

# VDS/FD VOLTAGE DETECTING SYSTEM

VDS/FD 07.01.2016



## APPLICATIONS

- Medium Voltage Switchboards

## STANDARDS

- VDS is a voltage presence indicating system conform to IEC 61243-5 standard , type LRM
- Conform to VDE 0682-415 german standard

## MAIN CHARACTERISTICS

- VDS is a voltage presence indicating system conform to IEC 61243-5 standard , type LRM
- The device supplies continuously an electrical signal for phase comparison combined with LCD display for easy look
- Built in self-test button for functionality checking
- Integrated dip-switch for fast and simple sensitivity adjustment allow to manage a lot of different applications with only one device reducing a lot the stock cost: 4 different settings available on rear side
- Suitable for plug and play panel mounting by external flexible retainers
- Transparent front lid IK07 proof allows safe protection against accidental mechanical impacts and avoid dust contamination
- Indication of overvoltage across the terminal leads: a special symbol indicates that the capacitive coupling between C1 and C2 is not the correct one and must be modified

This capacitive voltage module is used in medium voltage switchgears. The voltage detector module is tested and manufactured according to the requirements of IEC 61243-5

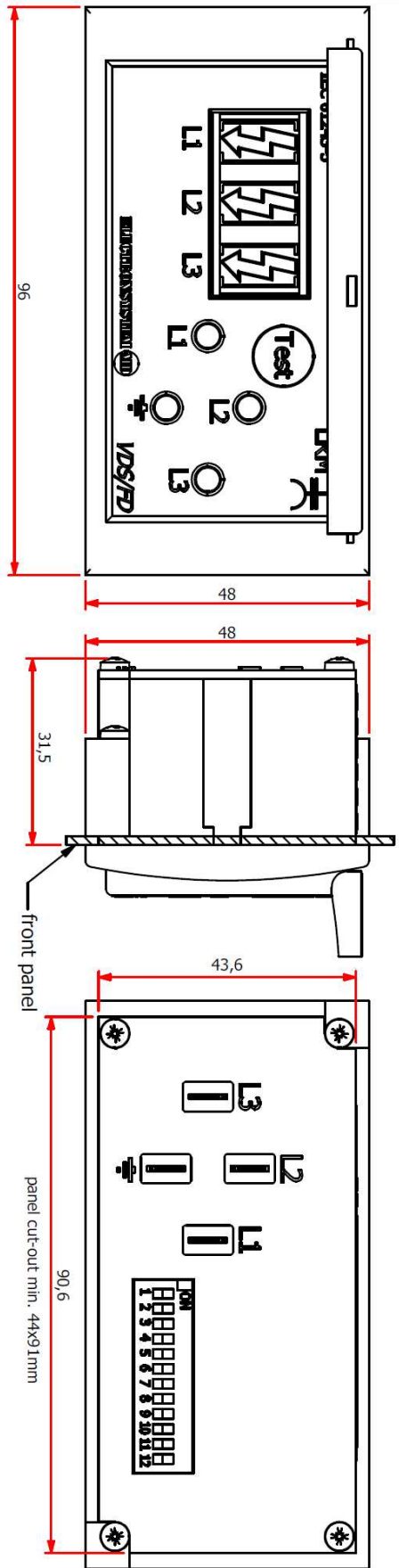
The indication of the voltage is displayed permanently by its specific display with dedicated symbols for each phase. The cover lid protects the device from mechanical impacts and hide the test sockets for phase comparison.

The capacitive module can to be simply adapted to the capacitive value of bushing or the insulator by front dipswitch; the selection is very easy and can be done just before shipment or on customer site simplifying a lot logistic cost and stock management.

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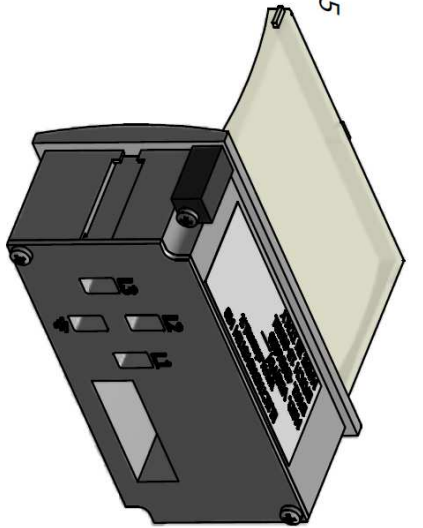
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Rev./Mod A	Date 07.01.2016	Rev./Mod B	Date 01.06.2016	Rev./Mod C	Date 10.06.2016	Rev./Mod D	Date 13.06.2016	Rev./Mod E	Date 18.05.2017	Rev./Mod F	Date 13.06.2017
Descrizione: CHANGED DEPTH		Descrizione: Changed capacitance		Descrizione: Changed capacitance		Descrizione: Add EMC standard		Descrizione: modify front panel		Descrizione: changed panel fixing	



## HIGHLIGHTS

- Voltage detecting system according to IEC 61243-5 or VDE 0682-415
- EMC standard: 62271-1 (EMV)
- Maintenance-free
- With integrated function test by pressing the display test push button
- With integrated 3-phase LRM test socket for phase comparison
- Degree of protection IP54
- Adjustable for different operating voltages (adjustable capacitance C2) by built in dip-switch



Piano di Completamento (UNI ISO 2859)	
LIVELLO	LOA
L2	1

Fig.		Material/Materiale		Finishing / Finitura	
Filing Room Archivio		Thread quality tolerance Tolleranza filetti qualità T9g-65 UNI 5541-65		General tolerance for machining / Tolleranze generali per lavorazioni meccaniche:	
Prep. G. FORLANI		Coord. Punching N.C. mech. Coord. punzon. a C.N. JS11		Quality for linear dimension Quotito per quote lineari	
App. P. GUZZETTI		Resp. Dep. Uff. Tecnico		Title VDS/FD	
Rev./Mod. 0111.1.2014		Emissione nuovo disegno		Appropriate Doc. No. N° Doc. 43931038	
ELECTRONSYSTEM MD S.r.l.				Scale 1:1	
				Sf. No. 1	
				Lingua	

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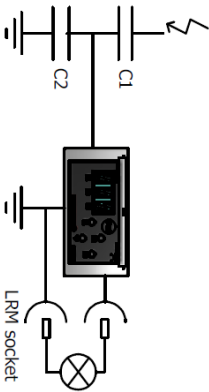
## SPECIFICATIONS

Product standard: IEC61243-5 LRM type  
 EMC standard: 62271-1 (EMV)  
 Degree protection: IP 54 epoxy resin filled  
 Operating temperature: -30°C ÷ 70°C  
 Connection input: -male 4,8X0,8 mm faston receptacles  
 Box: nylon housing fiber glass reinforced  
 Primary voltage: 3.3kV ÷ 36kV  
 C1 primary capacitance: 5pF ÷ 110pF  
 C2 secondary capacitance: 3.3nF - 39nF \*  
 Sensitivity selection: built-in dipswitch for easy adjustment, 4 levels selectable  
 Housing: Front panel mount HWXD =48x96x31,5mm , panel cut out 45x92mm

Ordering code:

VDS/FD/\_\_\_\_\_  
 C2 capacitance values \*

Group	Voltage	Range	nF	nF	nF	nF
801	4-12kV	Low	3.3	6.8	15	22
802	10-24kV	Medium	6.8	10	15	39



\* Other C2 values available on customer request

Piano di Completamento (UNI ISO 2859)	
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L2	1

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Indication	Indication during normal operation with nominal voltage	Explanation	Indication during bringing into service with nominal voltage	Indication with pressed test button
	Overvoltage	Isolation problem at primary part of divider or $U > > 1,2kUn$	C2 < Min.	VDS/FD O.K.
	Nominal voltage present	Signal O.K. Isolation $Un > 0,45Un$	C2 correct	Internal error
	Voltage present	Isolation problem at secondary part of divider $0,1Un < U < 0,45XUn$	C2 > Max.	Internal error
No Indication	No voltage	Short-circuit at connecting leads $U < 0,1XUn$	C2 >> Max.	Internal error

Fig.	Materiale/Materialie			N° Series / Serie	Finishing / Finitura
Archivio	Thread quality tolerance Tolleranza filetti qualità 7g-6S UNI 5541-65	General tolerance for machining / Tolleranze generali per lavorazioni meccaniche:	Coord.Punching N.C. mech. Coord. punzon. a C.N. JS11	Quality for linear dimension Quotità per quote lineari	Scale / Scala 1:1
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