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## RELAY SELECTION GUIDE- DISTANCE PROTECTION



SYSTEM CONTROLS & SWITCHGEARS



Online Solutions for Electrical Needs



# Overview

System controls & switchgears is one of the fastest growing companies in India. Established in 1983, a privately owned company has unrivalled experience in the distribution of electrical products. SCS business covers a broad range of Medium Voltage Switchgears, Low Voltage Switchgears, Power Capacitors, Internal wiring accessories, Lighting, Metal Detectors, Energy Management Products and other products. Over the last 3 decades history, we've developed strong relationships with customers. Our strength lives in all of our people, who have extended our tradition of service and integrity to customers in every location and situation, and who take pride in making us one of the most resilient resources in the products we deal.



## Models

### ➤ P14DL is for line protection

(ANSI Code- 37, 46, 46BC, 49, 50SOTF, 50BF, 50, 50N, 51, 51N, 67, 67N, VTS, CTS, 64N, 68, 27, 47, 59, 59N, 81V, 51V, 81R, 86, 81O, 81U, 81df/dt, 81V, 51V, 25, 32, 32(Load Blinders), 79, 21FL, 81RF, 81RAV, 81R)



### ➤ P441 - Full Scheme Distance Relay 40TE

(ANSI Code- 21P, 21G, 50/51/67, 50N/51N/67N, 67N, 32N, 67/46, 68, 50/27, 85, 49, 25, 27, 59, 46BC, 50ST, 50BF, CTS, VTS, 51FF, 78. 3 pole tripping only)



### ➤ P442 - Full Scheme Distance Relay 60TE

(ANSI Code- P441 + 1/3 Pole tripping + 37, 81 U/O)

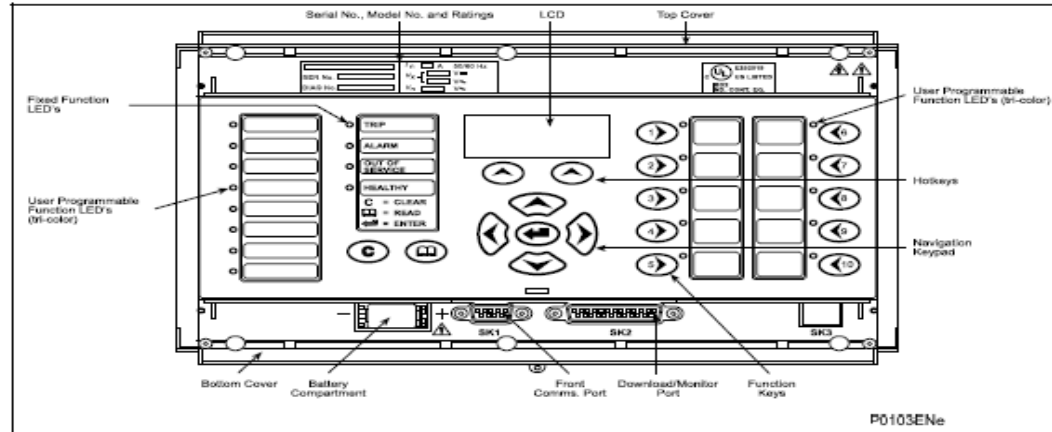
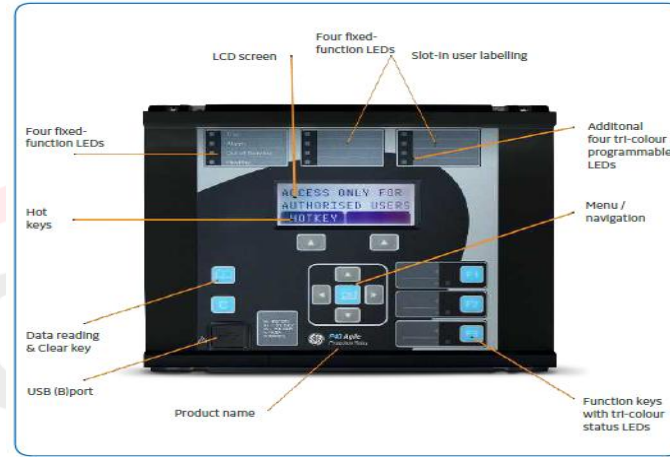
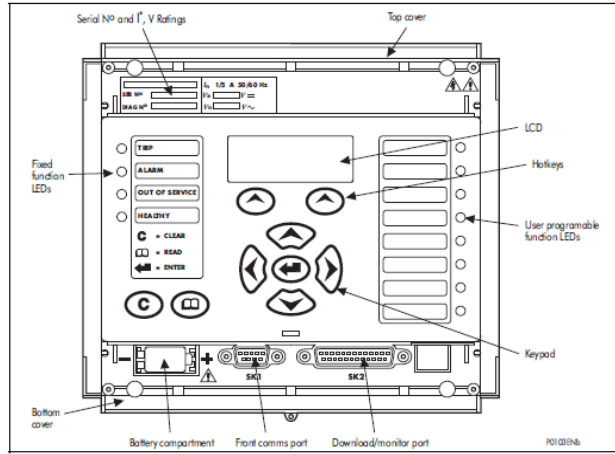
### ➤ P443- High Performance Distance Protection


(ANSI Code- 21P, 21G (Both Mho or Quad), 79, 78, 68, 25, 50, 27, 50/51P, 69P, 50/51N, 67N, 46, 46/67, 49, 27/59, 59N, 81U/O, 81R, 50BF, 46BC, 50ST, VTS, CTS, 85)



### ➤ P444- Full Scheme Distance Relay 80TE

(ANSI Code- P442 + Sampled values (IEC 61850 - 9-2))



Sr. No	Model of relay	Protocol	Input ( Min / Max)	Outputs ( Min / Max)	CT INPUTS	VT INPUTS	ANSI Code
a	 Agile P14DL	Modbus / IEC103/61850	8 / 13	8 / 12	4	4	37,46,46BC,49,50SOTF,50BF,50,50N,51,51N,67,67N,VTS,CTS,64N,68,27,47,59,59N,81V,51V,81R,86,81O,81U,81df/dt,81V, 51V,25,32, 32(Load BLINDERS),79,21FL,81RF,81RAV,81R)

### P14DL-30TE case dimensions

#### Design

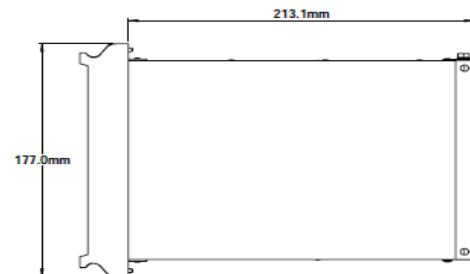
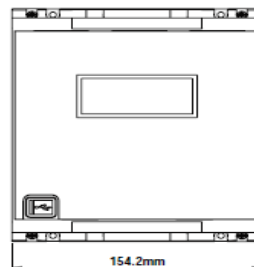
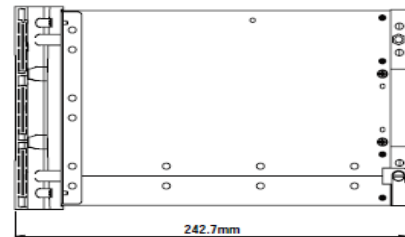
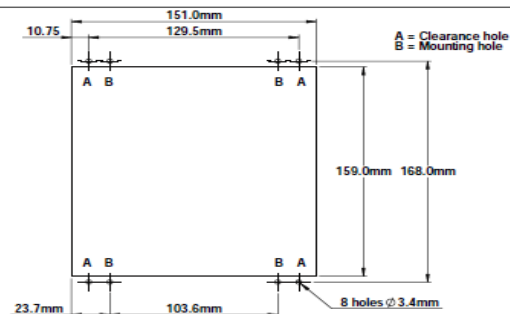
Dimensions in mm (w x h x l) (30TE case)


W: 154.2mm H: 177.0mm D: 243.1mm

#### Mounting Panel or rack

#### Weight

Weight (30TE case) 3 kg – 4 kg  
(depending on chosen options)



Sr. No	Model of relay	Protocol	Input ( Min / Max)	Outputs ( Min / Max)	CT INPUTS	VT INPUTS	ANSI Code
b	 Agile P441	Modbus/ IEC103/ DNP 3	8	14	4	4	21P, 21G, 50/51/67, 50N/51N/67N, 67N, 32N, 67/46, 68, 50/27, 85, 49, 25, 27, 59, 46BC, 50ST, 50BF, CTS, VTS, 51FF, 78. 3 pole tripping only

### P441 case dimensions (40TE case)

#### Design

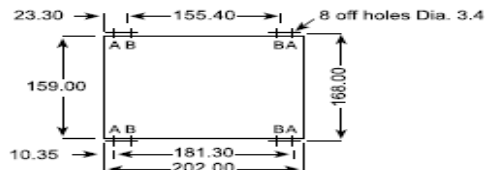
Modular MiCOM Px40 platform relay, P441 40TE (8")case

Mounting is front of panel flush mounting or 19" rack mounted (ordering options).

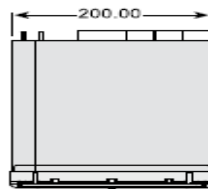
Dimensions in mm (w x h x l) (40TE case)-W: 206.0 mm H: 177.0 mm D: 243.1 mm

#### Weight

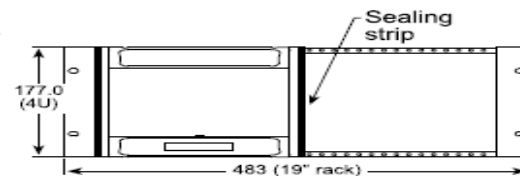
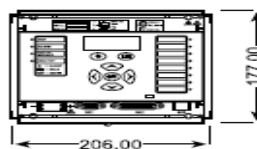
P441 (40TE): 7 kg – 8 kg (depending on chosen options)



A = Clearance holes  
B = Mounting holes



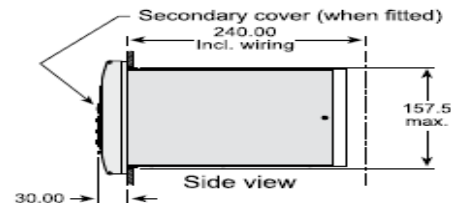
Front view




Flush mounting panel  
Panel cut-out detail

Note: If mounting plate is required  
use flush mounting cut out  
dimensions

All dimensions in mm

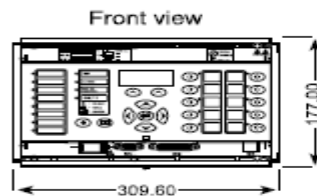
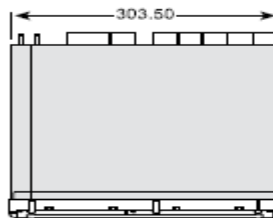
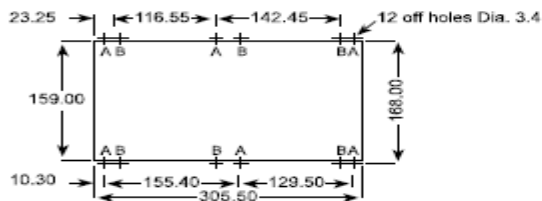


Sr. No	Model of relay	Protocol	Input ( Min / Max)	Outputs ( Min / Max)	CT INPUTS	VT INPUTS	ANSI Code
c	 Agile P442	Modbus/ IEC103/ DNP 3/ IEC 61850	16	21	4	4	P441 + 1/3 Pole tripping + 37, 81 U/O

### P442 case dimensions (60TE case)

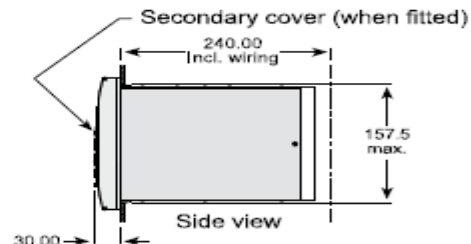
**Design**  
Modular MiCOM Px40 platform relay P442 60TE (12"), case  
Mounting is front of panel flush mounting or 19" rack mounted (ordering options).  
Dimensions in mm (w x h x l) (60TE case)-  
W: 309.6 mm H: 177.0 mm D: 243.1 mm


**Weight**  
P442 (60TE): 9 kg – 12 kg (depending on chosen options)



A = Clearance holes  
B = Mounting holes

All dimensions in mm



Sr. No	Model of relay	Protocol	Input ( Min / Max)	Outputs ( Min / Max	CT INPUTS	VT INPUTS	ANSI Code
d	 Agile P443	Modbus/ IEC103/ DNP 3/ IEC 61850	16 /24	16/ 24/ 32	4	4	21P, 21G (Both Mho or Quad), 79, 78, 68, 25, 50, 27, 50/51P, 69P, 50/51N, 67N, 46, 46/67, 49, 27/59, 59N, 81U/O, 81R, 50BF, 46BC, 50ST, VTS, CTS, 85

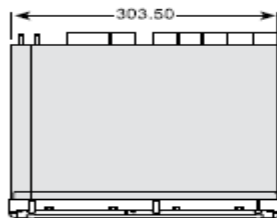
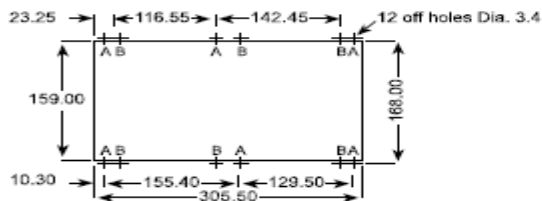
## P443 case dimensions (60TE case/ 80TE case)

**Design**  
Modular MiCOM Px40 platform  
relay P443 60TE (12"), case  
Mounting is front of panel flush  
mounting or 19" rack mounted  
(ordering options).

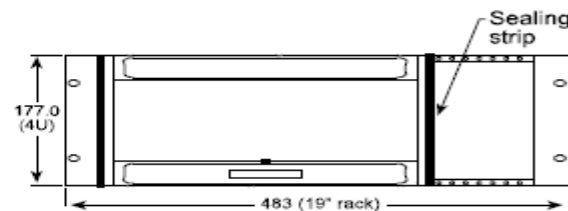
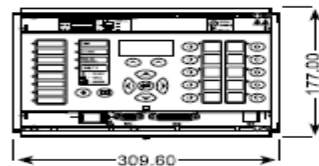
**Dimensions in mm (w x h x l) (60TE case)-**  
**W: 309.6 mm H: 177.0 mm D: 243.1 mm**

## Weight

**P4423(60TE): 9 kg – 12 kg (depending on chosen options)**

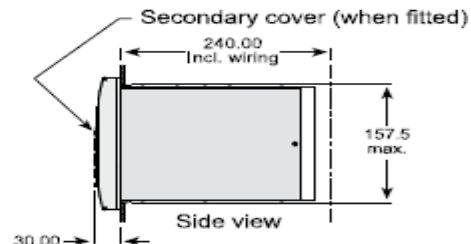


Front view




A = Clearance holes  
B = Mounting holes

All dimensions in mm





Sr. No	Model of relay	Protocol	Input (Min / Max)	Outputs (Min / Max)	CT INPUTS	VT INPUTS	ANSI Code
e	 Agile P444	Modbus/ IEC103/ DNP 3/ IEC 61850	24	32 / 46	4	4	P442 + Sampled values (IEC 61850 - 9-2)

### P444 case dimensions (80TE case)

#### Design

Modular MiCOM Px40 platform

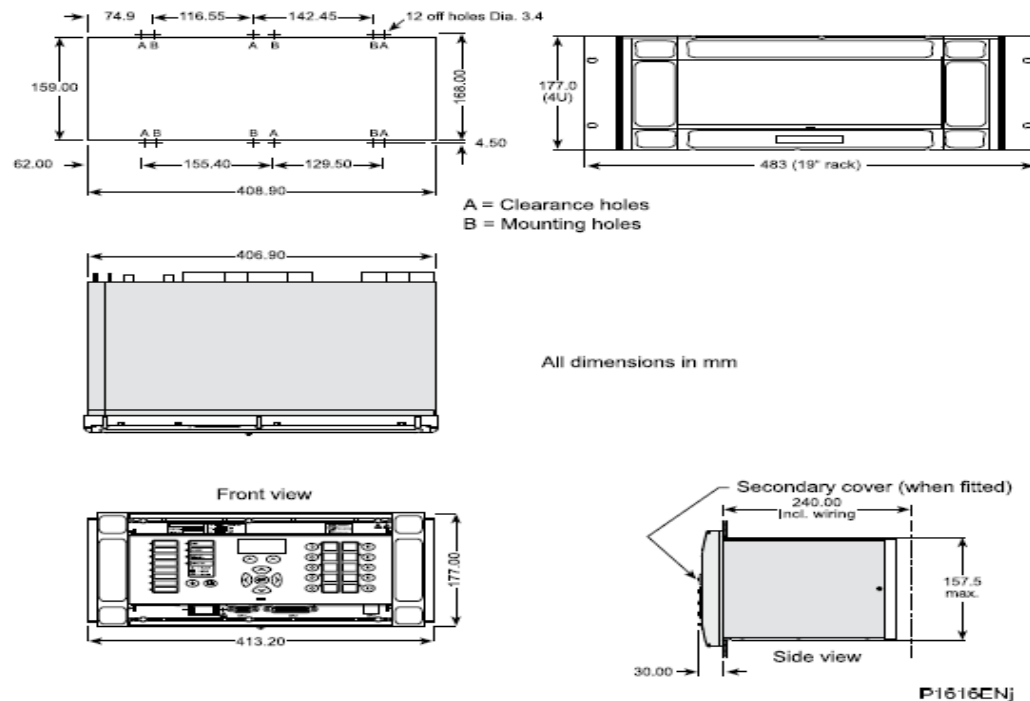
relay P444 80TE (16") case

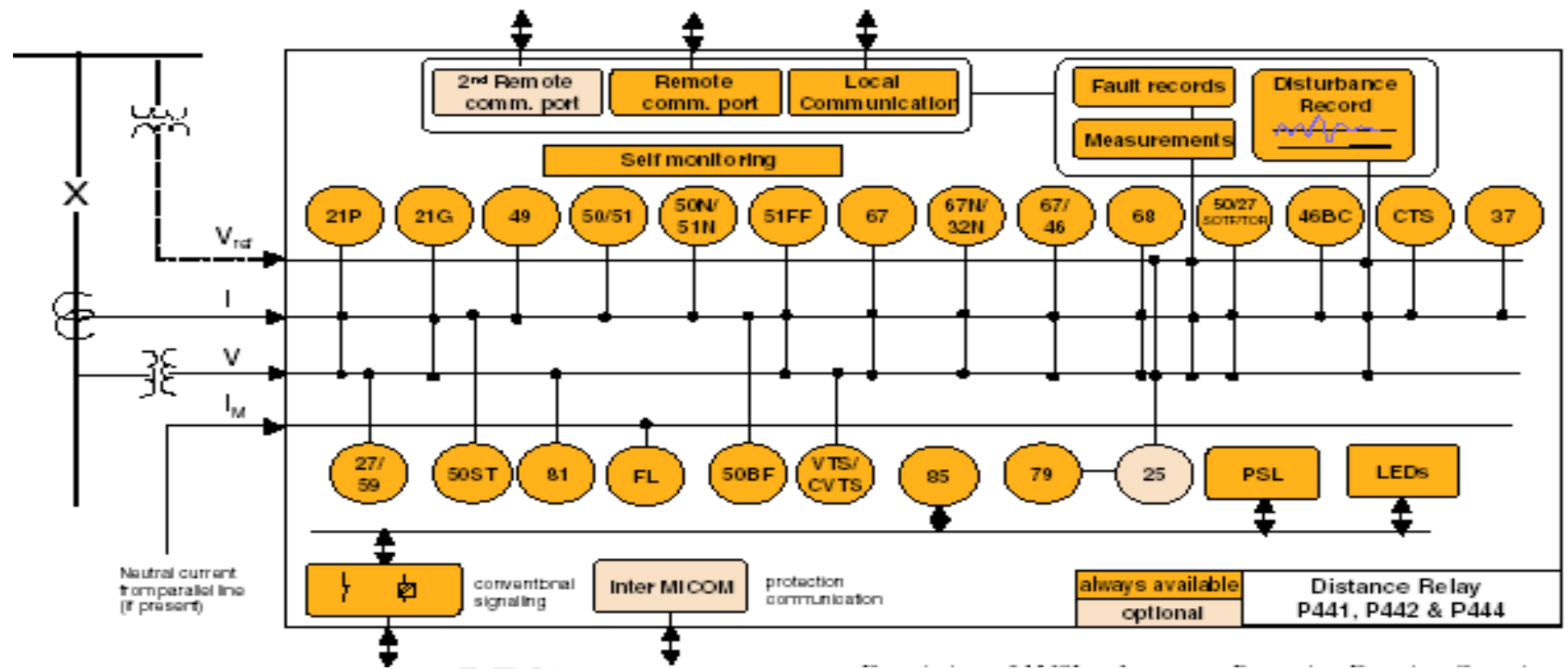
Mounting is front of panel flush  
mounting or 19" rack mounted  
(ordering options).

Dimensions in mm (w x h x l) (80TE case)-  
W 413.2 mm H 177.0 mm D 243.1 mm

#### Weight

P444(80TE): 13 kg - 16 kg (depending on  
chosen options)





❖Disclaimer:-

Info given herein is for ease of understanding. Customized tech info is for specific purpose SCS suggests you to take confirmation on technical details from GE experts SCS does not take responsibility or claim this will suit your needs.



## SYSTEM CONTROLS & SWITCHGEARS

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