)	
13.	1 Output Voltage Status Relay OUT DPDT type - Max. switching voltage 250 VAC/220 VDC, Rated carry current 2A, Max. switching power 60W/62.5 VA	--	1x Pluggable Terminal Blocks 3P 3.81MM (Male on product side)	
14.	Status LED Indicator	--	2 LED – (green = Aux VIN ON, Yellow = Relay Output ON)	
15.	Compensation capacitors /Adjustment Element (customizable* and selectable by dip switch)	--	Tbd (1*)	

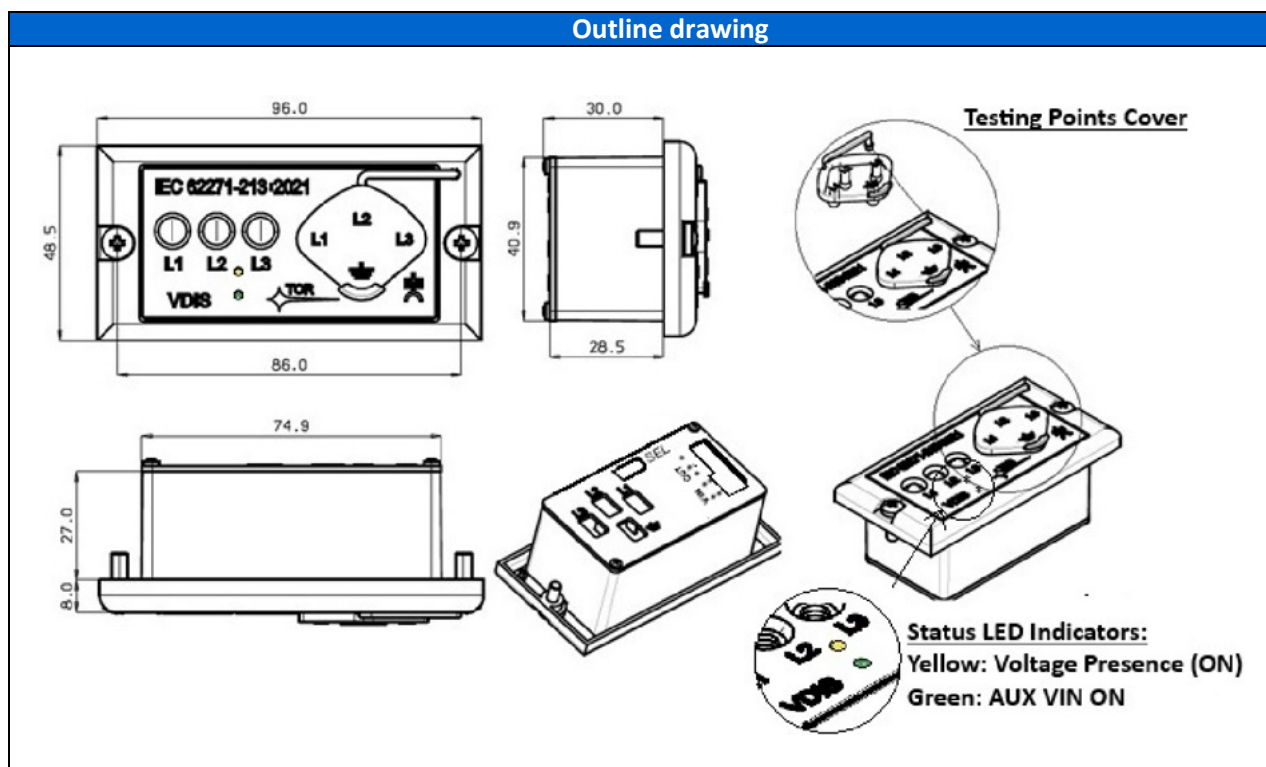
#	Environmental specifications	Unit	Value	Rev
16.	Humidity without condensation – RH	%	95%	
17.	Operating Temperature (ambient air)	°C	- 25 ~ +40	
18.	Storage Temperature	°C	- 25 ~ +55	

#	Mechanical specifications	Unit	Value	Rev
19.	Front Testing point connections - bushings	Φ	4mm	
20.	Rear Point connections - fast-on	--	4,75 x 0,8	
21.	IP protection code - EN 60529	--	IP20	
22.	Case	--	Polycarbonate	
23.	Dimensions LxDxP	mm	96 x48 x 38	
24.	Vibrations – sinusoidal 3-axes - IEC60068-2-6	Hz/mm/g	10 / ±0,15/ - 58/ ±0,15 / 2 150/ ±0,15/ 2	
25.	Impact – IEC62262	--	IK07	
26.	Standard	--	IEC62271-213:2022 (2*)	

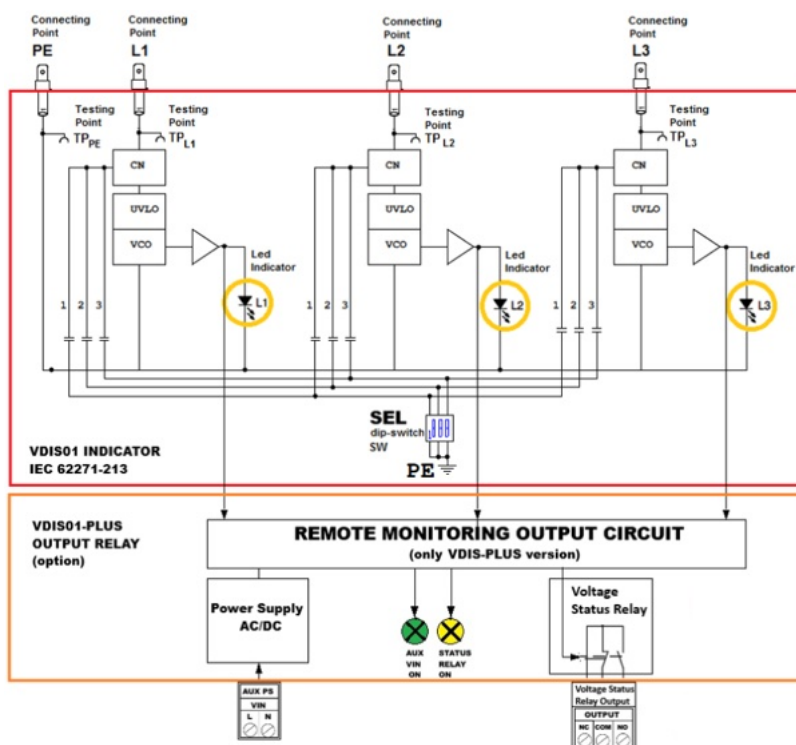
(1*) The value of the compensation capacitor depends on the specific final VDIS integration application (capacitance of Adjustment element)

(2*) The product is compliant to the standard for technical requirements applicable to its function (indicator) and interfaces (ref. Table 4 – IEC 62271-213 for Test piece type test requirements).

- VDIS01-PLUS indicator passed type tests required for product certification, as per EN 62271-213 standards.
- Integration and application of VDIS in final command and control equipment is the responsibility of end user manufacturer. Torresan S.r.l. is available for support and assistance.



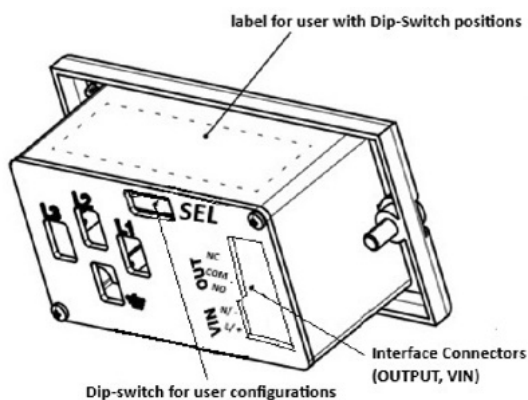
Block diagram

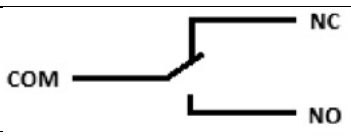


Dip switch user configuration

Coupling sensitivity Dip-Switch positions

DIP	SEL	SENS.	SEL	DIP	SENS.
	P0	High	P2		Low
	P1	Med.	P3		VLow



Output Relay Status Functional Specification				
AUX PS VIN	LED Green	LED Yellow	PHASE VOLTAGES L1, L2, L3	OUTPUT RELAY STATUS
OFF	OFF	OFF	Any Values	
ON	ON	OFF	All phases < 10% Un	
ON	ON	ON	At least one phase > %45 Un	

Code	Description	Features/Configuration/Variant
A71VDIS01-VNxyz	VDIS Voltage Detecting and Indicator System IEC 62271-213 (basic version, A-basic version without DIP-Switch, P-Plus version with output voltage status relay)	V = product version (not present = basic with DIP-Switch; A = basic with possible customer configuration without DIP-Switch, P=Plus with output relay) N = specific customer version configuration x: Not present =Product without rubber cap of test terminals protection on the front x=T: present =Product with black rubber cap of test terminals protection on the front y=A: light gray color y=B: medium gray color (standard at catalogue) y=C: dark gray color