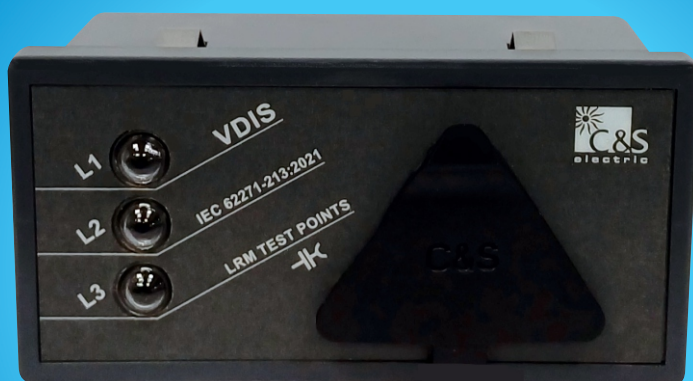


We touch your **electricity** everyday!

**VDIS-G**

Voltage Detecting & Indicating System



AS PER  
IEC

62271-213:2021

HIGH  
TRANSIENT  
VOLTAGE  
PROTECTION

SUITABLE  
FOR VOLTAGE  
SYSTEM  
3.3 TO 24 KV

BUSHING  
CAPACITANCE  
RANGE  
15 TO 66 PF

CATALOG



**PMD Division**

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## 1) Introduction

The VDIS is a voltage presence indicating system, in compliance with the IEC 62271-213:2021 standard which is used in RMU/MV Network. This is basically a tool which verify the absence or presence of voltage in the network & help to suggest when there is a need for maintenance & repairs. This device is an essential piece of equipment for most of the modern networks. Indication of the voltage is displayed by high bright LEDs. It gets fit with the bushing capacitance as input to measure the incoming voltage.

## 2) Features

There are two variants of VDIS (ordering based) :

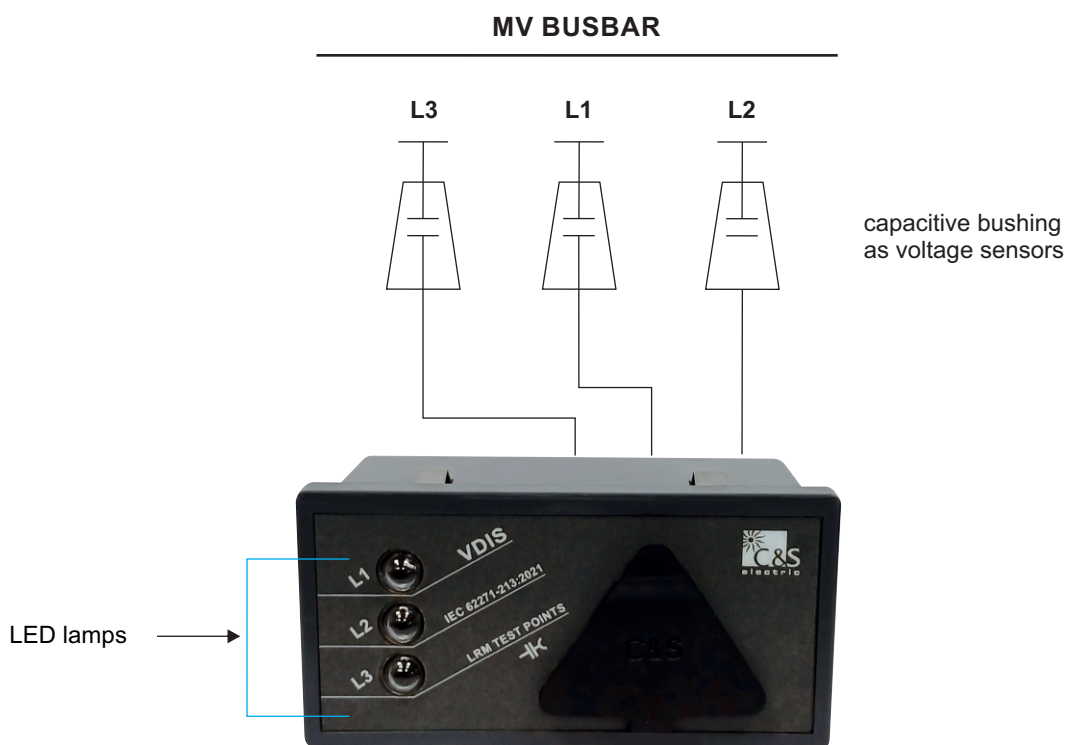
- 1) Basic Model : VDIS-G-I
- 2) Advance Model, (SCADA compatible with contacts) : VDIS-G-S

## 3) Main Characteristics / Benefit

- VDIS is a voltage presence indicating system conform to IEC62271-213:2021 standard
- Optical blinking led for voltage indication & Output terminals for LRM block
- Nominal frequency : 50 / 60 Hz
- Suitable for front panel mounting
- Suitable for Indoor & Outdoor application
- Suitable for various voltage range : 3.3 - 24 kV
- Bushing capacitance range : 15 - 66 pF based on model / customer requirement
- Internal gas tube arresters as required by standard for SURGE protection
- Indication Appear : When voltage is in range of 45% to 120% of nominal voltage  
Indication doesn't Appear : When voltage is less than 10% of nominal voltage
- SCADA compatibility, for SCADA signalling, NO/NC contact available for RTU.

## 4) Setup for VDIS

This product requires the suitable matching bushing capacitance. Bushing capacitance will connect on the terminal given on the backside of the product. Once voltage comes on the bushing, LED will start glowing as per available voltage range. In case of SCADA product, Aux will also be required where the potential free contract also will operate along with LED.



### 5) Technical Data

■ Nominal frequency	:	50 / 60 Hz
■ $U_n < 10\% U_n$	:	NO LED
■ $U_n \geq 45\% U_n$	:	Flashing / Glowing LED
■ Degree of protection	:	IP-54
■ Output contact rating	:	5A, 250V AC / 24V DC (only for SCADA model)
■ Aux supply rating	:	18-60V DC (only for SCADA model)
		(Power supply range & selection as per ordering information)
■ Operating temperature	:	-25 to +70°C
■ Storage temperature	:	-25 to +80°C / Dust free environment
■ Dimensions (W x H x D)	:	96.5 x 48.5 x 67.5 mm
■ Weight (VDIS-G-S)	:	325 gm. (approx)

### 6) Front Fascia

Usage of these Test plug terminals are:

- For Voltage detection via LRM block
- Connecting Phase comparator



Note : Test Plug to connect comparator device

### Existing Back Terminal view

For Bushing Connection  
 MINI-FITJR W-T-B HDR 4CKT  
 Molex make Male connector  
 Part No. : 0874270402  
 Double Row, 4 Wire



Aux / Output contact connector

### Rev.01 of Back Terminal view

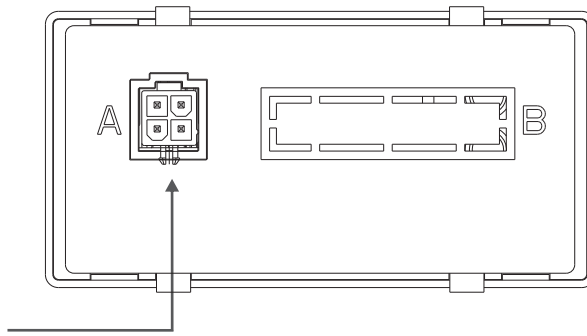
For Bushing Connection  
 MINI-FITJR W-T-B HDR 4CKT  
 Molex make Male connector  
 Part No. : 0874270402  
 Double Row, 4 Wire



Aux / Output contact connector

## 7) Back Terminal View

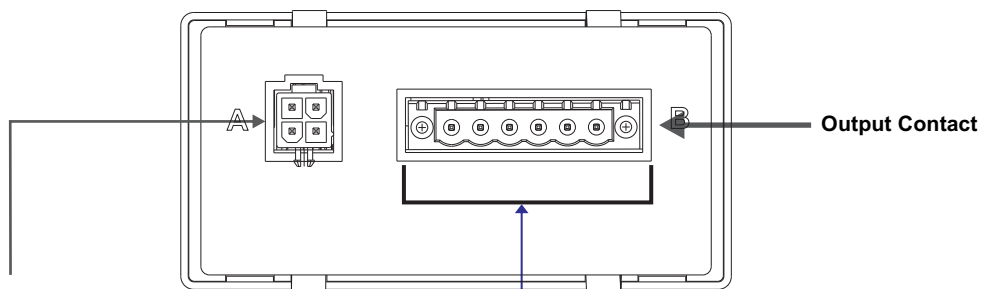
### a) VDIS-G-I Basic Model



**For Bushing Connection**

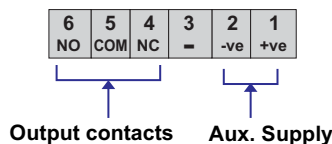
MINI-FITJR W-T-B HDR 4CKT  
Molex make Male connector  
Part No. : 0874270402  
Double Row, 4 Wire

### b) VDIS-G-S Advance Model (SCADA Compatible)



**For Bushing Connection**

MINI-FITJR W-T-B HDR 4CKT  
Molex make Male connector  
Part No. : 0874270402  
Double Row, 4 Wire



## Indications of the Integrated Voltage Detecting and Indicating system of VDIS

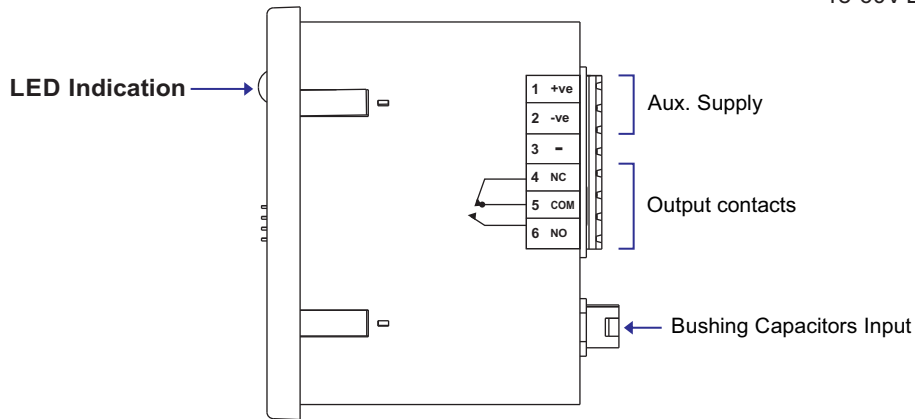
Indication	VDIS-G-I			VDIS-G-s				Description
	L1	L2	L3	L1	L2	L3	State of the Relay contacts (Relay1)	
A0	○	○	○	○	○	○		Operating voltage not present For VDIS : Auxiliary voltage present
A1	●	●	●	●	●	●		Operating voltage present For VDIS : Auxiliary voltage present
A2	●	●	●	●	●	●		Operating voltage present For VDIS-: Auxiliary voltage not present
A3	○	●	●	○	●	●		Failure in Phase L1, operating voltage at L2 & L3 For VDIS-: Auxiliary voltage present
LED does not light up	○			LED lights up ●				

**8) SCADA compatible VDIS-S**

VDIS is also available with the ordering option of SCADA compatibility. For SCADA signaling, VDIS is equipped with NO/NC contact terminal, which gives the status to the RTU.

◆ Voltage in any of the phase $\geq 45\%$	:	NO contact will become NC
	:	NC contact will become NO
	:	LEDs will BLINK
◆ Voltage in all the phases $\leq 10\%$	:	NO & NC contacts will not operate
	:	LEDs will not BLINK

LED / Contacts can start operating in between 10% & 45% of phase voltages.  
 For the operation of these output contacts, Aux supply to VDIS is mandatory. The Aux Supply range is 18-60V DC.



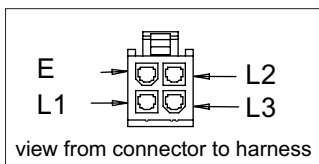
**9) Wire Harness for VDIS**

VDIS is available with optional accessories of cable harness as per below cable lengths / Terminations.

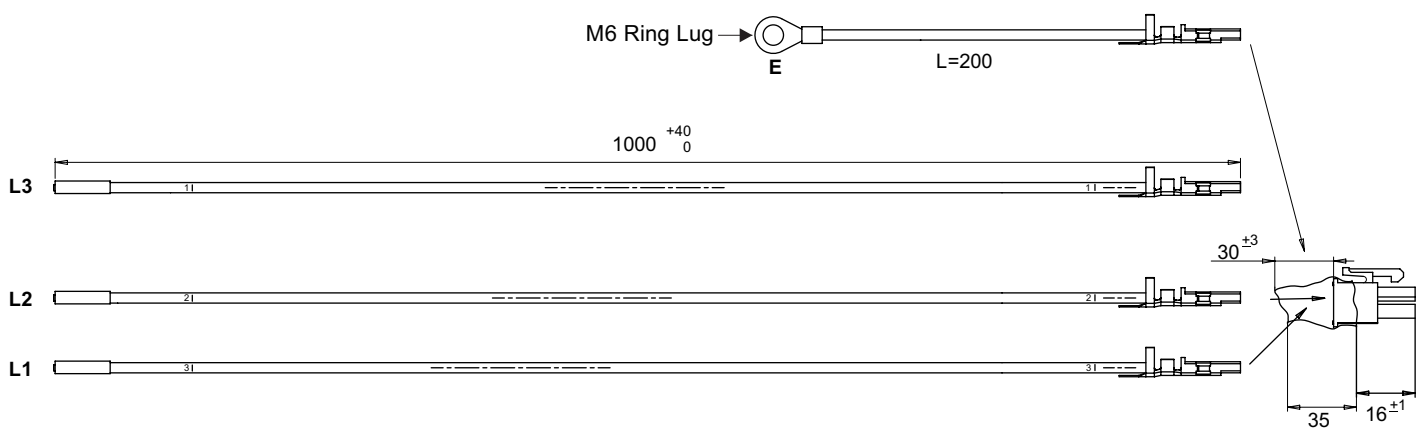
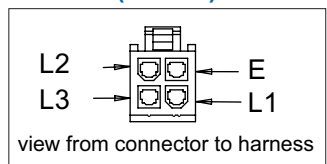
Note: Cable length of the Phase wire may vary based on the users requirement.

Cable Termination Length	
Cable Harness separately	: T0
Cable Harness Length : L=800mm & Earth=200mm (with Connector)	: T1
Cable Harness Length : L=1000mm & Earth=200mm (with Connector)	: T2
Cable Harness Length : L=1200mm & Earth=200mm (with Connector)	: T3
Cable Harness Length : L=1700mm & Earth=200mm (with Connector)	: T4
Cable Harness Length : L=2000mm & Earth=200mm (with Connector)	: T5
Cable Harness Length : L=3000mm & Earth=200mm (with Connector)	: T6

**(Existing)**



**(Rev.01)**

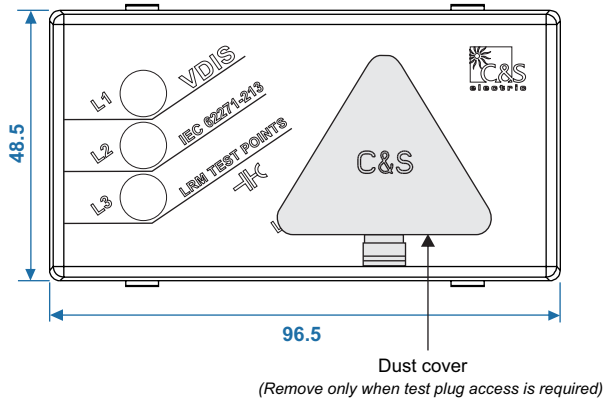


**Assembled view of Female connector having lugs at other end of wire**

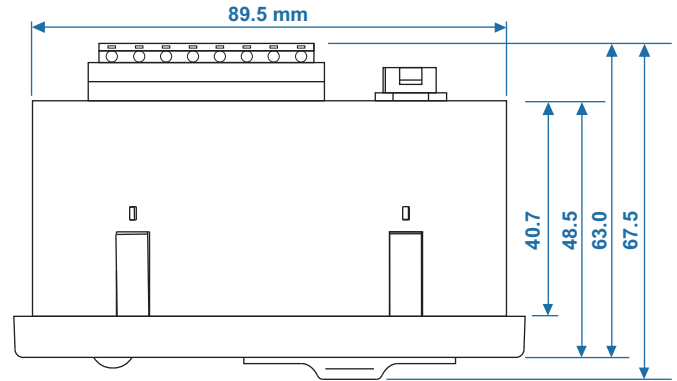
10) Dimension Details

All the dimension are in mm (Gen.Tol : + 0.8, -0.0 mm)

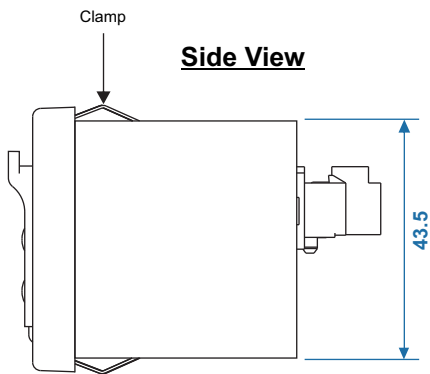
**Front View**



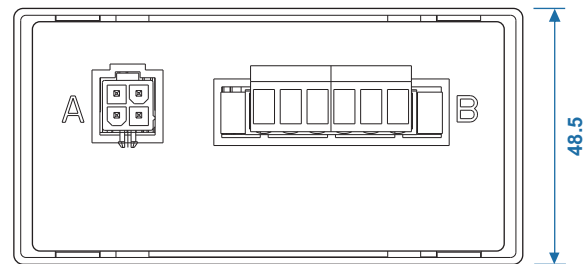
**Top View**



**Side View**

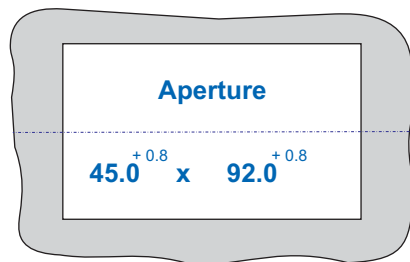


**Back View**

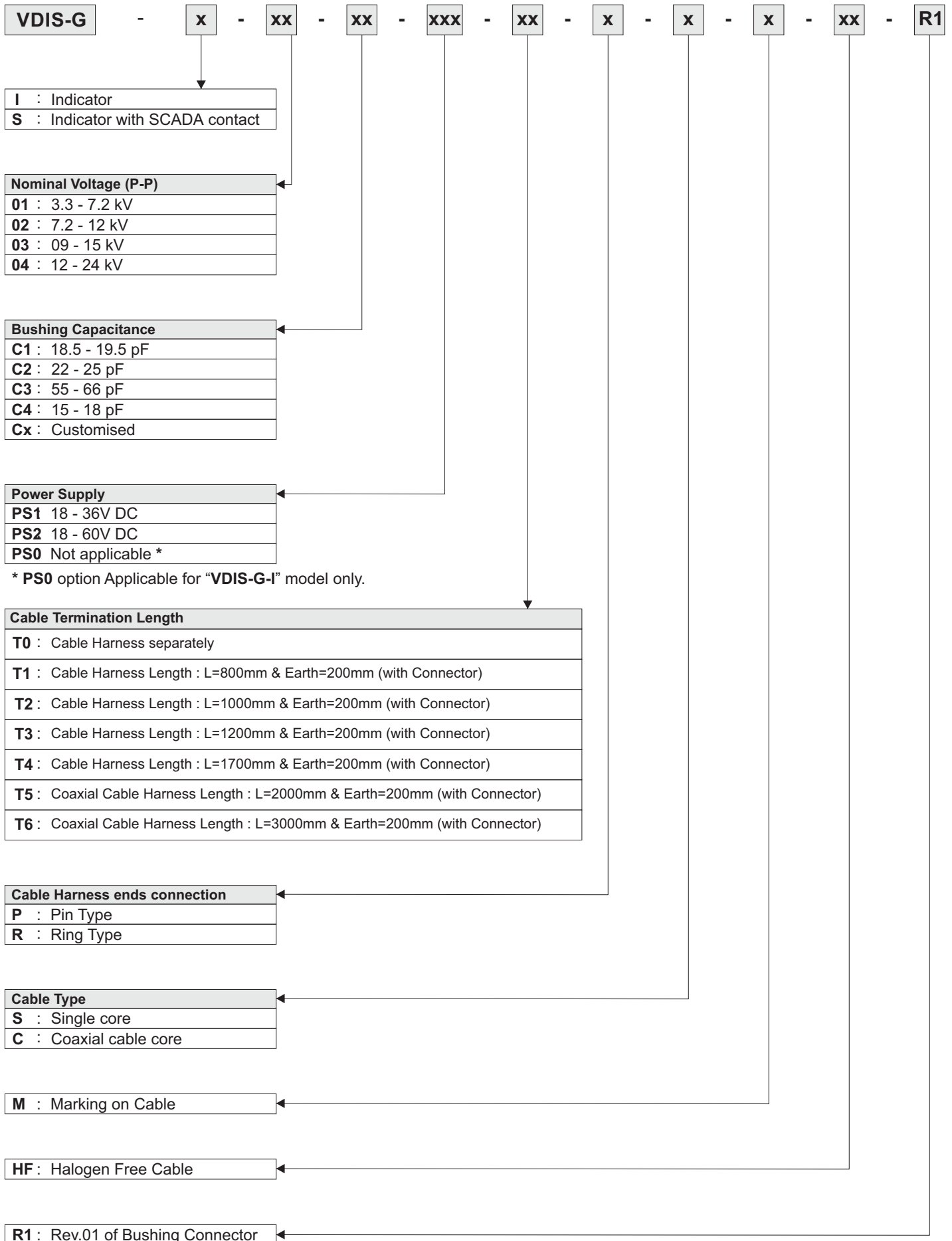


11) Panel Cut out Dimensions (for both variants)

Mounting through clamp on VDIS



12) Ordering Information a) Ordering Information for VDIS



**b) Ordering Information for Cable Harness (only separate from VDIS-G)**



Cable Termination Length
<b>T1</b> : Cable Harness Length : L=800mm & Earth=200mm (with Connector)
<b>T2</b> : Cable Harness Length : L=1000mm & Earth=200mm (with Connector)
<b>T3</b> : Cable Harness Length : L=1200mm & Earth=200mm (with Connector)
<b>T4</b> : Cable Harness Length : L=1700mm & Earth=200mm (with Connector)
<b>T5</b> : Cable Harness Length : L=2000mm & Earth=200mm (with Connector)
<b>T6</b> : Cable Harness Length : L=3000mm & Earth=200mm (with Connector)

Cable Harness ends connection
<b>P</b> : Pin Type
<b>R</b> : Ring Type

**M** : Marking on Cable

**HF** : Halogen Free Cable

**Note : Refer Page no. 6 further for cable harness details.**

