

Model

VDSHR

Description

The voltage detection system is an integrated VDS HR system compliant with the product standard IEC 61243-5 for the visual indication of the presence of voltage of medium voltage electrical distribution equipment.

VDSHR is the indicator part of the integrated VDS system which also includes the coupling dielectric and electrode both provided and integrated by the end-user manufacturer.

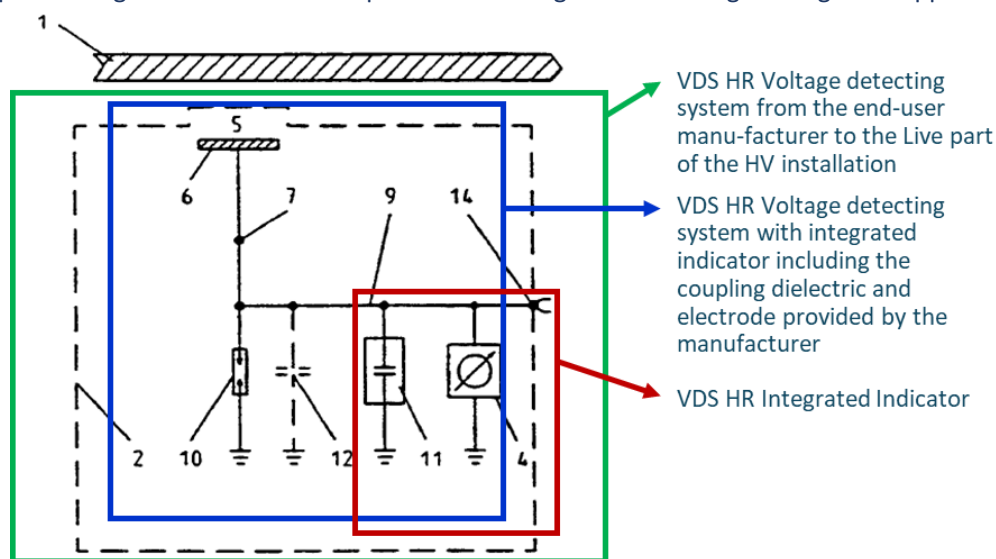
The visual indications are LED indicators of amber color. Connections points to phases L1, L2, L3 and grounding PE are available on the back by fast-on type connections and as testing points on the front by plug bushing type connections (diameter 4mm, length 19mm, pitch between each phase bushing and the single earth point 14mm).

IEC 61243-5 is applicable for the voltage detecting system (VDS) to be installed on indoor and outdoor high-voltage equipment.

VDSHR is certified by the accredited EN 17065 body SGS

EN 61243-5 Typical structure of an integrated VDS

Product standard EN 61243-5 defines the technical requirements of the integrated VDS system with reference to a typical configuration in which components are integrated into a high voltage end application.



1. Live part of HV installation; 2. Indication system; 4. Voltage Indicator; 5. Coupling dielectric; 6. Coupling electrode; 7. Connection of coupling electrode; 9. Connecting Lead; 10. Voltage Limiting device; 11. Measuring circuit (optional); 12. Stray capacitance; 14. Test point

Features

- Panel mounting (two mounting holes)
- Rear fast-on connections points 4mm
- Front bushings; testing points with a diam of 4mm

	Technical features	Unit	Value	Rev
1.	Phase Voltage range - U_N	kVAC	24 -36	
2.	Line Frequency	Hz	47 ~ 53	
3.	Indicator	--	LED – amber color	
4.	Angle of view (vs center line)	degree	30°	
5.	Threshold on-current IVDS – I_t	μA	1,62 – 2,5	
6.	Threshold on Voltage - IVDS – U_t (range)	VAC	70 - 90	
7.	Impedence IVDS - X_C range	M Ω	36 – 43,2	
8.	Nr ground connections (total) - back panel	--	3x 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	--	3x Bushing diam 4 mm x 19 mm	
11.	Nr phase bushings - for each phase - front panel Testing	--	3x Bushing diam 4 mm x 19 mm	
12.	Measuring circuit /Compensation capacitors	pF	780 (1*)	
13.	Humidity without condensation – RH	%	95%	
14.	Operating Temperature (ambient air)	°C	- 25 ~ +55	
15.	Storage Temperature	°C	- 25 ~ +75	
16.	Front Testing point connections - bushings	Φ	4mm	
17.	Rear Point connections - fast-on	--	4,75 x 0,8	
18.	IP protection code - EN 60529	--	IP20	
19.	Case	--	PA6 FIBER GLASS 30%	
20.	Dimensions LxDxP	mm	128 x36x36 (H) x 36	
21.	Weight	g	85	
22.	Vibrations – sinusoidal 3-axes - IEC60068-2-6	Hz/peak value/g	10-58 / 0,15/ - 58-150 / 19,6 m-s ² / 2	
23.	Impact resistance– IEC60068-2-63	J	1	
24.	Reference Standard	--	IEC61243-5 CEI EN 61243-5:2002-03:2022 (2*)	

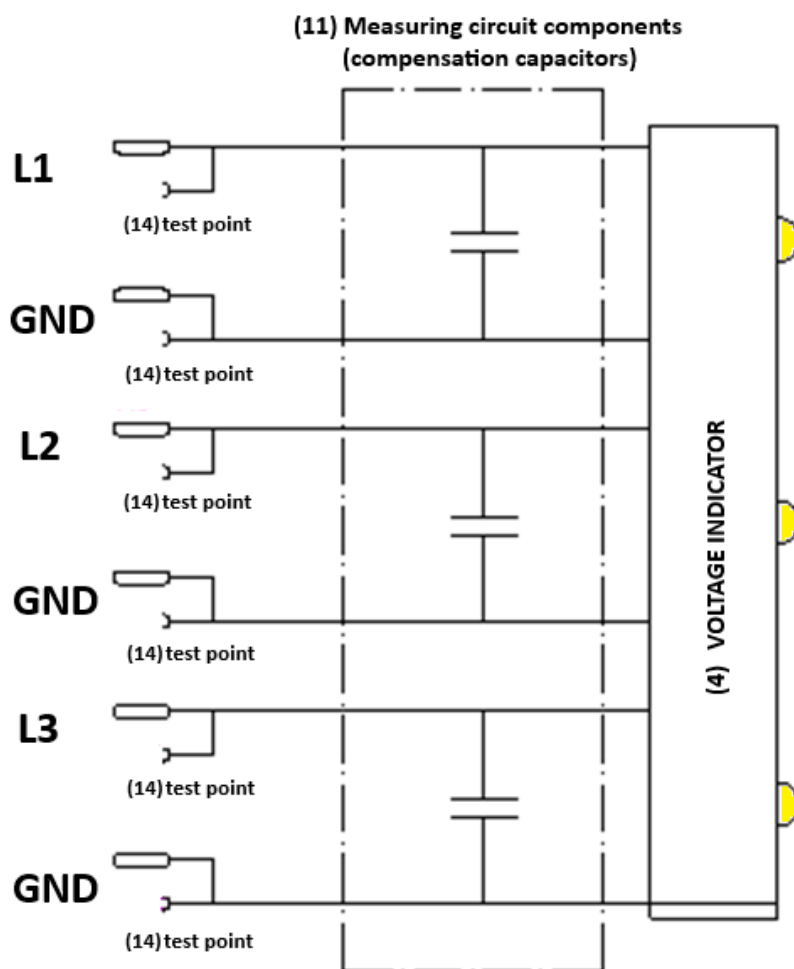
(1*) The value of the compensation capacitor depends on the specific final VDS HR integration application (Capacitance of coupling dielectric and electrode elements)

(2*) The product is compliant to the standard for technical requirements applicable to his function (indicator) and interfaces (ref. Tab A3 – IEC 61243-5 type test requirements of Integrated VDS (IVDS)).

VDSHR indicator passed type tests required for product certification, as per IEC 61243-5 standard.

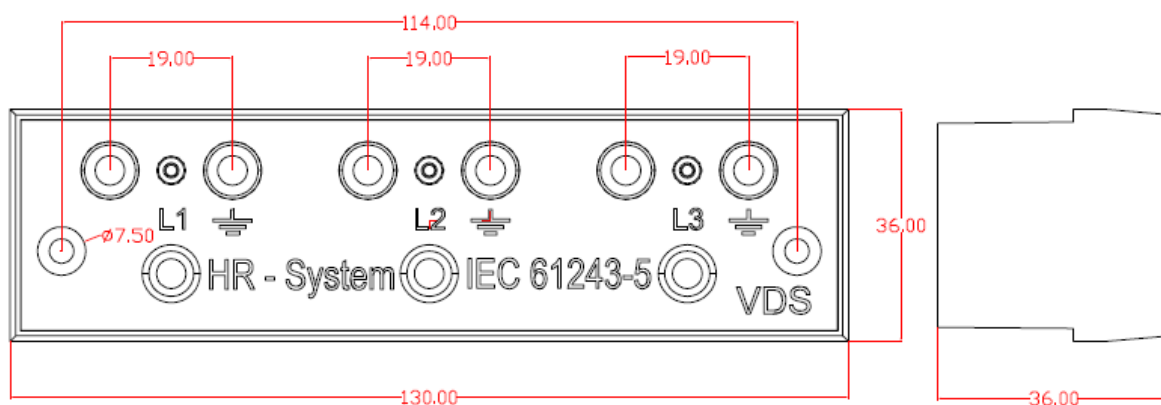
Integration and application of VDSHR in final High-Voltage equipment is the responsibility of end user manufacturer. TOR is available for support and assistance.

Block diagram



Outline and Panel Cutting Drawing

Outline



Panel cutting

