

**ELECTRONSYSTEM MD TECHNICAL SHEET**

Revision B of 24 April 2024

**APPLICATIONS**

- Medium Voltage Switchboards

**MAIN CHARACTERISTICS**

- VDIS/LRM is an integrated voltage detecting indicating system conform to IEC62271-213/2021
- The device supplies continuously an electrical signal for phase comparison and optical blinking led for voltage indication
- Very wide and bright leds allow simple and safe visibility for personnel encharged in verification
- Suitable for indoor applications / outdoor with waterproof socket
- Fully encapsulated electronics for harsh environment
- LED life time guaranteed - min. 30 years
- Suitable for panel mounting

**DESCRIPTION**

This capacitive voltage module is used in medium voltage switchgears. The voltage detector indicator and the coupling system is tested and manufactured according to the requirements of IEC 62271-213

The indication of the voltage is displayed with one flashing LED for each phase with a separable indicator. The test sockets for phase comparing are nickel plated. The capacitive module has to be simply adapted to the capacitive bushing or the insulator , in which the module is used.

**Electrical characteristics VDIS/LRM**

<b>Coupling capacity range</b>	pF	From 10 to 200 (other values on request)
<b>Medium Voltage range</b>	kV	From 3.6 to 36
<b>Power supply</b>		No auxiliary power requested
<b>Indication</b>		Red led on the indicator
<b>Led Consumption</b>	mW	< 1
<b>Led Intensity</b>	Mcd	3000@20mA
<b>Interface</b>		Ø4 mm measuring
<b>Temperature range</b>	°C	-25 to +65
<b>IP degree protection</b>	IP	>2X coupling system, 65 the indicator
<b>Connection input</b>		4x faston 4.8x0.5mm or 6.3x0.8mm
<b>Box</b>		Polyamide PA66

All specs are subject to change without notice

### Dimension VDIS

Drawing: 43931286

<p>Rev./Mod. Descrizione: _____</p> <p>Data _____</p>	<p>Rev./Mod. Descrizione: _____</p> <p>Data _____</p>	<p>Rev./Mod. Descrizione: _____</p> <p>Data _____</p>	<p>Rev./Mod. Descrizione: _____</p> <p>Data _____</p>	<p>Rev./Mod. Descrizione: _____</p> <p>Data _____</p>	<p>Rev./Mod. Descrizione: _____</p> <p>Data _____</p>
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**Note:**

- Conform to IEC62271-213:2021 standard
- Internal gas tube arresters as required by standard
- Max current at connection points : 2mA
- Max voltage at connection points : 90Vca
- Threshold voltage for powering : 5Vca
- Suitable for medium voltage range 3-6-36 KV
- Coupling capacity range 10-200 pF\*
- Dip switch for sensitivity selection
- Power consumption: <1mW
- LED: 3000mcd/20mA
- Dielectric strength: 275kV
- Surge strength: 650kV
- IP degree protection: IP65\*\*
- Housing: P46 grey color filled with epoxy resin
- Labels: white color
- Connections: 4x Faston 4.8x0.5mm or 6.3x0.8mm
- Operating temperature : -25°C to +70°C

\*other values on request

**DESIGNATIONS**

VOLTAGE DETECTING INDICATING SYSTEM

VDIS / LRM / □

W: WATER PROOF SOCKET \*\*

R : REAR OPTICAL OUTPUT FOR RELAY (page 2)

V : VERTICAL VERSION WITH FASTON 6.3x0.8mm (page 3)

**Material/Materiale**

Flushing / Finitura \_\_\_\_\_

Prep. C. FORLANI

App. P. GUZZETTI

First Issue 01/12/2021

Resp. Dep. \_\_\_\_\_

Uff. Resp. \_\_\_\_\_

**Technical Dept.**

Titolo \_\_\_\_\_

**VDIS/LRM**

Apparato \_\_\_\_\_

Doc. No. \_\_\_\_\_

**43931286**

Scale 1:1

SN No. \_\_\_\_\_

Prog. \_\_\_\_\_

General tolerance for manufacturing / Tolleranze generali per lavorazioni meccaniche:

Thread quality, tolerance / Qualità filettatura, tolleranza

Top-6S - UNI 5241 - 6S

Geometrical tolerances for features / Tolleranze geometriche per caratteristiche

ISO 2768 - mK

**PANEL CUT-OUT**

120

107

23

**Faston 4.8x0.5**

14

12

13

**DESIGNATIONS**

VOLTAGE DETECTING INDICATING SYSTEM

GROUP	SENSITIVITY	DIP	GROUP	SENSITIVITY
P0	High		P2	Low
P1	Medium		P3	Very Low

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## VDIS/LRM/R

Dimensions: 130 (height), 120 (width), 28 (top width), 25 (base width), 3 (base thickness), Max 72 (total height), R10 (fillet radius).

Labels: IEC62271-1-213, ELECTRONSYSTEM MD, L1, L2, L3, VDIS/LRM, 4x Ø4, 2x Ø4x2, Dip-switch, Faston 4.8x0.5, GND, L1, L2, L3, P0, P1, P2, P3, Very Low, Low, High, Medium.

DIP	GROUP	SENSITIVITY	DIP	GROUP	SENSITIVITY
	P0	High		P2	Low
	P1	Medium		P3	Very Low

Material/Watermark		N/A	General tolerance for machining / Tolleranze generali per lavorazioni meccaniche:	
Finishing / Finitura			Tolerance for geometrical features / Tolleranze per caratteristiche geometriche	
Prep. G. FORLANI			Tolerance for dimensional features / Tolleranze per caratteristiche dimensionali	
App. P. GUZZETTI			Tolerance for surface features / Tolleranze per caratteristiche superficiali	
First Issue		01/12/2021	Tolerance for positional features / Tolleranze per caratteristiche posizionali	
Title		VDIS/LRM	Tolerance for form features / Tolleranze per caratteristiche formali	
Apparatus		43931286	Tolerance for feature form / Tolleranze per caratteristiche di forma	
Doc. No.			Tolerance for feature position / Tolleranze per caratteristiche di posizione	
Scale		1:1	Tolerance for feature orientation / Tolleranze per caratteristiche di orientamento	
		SP-186	Tolerance for feature runout / Tolleranze per caratteristiche di runout	
		2	Tolerance for feature circular runout / Tolleranze per caratteristiche di runout circolare	
			Tolerance for feature profile runout / Tolleranze per caratteristiche di runout di profilo	

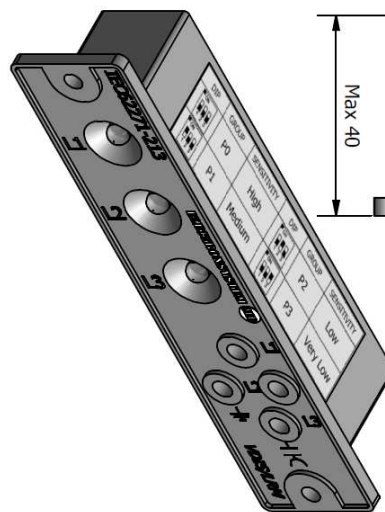
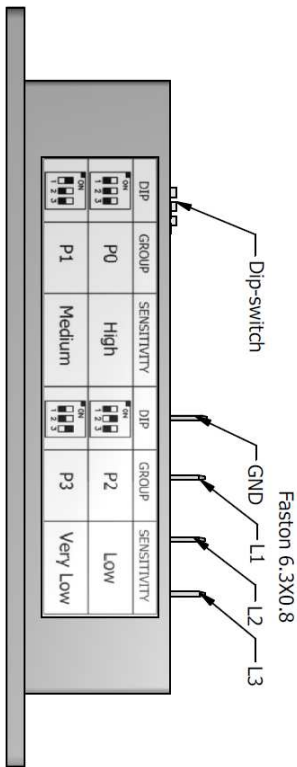
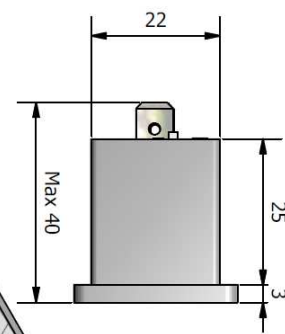
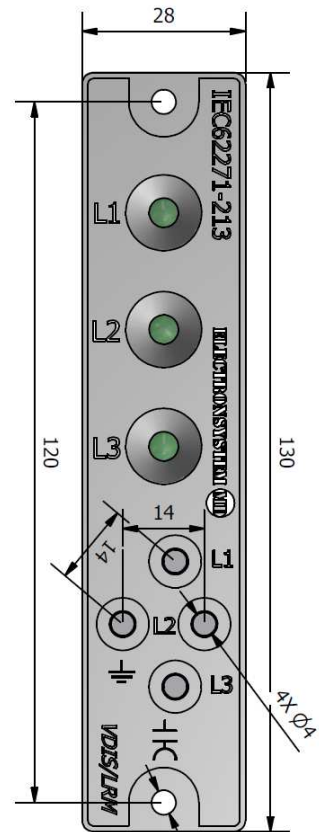
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#### ELECTRONSYSTEM MD TECHNICAL SHEET

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VDIS/LRM/V



Rev./Mod	Data	Rev./Mod	Data	Rev./Mod	Data	Rev./Mod	Data	Rev./Mod	Data	Rev./Mod	Data			
Descrizione:		Descrizione:		Descrizione:		Descrizione:		Descrizione:		Descrizione:				
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<p>Materiale/Materiale</p> <p>N/A</p>			<p>General tolerance for machining / Tolleranze generali per lavorazioni meccaniche:</p> <p>Thread quality tolerance / Tolleranze per filetti e angoli</p> <p>6g-6S UNI 5841-65</p>			<p>Flashing / Finitura</p> <p>Prep. C. FORLANI</p>			<p>Massa/Alcasi</p> <p>N/A</p>			<p>Tolerance for linear and angular dimensions / Tolleranze per dimensioni lineari ed angolari</p> <p>Geometrical tolerances for features / tolleranze geometriche</p> <p>ISO 2768 - mK</p>		
<p>App. P. GUZZETTI</p> <p>First Issue 01/12/2021</p>			<p>Resp. Dip. Uff. resp. Technical Dept.</p>			<p>Titolo</p> <p>VDIS/LRM</p>			<p>Appropriate Approccio 43931286</p> <p>Doc. No. 3</p> <p>Scale 1:1</p> <p>SP/109</p>					
<p><b>ELECTRONSYSTEM MD S.r.l.</b></p>														

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Faston 4.8X0.5

Dip-switch

DIP	GROUP	SENSITIVITY	DIP	GROUP	SENSITIVITY
	P0	High		P2	Low
	P1	Medium		P3	Very Low

**VDIS/LRM/.../VA**

Material/Materiale N/A	Masso/Masse General tolerance for machining / Tolleranze generali per lavorazioni meccaniche: Thread quality tolerance / Tolleranza filetti: qualità "7g-6S" UNI 5541-65 Tolerance for linear and angular dimensions / Tolleranze per dimensioni lineari ed angolari Geometrical tolerances for features / Tolleranze geometriche	Title <b>VDIS/LRM</b>	Scale Scala 1:1
Finishing / Finitura Papp. G. FORLANI	App. Uff. Resp. App. P. GUZZETTI	App. Uff. Resp. Technical Dept.	App. Uff. Resp. <b>ELECTRONSYSTEM MD S.r.l.</b>
First Issue 01/12/2021	Doc. No. <b>43931286</b>	App. Uff. Resp. Technical Dept.	Scale Scala 1:1

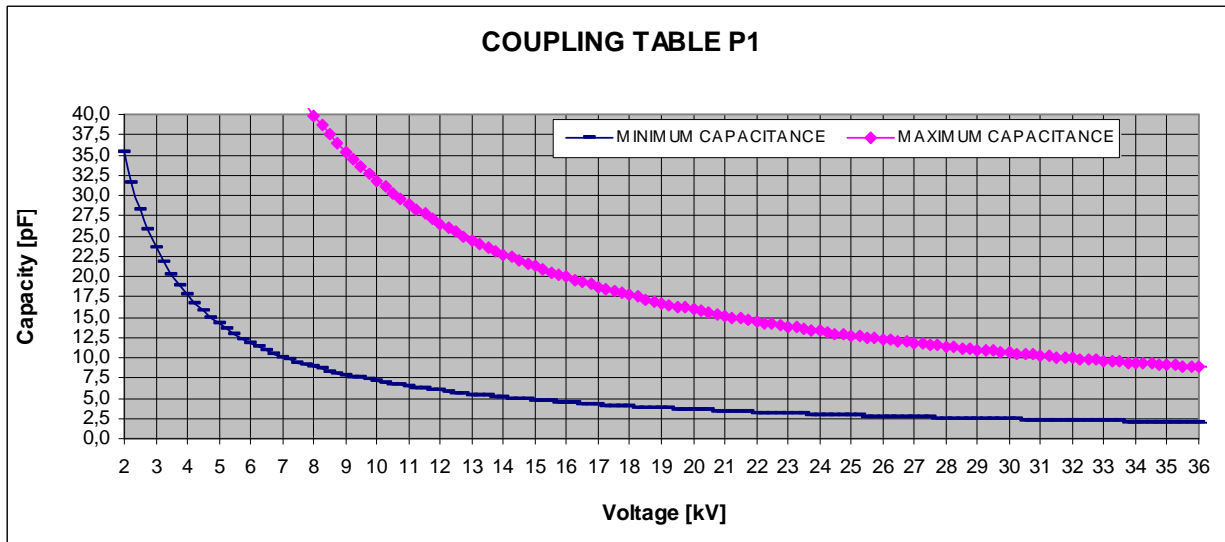
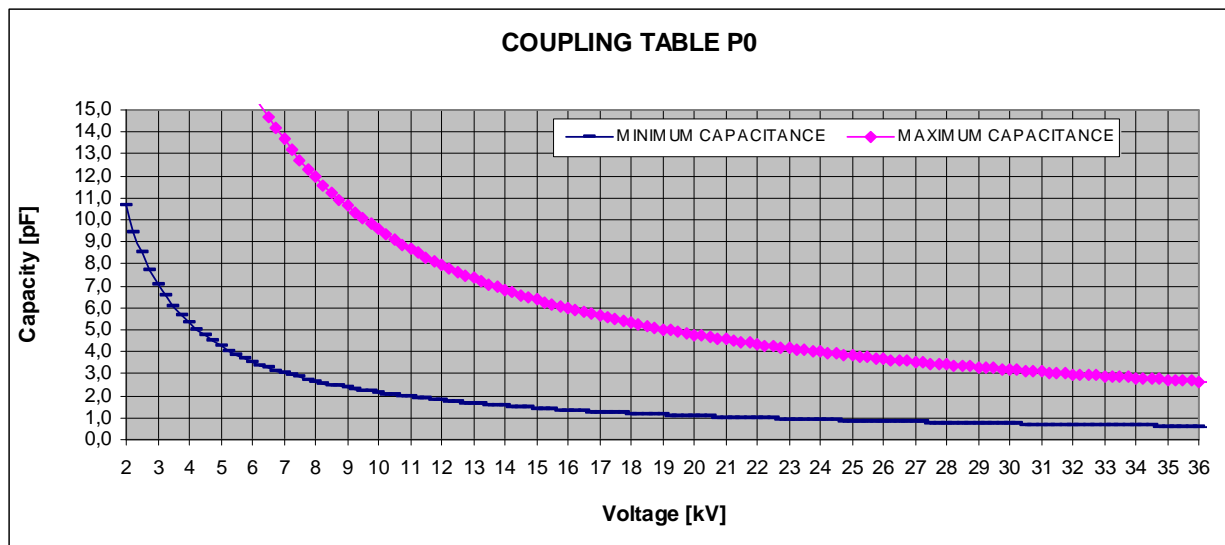
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Coupling table



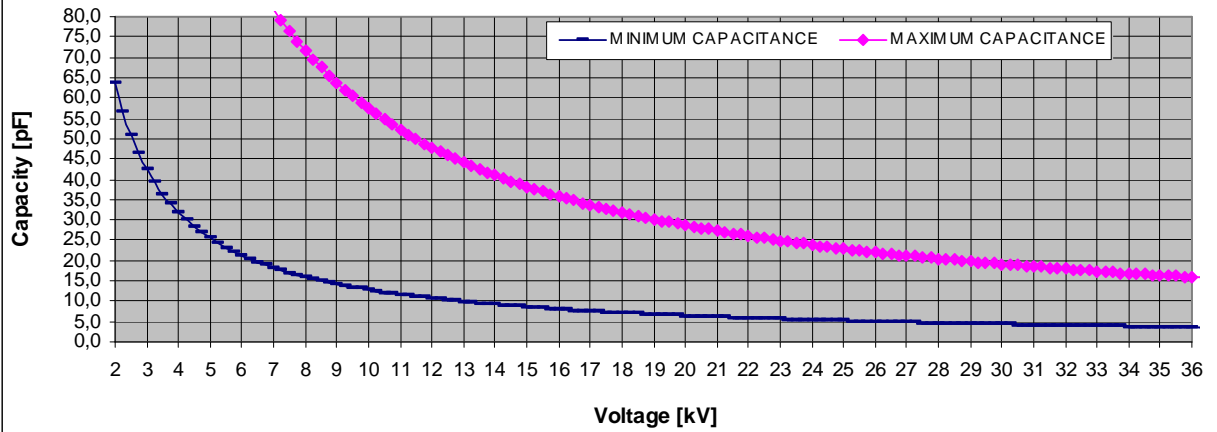
The correct coupling is obtained when the operating conditions (Voltage and Capacity) are between the two lines

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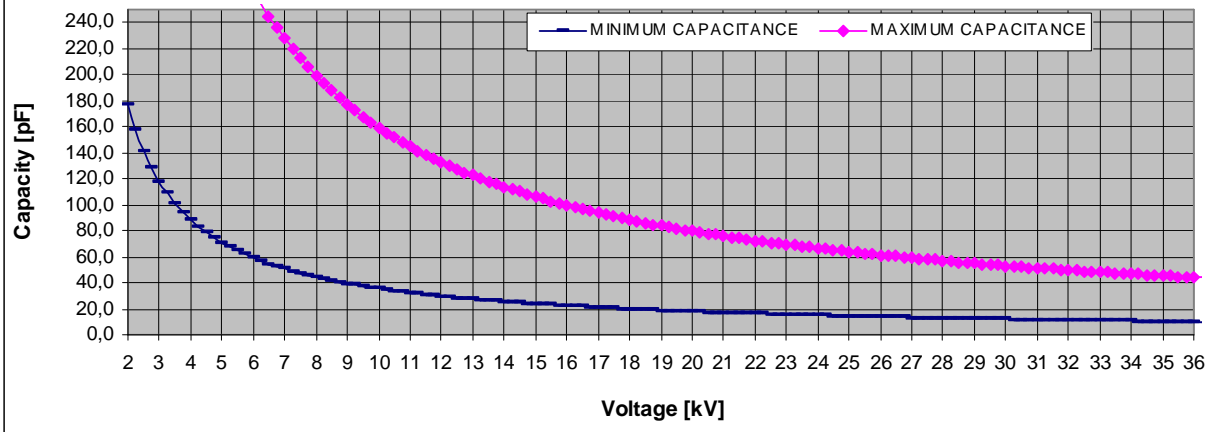
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Coupling table

**COUPLING TABLE P2**



**COUPLING TABLE P3**



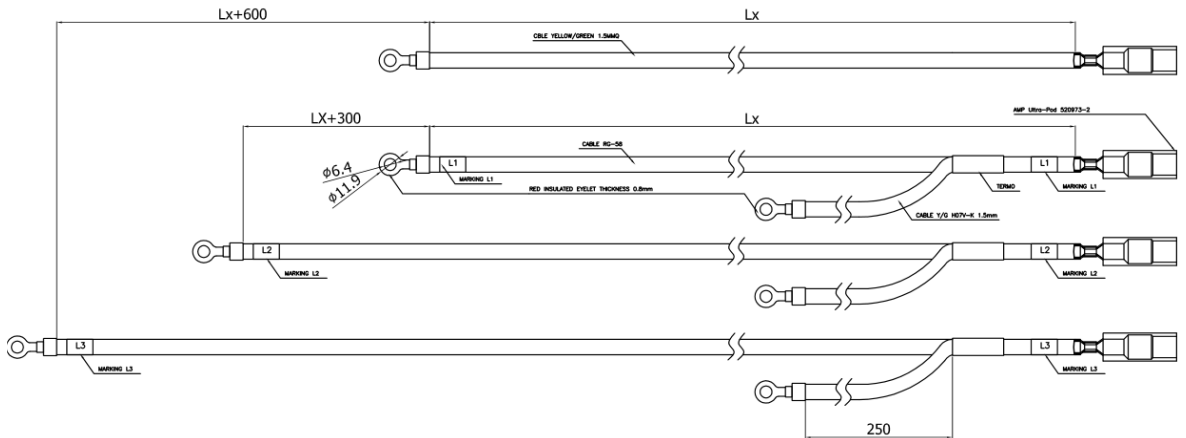
The correct coupling is obtained when the operating conditions (Voltage and Capacity) are between the two lines

#### ELECTRONSYSTEM MD TECHNICAL SHEET

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#### Accessories VDIS

Coaxial cable  
Drawing: 43922316



ORDERING CODE:  
Description : CABLE KIT VDIS 43922316  
Code : CAB22316 / [ ] / [ ]

S = special version with RG 58 cable  
low smoke zero halogens (flame retardant)  
1000 = length of cable (Lx) is 1000mm  
4000 = length of cable (Lx) is 4000mm  
5000 = length of cable (Lx) is 5000mm  
8000 = length of cable (Lx) is 8000mm

\* other lengths available on request



## **STORAGE**

If the complex must be storage before use, please keep dry and packed.  
Do not leave outdoor.

STORAGE TEMPERATURE: -30°C ÷ +70°C

RELATIVE HUMIDITY: max 90% @ +40°C

## **PROPER USAGE**

The system is intended to be used in the medium voltage installations such as switchgears, switchboard and the scope is to indicate by visual indication the absence or presence of live parts through connections to capacitive divider or bushing.

Our type is without any internal power source supply.

Working voltage range is between 3,6 to 36kV.

Direct voltage cannot be applied because can damage the device.

## **MAINTENANCE**

Maintenance of VDIS/LRM assembly is subjected to periodic verification with at least 24 months interval, the last year of maintenance must be indicated on front label by the customer.

## **WARRANTY**

Device is covered by 24 months after installation or max 36 months after delivery.

In case of service the VDIS/LRM must be sent back to factory for inspection.

## **WARNINGS**

### **CAUTION**

Do not drop or hit the VDIS/LRM. The piece is fragile and may break from sudden shock.

When transporting the piece, use the original shipping box from Electronsistem MD.

### **DISCLAIMER NOTE:**

While we provide application assistance it is up to the customer to determine the suitability for its use.

Specification may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However we assume no responsibility for its use.

The quality of Electronsistem MD products is guaranteed by a Quality, Safety and Environmental management system certified by DNV according to ISO 9001, ISO 18001 and ISO 14001. Electronsistem MD works in partnership with its customers in designing customized executions in order to meet specific requirements, please contact us.

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