HP Series

UL Recognized
ENEC Approved
ROHS Compliant



The HP series is the new power entry module developed for medical as well as general purpose applications with EMI suppression up to 12 A. Three options are available within this series: General Purpose, HG option with 1 MOPP(Means of Patient Protection) and NG option with 2 MOOP(Means of Operator Protection) compliance with UL60601. A total of 96 variants are offered for a wide range of different applications, with versatile features, and protection for medical patients & operators. The HP series is suitable for use in Class I or Class II medical equipment (UL60601), such as Dental Lighting, Medical Imaging Equipment, Therapeutic Equipment, Medical X-Ray Equipment, Medical Imaging Systems, Ultrasound Equipment etc. Corcom HP PEM is designed using Eco-design principles, and its housing is made of post-consumer recycled material.

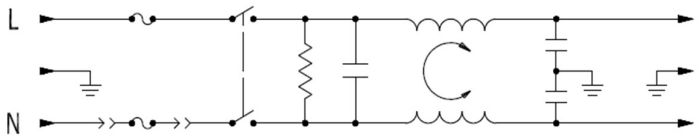
Features

High Protection Power Entry Module
Compatible with V-Lock plug
Compact / Light Weight
2 MOOP (double insulated, 3 kV) UL60601 -NG
1 MOPP (grounded, 5 µA leakage) UL60601 -HG
DPST Switch with rocker-guard option
Compact, flanged or Snap-In
Single- or Dual-Fusing
Shrouded FASTONs (for Class II protection)

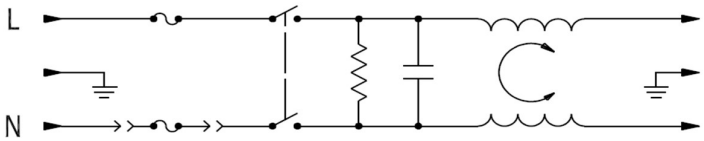
Applications

General purpose
Medical devices
Instruments
Portable electrical/electronic devices
Laboratory equipment
Home appliances
Office equipment
Telecom devices

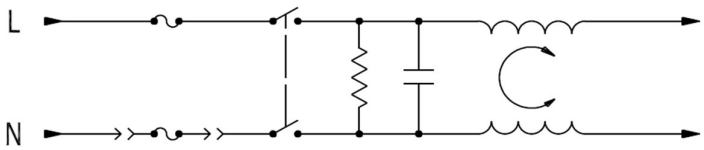
Electrical Schematics



Class I, 1 MOOP, General Purpose option



Class I, 1 MOPP, -HG



Class II, 2 MOOP, -NG

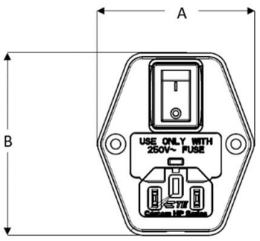
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Electrical Specifications

Maximum leakage current per Line to Ground	General Purpose	-HG, -NG
@120V, 60Hz	70 µA	2 µA
@250V, 50 Hz	140 µA	5 µA
HIPOT rating (2 s)		
L-G Class I	2250 VAC	
L-G Class II, (-NG)	3000 VAC	
Line to Line	1500 VDC	
Rated Voltage	120/250 VAC	
Operating Frequency	50/60 Hz	
Switch	DPST, 10,000 operations at 51 A max. Inrush	
Current Overload	2 X Rated for 8 second †	
Humidity	21 days, 40C @95% RH	
Operating Ambient Temperature	-40C to 40C†	
Storage Temperature	-40C to 85C	
Compatible with V-lock Plug	With IEC 60320 C14 or C18 socket	
† Use 14 AWG power cord for current over 6 A. Limit fault current to 12 A at 40C.		

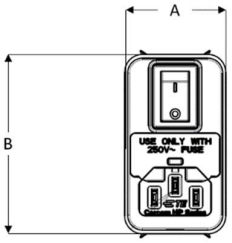
Case Styles

HPE – Flange type

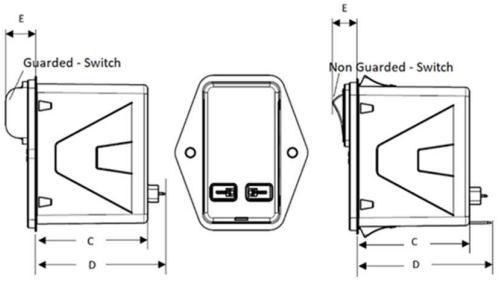


Class II, IEC 60320 C18

HPS – Snap-In type



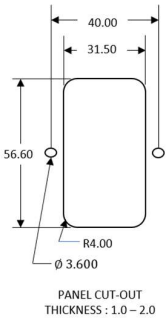
Class I, IEC 60320 C14



6.3 x 0.8 mm output terminals comply with IEC61210.

Case Dimensions

Part #	A	B	C	D	E
HPE	52	60.5	43.6	50.7	11.9
HPS	34	60.5	43.6	52.2	10.0





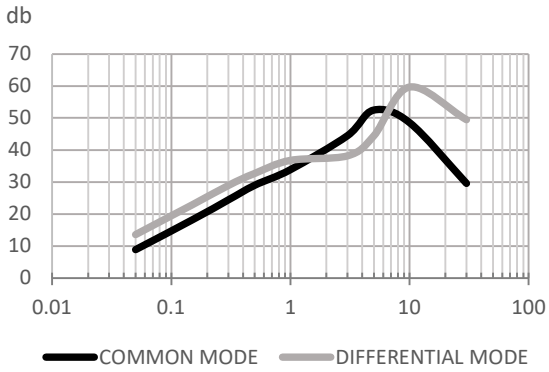
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Typical Insertion Loss

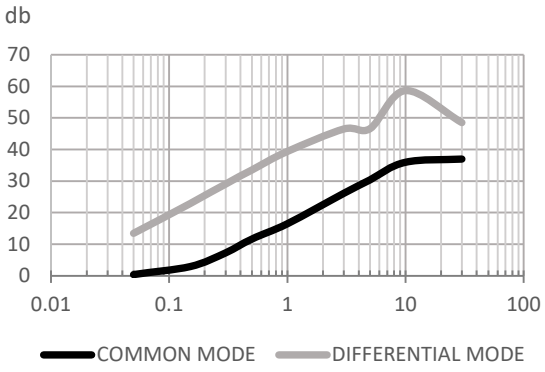
General purpose versions

Measured in closed 50-ohm system

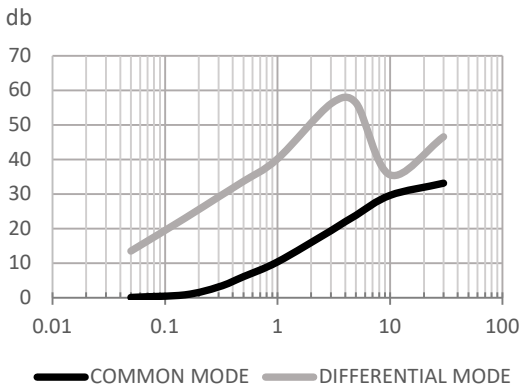
3A



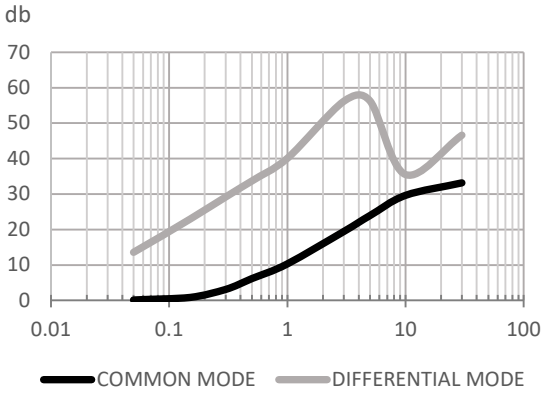
6A



10A



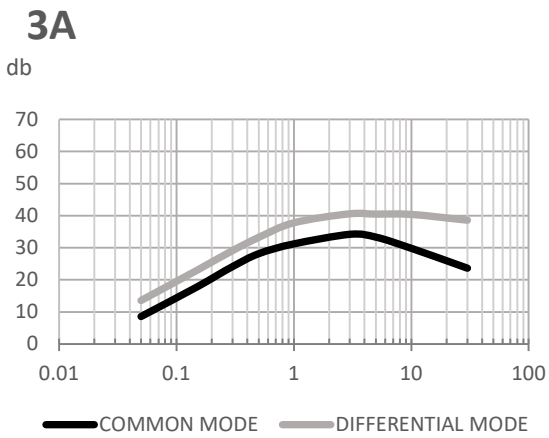
12A



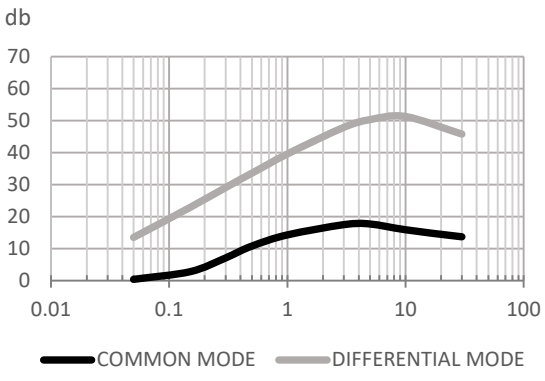
Typical Insertion Loss

-NG and -HG versions

3A

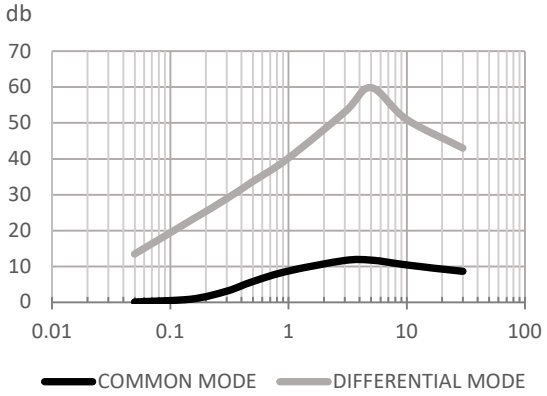


6A

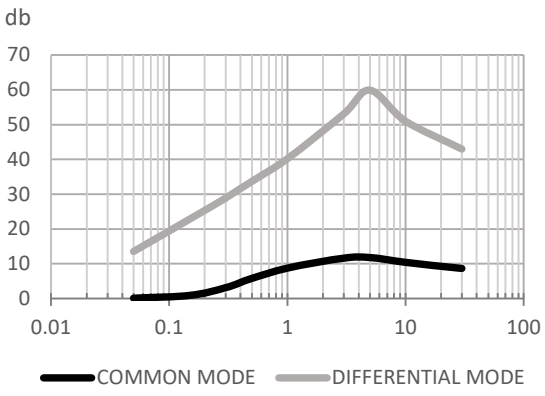


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10A



12A



Minimum Insertion Loss

General purpose versions

INSERTION LOSS [dB]																
	COMMON MODE/ Asymmetrical (Line to Ground)								DIFFERENTIAL MODE / Symmetrical (Line to Line)							
-__	3		6		10		12		3		6		10		12	
MHz	TYP	MIN	TYP	MIN	TYP	MIN	TYP	MIN	TYP	MIN	TYP	MIN	TYP	MIN	TYP	MIN
0.05	9	3	0	0	0	0	0	0	14	8	13	7	14	8	14	8
0.15	18	12	3	0	1	0	1	0	23	17	23	17	23	17	23	17
0.3	24	18	7	1	3	0	3	0	29	23	29	23	29	23	29	23
0.5	29	23	12	6	6	0	6	0	33	27	34	28	34	28	34	28
1	34	24	17	7	10	0	10	0	37	27	39	29	40	30	40	30
3	45	35	26	16	19	9	19	9	38	28	47	37	56	46	56	46
5	53	43	30	20	24	14	24	14	44	34	47	37	56	46	56	46
10	49	34	36	21	30	15	30	15	60	45	59	44	35	20	35	20
30	30	15	37	22	33	18	33	18	50	35	49	34	47	32	47	32

Minimum Insertion Loss

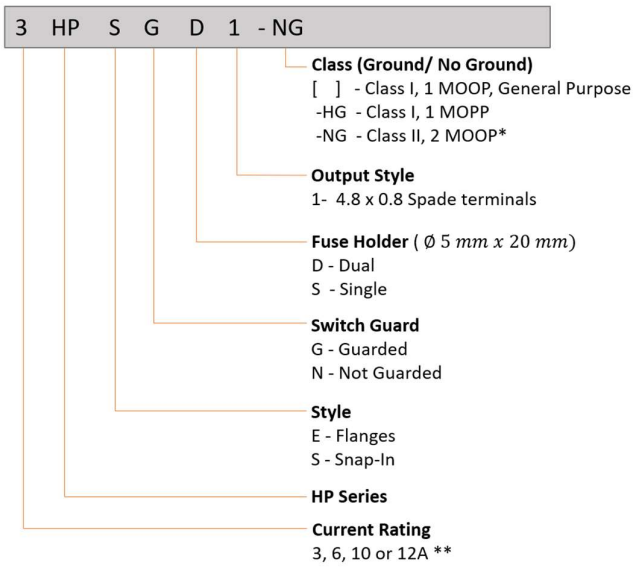
-NG, -HG versions

INSERTION LOSS [dB]																
-NG and	COMMON MODE/ Asymmetrical (Line to Ground)								DIFFERENTIAL MODE / Symmetrical (Line to Line)							
-HG	3A		6A		10A		12A		3A		6A		10A		12A	
MHz	TYP	MIN	TYP	MIN	TYP	MIN	TYP	MIN	TYP	MIN	TYP	MIN	TYP	MIN	TYP	MIN
0.05	9	3	0	0	0	0	0	0	14	8	14	8	14	8	14	8
0.15	18	12	3	0	1	0	1	0	23	17	23	17	23	17	23	17
0.3	24	18	7	1	3	0	3	0	29	23	29	23	29	23	29	23
0.5	28	22	11	5	6	0	6	0	33	27	34	28	34	28	34	28
1	31	21	14	4	9	0	9	0	38	28	40	30	40	30	40	30
3	34	24	18	8	12	2	12	2	41	31	48	38	53	43	53	43
5	33	23	18	8	12	2	12	2	41	31	50	40	60	50	60	50
10	30	15	16	1	10	0	10	0	40	25	51	36	51	36	51	36
30	24	9	14	0	9	0	9	0	39	24	46	31	43	28	43	28

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Ordering Information (Part Description)

EXAMPLE: 12HPENS1
12 A **
FLANGED
NO SWITCH GUARD
SINGLE-FUSE
GENERAL PURPOSE



*Class II with insulated FASTONS.
** RATED 12 A UL/CSA, 10 A ENEC.

Available Part Numbers

Class I, 1 MOOP, General purpose

Part Description	Part Number	Weight, g	Part Description	Part Number	Weight, g
Snap-In, Guarded, Single Fuse			Snap-In, Guarded, Double Fuse		
3HPSGS1	1-1609158-4	68	3HPSGD1	1-1609158-0	68
6HPSGS1	1-1609158-5	68	6HPSGD1	1-1609158-1	68
10HPSGS1	1-1609158-6	68	10HPSGD1	1-1609158-2	68
12HPSGS1	1-1609158-7	68	12HPSGD1	1-1609158-3	68
Flanges, Guarded, Single Fuse			Flanges, Guarded, Double Fuse		
3HPEGS1	2-1609158-2	80	3HPEGD1	1-1609158-8	80
6HPEGS1	2-1609158-3	80	6HPEGD1	1-1609158-9	80
10HPEGS1	2-1609158-4	80	10HPEGD1	2-1609158-0	80
12HPEGS1	2-1609158-5	80	12HPEGD1	2-1609158-1	80
Snap-In, Non-Guarded, Single Fuse			Snap-In, Non-Guarded, Double Fuse		
3HPSNS1	3-1609158-0	68	3HPSND1	2-1609158-6	68
6HPSNS1	3-1609158-1	68	6HPSND1	2-1609158-7	68
10HPSNS1	3-1609158-2	68	10HPSND1	2-1609158-8	68
12HPSNS1	3-1609158-3	68	12HPSND1	2-1609158-9	68
Flanges, Non-Guarded, Single Fuse			Flanges, Non-Guarded, Double Fuse		
3HPENS1	3-1609158-8	80	3HPEND1	3-1609158-4	80
6HPENS1	3-1609158-9	80	6HPEND1	3-1609158-5	80
10HPENS1	4-1609158-0	80	10HPEND1	3-1609158-6	80
12HPENS1	4-1609158-1	80	12HPEND1	3-1609158-7	80

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HG, Class I, 1 MOPP

Part Description	Part Number	Weight, g	Part Description	Part Number	Weight, g
Snap-In, Guarded, Single Fuse			Snap-In, Guarded, Double Fuse		
3HPSGS1-HG	7-1609158-8	68	3HPSGD1-HG	7-1609158-4	68
6HPSGS1-HG	7-1609158-9	68	6HPSGD1-HG	7-1609158-5	68
10HPSGS1-HG	8-1609158-0	68	10HPSGD1-HG	7-1609158-6	68
12HPSGS1-HG	8-1609158-1	68	12HPSGD1-HG	7-1609158-7	68
Flanges, Guarded, Single Fuse			Flanges, Guarded, Double Fuse		
3HPEGS1-HG	8-1609158-6	80	3HPEGD1-HG	8-1609158-2	80
6HPEGS1-HG	8-1609158-7	80	6HPEGD1-HG	8-1609158-3	80
10HPEGS1-HG	8-1609158-8	80	10HPEGD1-HG	8-1609158-4	80
12HPEGS1-HG	8-1609158-9	80	12HPEGD1-HG	8-1609158-5	80
Snap-In, Non-Guarded, Single Fuse			Snap-In, Non-Guarded, Double Fuse		
3HPSNS1-HG	9-1609158-4	68	3HPSND1-HG	9-1609158-0	68
6HPSNS1-HG	9-1609158-5	68	6HPSND1-HG	9-1609158-1	68
10HPSNS1-HG	9-1609158-6	68	10HPSND1-HG	9-1609158-2	68
12HPSNS1-HG	9-1609158-7	68	12HPSND1-HG	9-1609158-3	68
Flanges, Non-Guarded, Single Fuse			Flanges, Non-Guarded, Double Fuse		
3HPENS1-HG	1-1609157-2	80	3HPEND1-HG	9-1609158-8	80
6HPENS1-HG	1-1609157-3	80	6HPEND1-HG	9-1609158-9	80
10HPENS1-HG	1-1609157-4	80	10HPEND1-HG	1-1609157-0	80
12HPENS1-HG	1-1609157-5	80	12HPEND1-HG	1-1609157-1	80

NG, Class II, 2 MOOP (Insulated FASTON)

Part Description	Part Number	Weight, g	Part Description	Part Number	Weight, g
Snap-In, Guarded, Single Fuse			Snap-In, Guarded, Double Fuse		
3HPSGS1-NG	4-1609158-6	68	3HPSGD1-NG	4-1609158-2	68
6HPSGS1-NG	4-1609158-7	68	6HPSGD1-NG	4-1609158-3	68
10HPSGS1-NG	4-1609158-8	68	10HPSGD1-NG	4-1609158-4	68
12HPSGS1-NG	4-1609158-9	68	12HPSGD1-NG	4-1609158-5	68
Flanges, Guarded, Single Fuse			Flanges, Guarded, Double Fuse		
3HPEGS1-NG	5-1609158-4	80	3HPEGD1-NG	5-1609158-0	80
6HPEGS1-NG	5-1609158-5	80	6HPEGD1-NG	5-1609158-1	80
10HPEGS1-NG	5-1609158-6	80	10HPEGD1-NG	5-1609158-2	80
12HPEGS1-NG	5-1609158-7	80	12HPEGD1-NG	5-1609158-3	80
Snap-In, Non-Guarded, Single Fuse			Snap-In, Non-Guarded, Double Fuse		
3HPSNS1-NG	6-1609158-2	68	3HPSND1-NG	5-1609158-8	68
6HPSNS1-NG	6-1609158-3	68	6HPSND1-NG	5-1609158-9	68
10HPSNS1-NG	6-1609158-4	68	10HPSND1-NG	6-1609158-0	68
12HPSNS1-NG	6-1609158-5	68	12HPSND1-NG	6-1609158-1	68
Flanges, Non-Guarded, Single Fuse			Flanges, Non-Guarded, Double Fuse		
3HPENS1-NG	7-1609158-0	80	3HPEND1-NG	6-1609158-6	80
6HPENS1-NG	7-1609158-1	80	6HPEND1-NG	6-1609158-7	80
10HPENS1-NG	7-1609158-2	80	10HPEND1-NG	6-1609158-8	80
12HPENS1-NG	7-1609158-3	80	12HPEND1-NG	6-1609158-9	80

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