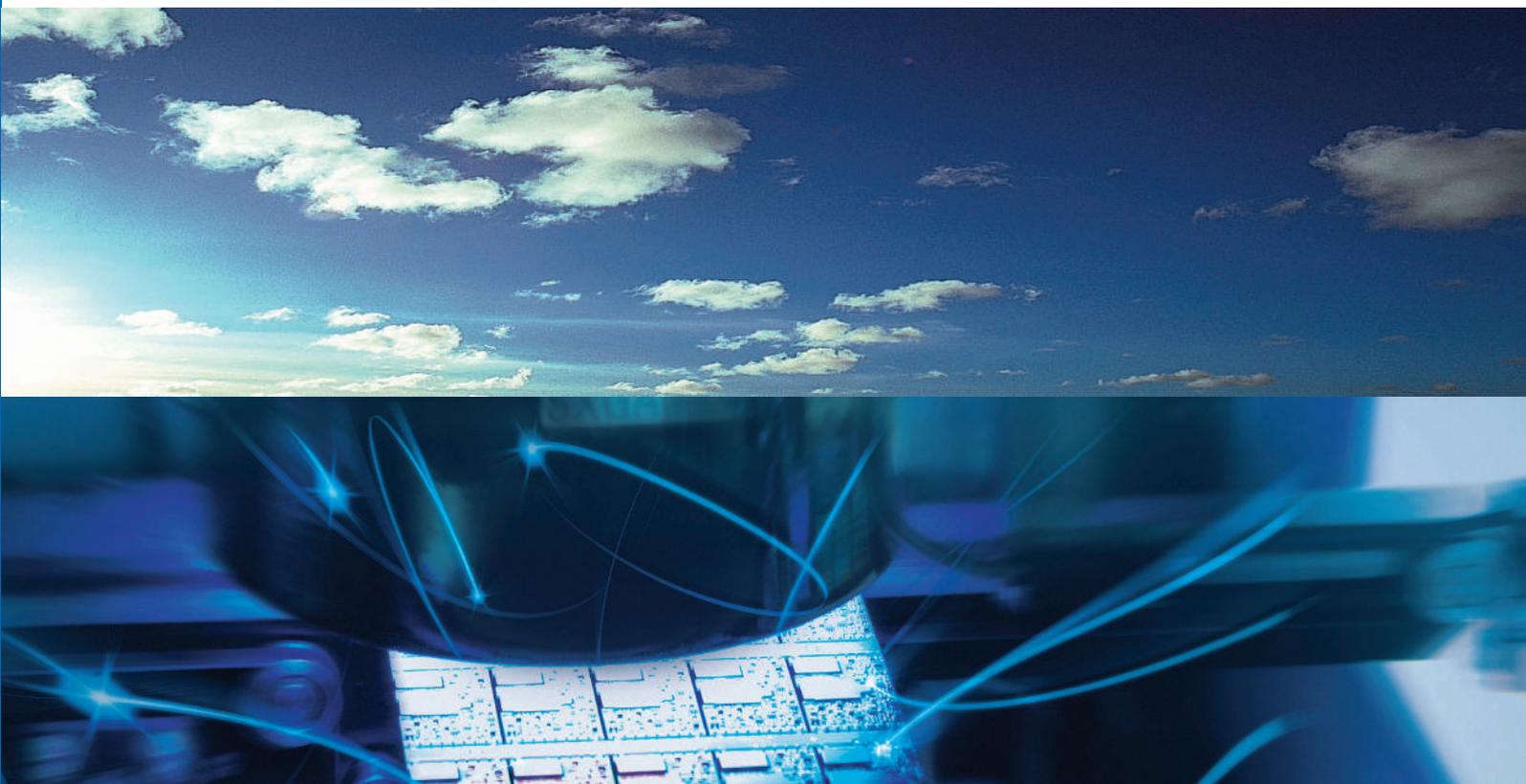


COSEL

2025

SHORT FORM CATALOG
POWER SUPPLIES / EMI FILTERS



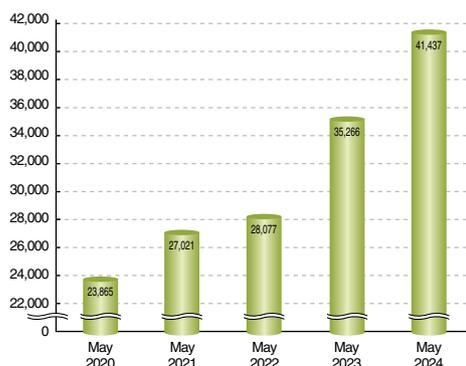
Company Guidance

- Established : July 26, 1969.
- Paid Capital : 6,043 Million Yen (As of July 2024)
- CEO : Morio Saito
- Annual Sales : 41,437 Million Yen (As of May 2024)
(Consolidated)
- Employees : 721 (As of May 2024)
- Subsidiaries : COSEL U.S.A., INC.
COSEL EUROPE GmbH
COSEL ASIA LTD.
COSEL (SHANGHAI) ELECTRONICS CO., LTD.
WUXI COSEL ELECTRONICS CO., LTD.
SHANGHAI COSEL INTERNATIONAL TRADING CO., LTD.
COSEL VIETNAM CO., LTD
POWERBOX INTERNATIONAL AB

- History :
 - J u l . 1969 Established ELCO CO., LTD.
 - A p r . 1978 Introduced QC circle activities.
 - J u n . 1978 Became Pure-Power Supply Business-Play.
 - M a y . 1982 Introduced TQC activities (Now changed to TQM activities).
 - J u n . 1983 Introduced Hoshin Management (Business Goal Management) activities.
 - M a r . 1988 Introduced Toyota Production System activities.
 - M a r . 1989 Tateyama Factory completed.
 - A p r . 1990 Established COSEL U. S. A., INC. (Former U. S. ELCO INC.) in San Jose, USA.
 - A p r . 1992 Changed company name to COSEL CO., LTD. from ELCO CO., LTD.
 - J u n . 1993 Acquired ISO9001.
 - M a y . 1995 Set a representative in Hong Kong, China.
 - M a y . 1996 Introduced TPM (Total Plant Maintenance) activities.
 - J u l . 1997 Established COSEL EUROPE GmbH in Frankfurt, Germany.
 - M a y . 1998 Established COSEL ASIA LTD. in Hong Kong, China.
 - J a n . 1999 Shares listed on the Second Sections of the Tokyo Stock Exchange and Nagoya Stock Exchange both.
 - D e c . 1999 Acquired ISO14001.
 - M a y . 2000 Shares listed on the First Section of the Tokyo Stock Exchange.
 - N o v . 2002 Established COSEL (SHANGHAI) ELECTRONICS CO., LTD. in Shanghai, China.
 - M a r . 2005 Entering EMI filter Business.
 - F e b . 2006 Successfully completed the RoHS Directive conformity.
 - N o v . 2011 Established SHANGHAI COSEL INTERNATIONAL TRADING CO., LTD. in Shanghai, China.
 - D e c . 2011 Established WUXI COSEL ELECTRONICS CO., LTD. in Wuxi, China.
 - A u g . 2015 Established COSEL VEITNAM CO., LTD in Ho Chi Minh City, Vietnam.
 - J u n . 2018 Acquired POWERBOX INTERNATIONAL AB.
 - O c t . 2018 Began operations at R&D Center.
 - A p r . 2024 Signed Capital and Business Alliance agreement with LITEON TECHNOLOGY CORPORATION.

Data

Annual sales
(Consolidated)
(Unit: Million Yen)



Ordinary income
(Consolidated)
(Unit: Million Yen)

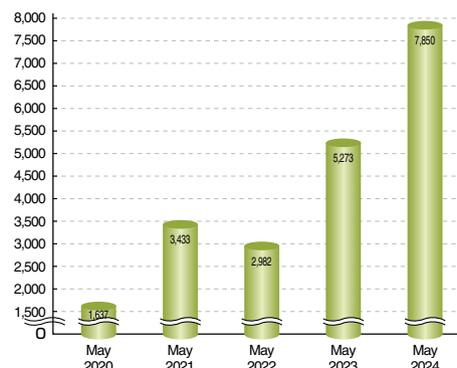




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The catalog is not listed some products for "Not recommended for new design" and "Not enough time till Last Time Buy". If you'd like to see all product information, please visit our website.

If you'd like to know details of the listed products, please scan the QR code on the catalog page with your smartphone to access the website.

Input Voltage Range	Outputs	Series	Output Power [W]																Released Year	Main Feature	Safety Standard · RoHS								
			10	20	40	60	80	100	150	200	250	300	400	500	600	700	800	900				1000	1500	2500	3500over				
100VAC 200VAC 300VAC	Single	1	PDA	NEW	●	●	●																'23	Enclosed type power supplies for general purpose.	UL, CE, UK, RoHS				
								●	●		●		●														'25		
			PCA										●													'17	Enclosed type power supplies for general purpose.	UL, CE, UK, RoHS	
																								●		'19			
			PJA																								'16	Enclosed type power supplies for general purpose.	UL, CE, UK, RoHS
																											'17		
			FETA																								'16	Low profile front-end power supplies. High power density.	UL, CE, UK, RoHS
				NEW																					●		'23		
																								7000	Low profile front-end power supplies. Three-phase type.	UL, CE, UK, RoHS			
																								7000	Low profile front-end power supplies. Three-phase four-wire type.				
																								NEW	Low profile enclosed power supply. Conduction cooling (Water cooling plate). Wide input voltage range (3 φ).	UL, CE, UK, RoHS			
																								NEW	Low profile enclosed power supply. Wide input voltage range (3 φ).	UL, CE, UK, RoHS			
																									Wide input voltage (170-305VAC).	UL, CE, UK, RoHS			

Input Voltage Range	Outputs	Series	Output Current [A]																Released Year	Main Feature	Safety Standard · RoHS								
			20	40	60	80	100																						
10-60VDC	Single	1	WDA	NEW	●	●	●																	'22	Din rail type. Basic function model. Economical type.	UL, CE, UK, RoHS			
																												'12	
																													'13
																													'15

Input Voltage Range	Outputs	Series	Output Current [A]																Released Year	Main Feature	Safety Standard · RoHS					
			20	40	60	80	100																			
10-60VDC	1	KR																						'16	Din rail type. Redundancy Module.	UL, CE, UK, RoHS
10-30VDC																										

Configurable Type

Multiple

Input Voltage Range	Outputs	Series	Output Power [W]	Released Year	Main Feature	Safety Standard · RoHS
100VAC 200VAC 400VAC	4 6	AME	20 40 60 100 200 300 400 500 600 700 800 900 1000 2000 3000 4000	'19	Low profile (1U) type. Available to select 4-6 channels among many output current modules.	

Open Frame/Enclosed Type

Single

Input Voltage Range	Outputs	Series	Output Power [W]	Released Year	Main Feature	Safety Standard · RoHS
100VAC 200VAC 400VAC	1	TECS	10 15 30 50 75 100 150 200 300 400 500 700 1000 1500	'23 '25	1 X 3 inches. High efficiency. 1 X 2.3 inches. High efficiency.	
	1	LHP		'21	Peak current function. Successor series of LFP series.	
	1	LHA		'19 '22	Open frame type power supplies for general purpose. Successor series of LFA series.	

Medical Type

Single

Input Voltage Range	Outputs	Series	Output Power [W]	Released Year	Main Feature	Safety Standard · RoHS
100VAC 200VAC 400VAC	1	AEA		'21 '22	Convection cooling. High output wattage and peak current function.	
	1	UMCS		'24	Enclosed type. For medical applications.	
	1	UMPS		'24	PCB mount type. For medical applications.	
	1	UMA		'23 '24	Open frame type 2X3 inches. For medical applications. Open frame type 2X4 inches. For medical application.	
	1	PJMA		'20 '21 '22	Enclosed type. For medical applications.	
	1	GMA		'17	Open frame type 2X4 inches. For medical applications.	
	1	GHA		'13 '23	Open frame type. 3X5 inches. Conduction cooling. For medical applications.	
	1	WMA		'19 '20 '23	Enclosed type. For medical applications.	

:UL · C-UL :TÜV :DEMCO :CE :UKCA :RoHS

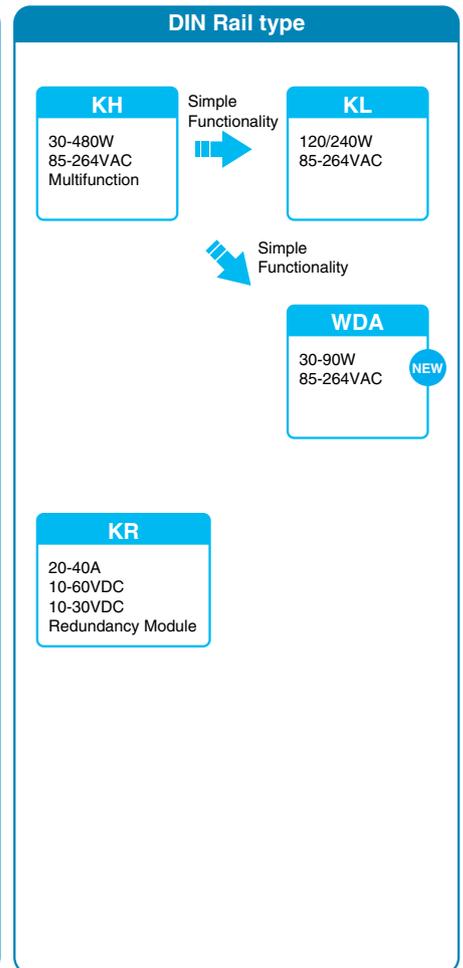
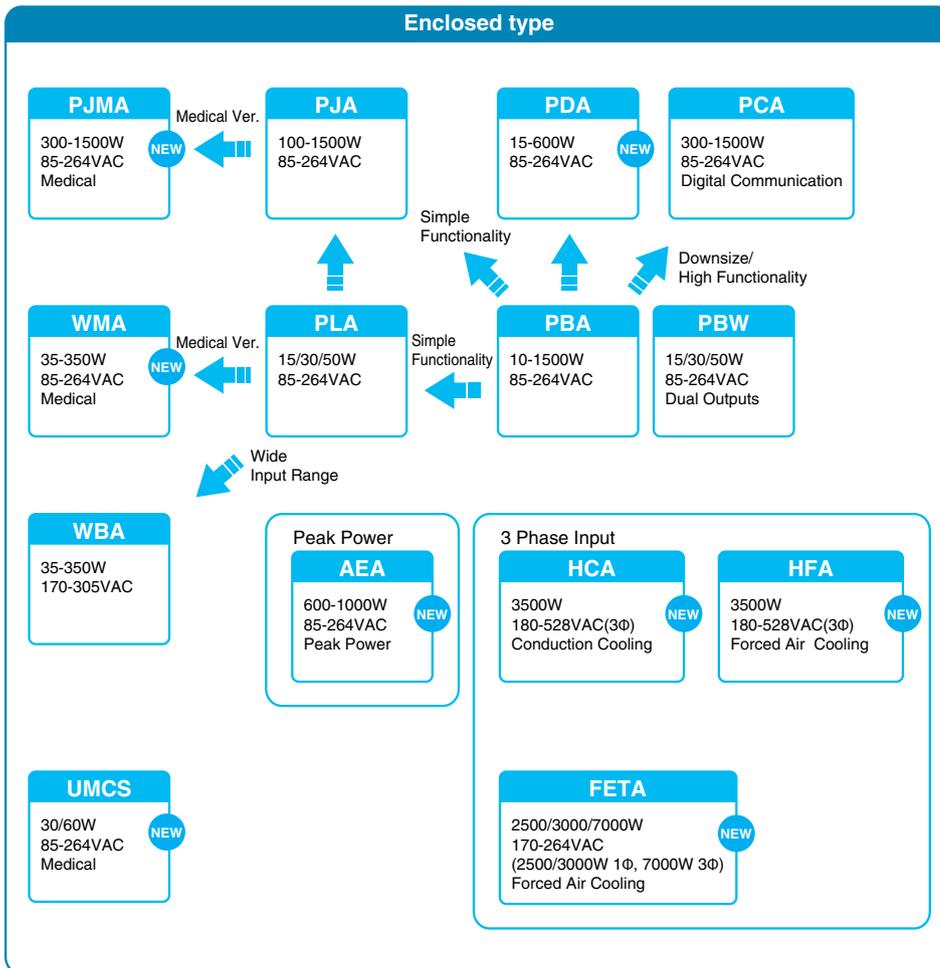
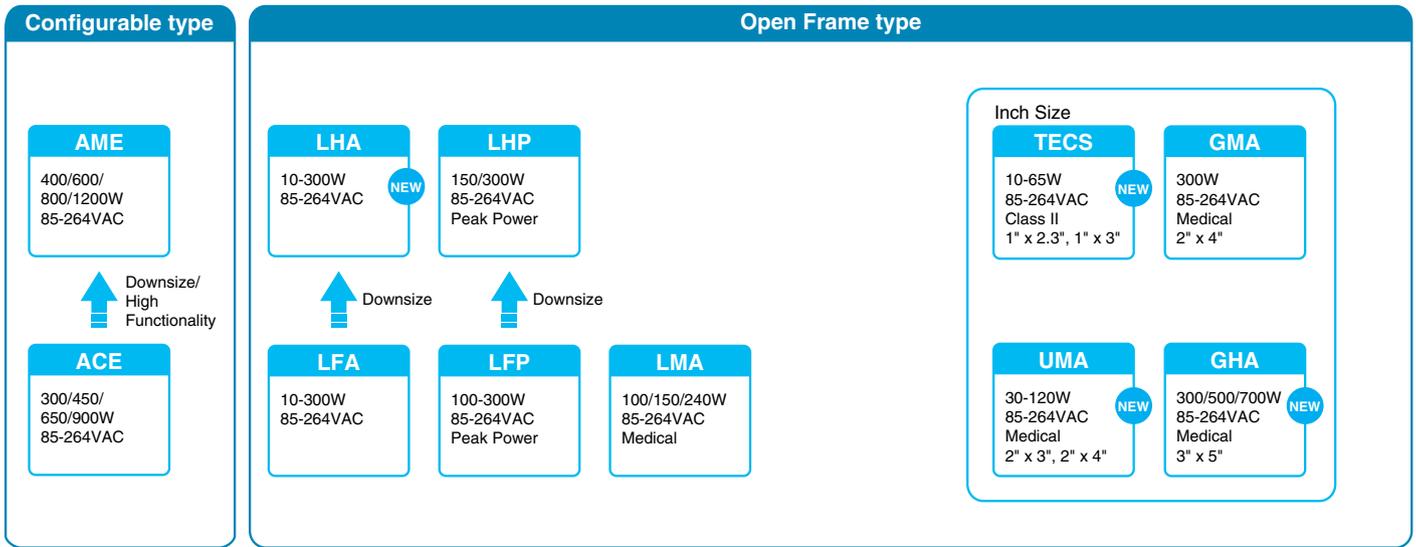
The catalog is not listed some products for “Not recommended for new design” and “Not enough time till Last Time Buy”. If you'd like to see all product information, please visit our website.

PCB Mount Type	Input Voltage Range	Outputs	Series	Output Power [W]													Release Year	Main Feature	Safety Standard · RoHS			
				1.5	3	5	6	10	15	20	25	30	40	80								
Single	5VDC 12VDC 24VDC 28VDC 110VDC 280VDC	1	NEW MUS	●	●		●	●									'25	Compact and thin DC/DC Converter for general purpose.	UL, TÜV, DEMKO, CE, UKCA, RoHS			
			MGS	●	●		●	●			●							'10 '16	Global standard DC/DC converter for general purpose.	UL, TÜV, DEMKO, CE, UKCA, RoHS		
			MGFS	●	●		●	●			●				●			'10 '17 '19	Wide-input global standard DC/DC converter for general purpose.	UL, TÜV, DEMKO, CE, UKCA, RoHS		
			MGXS	●			●											'18	Wide-input (6-60VDC) global standard DC/DC converter.	UL, TÜV, DEMKO, CE, UKCA, RoHS		
			STMG								●				●		●	'13 '21	Value-added type of MGFS series.	CE, UKCA, RoHS		
			NEW MHFS		●			●										'20 '22	DC/DC Converters with 4.2kVDC Isolation.	UL, TÜV, DEMKO, CE, UKCA, RoHS		
			SUS/SUCS	●	●		●	●										'04	Compact and thin DC/DC Converter for general purpose.	UL, TÜV, DEMKO, CE, UKCA, RoHS		
			100VAC 200VAC 277VAC	1	NEW TEPS							●		●				●	●	'23 '25	100/200VAC input, All in one type, High efficiency.	UL, TÜV, DEMKO, CE, UKCA, RoHS
					TUHS		●	●		●			●							'14 '15	100/200VAC input, compact size.	UL, TÜV, DEMKO, CE, UKCA, RoHS
			Multiple	5VDC 12VDC 24VDC 28VDC 110VDC 280VDC	2	NEW MUW	●	●		●	●									'25	Compact and thin DC/DC Converter for general purpose.	UL, TÜV, DEMKO, CE, UKCA, RoHS
MGW	●	●					●	●			●							'10 '16	Global standard DC/DC converter for general purpose.	UL, TÜV, DEMKO, CE, UKCA, RoHS		
MGFW	●	●					●	●			●				●			'10 '17 '19	Wide-input global standard DC/DC converter for general purpose.	UL, TÜV, DEMKO, CE, UKCA, RoHS		
MGXW	●						●											'18	Wide-input (6-60VDC) global standard DC/DC converter.	UL, TÜV, DEMKO, CE, UKCA, RoHS		
STMG											●				●			'13	Value-added type of MGFW series.	CE, UKCA, RoHS		
NEW MHFW		●						●										'20 '22	DC/DC Converters with DC4.2kVDC Isolation.	UL, TÜV, DEMKO, CE, UKCA, RoHS		
SUW/SUCW	●	●					●	●										'04	Compact and thin DC/DC Converter for general purpose.	UL, TÜV, DEMKO, CE, UKCA, RoHS		

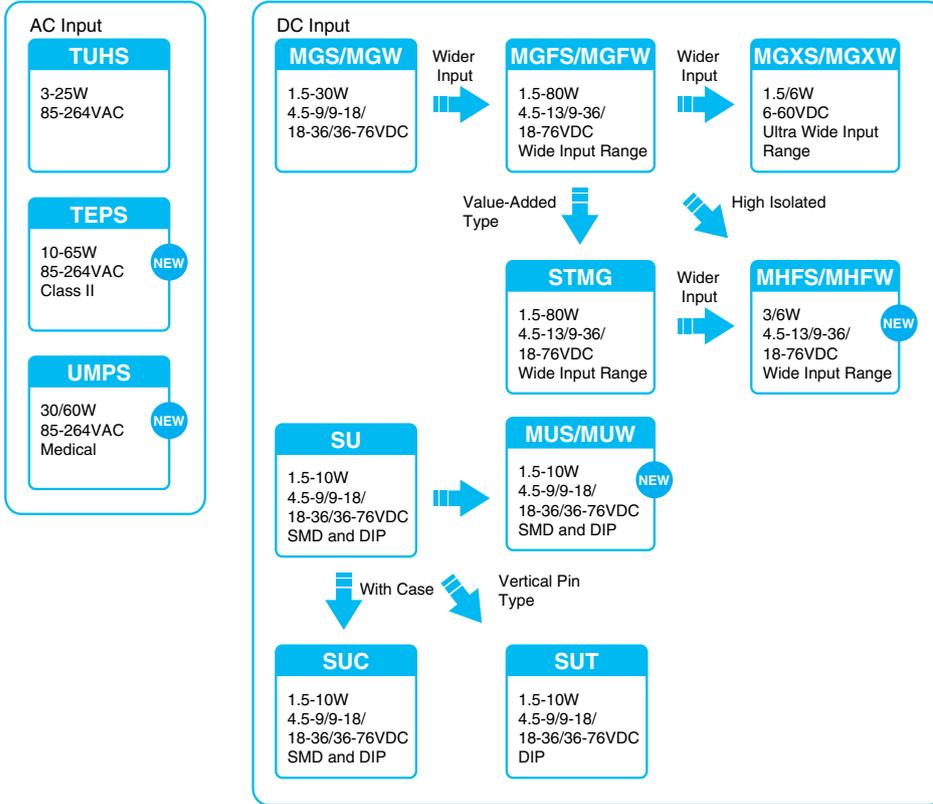
UL :UL · C-UL TÜV :TÜV DEMKO :DEMKO CE :CE UKCA :UKCA RoHS :RoHS

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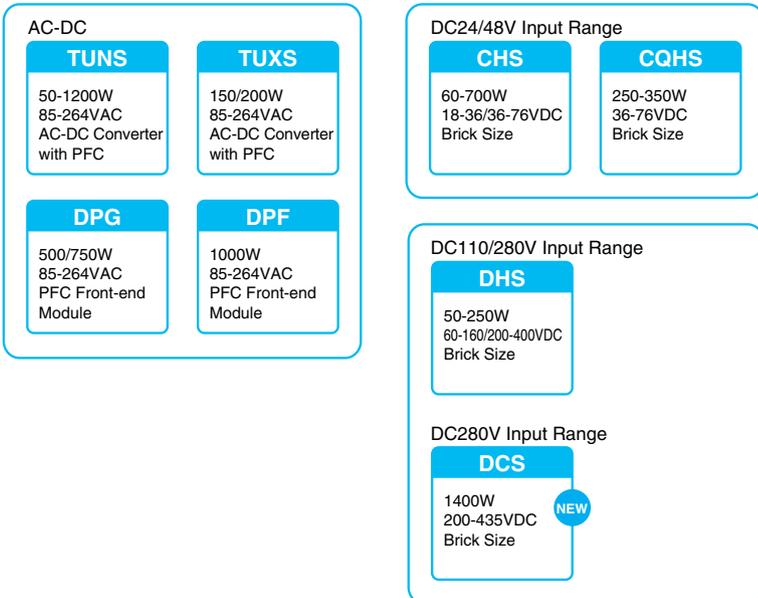
COSEL Selection Guide by Type/Function



PCB Mount type



Bus Converter/Power Module type



POL type



COSEL AC-DC Power Supplies Enclosed Type

FETA-Series



RoHS CE UK RoHS

FETA



MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [kg]
FETA2500BA	170-264VAC 1 φ	36	55	102·41·340 (4.02·1.61·13.39)	2.3
FETA3000BA		48	52		
FETA3000BC		250	12		
FETA7000T	170-264VAC 3 φ	48	148.2	388·43·475 (15.28·1.69·18.70)	11
		144	52		

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [kg]
FETA7000ST	300-480VAC 3 φ 4-Wire	48	148.2	388·43·475 (15.28·1.69·18.70)	11
		144	52		

*Derating is required. Please see COSEL website for the details.

Feature

- High power density (2.09W/cm³ FETA3000BA-48)
- Low profile (Meets 1U height)
- High output voltage
(FETA3000BC-250, FETA7000T-144, FETA7000ST-144)
- High efficiency (93.0%typ FETA3000BA-48, 230VACin, 50% load)
- High-speed response (FETA3000BC)
- Harmonic attenuator
(FETA2500BA, 3000BA, 3000BC, 7000ST : Complies with IEC61000-3-2 Class A)
- FETA7000T : Complies with IEC61000-3-12)
- Complies with SEMI F47
- Parallel Operation / Parallel Redundancy Operation
- Alarm signals, Remote ON / OFF and other functions

Safety agency approvals

UL62368-1, C-UL (CSA62368-1), EN62368-1

CE marking

Low Voltage Directive
RoHS Directive

UKCA marking

Electrical Equipment Safety Regulations
RoHS Regulations

EMI

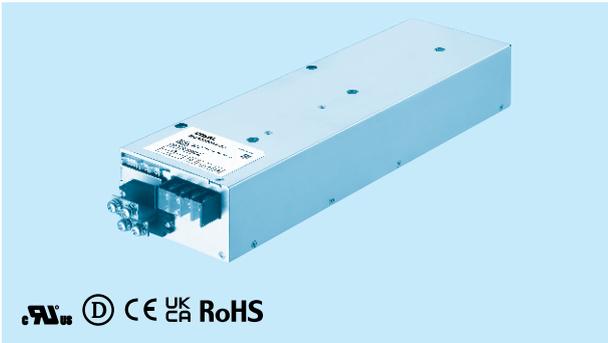
Complies with FCC Part15-A, CISPR32-A, EN55011-A, EN55032-A, VCCI-A (FETA7000ST External EMI filter is required.)

EMS Compliant : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

3-year warranty

COSEL AC-DC Power Supplies Enclosed Type
HCA-Series



Feature

- Low profile (Meets 1.5U height)
- Wide input voltage range
- High efficiency
- Parallel operation / N+1 redundancy operation
- Built-in AUX power (12V 1A)
- Built-in alarm
- Built-in ORING MOSFET
- Remote ON/OFF function
- Fanless (Conduction cooling)
- Complies with SEMI F47

Safety agency approvals

UL62368-1, C-UL (CSA62368-1), EN62368-1

CE marking

Low Voltage Directive
 RoHS Directive

UKCA marking

Electrical Equipment Safety Regulations
 RoHS Regulations

EMI

Complies with FCC Part 15-A, FCC Part 18-A, CISPR11-A,
 CISPR32-A, EN55011-A, EN55032-A, VCCI-A

EMS Compliance : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

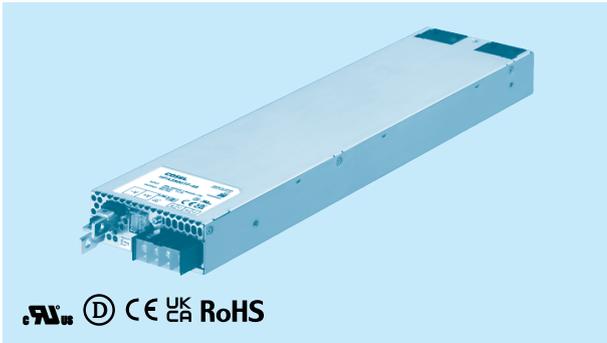
5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [kg]
HCA3500TF	180-528VAC 3 φ	48	73	110·65·420 (4.33·2.56·16.54)	5
		65	54		

* Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies Enclosed Type

HFA-Series



UL CE UK RoHS

HFA



MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [kg]
HFA3500TF	180-528VAC 3 φ	48	73	110·41·468 (4.33·1.61·18.43)	3
		65	54		

*Derating is required. Please see COSEL website for the details.

Feature

- Low profile (Meets 1U height)
- Wide input voltage range
- High efficiency
- Parallel operation / N+1 redundancy operation
- Built-in AUX power (12V 1A)
- Built-in alarm
- Built-in ORING MOSFET
- Remote ON/OFF function
- Complies with SEMI F47

Safety agency approvals

UL62368-1, C-UL (CSA62368-1), EN62368-1

CE marking

Low Voltage Directive
RoHS Directive

UKCA marking

Electrical Equipment Safety Regulations
RoHS Regulations

EMI

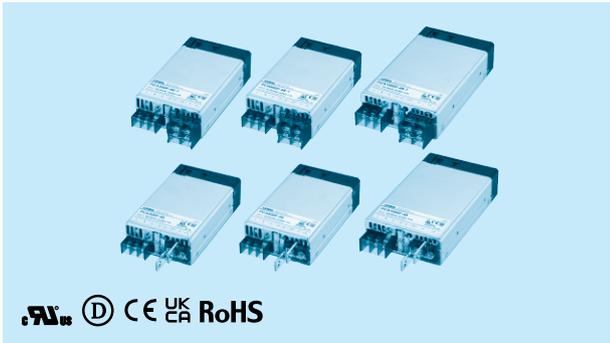
Complies with FCC Part 15-A, FCC Part 18-A, CISPR11-A, CISPR32-A, EN55011-A, EN55032-A, VCCI-A

EMS Compliance : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

COSEL AC-DC Power Supplies Enclosed Type
PCA-Series



MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]		CASE SIZE W · H · D [mm] (inches)	WEIGHT [kg]
			100VACin	230VACin		
PCA300F	85-264VAC 1φ or 88-370VDC	5	60		89·41·152 (3.50·1.61·5.98)	0.84
		12	27			
		15	22			
		24	14			
		32	10			
		48	7			
PCA600F	85-264VAC 1φ or 88-370VDC	5	120		89·41·152 (3.50·1.61·5.98)	0.84
		12	53			
		15	43			
		24	27			
		32	20			
		48	13			
PCA1000F	85-264VAC 1φ	5	200		102·41·178 (4.02·1.61·7.01)	1.2
		12	88			
		15	70			
		24	44			
		32	33			
		48	22			
PCA1500F	85-264VAC 1φ	5	300	300	140·41·203 (5.51·1.61·7.99)	2.0
		12	125	125		
		15	100	100		
		24	65	70		
		32	47	52		
		48	32	35		

*Derating is required. Please see COSEL website for the details.

Feature

- Low profile (41mm, 1.61 inches = Meets 1U height)
- Universal input (85-264VAC)
- Operating input voltage: 88-370VDC (Excl. PCA1000F and PCA1500F.)
- For medical applications (ANSI/AAMI ES60601-1, EN60601-1 3rd, IEC60601-1-2 4th Ed.)
- 2MOPP
- AUX output 12V 0.1A (Voltage adjustable range 5-12V)
- Constant current function
- Output voltage can be adjusted to approximately 0V
- Many alarm functions
- Parallel and N+1 parallel redundancy operations
- Monitoring function by communication.

Safety agency approvals

- UL62368-1, C-UL (CSA62368-1), EN62368-1, ANSI/AAMI EN60601-1, EN60601-1 3rd, IEC60601-1-2 4th
- Complies with DEN-AN

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with FCC-B, CISPR32-B, EN55011-B, EN55032-B, VCCI-B (PCA1000F and PCA1500F : External EMI filter is required to meet Class B. Only PCA1000F and PCA1500F : Class A)

EMS Compliance : EN61204-3, EN61000-6-2,

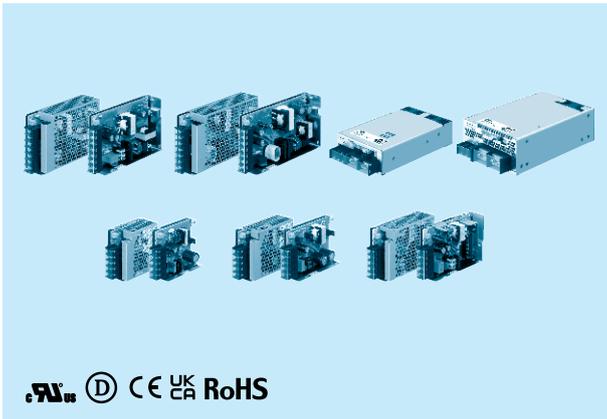
IEC60601-1-2 (2014), EN60601-1-2 (2015)

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

COSEL AC-DC Power Supplies Enclosed Type

PDA-Series



UL CE UK RoHS

PDA



Feature

- High efficiency
- Low noise
- Complies with SEMI F47
- Harmonic attenuator (Complies with IEC61000-3-2)
- Universal input (85-264VAC)
- Built-in inrush current, overcurrent and overvoltage protection circuits
- PDA300F/600F
 - Parallel Operation / N+1 Parallel Redundancy Operation possible
 - With various alarms
 - With AUX output 12V
 - Output voltage can be varied to near 0V

Safety agency approvals

- UL62368-1, C-UL (equivalent to CAN/CSA-C22.2 No.62368-1), EN62368-1
- Complies with DEN-AN

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, FCC Part 15-B, FCC Part 18-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty (refer to Instruction Manual)

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [g]
PDA15F	85-264VAC 1 φ	5	3	31·78·85 (1.22·3.07·3.35)	180
		12	1.3		
		24	0.7		
PDA30F	85-264VAC 1 φ	5	6	31·78·103 (1.22·3.07·4.06)	250
		12	2.5		
		24	1.3		
PDA50F	85-264VAC 1 φ	5	10	31·82·120 (1.22·3.23·4.72)	330
		12	4.3		
		24	2.2		
PDA100F	85-264VAC 1 φ	5	20	32·93·147 (1.26·3.66·5.79)	440
		12	8.5		
		15	7		
		24	4.5		
PDA150F	85-264VAC 1 φ	5	30	34·93·168 (1.34·3.66·6.61)	530
		12	13		
		15	10		
		24	6.5		

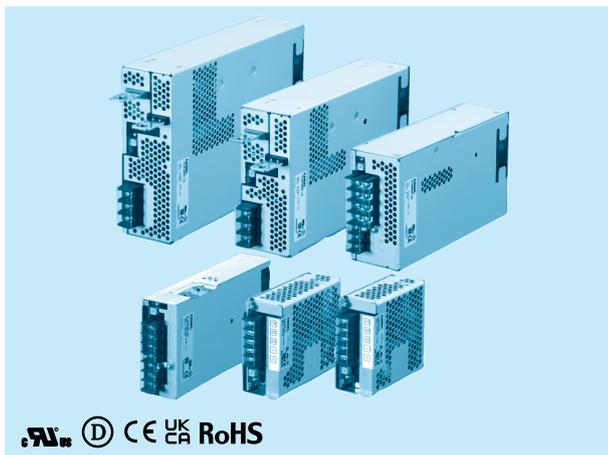
MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [kg]
PDA300F	85-264VAC 1 φ	5	60	102·42·170 (4.02·1.65·6.69)	1.0
		12	27		
		15	22		
		24	14 (16.5) *		
		36	9		
		48	7		
PDA600F	85-264VAC 1 φ	5	120	120·61·190 (4.72·2.4·7.48)	1.6
		12	53		
		15	43		
		24	27 (31) *		
		36	18		
		48	13		

* Peak current is available (230VACin)

* Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies Enclosed Type

PJA-Series



UL CE UK RoHS

PJA



Feature

- Low profile
- Wide operating ambient temperature (-20°C to +70°C, Derating is required)
- Harmonic attenuator (Complies with IEC61000-3-2 class A)
- Universal input (85-264VAC, Derating is required)
- Low power consumption at no load
- Complies with SEMI F-47

Safety agency approvals

- UL62368-1, C-UL (CSA62368-1), EN62368-1,
- UL508 (PJA100F and PJA150F, Except option -J) approved
- Complies with DEN-AN

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B
- (PJA1500F: External EMI filter is required to meet Class B. Only PJA1500F: Class A)

EMS Compliance : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

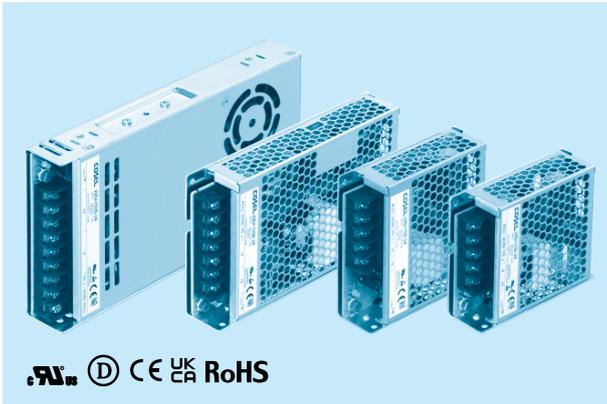
5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [kg]
PJA100F	85-264VAC 1 φ	12	8.4	41·97·109 (1.61·3.82·4.29)	0.5
		15	6.7		
		24	4.3		
		36	2.8		
		48	2.1		
PJA150F	85-264VAC 1 φ	12	12.5	41·97·129 (1.61·3.82·5.08)	0.6
		15	10		
		24	6.4		
		36	4.2		
		48	3.2		
PJA300F	85-264VAC 1 φ	5	50	102·41·190 (4.02·1.61·7.48)	1.0
		12	25		
		15	20		
		24	12.5		
		36	8.4		
PJA600F	85-264VAC 1 φ	48	6.3	120·61·215 (4.72·2.40·8.46)	2.0
		5	100		
		12	50		
		15	40		
		24	25		
PJA1000F	85-264VAC 1 φ	36	16.7	150·61·240 (5.91·2.40·9.45)	2.8
		48	12.5		
		12	84		
		15	67		
		24	42		
PJA1500F	85-264VAC 1 φ	48	21	178·61·268 (7.01·2.40·10.55)	3.5
		12	125		
		15	100		
		24	64		
		36	42		
48	32				

*Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies Enclosed Type

WBA-Series



*** This product is only available in Asia and Oceania (excluding Japan).**

Feature

- Wide input 170-305VAC (Accepts 230/277VAC Nominal inputs)
- Wide temperature range (-20°C to +70°C, Derating is required)
- Operating altitude up to 5000 meters
- 4kV isolation
- Low-profile
- Economical design
- Complies with SEMI F47

Safety agency approvals

- UL62368-1, EN62368-1,
- C-UL (equivalent to CAN/CSA-C22.2 No.62368-1)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, FCC Part 15-B and FCC Part 18-B (WBA350B: Class A In radiated noise, it can meet class B by additional EM/EMC filter.)

EMS Compliance : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [g]
WBA35B	170-305VAC 1 φ	5	7	30·82·99 (1.18·3.23·3.90)	200
		12	3		
		24	1.5		
		48	0.8		
WBA75B		12	6	30·97·99 (1.18·3.82·3.90)	250
		24	3.2		
		48	1.6		
WBA150B		12	12.5	30·97·159 (1.18·3.82·6.26)	500
		24	6.5		
		48	3.3		
WBA350B		12	29	115·30·215 (4.53·1.18·8.46)	800
		24	14.6		
	36	9.7			
	48	7.3			

* Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies DIN Rail Type
KH-Series



Feature

- DIN (35mm) rail type (Full function series)
- Attachment available with DIN EN60715
- TH35 (35x7.5mm) (Top hat shaped DIN rail)
- Convection cooling
- Wide operating ambient temperature (Derating is required)
- 2 types of I/O terminal (Euro style and barrier blocks style)
- Overcurrent protection, overvoltage protection
- KHEA30F/60F/90F, KHNA30F/60F/90F
- Low power consumption at no load
- Complies with SEMI F-47 (Derating is required)
- KHEA120F/240F/480F, KHNA120F/240F/480F
- Remote ON/OFF
- Relay signal for checking output voltage
- Complies with SEMI F-47

5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
KHEA30F/ KHNA30F	85-264VAC 1 φ or 88-370VDC	5	5	22.5·75·90 (0.89·2.95·3.54)	165
		12	2.3		
		24	1.3		
KHEA60F/ KHNA60F	85-264VAC 1 φ or 88-370VDC	12	4.5	32·90·90 (1.26·3.54·3.54)	270
		24	2.5		
KHEA90F/ KHNA90F	85-264VAC 1 φ or 88-250VDC	12	6.8	50·90·90 (1.97·3.54·3.54)	405
		24	3.8		
KHEA120F/ KHNA120F	85-264VAC 1 φ or 88-370VDC	24	5 (7.5)*	37·124·117 (1.46·4.88·4.61)	580
KHEA240F/ KHNA240F	85-264VAC 1 φ or 88-370VDC	24	10 (15)*	50·124·117 (1.97·4.88·4.61)	900
KHEA480F/ KHNA480F	85-264VAC 1 φ or 88-350VDC	24	20 (30)*	70·124·117 (2.76·4.88·4.61)	1200
		48	10 (15)*		

*Peak current.

*Derating is required. Please see COSEL website for the details.

Safety agency approvals

- 30-90F: <AC input>
 UL60950-1, C-UL (CSA60950-1), EN62368-1, UL508 (NEC Class2 per UL1310)※, ANSI/ISA12.12.01, ATEX
 Complies with DEN-AN
 ※90F: Only option -E
 <DC input>
 UL60950-1, C-UL(CSA60950-1), EN62368-1
- 120-480F: <AC input>
 UL60950-1, C-UL (CSA60950-1), EN62368-1, UL508, ANSI/ISA12.12.01, GL (Except 480F-48), ATEX
 Complies with DEN-AN
 <DC input>
 UL60950-1, C-UL (CSA60950-1), EN62368-1

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

COSEL AC-DC Power Supplies DIN Rail Type

KL-Series



RoHS CE UK CA RoHS



Feature

- DIN (35mm) rail type (Basic function series)
- Attachment available with DIN EN60715
- TH35 (35x7.5mm) (Top hat shaped DIN rail)
- Convection cooling
- Wide operating ambient temperature (Derating is required)
- 2 types of I/O terminal (Euro style and barrier blocks style)
- Harmonic attenuator (Complies with IEC61000-3-2 Class A)
- Overcurrent and overvoltage protection

COSEL Redundancy Module DIN Rail Type

KR-Series



RoHS CE UK CA RoHS



Feature

- DIN(35mm) rail type (Redundancy module)
- Attachment available with DIN EN60715
- TH 35 (35 x 7.5 mm) (Top hat shaped DIN rail)
- Convection cooling
- Wide operating ambient temperature (Derating is required)
- LED signal for checking input voltage balance
- Relay signal for checking input voltage

Safety agency approvals

UL60950-1, UL508, C-UL (CSA60950-1), EN62368-1

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
KLEA120F/ KLNA120F	85-264VAC 1 φ	24	5	38·124·117 (1.50·4.88·4.61)	580
		48	2.5		
KLEA240F/ KLNA240F	85-264VAC 1 φ	24	10	50·124·117 (1.97·4.88·4.61)	750
		48	5		

*Derating is required. Please see COSEL website for the details.

Safety agency approvals

UL60950-1, UL508, C-UL (CSA60950-1), EN62368-1
Complies with DEN-AN

CE marking

Low Voltage Directive
RoHS Directive

UKCA marking

Electrical Equipment Safety Regulations
RoHS Regulations

EMI

Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT CURRENT [A]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
KRE-20A	10-60VDC	20 (30)*	38·124·117 (1.50·4.88·4.61)	480
KRE-40A	10-30VDC	40 (60)*		610

*Peak current.

*Derating is required. Please see COSEL website for the details.

CE marking

Low Voltage Directive
RoHS Directive

UKCA marking

Electrical Equipment Safety Regulations
RoHS Regulations

EMI

Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6

5-year warranty

COSEL AC-DC Power Supplies DIN Rail Type
WDA-Series



- Feature**
 For DIN (35mm) Rail products
 Built-in overcurrent protection, overvoltage protection circuits
 Economical design
- Safety agency approvals**
 UL62368-1, EN62368-1,
 C-UL (equivalent to CAN/CSA-C22.2 No.62368-1)
- CE marking**
 Low Voltage Directive
 RoHS Directive
- UKCA marking**
 Electrical Equipment Safety Regulations
 RoHS Regulations

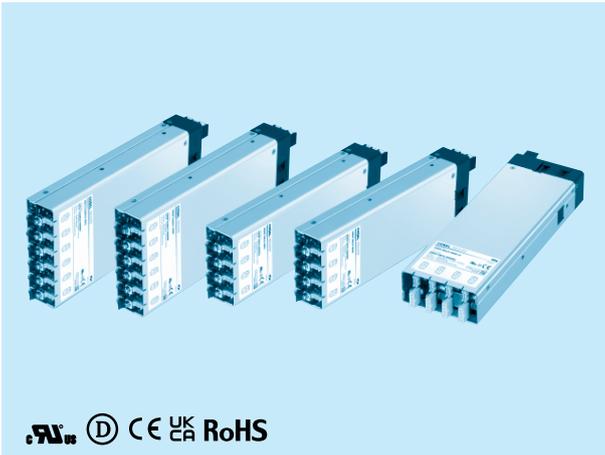
MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
WDA30F	85-264VAC 1 φ	5	6	32·90·90 (1.26·3.54·3.54)	200
		12	2.5		
		24	1.3		
		48	0.7		
WDA60F		12	5	32·90·90 (1.26·3.54·3.54)	250
		24	2.5		
		48	1.3		
WDA90F		12	7.5	50·90·90 (1.97·3.54·3.54)	350
		24	3.8		
		48	1.9		

*Derating is required. Please see COSEL website for the details.

- EMI**
 Complies with CISPR11-B, CISPR32-B, EN55011-B,
 EN55032-B, FCC Part 15-B and FCC Part 18-B
- EMS Compliance** : EN61204-3, EN61000-6-2
 EN61000-4-2
 EN61000-4-3
 EN61000-4-4
 EN61000-4-5
 EN61000-4-6
 EN61000-4-8
 EN61000-4-11
- 5-year warranty**

COSEL AC-DC Power Supplies Configurable Type

AME-Series



UL CE UK RoHS

AME



Feature

- Configurable type power supply
- Low profile (41mm, 1.61 inches = Meets 1U height)
- Universal input (85-264VAC)
- For medical applications (ANSI/AAMI ES60601-1, EN60601-1 3rd, IEC60601-1-2 4th Ed.)
- AUX output 5V 1A
- Global inhibit, remote ON/OFF control
- Connector type (Output terminal) (Option)

Safety agency approvals

- UL62368-1, ANSI/AAMI ES60601-1
- C-UL (CAN/CSA62368-1), C-UL (CAN/CSA60601-1)
- EN62368-1, EN60601-1 3rd

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with FCC-B, CISPR32-B, EN55011-B, EN55032-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2 IEC60601-1-2 (2014), EN60601-1-2 (2015)

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

MODEL [TYPE]	INPUT VOLTAGE	NUMBER OF SLOT	TOTAL OUTPUT WATTAGE [W]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [kg]
AME400F (AM04)	85-264VAC 1 φ	4	250 (90-150VACin)	89·41·257 (3.50·1.61·10.12)	1.2
			400 (170-264VACin)		
AME600F (AM06)	85-264VAC 1 φ	4	400 (90-150VACin)	89·41·257 (3.50·1.61·10.12)	1.2
			600 (170-264VACin)		
AME800F (AM08)	85-264VAC 1 φ	6	600 (90-150VACin)	127·41·257 (5.00·1.61·10.12)	1.8
			800 (170-264VACin)		
AME1200F (AM12)	85-264VAC 1 φ	6	1000 (90-150VACin)	127·41·257 (5.00·1.61·10.12)	1.8
			1200 (170-264VACin)		

OUTPUT MODULE

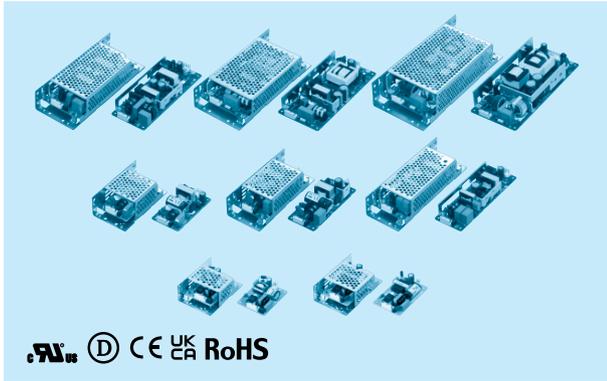
CODE	OUTPUT		CURRENT[A]	
	VOLTAGE[V]			
J	3.3		15.2	
A	5		12	
K	7.5		12	
B	12		8.5	
L	15		8	
C	24		5	
M	36		3.4	
D	48		2.5	
R	V1:24	V2:24	3	3
E4	3.3		32	
E	5		32	
S	7.5		24	
F4	7.5		20	
F	12		20	
T	15		16	
G4	15		10 (15)*	
G	24		10 (15)*	
U	36		6.7 (10)*	
H4	36		5 (7.5)*	
H	48		5 (7.5)*	
V4	65		3	
V	75		3	
V5	100		2.25	

*Peak current.

*Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies Open Frame Type

LHA-Series



LHA



Feature

- EN62477-1 (OVC III) : LHA150F, 300F
- Low profile
- Compact open frame type
- High efficiency
- Low noise
- Harmonic attenuator (Complies with IEC61000-3-2)
- Power factor correction (LHA75F-300F)
- Universal input (85-264VAC)
- Inrush current, overcurrent and overvoltage protection

Safety agency approvals

- UL62368-1, C-UL (equivalent to CAN/CSA-C22.2 No.62368-1), EN62368-1
- EN62477-1 (OVC III) : LHA150F, 300F
- Complies with DEN-AN

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with FCC-B, CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

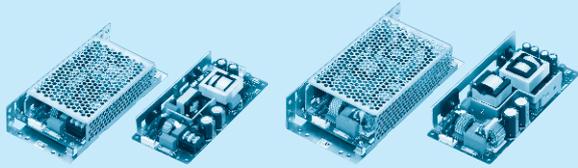
5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [g]
LHA10F	85-264VAC 1 φ	3.3	2	50·21.5·62.5 (1.97·0.85·2.46)	45
		5	2		
		12	0.9		
		15	0.7		
		24	0.5		
LHA15F	85-264VAC 1 φ	3.3	3	50·21.5·73.5 (1.97·0.85·2.89)	60
		5	3		
		12	1.3		
		15	1		
		24	0.7		
LHA30F	85-264VAC 1 φ	3.3	6	50·27·87.5 (1.97·1.07·3.44)	100
		5	6		
		12	2.5		
		15	2		
		24	1.3		
LHA50F	85-264VAC 1 φ	3.3	8	50·27·112 (1.97·1.07·4.41)	140
		5	8		
		12	4.3		
		15	3.5		
		24	2.1		
		36	1.4		
LHA75F	85-264VAC 1 φ	3.3	12	50·27·150 (1.97·1.07·5.91)	190
		5	12		
		12	6.3		
		15	5		
		24	3.2		
		36	2.1		
LHA100F	85-264VAC 1 φ	48	1.6	62·27·155 (2.44·1.07·6.10)	250
		5	15		
		12	8.5		
		15	6.7		
		24	4.3		
		36	2.8		
LHA150F	85-264VAC 1 φ	48	2.1	75·27·160 (2.95·1.07·6.30)	320
		12	12.5		
		24	6.3		
		36	4.2		
LHA300F	85-264VAC 1 φ	48	3.2	84·37·180 (3.31·1.46·7.09)	580
		12	25		
		24	12.5		
		48	6.3		

*Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies Open Frame Type

LHP-Series



UL CE UK RoHS

LHP



Feature

- OVC III
- High power and high peak power
- High efficiency
- Low profile
- Active power factor correction
- Harmonic attenuator (Complies with IEC61000-3-2)
- Universal input (85-264VAC)
- Built-in inrush current, overcurrent and overvoltage protection

Safety agency approvals

- UL62368-1, C-UL (equivalent to CAN/CSA-C22.2 No.62368-1), EN62368-1
- EN62477-1 (OVC III)
- Complies with DEN-AN
- UL508 (Optional)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with FCC-B, CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2

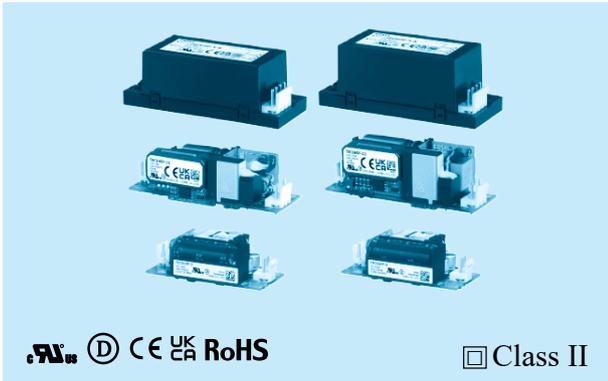
- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [g]
LHP150F	85-264VAC 1 φ	24	6.3(12.6)*	75·27·160 (2.95·1.07·6.30)	320
		30	5.0(10.0)*		
		36	4.2(8.4)*		
		42	3.6(7.2)*		
		48	3.2(6.4)*		
LHP300F	85-264VAC 1 φ	24	12.5(25.0)*	84·37·180 (3.31·1.46·7.09)	580
		30	10.0(20.0)*		
		36	8.4(16.8)*		
		42	7.2(14.4)*		
		48	6.3(12.6)*		

*Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies Open Frame Type
TECS-Series



TECS



Feature

- Small size
- 1"X2.3" (TECS10/20F), 1"X3" (TECS45/65F)
- High efficiency
- Harmonic attenuator (Complies with IEC61000-3-2)
- Universal input (85-264VAC)
- Built-in inrush current, overcurrent and overvoltage protection circuits
- Class II

Safety agency approvals

- UL62368-1, C-UL (equivalent to CAN/CSA-C22.2 No.62368-1), EN62368-1
- Complies with DEN-AN

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, FCC Part 15-B, FCC Part 18-B, VCCI-B

EMS Compliant : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

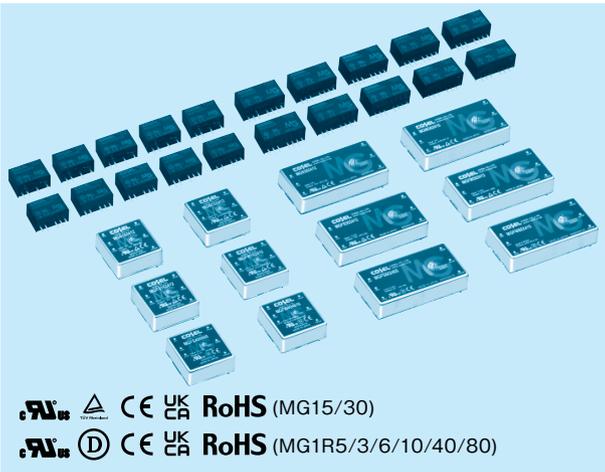
MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [g]
TECS10F	85-264VAC 1 φ	5	2	25.4·21.1· 58.5 (1.00·0.83·2.30)	35
		12	0.85		
		15	0.7		
		24	0.45		
TECS20F	85-264VAC 1 φ	5	4	25.4·21.1· 58.5 (1.00·0.83·2.30)	35
		12	1.7		
		15	1.35		
		24	0.85		
TECS45F	85-264VAC 1 φ	5	8	25.4·23.5· 76.2 (1.00·0.93· 3.00) 30.7·27.6·80.3** (1.21·1.09·3.16)**	60 80**
		12	3.8 (5.45)*		
		24	1.9 (2.75)*		
TECS65F	85-264VAC 1 φ	5	10	25.4·27.0·76.2 (1.0·1.06· 3.00) 30.7·31.1·80.3** (1.21·1.22·3.16)**	70 90**
		12	5.45 (7.5)*		
		24	2.75 (3.75)*		

*Peak current (Optional: -H).

**With cover (Optional: -N).

*Derating is required. Please see COSEL website for the details.

MG-Series



RoHS (MG15/30)
 RoHS (MG1R5/3/6/10/40/80)



Feature

- Industrial standard SIP6 (MG1R5/3), SIP8 (MG6/10), 1"X1" (MG15/MG40), 1"X2" (MG30/MG80)
- Wide input 9-36VDC/18-76VDC (MGFS/MGFW)
- Ultra wide input 6-60VDC (MGXS/MGXW)
- 6 sided shield (MG15/30/40/80)
- I/O Isolation voltage 1,500VDC (1minute)
- Overcurrent protection (Auto recovery type)
- Overvoltage protection (MG30/40/80)
- Remote ON/OFF (MG6/10/15/30/40/80)
- Output voltage adjustable by external variable resistor (MG15/30/40/80 Single output)
- High reliability: No built-in aluminum and tantalum electrolytic capacitor

Safety agency approvals

- UL60950-1, C-UL, EN62368-1 (MG1R5/3/6/10/15/30)
- UL62368-1, C-UL, EN62368-1 (MG40/80)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

10-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A]				CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
		3.3[V]	5[V]	12[V]	15[V]		
MGXS1R5	6-60VDC	0.4	0.3	0.13	0.1	17·12·8.5 (0.67·0.48·0.34)	4
MGXS6	6-60VDC	1.6	1.2	0.5	0.4	22·12·9.5 (0.87·0.48·0.38)	7

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A]			CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
		±5(+10) [V]	±12(+24) [V]	±15(+30) [V]		
MGXW1R5	6-60VDC	-	0.065	0.05	17·12·8.5 (0.67·0.48·0.34)	4
MGXW6	6-60VDC	-	0.25	0.2	22·12·9.5 (0.87·0.48·0.38)	7

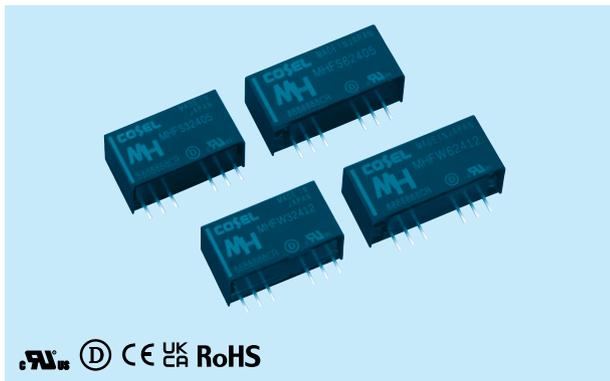
MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A]				CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
		3.3[V]	5[V]	12[V]	15[V]		
MGS1R5	4.5-9VDC	0.4	0.3	0.13	0.1	17·12·8.5 (0.67·0.48·0.34)	4
	9-18VDC	0.4	0.3	0.13	0.1		
	18-36VDC	0.4	0.3	0.13	0.1		
	36-76VDC	0.4	0.3	0.13	0.1		
MGS3	4.5-9VDC	0.8	0.6	0.25	0.2	17·12·8.5 (0.67·0.48·0.34)	4
	9-18VDC	0.8	0.6	0.25	0.2		
	18-36VDC	0.8	0.6	0.25	0.2		
MGS6	4.5-9VDC	1.6	1.2	0.5	0.4	22·12·9.5 (0.87·0.48·0.38)	7
	9-18VDC	1.6	1.2	0.5	0.4		
	18-36VDC	1.6	1.2	0.5	0.4		
	36-76VDC	1.6	1.2	0.5	0.4		
MGS10	4.5-9VDC	2.6	2	0.9	0.7	22·12·9.5 (0.87·0.48·0.38)	7
	9-18VDC	2.6	2	0.9	0.7		
	18-36VDC	2.6	2	0.9	0.7		
	36-76VDC	2.6	2	0.9	0.7		
MGS15	9-18VDC	4	3	1.3	1	25.4·9.9·25.4 (1·0.39·1)	20
	18-36VDC	4	3	1.3	1		
	36-76VDC	4	3	1.3	1		
MGS30	9-18VDC	8	6	2.5	2	25.4·9.9·50.8 (1·0.39·2)	40
	18-36VDC	8	6	2.5	2		
	36-76VDC	8	6	2.5	2		
MGFS1R5	9-36VDC	0.4	0.3	0.13	0.1	17·12·8.5 (0.67·0.48·0.34)	4
	18-76VDC	0.4	0.3	0.13	0.1		
MGFS3	9-36VDC	0.8	0.6	0.25	0.2	17·12·8.5 (0.67·0.48·0.34)	4
	18-76VDC	0.8	0.6	0.25	0.2		
MGFS6	9-36VDC	1.6	1.2	0.5	0.4	22·12·9.5 (0.87·0.48·0.38)	7
	18-76VDC	1.6	1.2	0.5	0.4		
MGFS10	9-36VDC	2.6	2	0.9	0.7	22·12·9.5 (0.87·0.48·0.38)	7
	18-76VDC	2.6	2	0.9	0.7		
MGFS15	9-36VDC	4	3	1.3	1	25.4·9.9·25.4 (1·0.39·1)	20
	18-76VDC	4	3	1.3	1		
MGFS30	9-36VDC	7.5	6	2.5	2	25.4·9.9·50.8 (1·0.39·2)	40
	18-76VDC	7.5	6	2.5	2		
MGFS40	4.5-13VDC	8	6	2.5	2	25.4·9.9·25.4 (1·0.39·1)	30
	9-36VDC	10	8	3.4	2.7		
	18-76VDC	10	8	3.4	2.7		
MGFS80	9-36VDC	18	16	6.7	5.4	25.4·9.9·50.8 (1·0.39·2)	50
	18-76VDC	18	16	6.7	5.4		

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A]			CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
		±5(+10) [V]	±12(+24) [V]	±15(+30) [V]		
MGW1R5	4.5-9VDC	-	0.065	0.05	17·12·8.5 (0.67·0.48·0.34)	4
	9-18VDC	-	0.065	0.05		
	18-36VDC	-	0.065	0.05		
	36-76VDC	-	0.065	0.05		
MGW3	4.5-9VDC	-	0.13	0.1	17·12·8.5 (0.67·0.48·0.34)	4
	9-18VDC	-	0.13	0.1		
	18-36VDC	-	0.13	0.1		
	36-76VDC	-	0.13	0.1		
MGW6	4.5-9VDC	-	0.25	0.2	22·12·9.5 (0.87·0.48·0.38)	7
	9-18VDC	-	0.25	0.2		
	18-36VDC	-	0.25	0.2		
	36-76VDC	-	0.25	0.2		
MGW10	4.5-9VDC	-	0.42	0.34	22·12·9.5 (0.87·0.48·0.38)	7
	9-18VDC	-	0.42	0.34		
	18-36VDC	-	0.42	0.34		
	36-76VDC	-	0.42	0.34		
MGW15	9-18VDC	1.5	0.65	0.5	25.4·9.9·25.4 (1·0.39·1)	20
	18-36VDC	1.5	0.65	0.5		
	36-76VDC	1.5	0.65	0.5		
MGW30	9-18VDC	2.5	1.25	1	25.4·9.9·50.8 (1·0.39·2)	40
	18-36VDC	2.5	1.25	1		
	36-76VDC	2.5	1.25	1		
MGFW1R5	9-36VDC	-	0.065	0.05	17·12·8.5 (0.67·0.48·0.34)	4
	18-76VDC	-	0.065	0.05		
MGFW3	9-36VDC	-	0.13	0.1	17·12·8.5 (0.67·0.48·0.34)	4
	18-76VDC	-	0.13	0.1		
MGFW6	9-36VDC	-	0.25	0.2	22·12·9.5 (0.87·0.48·0.38)	7
	18-76VDC	-	0.25	0.2		
MGFW10	9-36VDC	-	0.42	0.34	22·12·9.5 (0.87·0.48·0.38)	7
	18-76VDC	-	0.42	0.34		
MGFW15	9-36VDC	1.5	0.65	0.5	25.4·9.9·25.4 (1·0.39·1)	20
	18-76VDC	1.5	0.65	0.5		
MGFW30	9-36VDC	2	1.25	1	25.4·9.9·50.8 (1·0.39·2)	40
	18-76VDC	2	1.25	1		
MGFW40	4.5-13VDC	-	1.3	1	25.4·9.9·25.4 (1·0.39·1)	30
	9-36VDC	-	1.7	1.4		
	18-76VDC	-	1.7	1.4		
MGFW80	9-36VDC	-	3.4	2.7	25.4·9.9·50.8 (1·0.39·2)	50
	18-76VDC	-	3.4	2.7		

*Derating is required. Please see COSEL website for the details.

COSEL DC-DC Converters PCB Mount Type

MH-Series



MHFS



MHFW



Feature

- Industry Standard SIP8
- Wide input range 4.5-18VDC/9-36VDC/18-76VDC
- I/O isolation voltage 3,000VAC (1 minute), 4,200VDC (1 minute)
- Built-in overcurrent protection circuits (recovers automatically)
- Built-in remote ON/OFF
- Output voltage adjustable by external variable resistor (MHFS3/MHFS6)
- For medical electric equipment (ANSI/AAMI ES60601-1, EN60601-1 3rd)
- Medical Isolation Grade 2MOOP (250VAC)
- High reliability : not built-in aluminum and tantalum electrolytic capacitor

Safety agency approvals

- UL62368-1, EN62368-1, C-UL (equivalent to CAN/CSA-C22.2 No.62368-1), ANSI/AAMI ES60601-1, EN60601-1 3rd, C-UL (equivalent to CAN/CSA-C22.2 No.60601-1)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

5-year warranty

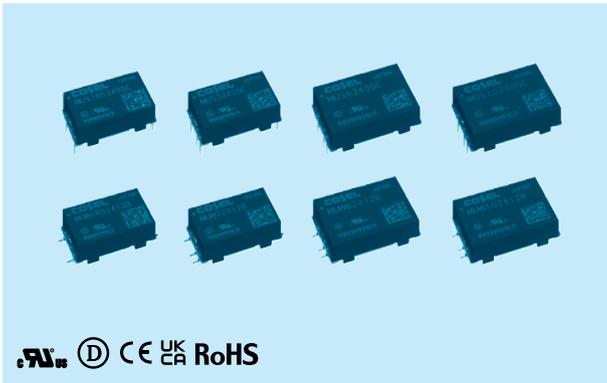
MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A]					CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
		3.3[V]	5[V]	9[V]	12[V]	15[V]		
MHFS3	4.5-18VDC	0.8	0.6	0.33	0.25	0.2	22·12·9.5 (0.87·0.48·0.38)	7
	9-36VDC	0.8	0.6	0.33	0.25	0.2		
	18-76VDC	0.8	0.6	0.33	0.25	0.2		
MHFS6	4.5-18VDC	1.6	1.2	0.66	0.5	0.4	26·12·9.5 (1.03·0.48·0.38)	8
	9-36VDC	1.6	1.2	0.66	0.5	0.4		
	18-76VDC	1.6	1.2	0.66	0.5	0.4		

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A]		CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
		±12 (+24) [V]	±15 (+30) [V]		
MHFW3	4.5-18VDC	0.13	0.1	22·12·9.5 (0.87·0.48·0.38)	7
	9-36VDC	0.13	0.1		
	18-76VDC	0.13	0.1		
MHFW6	4.5-18VDC	0.25	0.2	26·12·9.5 (1.03·0.48·0.38)	8
	9-36VDC	0.25	0.2		
	18-76VDC	0.25	0.2		

*Derating is required. Please see COSEL website for the details.

COSEL DC-DC Converters PCB Mount Type

MU-Series



Feature

- SMD mounting type and through-hole mounting type
- High efficiency
- I/O isolation
- Remote ON/OFF (MU3,6,10)
- Output voltage adjustable by external variable resistor
- High reliability : No built-in aluminum and tantalum electrolytic capacitor

Safety agency approvals

UL62368-1, EN62368-1,
C-UL (equivalent to CAN/CSA-C22.2 No.62368-1)

CE marking

Low Voltage Directive
RoHS Directive

UKCA marking

Electrical Equipment Safety Regulations
RoHS Regulations

5-year warranty

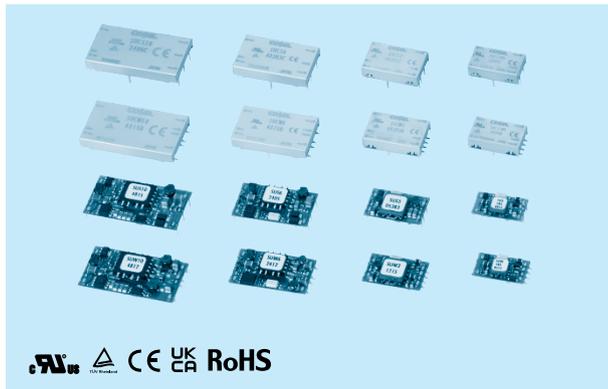
MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A]				CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
		3.3[V]	5[V]	12[V]	15[V]		
MUS1R5	4.5-9VDC	0.4	0.3	0.13	0.1	21.4·8.5·13.4 (0.84·0.33·0.53)	3
	9-18VDC	0.4	0.3	0.13	0.1		
	18-36VDC	0.4	0.3	0.13	0.1		
	36-76VDC	0.4	0.3	0.13	0.1		
MUS3	4.5-9VDC	0.6	0.6	0.25	0.2	21.4·8.5·13.4 (0.84·0.33·0.53)	3
	9-18VDC	0.6	0.6	0.25	0.2		
	18-36VDC	0.6	0.6	0.25	0.2		
MUS6	4.5-9VDC	1.35	1.2	0.5	0.4	24·8.5·17.3 (0.94·0.33·0.68)	5
	9-18VDC	1.35	1.2	0.5	0.4		
	18-36VDC	1.35	1.2	0.5	0.4		
MUS10	4.5-9VDC	2.6	2	0.9	0.7	24·8.5·17.3 (0.94·0.33·0.68)	5
	9-18VDC	2.6	2	0.9	0.7		
	18-36VDC	2.6	2	0.9	0.7		
	36-76VDC	2.6	2	0.9	0.7		

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A]		CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
		±12 (+24) [V]	±15 (+30) [V]		
MUW1R5	4.5-9VDC	0.065	0.05	21.4·8.5·13.4 (0.84·0.33·0.53)	3
	9-18VDC	0.065	0.05		
	18-36VDC	0.065	0.05		
	36-76VDC	0.065	0.05		
MUW3	4.5-9VDC	0.13	0.1	21.4·8.5·13.4 (0.84·0.33·0.53)	3
	9-18VDC	0.13	0.1		
	18-36VDC	0.13	0.1		
	36-76VDC	0.13	0.1		
MUW6	4.5-9VDC	0.25	0.2	24·8.5·17.3 (0.94·0.33·0.68)	5
	9-18VDC	0.25	0.2		
	18-36VDC	0.25	0.2		
	36-76VDC	0.25	0.2		
MUW10	4.5-9VDC	0.45	0.35	24·8.5·17.3 (0.94·0.33·0.68)	5
	9-18VDC	0.45	0.35		
	18-36VDC	0.45	0.35		
	36-76VDC	0.45	0.35		

*Derating is required. Please see COSEL website for the details.

COSEL DC-DC Converters PCB Mount Type

SU,SUC-Series



UL CE UK RoHS

SUS



SUCS



SUW



SUCW



Feature

- SMD mounting type and through-hole mounting type
- High efficiency (synchronous rectifier circuit)
- Remote ON/OFF (SU/SUC 3-10)
- High reliability : No built-in aluminum and tantalum electrolytic capacitor

Safety agency approvals

UL60950-1, C-UL, EN62368-1

CE marking

Low Voltage Directive
RoHS Directive

UKCA marking

Electrical Equipment Safety Regulations
RoHS Regulations

5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A]				CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
		3.3[V]	5[V]	12[V]	15[V]		
SUS1R5	4.5-9VDC	0.4	0.3	0.13	0.1	21.4·6.5·12.2 (0.84·0.26·0.48)	2
	9-18VDC	0.4	0.3	0.13	0.1		
	18-36VDC	0.4	0.3	0.13	0.1		
	36-76VDC	0.4	0.3	0.13	0.1		
SUS3	4.5-9VDC	0.6	0.6	0.25	0.2	24·6.5·15.1 (0.94·0.26·0.59)	3
	9-18VDC	0.6	0.6	0.25	0.2		
	18-36VDC	0.6	0.6	0.25	0.2		
	36-76VDC	0.6	0.6	0.25	0.2		
SUS6	4.5-9VDC	1.2	1	0.5	0.4	31.6·6.5·18.1 (1.24·0.26·0.71)	4
	9-18VDC	1.35	1.2	0.5	0.4		
	18-36VDC	1.35	1.2	0.5	0.4		
	36-76VDC	1.35	1.2	0.5	0.4		
SUS10	4.5-9VDC	2.6	2	0.9	0.7	39.2·6.5·21.0 (1.54·0.26·0.83)	6
	9-18VDC	2.6	2	1	0.8		
	18-36VDC	2.6	2	1	0.8		
	36-76VDC	2.6	2	1	0.8		
SUCS1R5	4.5-9VDC	0.4	0.3	0.13	0.1	22.4·7.0·13.2 (0.88·0.28·0.52)	3
	9-18VDC	0.4	0.3	0.13	0.1		
	18-36VDC	0.4	0.3	0.13	0.1		
	36-76VDC	0.4	0.3	0.13	0.1		
SUCS3	4.5-9VDC	0.6	0.6	0.25	0.2	25·7.0·16.1 (0.98·0.28·0.63)	5
	9-18VDC	0.6	0.6	0.25	0.2		
	18-36VDC	0.6	0.6	0.25	0.2		
	36-76VDC	0.6	0.6	0.25	0.2		
SUCS6	4.5-9VDC	1.2	1	0.5	0.4	32.6·7.0·19.1 (1.28·0.28·0.75)	7
	9-18VDC	1.35	1.2	0.5	0.4		
	18-36VDC	1.35	1.2	0.5	0.4		
	36-76VDC	1.35	1.2	0.5	0.4		
SUCS10	4.5-9VDC	2.6	2	0.9	0.7	40.2·7.0·22.0 (1.58·0.28·0.87)	10
	9-18VDC	2.6	2	1	0.8		
	18-36VDC	2.6	2	1	0.8		
	36-76VDC	2.6	2	1	0.8		

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A]		CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
		±12 (+24) [V]	±15 (+30) [V]		
SUW1R5	4.5-9VDC	0.065	0.05	21.4·6.5·12.2 (0.84·0.26·0.48)	2
	9-18VDC	0.065	0.05		
	18-36VDC	0.065	0.05		
	36-76VDC	0.065	0.05		
SUW3	4.5-9VDC	0.13	0.1	24·6.5·15.1 (0.94·0.26·0.59)	3
	9-18VDC	0.13	0.1		
	18-36VDC	0.13	0.1		
	36-76VDC	0.13	0.1		
SUW6	4.5-9VDC	0.25	0.2	31.6·6.5·18.1 (1.24·0.26·0.71)	4
	9-18VDC	0.25	0.2		
	18-36VDC	0.25	0.2		
	36-76VDC	0.25	0.2		
SUW10	4.5-9VDC	0.45	0.35	39.2·6.5·21.0 (1.54·0.26·0.83)	6
	9-18VDC	0.45	0.35		
	18-36VDC	0.45	0.35		
	36-76VDC	0.45	0.35		
SUCW1R5	4.5-9VDC	0.065	0.05	22.4·7.0·13.2 (0.88·0.28·0.52)	3
	9-18VDC	0.065	0.05		
	18-36VDC	0.065	0.05		
	36-76VDC	0.065	0.05		
SUCW3	4.5-9VDC	0.13	0.1	25·7.0·16.1 (0.98·0.28·0.63)	5
	9-18VDC	0.13	0.1		
	18-36VDC	0.13	0.1		
	36-76VDC	0.13	0.1		
SUCW6	4.5-9VDC	0.25	0.2	32.6·7.0·19.1 (1.28·0.28·0.75)	7
	9-18VDC	0.25	0.2		
	18-36VDC	0.25	0.2		
	36-76VDC	0.25	0.2		
SUCW10	4.5-9VDC	0.45	0.35	40.2·7.0·22.0 (1.58·0.28·0.87)	10
	9-18VDC	0.45	0.35		
	18-36VDC	0.45	0.35		
	36-76VDC	0.45	0.35		

*Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies PCB Mount Type

TEPS-Series



TEPS



Feature

- Small size
- 1"X1.5" (TEPS10/20F), 1"X2.3" (TEPS45/65F)
- High efficiency
- Harmonic attenuator (Complies with IEC61000-3-2)
- Universal input (85-264VAC)
- Built-in inrush current, overcurrent and overvoltage protection circuits
- All in one type
- Class II

Safety agency approvals

- UL62368-1, C-UL (equivalent to CAN/CSA-C22.2 No.62368-1),
- EN62368-1
- Complies with DEN-AN

CE marking

- Low voltage directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with CISPR11-B, CISPR32-B, EN55011-B, EN55032-B
- FCC Part 15-B, FCC Part 18-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [g]
TEPS10F	85-264VAC 1 φ	5	2	25.4·21.6·38.5 (1.00·0.85·1.50)	30
		12	0.85		
		15	0.7		
		24	0.45		
TEPS20F	85-264VAC 1 φ	5	4	25.4·21.6·38.1 (1.00·0.85·1.50)	30
		12	1.7		
		15	1.35		
		24	0.85		
TEPS45F	85-264VAC 1 φ	5	8	25.4·24.0·58.5 (1.00·0.94·2.30) 30.6·27.6·62.5** (1.21·1.09·2.46)**	60 80**
		12	3.8 (5.45)*		
		24	1.9 (2.75)*		
		5	10		
12	5.45 (7.5)*				
24	2.75 (3.75)*				

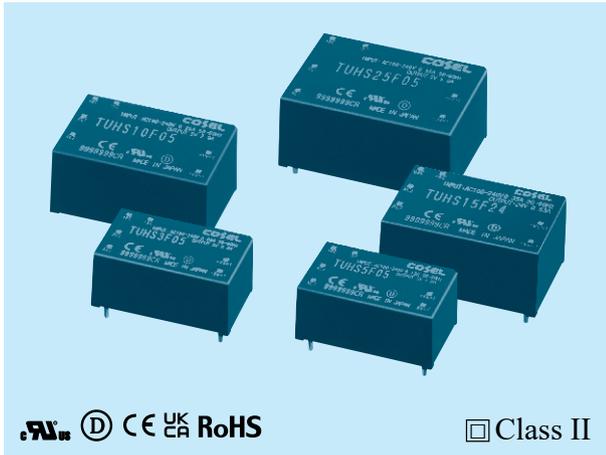
* Peak current (Optional: -H).

** With cover (Optional: -N).

* Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies PCB Mount Type

TUHS-Series



TUHS



Feature

- PCB mount type AC-DC converter
- A lot of design flexibility about hold-up time and expected life
- Small size
- Overcurrent and overvoltage protection
- High efficiency by synchronous rectification technology (TUHS25)
- No built-in aluminum and tantalum electrolytic capacitor

Safety agency approvals

UL60950-1, C-UL, EN62368-1

CE marking

- Low voltage directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

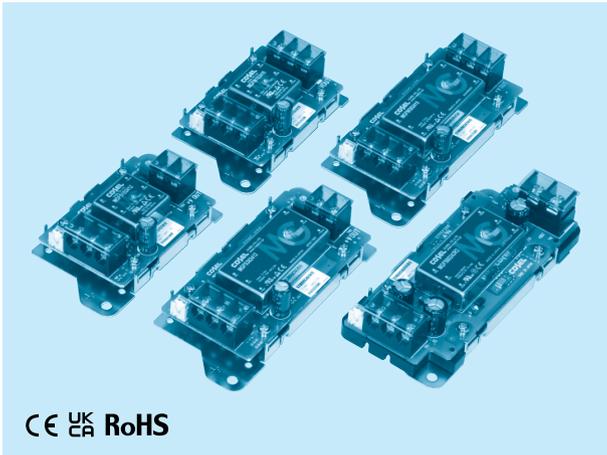
5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [g]
TUHS3	85-264VAC 1φ or 120 - 370VDC	5	0.6	28.7·12.7·17.5 (1.13·0.50·0.69)	15
		12	0.25		
		15	0.20		
		24	0.13		
TUHS5	85-264VAC 1φ or 120 - 370VDC	5	1	28.7·12.7·17.5 (1.13·0.50·0.69)	15
		12	0.45		
		15	0.34		
		24	0.22		
TUHS10	85-264VAC 1φ or 120 - 370VDC	5	2	33.0·15.0·22.0 (1.3·0.59·0.86)	25
		12	0.9		
		15	0.67		
		24	0.45		
TUHS15	85-264VAC 1φ or 120 - 370VDC	12	1.25	33.0·15.0·22.0 (1.3·0.59·0.86)	25
		15	1		
		24	0.63		
		5	5		
TUHS25	85-264VAC 1φ or 120 - 370VDC	12	2.1	36.0·16.5·25.4 (1.42·0.65·1.0)	40
		15	1.7		
		24	1.1		

*Derating is required. Please see COSEL website for the details.

COSEL DC-DC Converters PCB Mount Type Value-added Type

STMG-Series



CE UK RoHS

STMGFS



STMGFW



MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A]				CASE SIZE W · H · D [mm] (inches)	WEIGHT [g]
		3.3[V]	5[V]	12[V]	15[V]		
STMGFS15	9-36VDC	4	3	1.3	1	52·27·93 (2.05·1.06·3.66)	110
	18-76VDC	4	3	1.3	1		
STMGFS30	9-36VDC	7.5	6	2.5	2	52·27·117 (2.05·1.06·4.61)	140
	18-76VDC	7.5	6	2.5	2		
STMGFS80	9-36VDC	18	16	6.7	5.4	52·29·117 (2.05·1.14·4.61)	170
	18-76VDC	18	16	6.7	5.4		

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A]			CASE SIZE W · H · D [mm] (inches)	WEIGHT [g]
		± 5 (+10) [V]	± 12 (+24) [V]	± 15 (+30) [V]		
STMGFW15	9-36VDC	1.5	0.65	0.5	52·27·93 (2.05·1.06·3.66)	110
	18-76VDC	1.5	0.65	0.5		
STMGFW30	9-36VDC	2	1.25	1	52·27·117 (2.05·1.06·4.61)	140
	18-76VDC	2	1.25	1		

*Derating is required. Please see COSEL website for the details.

Feature

- Isolated PCB mount type DC-DC converter
- Wide input 9-36VDC/18-76VDC
- Connector interface available (Option)
- Case cover available (Option)
- DIN rail attachment available (Option)
- Overcurrent protection (Auto recovery type)
- Overvoltage protection (STMG30/STMG80)
- Remote ON/OFF
- Output voltage adjustment (Single output only, ±10%)

Safety agency approvals

- UL60950-1, C-UL, EN62368-1, Complies (STMG15/STMG30)
- UL62368-1, C-UL, EN62368-1, Complies (STMG80)

CE marking

- Low Voltage Directive
- RoHS Directive

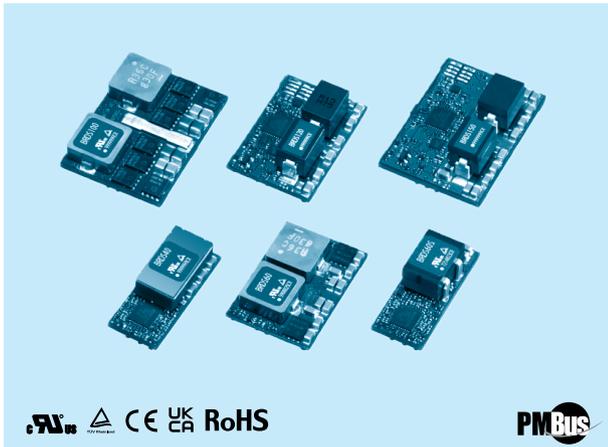
UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

5-year warranty

COSEL DC-DC Converters POL Type

BRDS-Series



UL CE UK RoHS

PMBus

BRDS



Feature

- Small size and high efficiency non-isolated DC-DC converter
- Wide input 4.5VDC to 14.0VDC
- Fast transient response by robust control
- Remote ON/OFF, power good, start-up sequence
- Overcurrent and thermal protection (Auto recovery type)
- PMBus

Safety agency approvals

UL60950-1, C-UL, EN62368-1

CE marking

Low Voltage Directive
RoHS Directive

UKCA marking

Electrical Equipment Safety Regulations
RoHS Regulations

5-year warranty

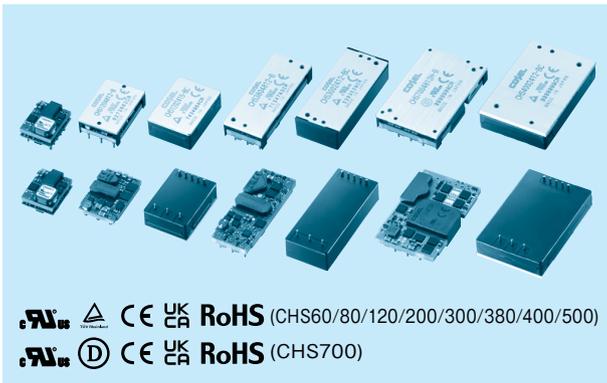
MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [g]
BRDS40	4.5-14.0VDC	0.6-2.0	40	33.0·10.9·13.5 (1.30·0.43·0.53)	12
BRDS60		0.7-2.0	60	33.0·8.0·22.9 (1.30·0.31·0.90)	15
BRDS60S		0.6-2.0	60	33.0·12.7·13.5* (1.30·0.5·0.53)*	12*
BRDS100		0.7-2.0	100	38.0·8.5·27.7 (1.50·0.33·1.09)	22
BRDS120		0.6-1.8	120	33.0·12.7·22.9 (1.30·0.50·0.90)	14
BRDS150			150	38.0·13.8·27.7 (1.50·0.54·1.09)	21

*Small type: BRDS60S

*Derating is required. Please see COSEL website for the details.

COSEL DC-DC Converters Bus Converter/Power Module Type

CHS-Series



UL, CE, UKCA, RoHS (CHS60/80/120/200/300/380/400/500)
 UL, CE, UKCA, RoHS (CHS700)

CHS



Feature

- High efficiency 96% (CHS7004812H)
- For telecommunication, server and factory automation market
- High density
- High reliability : No built-in aluminum and tantalum electrolytic capacitor
- Overcurrent, overvoltage and thermal protection
- Remote ON/OFF
- PMBus (Option : -I)
- (CHS3004810/CHS3004812/CHS4004812/CHS5004812)

Safety agency approvals

- UL60950-1, C-UL, EN62368-1 approved
- UL62368-1, C-UL, EN62368-1 approved (Only CHS700)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
CHS60	36-76VDC	3.3	18	19.05·12.7·23.36 (0.75·0.50·0.92)	15
		5	12		
		12	6		
CHS80	36-76VDC	3.3	25	33·10.5·22.76 (1.30·0.41·0.90)	21
		5	16		
		12	7.5		
CHS120	18-36VDC	5	24	33·10.5·22.86 (1.30·0.41·0.90)	19
		12	10	33.5·12.7·23.36* (1.32·0.50·0.92)*	28*
		15	8	36.5·12.7·26.5** (1.44·0.50·1.04)**	32**
		24	4.2		
	36-76VDC	3.3	30	33·10.5·22.86 (1.30·0.41·0.90)	19
		5	24	33.5·12.7·23.36* (1.32·0.50·0.92)*	28*
		12	10		
		15	8		
CHS200	36-76VDC	3.3	50	57.9·10.5·22.76 (2.28·0.41·0.90)	30
		5	40	58.4·12.7·23.26* (2.30·0.50·0.92)*	45*
		12	16		
CHS300	18-36VDC	5	40	58.4·11.0·22.86 (2.30·0.43·0.90)	38
		12	16.7	58.9·12.7·23.26* (2.32·0.50·0.92)*	50*
		15	13.5	61.1·14.3·26.1** (2.41·0.56·1.03)**	57**
		24	10.5		
		28	9		
		32	7.9		
	36-76VDC	48	5.3		
		10	30	58.4·11.0·22.86 (2.30·0.43·0.90)	38
		12	25	58.9·12.7·23.26* (2.32·0.50·0.92)*	50*
		15	20		
		24	12.5		
		28	10.8		
CHS380	36-76VDC	10	38	58.4·11.0·22.86 (2.30·0.41·0.90)	38
		12	32	58.9·12.7·23.26* (2.32·0.50·0.92)*	50*
CHS400	18-36VDC	12	26.5	58.4·9.5·36.8 (2.30·0.37·1.45)	60
		15	26.5		
		24	14.5		
		28	12.5		
		32	11		
		48	6.3		
	36-76VDC	10	40	58.9·12.7·37.3* (2.32·0.50·1.47)*	90*
		12	33	61.6·12.7·40.3** (2.43·0.50·1.59)**	90**
		15	26.5		
		24	16.5		
		28	14		
		32	12.5		
CHS500	36-76VDC	12	42	58.4·9.5·36.8 (2.30·0.37·1.45)	60
				58.9·12.7·37.3* (2.32·0.50·1.47)*	90*
CHS700	36-76VDC	12	58.5	58.4·10.5·36.8 (2.30·0.41·1.45)	72
				58.9·12.7·37.3* (2.32·0.50·1.47)*	100*

* Baseplate option.
 ** Baseplate and case option

* Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies Bus Converter/Power Module Type
DCS-Series



Feature

- Ideal for distributed power systems
- Wide output voltage range allows for flexible voltage settings.
- Output voltage can be varied to near 0V
- Constant current regulation
- Parallel Operation / N+1 Parallel Redundancy Operation
- Built-in ORing MOSFET (Option)
- Built-in overcurrent, overvoltage and thermal protection circuits

Safety agency approvals

UL62368-1, C-UL, EN62368-1

CE marking

Low Voltage Directive
 RoHS Directive

UKCA marking

Electrical Equipment Safety Regulations
 RoHS Regulations

5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
DCS1400B	200-435VDC	12	100	116.8·12.7·61 (4.6·0.5·2.4)	230
		24	58.5		
		28	50		
		36	39		
		48	29.2		
		55	21.6		

*Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies Bus Converter/Power Module Type
DPF-Series



MODEL	INPUT VOLTAGE	MAX OUTPUT WATTAGE [W]	OUTPUT VOLTAGE [V]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
DPF1000	85-264VAC 1 φ	1000	DC360	118.6·12.7·85 (4.67·0.5·3.35)	200
	170-264VAC 1 φ	1500			

*Derating is required. Please see COSEL website for the details.



■ **Power factor correction module**

■ **Feature**

- Harmonic attenuator (Complies with IEC61000-3-2)
- High efficiency 90% (100VAC), 95% (200VAC)
- Universal input voltage (85-264VAC)
- Inrush current protection
- Parallel operation (Current balancing function)
- Overvoltage and thermal protection
- Inverter operation monitoring (IOG)
- Enable signal (ENA)
- Auxiliary power supply for external signal (AUX)
- Ideal for distributed power systems

■ **Safety agency approvals**

UL609501-1, C-UL, EN62368-1

■ **CE marking**

Low Voltage Directive
 RoHS Directive

■ **UKCA marking**

Electrical Equipment Safety Regulations
 RoHS Regulations

■ **5-year warranty**

COSEL AC-DC Power Supplies Bus Converter/Power Module Type
TUNS-Series



TUNS



Feature

- AC-DC power module type converter
- Harmonic attenuator (Complies with IEC61000-3-2 class A)
- Thin and small size
- Overcurrent, overvoltage and thermal protection
- Universal input 85-264VAC (TUNS50F/100F/300F/500F/700F)
- Wide input 85-305VAC (TUNS1200F)
- For medical applications (TUNS1200F)
- Constant current function (TUNS1200F)
- Output voltage can be adjusted to approximately 0V (TUNS1200F)
- Parallel operation (TUNS1200F) (-P option : TUNS700F)

Safety agency approvals

- UL60950-1, C-UL, EN62368-1 (TUNS50F/100F/300F/500F/700F)
- UL62368-1, C-UL, EN62368-1 (TUNS1200F)
- ANSI/AAMI ES60601-1, EN60601-1 3rd (TUNS1200F)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

5-year warranty

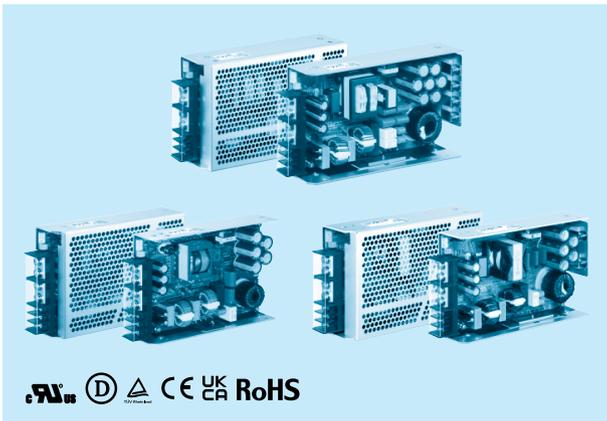
MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
TUNS300F	85-264VAC 1 φ	12	25	117.3·12.7·61.5 (4.62·0.5·2.42)	190
		28	11		
		48	6.5		
TUNS500F	85-264VAC 1 φ	12	42 (55)*	117.3·12.7·61.5 (4.62·0.5·2.42)	190
		28	18 (24)*		
		48	10.5 (14)*		
TUNS700F	85-264VAC 1 φ	12	58.4	117.3·12.7·61.5 (4.62·0.5·2.42)	190
		28	25		
		48	14.6		
TUNS1200F	85-305VAC 1 φ	12	84	117.3·12.7·86.8 (4.62·0.5·3.42)	280
		28	43		
		48	25		
		65	18.5		

* Peak current

* Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies Medical Type

AEA-Series



UL CE UK RoHS

AEA



Feature

- High power and high peak power
- High efficiency
- Low profile (41mm, 1.61 inch = meet to 1U hight)
- For medical electrical equipment (ANSI/AAMI ES60601, EN60601-1 3rd, IEC60601-1-2 4th Ed.)
- Suitable for FB application (Output-FG: 1MOPP, Input-Output: 2MOPP)
- OVC III (according to EN62477-1)
- Complies with SEMI F47 (Refer to Instruction Manual)
- UL508 (Optional)

Safety agency approvals

- UL62368-1, ANSI/AAMI ES60601-1
- C-UL (CSA62368-1, CAN/CSA60601-1)
- EN62368-1, EN60601-1 3rd
- Complies with IEC60601-1-2 4th Ed.
- EN62477-1 (OVC III)
- UL508 (Optional)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT (Peak current) [A]			CASE SIZE W·H·D [mm] (inches)	WEIGHT [kg]	
			100VACin	230VACin				
AEA600F	85 - 264VAC 1 φ	24	Convection	14.0 (42.0)	17.5 (52.5)	41·127·186 (1.61·5·7.32)	1.0	
			Forced air	20.0 (42.0)	25.0 (52.5)			
		32	Convection	10.5 (31.5)	13.2 (39.4)			
			Forced air	15.0 (31.5)	18.8 (39.4)			
		36	Convection	9.4 (28.0)	11.7 (35.0)			
			Forced air	13.4 (28.0)	16.7 (35.0)			
AEA800F		85 - 264VAC 1 φ	24	Convection	17.6 (54.3)	23.5 (72.5)	50·127·203.2 (1.97·5·8)	1.3
				Forced air	25.5 (54.3)	34.0 (72.5)		
			30	Convection	14.1(43.5)	18.8 (58.0)		
				Forced air	20.4(43.5)	27.2 (58.0)		
			36	Convection	11.7 (36.3)	15.7 (48.4)		
				Forced air	17.0 (36.3)	22.7 (48.4)		
AEA1000F	85 - 264VAC 1 φ		24	Convection	22.5 (75.0)	30.0 (100.0)	50·127·228.6 (1.97·5·9)	1.5
				Forced air	31.5 (75.0)	42.0 (100.0)		
			36	Convection	15.0 (50.0)	20.0 (66.7)		
				Forced air	21.0 (50.0)	28.0 (66.7)		
			48	Convection	11.3 (37.5)	15.0 (50.0)		
				Forced air	15.8 (37.5)	21.0 (50.0)		

*Derating is required. Please see COSEL website for the details.

EMI

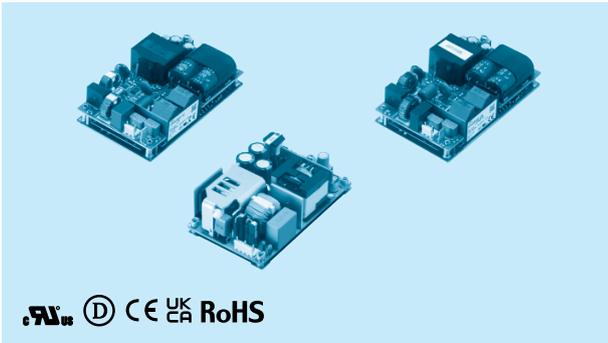
Complies with FCC-B, CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, VCCI-B

EMS Compliance

- EN61204-3, EN61000-6-2, IEC60601-1-2 (2014), EN60601-1-2 (2015)
- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

COSEL AC-DC Power Supplies Medical Type
GHA-Series



Feature

- Wattage 700W max
- Conduction cooling (GHA500F, GHA700F)
- 3"X5"standard footprint
- Less than 1U high
- ITE and Medical safety approvals
- Low leakage current
- Suitable for BF application
- (Output-FG: 1MOPP, Input-Output: 2MOPP) (GHA700F)
- With Remote ON/OFF (Optional)
- With AUX1 (12V) (Optional Excluding GHA700F-12)
- With AUX2 (5V) (Optional)

Safety agency approvals

- UL60950-1 (GHA300F, 500F), UL62368-1 (GHA700F),
- ANSI/AAMI ES60601-1, C-UL, EN62368-1, EN60601-1 3rd,
- Complies with IEC60601-1-2 4th
- DEN-AN
- EN61558-2-16 (GHA700F)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with FCC-B, CISPR11-B, CISPR32-B, EN55011-B,
- EN55032-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2, IEC60601-1-2 (2014), EN60601-1-2 (2015)

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]		CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]	
			Forced air	Conduction			
GHA300F	90-264VAC 1φ	12	Forced air	25	76.2·35·127 (3.0·1.4·5.0)	400	
			Convection	4.5			
		24	Forced air	12.5			
Convection	2.2						
48	Forced air	6.3					
		Convection	1.1				
GHA500F	90-264VAC 1φ	12	Forced air	41.7	76.2·35·127 (3.0·1.4·5.0)	420	
			Convection	9.2			
			Conduction	16.7			
		15	Forced air	33.4			
			Convection	7.4			
			Conduction	13.4			
		24	Forced air	4.6			
				Convection			8.4
				Conduction			6.7
		30	Forced air	16.7			
				Convection			3.7
				Conduction			6.7
		48	Forced air	10.5			
				Convection			2.3
				Conduction			4.2
56	Forced air			9			
				Convection	1.9		
				Conduction	3.6		
GHA700F	85-264VAC 1φ	12	Forced air	54.2	76.2·38.1·127 (3.0·1.5·5.0)	570	
			Convection	22.2			
			Conduction	33.4			
		24	Forced air	29.2			
				Convection			11.1
				Conduction			16.7
		30	Forced air	23.3			
				Convection			8.9
				Conduction			13.4
		48	Forced air	14.6			
				Convection			5.6
				Conduction			8.4
		56	Forced air	12.5			
				Convection			4.8
				Conduction			7.2

*Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies Medical Type

GMA-Series



MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]		CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
GMA300F	85-264VAC 1φ	12	Forced air	25	50.8·37·101.6 (2.00·1.46·4.00)	230
		24	Forced air	12.5		
		48	Forced air	6.3		
		56	Forced air	5.4		

*Derating is required. Please see COSEL website for the details.

GMA



Feature

- Maximum 300W
- For medical applications (ANSI/AAMI ES60601-1, EN60601-1 3rd, IEC60601-1-2 4th Ed.)
- For type BF medical applications (Output-FG : 1MOOPP, Input-Output : 2MOOPP)
- 2"X4" standard footprint
- Remote ON/OFF (Option)
- AUX1(12V 1A), AUX2(5V 1A) (Option)

Safety agency approvals

- UL62368-1, ANSI/AAMI ES60601-1
- C-UL (CSA62368-1, CAN/CSA60601-1)
- EN62368-1, EN60601-1 3rd
- Complies with IEC60601-1-2 4th Ed.

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

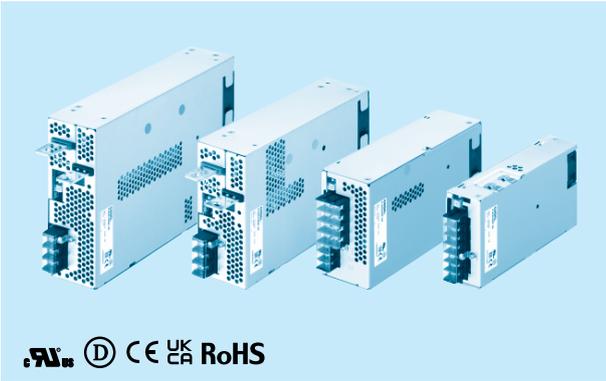
- Complies with FCC-B, CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2, IEC60601-1-2 (2014), EN60601-1-2 (2015)

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

COSEL AC-DC Power Supplies Medical Type
PJMA-Series



PJMA



Feature

- 4kV isolation
- Economical design
- Suitable for BF application (Output-FG : 1MOPP, Input-Output : 2MOPP)
- Wide temperature range (-20°C to +70°C, Derating is required)
- Harmonic attenuator (Complies with IEC61000-3-2 class A)
- Universal input (85-264VAC, Derating is required)
- Low power consumption at no load

Safety agency approvals

- ANSI/AAMI ES60601-1, EN60601-1 3rd,
- C-UL (equivalent to CAN/CSA-C22.2 No.60601-1)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with CISPR11-B, CISPR32-B,
- EN55011-B, EN55032-B, FCC Part 15-B and FCC Part 18-B
- (PJMA1500F: Class A. In conducted noise, it can meet class B by additional EMI/EMC filter.)

EMS Compliance: EN61204-3, EN61000-6-2, IEC60601-1-2 (2014), EN60601-1-2 (2015)

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

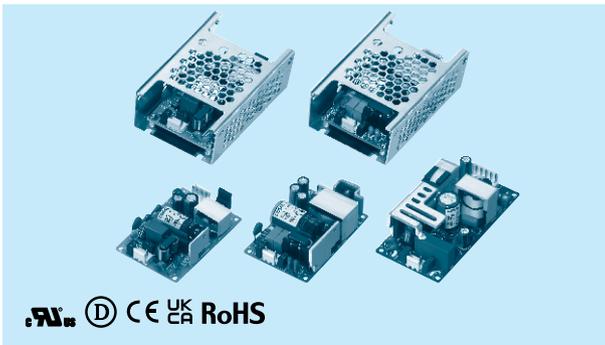
5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W · H · D [mm] (inches)	WEIGHT [kg]
PJMA300F	85-264VAC 1φ	12	25	102·41·190 (4.02·1.61·7.48)	1.0
		24	12.5		
		36	8.4		
		48	6.3		
PJMA600F		12	50	120·61·215 (4.72·2.4·8.46)	2.0
		24	25		
		36	16.7		
		48	12.5		
PJMA1000F		12	84	150·61·240 (5.91·2.4·9.45)	2.8
		24	42		
		36	28		
		48	21		
PJMA1500F		12	125	178·61·268 (7.01·2.4·10.55)	3.5
		24	64		
		36	42		
		48	32		

*Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies Medical Type

UMA-Series



MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
UMA30F	85-264VAC 1 φ	5	3	50.8·21.7·76.2 (2.0·0.85·3.0)	80
		12	2.5		
		15	2		
		24	1.3		
		36	0.85		
UMA60F		48	0.65	50.8·24.2·76.2 (2.0·0.95·3.0)	120
		5	6		
		7.5	5.5		
		12	4.5		
		15	3.5		
		24	2.5		
UMA120F		36	1.7	50.8·29.0·101.6 (2.0·1.14·4.0)	150
		48	1.25		
		12	10		
			24	5	
		48	2.5		

*Derating is required. Please see COSEL website for the details.

Feature

- For medical electric equipment
- Medical Isolation Grade 2MOPP
- 4kV isolation
- Suitable for BF application
- Low leakage current
- Power factor correction (UMA120F)
- UMA30F, UMA60F : 2"X3" standard footprint
- UMA120F : 2"X4" standard footprint
- Economical design

Safety agency approvals

- ANSI/AAMI ES60601-1:EN60601-1 3rd.
- C-UL (equivalent to CAN/CSA-C22.2 No.60601-1)
- UL62368-1, EN62368-1,
- C-UL (equivalent to CAN/CSA-C22.2 No.62368-1)
- Complies with EN60335 (UMA30F/60F)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

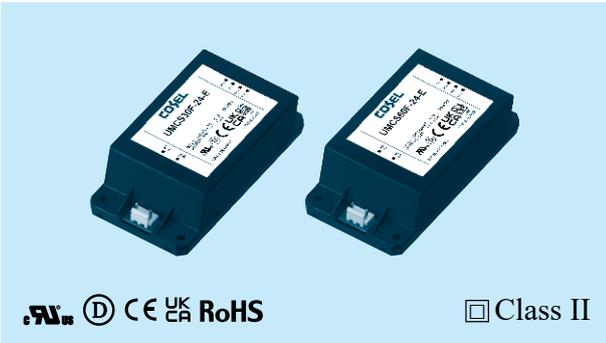
- Complies with CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, FCC Part 15-B and FCC Part 18-B

EMS Compliance : EN61204-3, EN61000-6-2, IEC60601-1-2 (2014), EN60601-1-2 (2015)

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

COSEL AC-DC Power Supplies Medical Type
UMCS-Series



Feature

- For medical electric equipment
- Medical Isolation Grade 2MOPP
- 4kV isolation
- Suitable for BF application
- Low leakage current
- Economical design
- Class II

Safety agency approvals

- ANSI/AAMI ES60601-1:EN60601-1 3rd.
- C-UL (equivalent to CAN/CSA-C22.2 No.60601-1)
- UL62368-1, EN62368-1,
- C-UL (equivalent to CAN/CSA-C22.2 No.62368-1)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with CISPR11-B, CISPR32-B, EN55011-B,
- EN55032-B, FCC Part 15-B and FCC Part 18-B

EMS Compliance : EN61204-3, EN61000-6-2, IEC60601-1-2 (2014), EN60601-1-2 (2015)

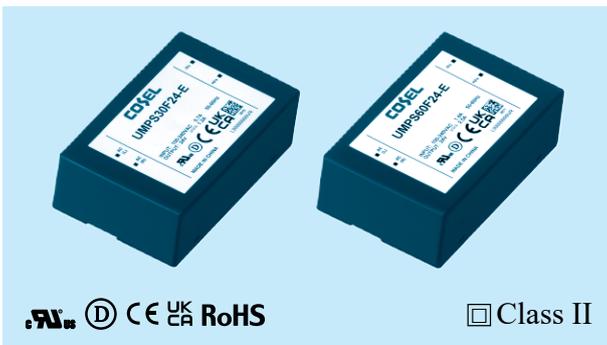
- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
UMCS30F	85-264VAC 1 φ	5	3	55.9·35.7·109.2 (2.2·1.4·4.3)	200
		12	2.5		
		24	1.3		
		48	0.65		
UMCS60F		5	6	55.9·35.7·109.2 (2.2·1.4·4.3)	230
		12	4.5		
		24	2.5		
		48	1.25		

*Derating is required. Please see COSEL website for the details.

COSEL AC-DC Power Supplies Medical Type
UMPS-Series



MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]
UMPS30F	85-264VAC 1 φ	5	3	55.9·30.5·81.3 (2.2·1.2·3.2)	170
		12	2.5		
		24	1.3		
		48	0.65		
UMPS60F	85-264VAC 1 φ	5	6	55.9·30.5·81.3 (2.2·1.2·3.2)	200
		12	4.5		
		24	2.5		
		48	1.25		

*Derating is required. Please see COSEL website for the details.



Feature

- For medical electric equipment
- Medical Isolation Grade 2MOPP
- 4kV isolation
- Suitable for BF application
- Low leakage current
- Economical design
- Class II

Safety agency approvals

- ANSI/AAMI ES60601-1, EN60601-1 3rd.
- C-UL (equivalent to CAN/CSA-C22.2 No.60601-1)
- UL62368-1, EN62368-1,
- C-UL (equivalent to CAN/CSA-C22.2 No.62368-1)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

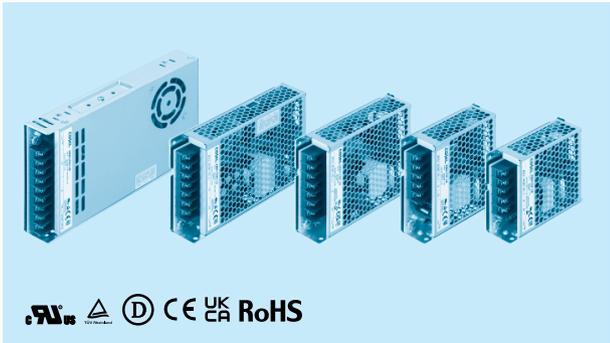
- Complies with CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, FCC Part 15-B and FCC Part 18-B

EMS Compliance : EN61204-3, EN61000-6-2, IEC60601-1-2 (2014), EN60601-1-2 (2015)

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

COSEL AC-DC Power Supplies Medical Type
WMA-Series



Feature

- For medical electric equipment (ANSI/AAMI ES60601-1, EN60601-1 3rd)
- Medical Isolation Grade 2MOPP
- 4kV isolation
- Low-profile
- Economical design
- Complies with SEMI F47

Safety agency approvals

- ANSI/AAMI ES60601-1, EN60601-1 3rd,
- C-UL (equivalent to CAN/CSA-C22.2 No.60601-1), UL62368-1, EN62368-1,
- C-UL (equivalent to CAN/CSA-C22.2 No.62368-1), EN61558-2-16 (OVC III)

CE marking

- Low Voltage Directive
- RoHS Directive

UKCA marking

- Electrical Equipment Safety Regulations
- RoHS Regulations

EMI

- Complies with CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, FCC Part 15-B and FCC Part 18-B

EMS Compliance : EN61204-3, EN61000-6-2, IEC60601-1-2 (2014), EN60601-1-2 (2015)

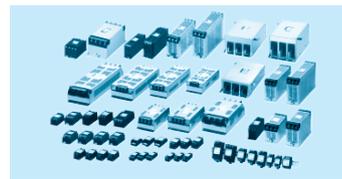
- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE [V]	OUTPUT CURRENT [A]	CASE SIZE W·H·D [mm] (inches)	WEIGHT [g]	
WMA35F	85-264VAC 1 φ	5	7	30·82·99 (1.18·3.23·3.90)	200	
		12	3			
		24	1.5			
		48	0.8			
WMA75F		12	6	30·97·99 (1.18·3.82·3.90)	250	
		24	3.2			
		48	1.6			
WMA100F		12	8.4	30·97·129 (1.18·3.82·5.08)	300	
		24	4.3			
		48	2.1			
WMA150H		85-132VAC 1 φ / 170-264VAC 1 φ (Selectable by switch)	12	12.5	30·97·159 (1.18·3.82·6.26)	500
			24	6.5		
	48		3.3			
WMA350H	12		29	115·30·215 (4.53·1.18·8.46)	800	
	24		14.6			
	36		9.7			
	48		7.3			

*Derating is required. Please see COSEL website for the details.

EMI/EMC Filter Contents



Single-phase type

	Rated voltage	Series	Rated current [A]										Released year	Option		
			3A	4A	6A	10A	16A	20A	30A	40A	50A	60A		D	F	
1-stage	AC250V	EAC	●	—	●	●	●	●	●	—	—	—	—	'10	●	—
	AC250V	EAM	●	—	●	●	●	●	—	—	—	—	'10	●	—	
	AC250V	EAP	●	—	●	●	●	●	—	—	—	—	'10	●	—	
	AC250V	ESC	●	—	●	●	●	—	—	—	—	—	'10	●	—	
	AC250V	ESM	●	—	●	●	●	—	—	—	—	—	'10	●	—	
	AC250V	ESP	●	—	●	●	●	—	—	—	—	—	'10	●	—	
	AC250V	NAC	—	●	●	●	●	●	—	—	—	—	'05	●	—	
	AC250V	NAM	—	●	●	●	●	●	—	—	—	—	'05	●	—	
	AC250V	NAH	—	—	●	●	●	●	—	—	—	—	'06	●	—	
	AC250V	NAP	—	●	●	●	●	●	—	—	—	—	'05	●	—	
	AC277V DC300V	NAC	—	—	—	—	—	—	—	●	●	●	'21	—	●	
	AC277V DC300V	NAM	—	—	—	—	—	—	—	●	●	●	'21	—	—	
	AC277V DC300V	NAH	—	—	—	—	—	—	—	●	●	●	'21	—	●	
	AC277V DC300V	NAP	—	—	—	—	—	—	—	●	●	●	'21	—	●	
2-stage	AC250V	NBH	—	—	●	●	●	●	—	—	—	—	'07	●	—	
	AC250V	NBC	—	—	●	●	●	●	—	—	—	—	'07	●	—	
	AC250V	NBM	—	—	●	●	●	●	—	—	—	—	'07	●	—	

Option -D: DIN rail installation type -F: High input voltage (Rated voltage 500VAC/600VDC)

Three-phase type

	Rated voltage	Series	Rated current [A]																				Released year	Option													
			4A	6A	10A	20A	25A	30A	36A	40A	50A	60A	64A	80A	100A	120A	125A	150A	160A	200A	250A	300A		400A	600A	800A	1000A	D	G	H	L	S	U				
1-stage	AC500V	JAC	—	●	●	●	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'14	●	—	●	—	—	●
		TAC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'19	—	—	●	—	—
	AC500V	TAH	●	●	●	●	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'06	●	—	—	—	—	—
	AC500V	TAC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'08	—	—	—	—	—	●
	AC500V	TAH	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'16	—	—	—	—	—	—
	AC500V	TAC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'09	—	—	—	—	—	●
	AC500V	FTA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'13	—	—	●	—	—	●
2-stage	AC500V	YAC	—	—	—	—	●	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	NEW '23	—	—	—	—	—	—
		TAC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	NEW '25	—	—	—	—	—	—
2-stage	AC500V	TBC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'08	—	—	—	—	—	—
		FTB	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'09	—	—	—	—	—	—
	AC500V	FSB	—	—	●	●	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'16	—	—	—	—	—	●
multi-stage	AC500V	TSC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'13	—	—	—	—	—	●	
		TSD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'21	—	—	—	—	—	—
																															NEW '23	—	—	—	—	—	—

Option -D: DIN rail installation type -G: With switch of line to ground capacitor -H: Ultra high-attenuation type
 -L: Ultra high-attenuation type for EU -S: Hexagon socket head cap screw (Standard type is Hexagon head screw) -U: Improve differential mode attenuation (Rated voltage 250V)

DC type

	Rated voltage	Series	Rated current [A]				Released year	Option	
			1A	3A	6A	10A		D	T
1-stage	DC±50V	SNA	●	—	●	—	'05	●	●
	DC50V	SNR	—	—	—	●	'07	●	●

Option -D: DIN rail installation type -T: Terminal block type

EMI/EMC Filter Selection Guide by Type

Refer to EMI/EMC filter selection flow chart for options.

Series	Features	Rated Voltage (voltage range max)	Rated Current																								
			1	3	4	6	10	16	20	25	30	36	40	50	60	64	80	100	120	125	150	160	200	250	300	300	400
Single-phase EMV/EMC filter	EA Series 1-stage filter	Small size Screw type	EAC: Attenuation for low frequency band (150kHz to 1MHz) EAM: Low leakage current EAP: Outside impulse attenuation	250VAC	3A 6A 10A 16A 20A 30A																						
	ES Series 1-stage filter	Small size Screwless type	ESC: Attenuation for low frequency band (150kHz to 1MHz) ESM: Low leakage current ESP: Outside impulse attenuation	250VAC	3A 6A 10A 16A																						
	NA Series 1-stage filter	General purpose Screw type	NAC: High-attenuation for low frequency band (150kHz to 1MHz) NAM: Low leakage current NAH: Ultra high-attenuation for ultra low frequency band (9kHz to 1MHz) NAP: Outside impulse high-attenuation	250VAC	4A 6A 10A 16A 20A 30A * NAH only, 6A to 30A;																						
				277VAC (305VAC) 300VDC (400VDC)	40A 50A 60A																						
NB Series 2-stage filter	High-attenuation Screw type	NBC: High-attenuation for low frequency band (150kHz to 1MHz) NBM: Low leakage current, Withstand voltage 4,000VAC NBH: Ultra high-attenuation and broadband (9kHz to 10MHz)	250VAC	6A 10A 16A 20A 30A																							
Three-phase EMV/EMC filter	JAC Series 1-stage filter	Compact and low profile General purpose	High-attenuation for low frequency band (150kHz to 1MHz)	500VAC (528VAC)	6A 10A 20A 30A 40A 50A 60A																						
	TAC Series 1-stage filter		High-attenuation for low frequency band (150kHz to 1MHz)	500VAC (528VAC)	4A 6A 10A 20A 30A 50A 60A 80A 100A 150A 200A 250A 300A																						
	TAH Series 1-stage filter		Ultra high-attenuation for ultra low frequency band (9kHz to 10MHz)	500VAC (528VAC)	4A 6A 10A 20A 30A 50A 60A 80A 100A 150A																						
	TBC Series 2-stage filter	High-attenuation	High-attenuation for low frequency band (150kHz to 1MHz)	500VAC (528VAC)	50A 60A 80A 100A 150A 200A 250A 300A																						
	FTA Series 1-stage filter	Book type (Space-saving type)	General purpose	High-attenuation for low frequency band (150kHz to 1MHz)	500VAC (528VAC)	40A 50A 60A 80A 100A 125A 150A																					
				FTB Series 2-stage filter	Ultra high-attenuation for low frequency band (150kHz to 1MHz)	500VAC (528VAC)	80A 100A 150A																				
	FSB Series 2-stage filter	Saturation resistance type	EMI/EMC Filter for motor drive system (AC servo) Improve saturation resistance	500VAC (528VAC)	10A 20A 30A 40A 50A 60A 80A 100A 150A																						
	TSC Series multi-stage filter	Ultra high-attenuation	Ultra high-attenuation from 150kHz to 1MHz	500VAC (528VAC)	400A 600A																						
	TSD Series multi-stage filter	Low profile	Saturation resistance type	Ultra high-attenuation from 150kHz to 1MHz	500VAC (528VAC)	400A 600A 800A 1000A																					
	YAC Series 1-stage filter	General purpose	High-attenuation for low frequency band (150kHz to 1MHz) 1-stage filter: 25A to 80A 2-stage filter: 120A to 300A	500/289VAC (528/305VAC)	25A 36A 64A 80A 120A 160A 200A 300A																						
SNA Series 1-stage filter	Ripple noise attenuation for switch mode power supplies			For ±V output power supply	DC±50V	1A 3A 6A																					
SNR Series 1-stage filter	DC EMV/EMC filter	Ripple noise attenuation for switch mode power supplies	For +V output power supply (Peak load)	DC50V	10A																						

EMI/EMC Filter Selection Guide by Function

Refer to EMI/EMC filter selection flow chart for options.

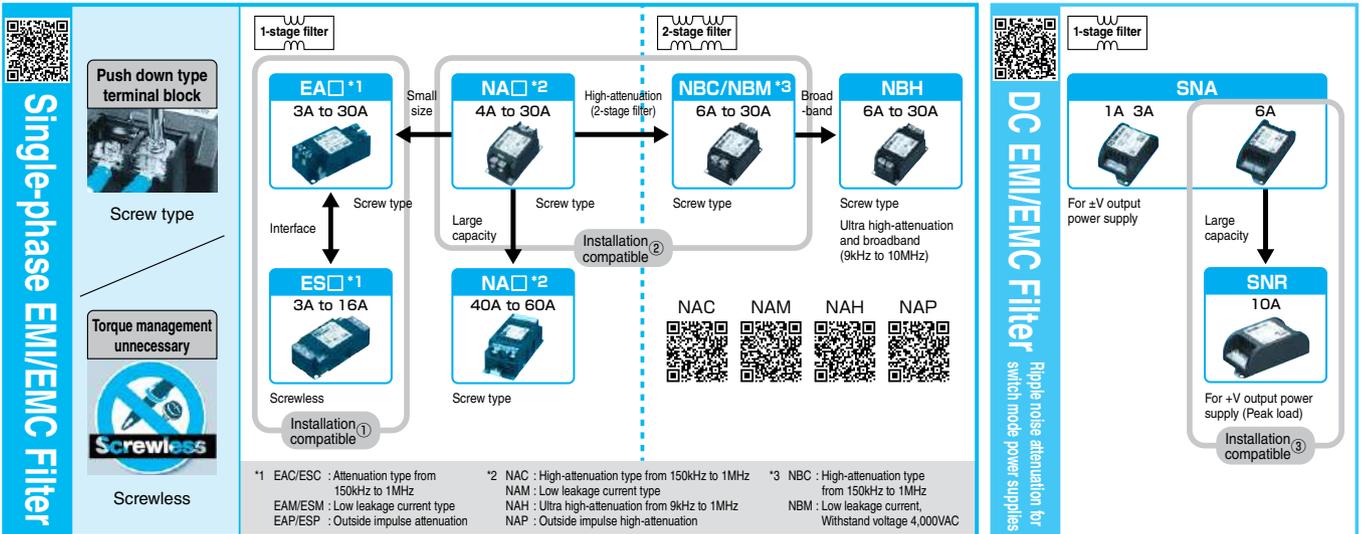
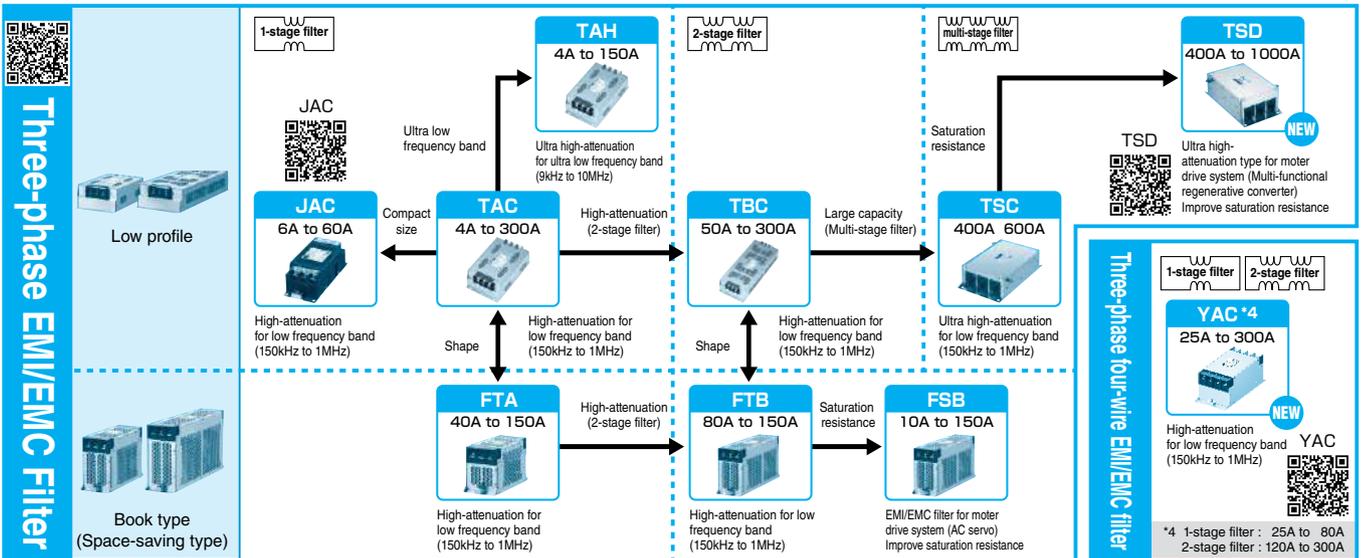
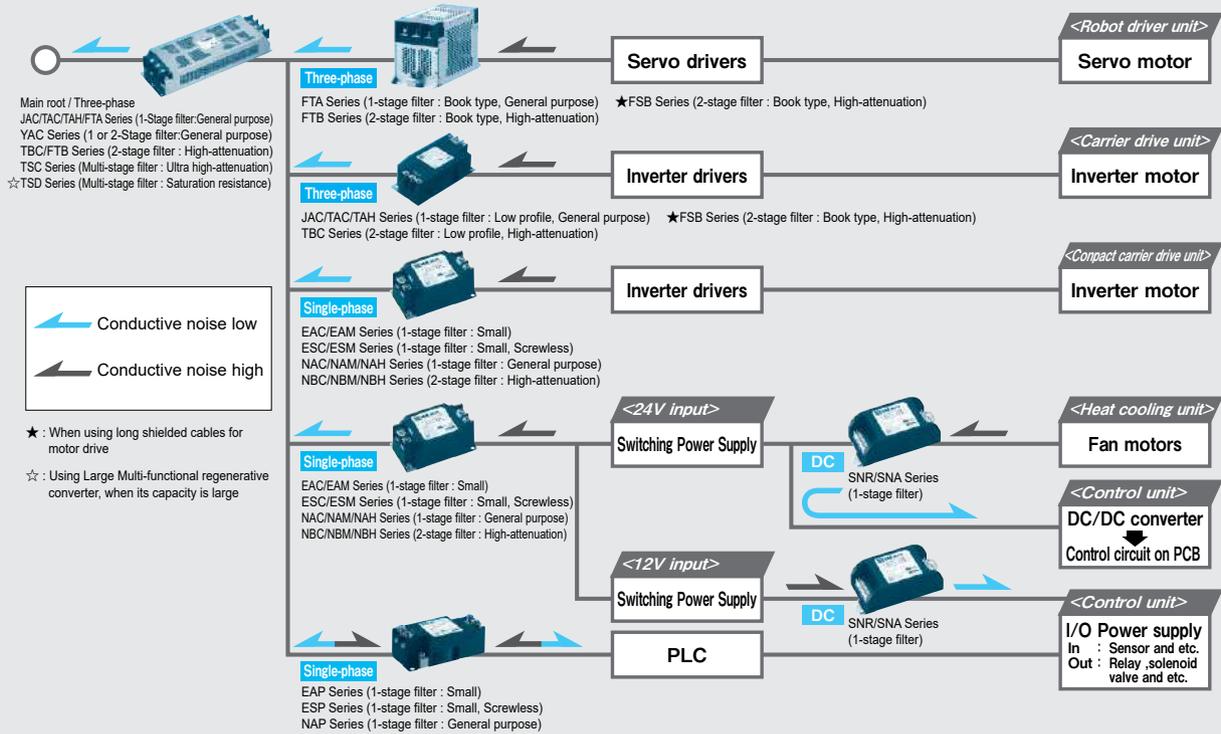


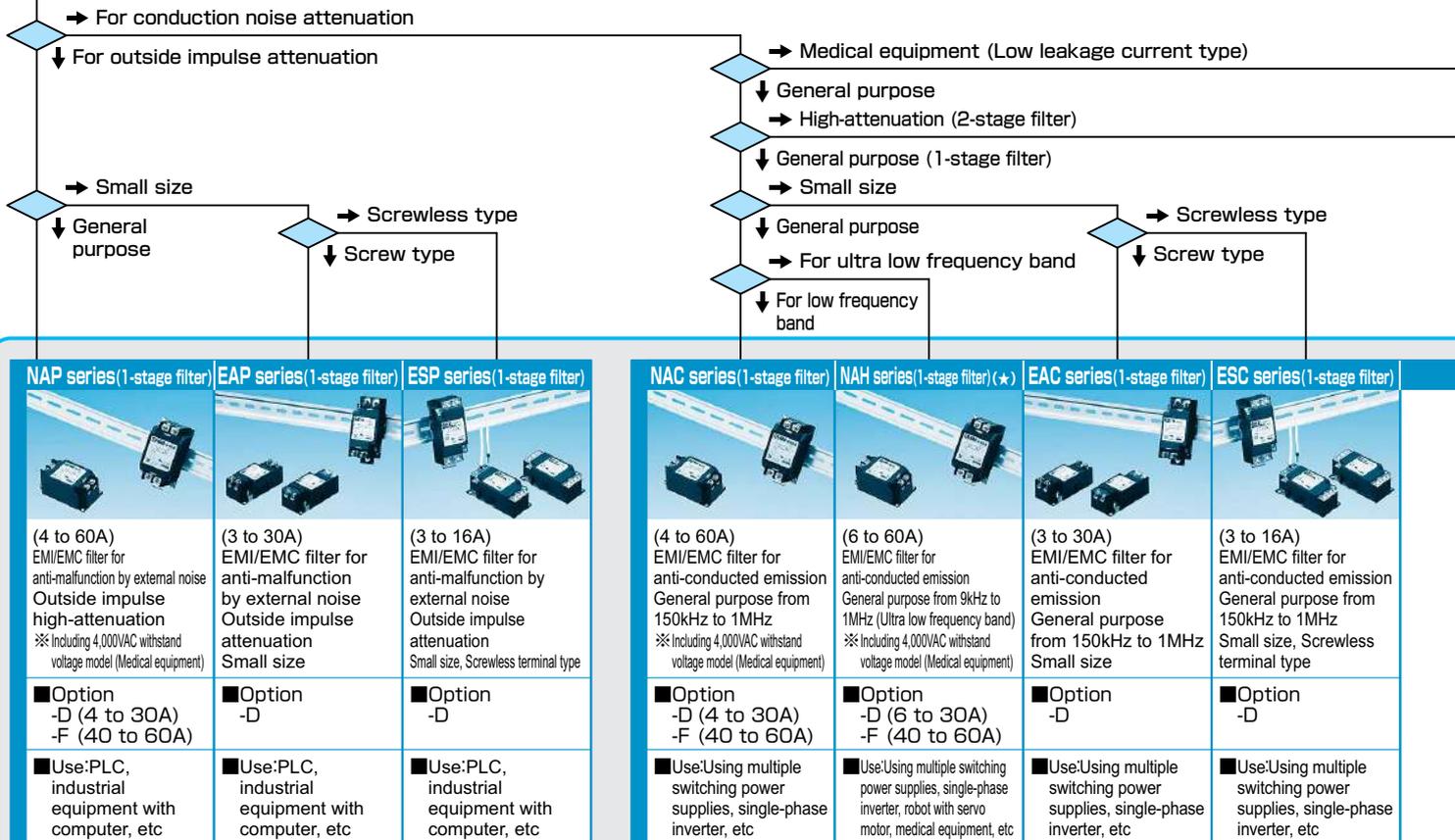
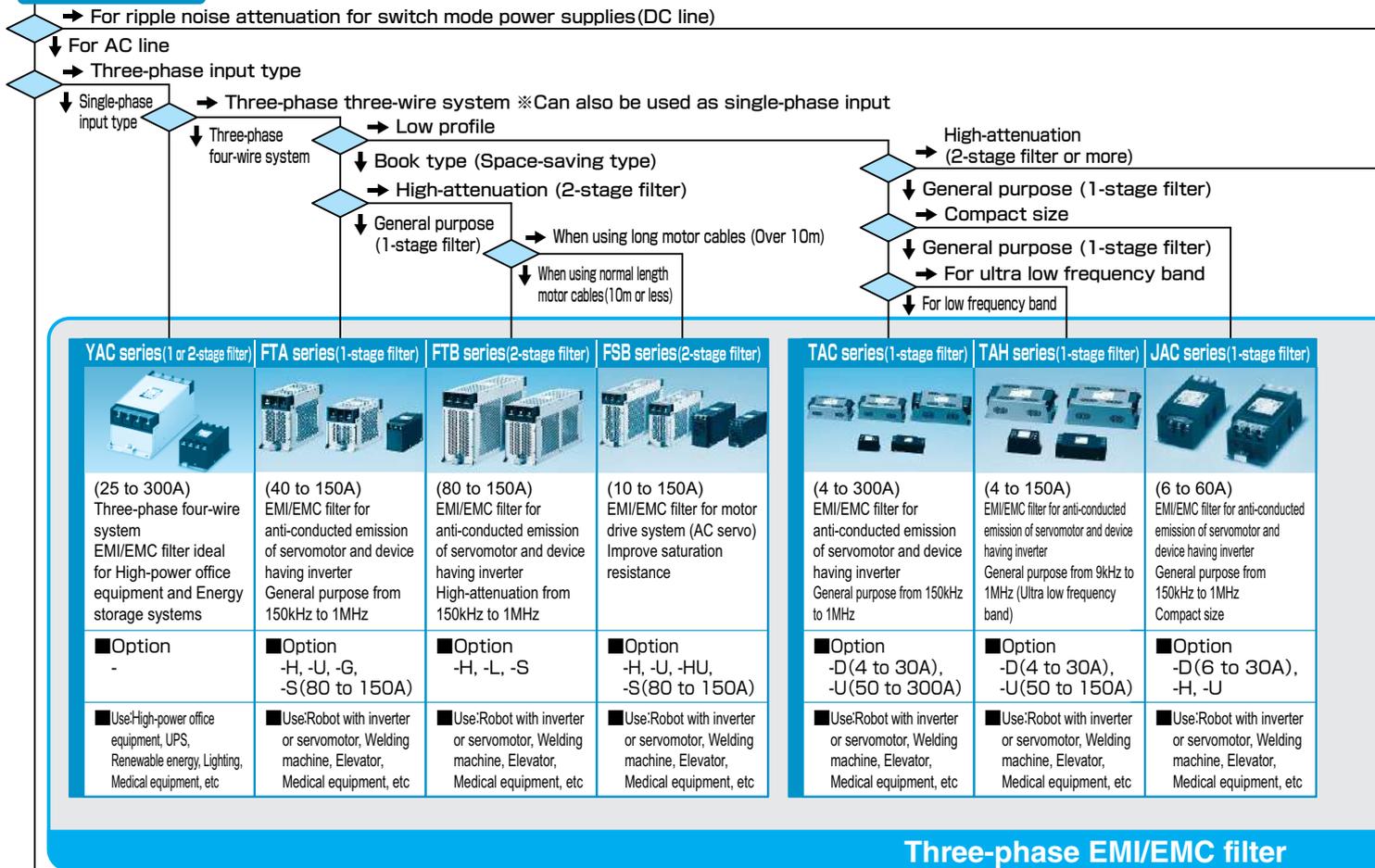
Diagram of Sample application



EMI/EMC Filter Selection flow chart

By using the flow chart below, you can easily select the model you need.

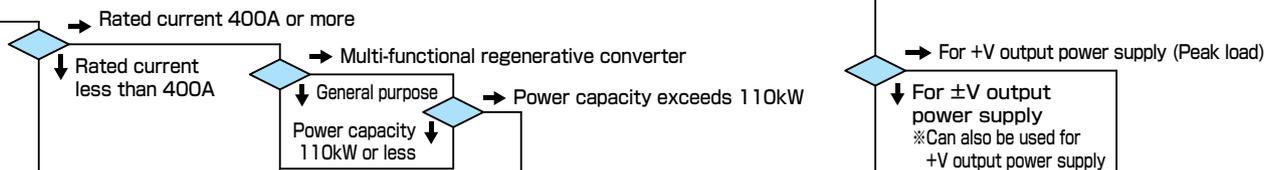
START



■Option

- D : DIN rail installation type
- G : With switch of line to ground capacitor
- L : Ultra high-attenuation type for EU
- T : Terminal block type

- F : High input voltage (Rated voltage 500VAC/600VDC)
- H : Ultra high-attenuation type
- S : Hexagon socket head cap screw (Standard type is Hexagon head screw)
- U : Improve differential mode attenuation (Rated voltage 250V)

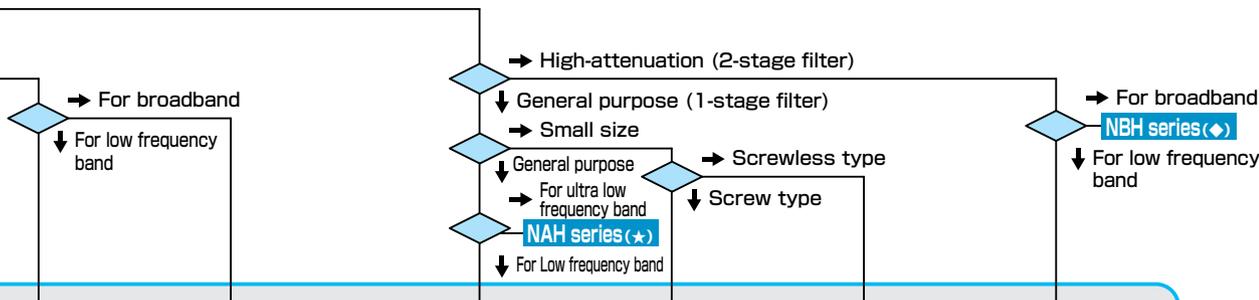


TBC series(2-stage filter)	TSC series(multi-stage filter)	TSD series(multi-stage filter)
(50 to 300A) EMI/EMC filter for anti-conducted emission of servomotor and device having inverter High-attenuation from 150kHz to 1MHz	(400, 600A) EMI/EMC filter for anti-conducted emission of servomotor and device having inverter Ultra high-attenuation from 150kHz to 1MHz	(400 to 1000A) Ultra high-attenuation for motor drive system (Multi-functional regenerative converter) Improve saturation resistance
■Option —	■Option ※1 -H	■Option ※1 —
■Use:Robot with inverter or servomotor, Welding machine, Elevator, Medical equipment, etc	■Use:Robot with inverter or servomotor, Welding machine, Elevator, Medical equipment, etc	■Use:Large equipment with Multi-functional regenerative converter (Transferred equipment, air conditioning equipment), etc

※1 Please contact us about low leakage current type (Change to low grounding capacitor)

SNA series(1-stage filter)	SNR series(1-stage filter)
(1, 3, 6A) Ripple noise attenuation for switch mode power supplies (DC±50V)	(10A) Ripple noise attenuation for switch mode power supplies (DC+50V)
■Option -D, -T(6A), -DT(6A)	■Option -D, -T, -DT
■Use:DC EMI/EMC filter for ±V output power supply of analog circuit (Operational amplifier etc.)	■Use:DC EMI/EMC filter for +V output power supply of analog circuit

DC EMI/EMC filter

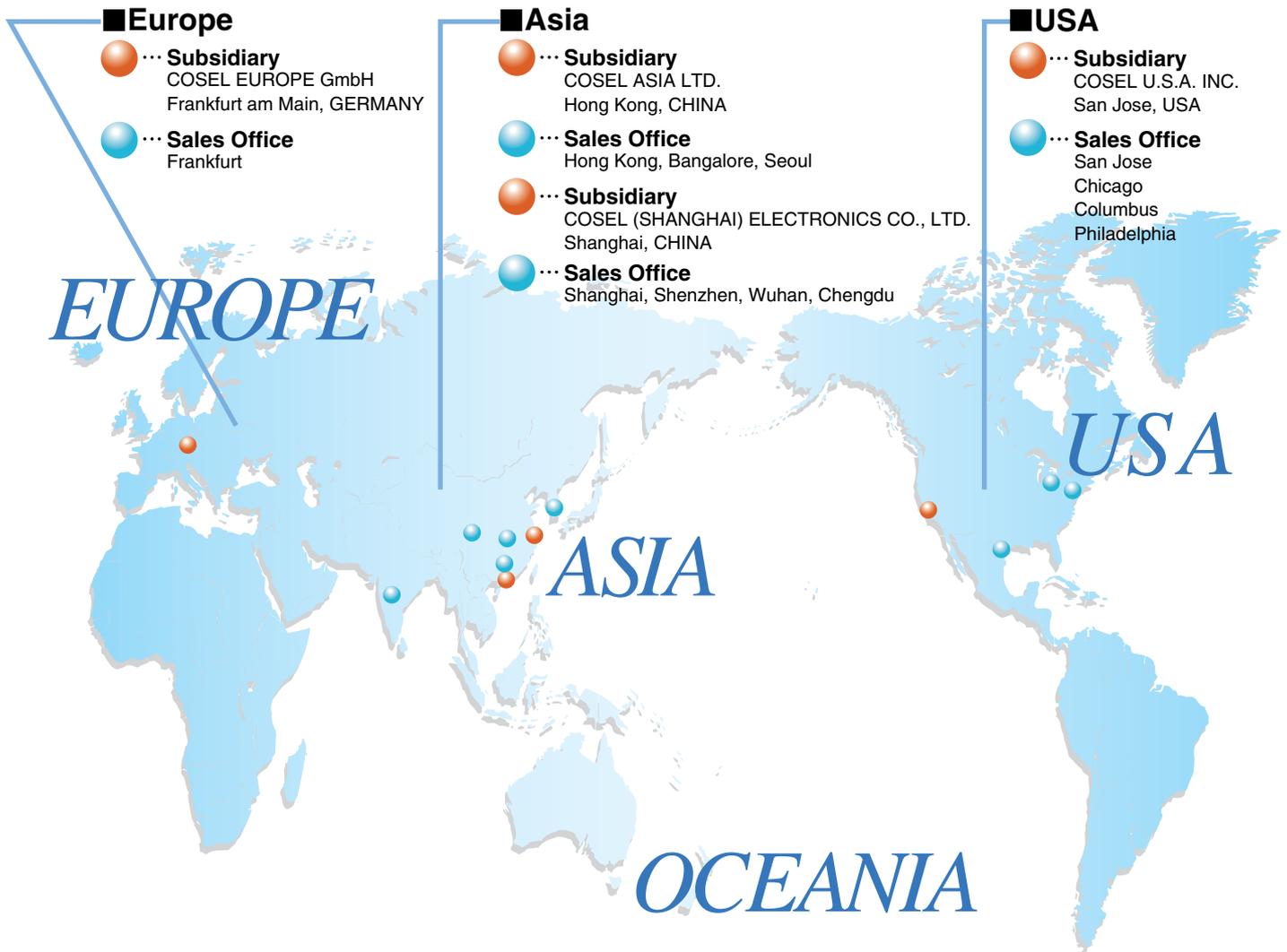


NBC series(2-stage filter)	NBH series(2-stage filter) (◆)
(6 to 30A) EMI/EMC filter for anti-conducted emission High-attenuation from 150kHz to 1MHz	(6 to 30A) EMI/EMC filter for anti-conducted emission Ultra high-attenuation and broadband from 9kHz to 10MHz ※Including 4,000VAC withstand voltage model (Medical equipment)
■Option -D	■Option -D
■Use:Using multiple switching power supplies, single-phase inverter, etc	■Use:Using multiple switching power supplies, single-phase inverter, robot with servo motor, medical equipment, etc

NAM series(1-stage filter)	EAM series(1-stage filter)	ESM series(1-stage filter)	NBM series(2-stage filter)
(4 to 60A) EMI/EMC filter for medical applications Low leakage current type General purpose from 150kHz to 1MHz ※Including 4,000VAC withstand voltage model	(3 to 30A) EMI/EMC filter for medical applications Low leakage current type General purpose from 150kHz to 1MHz Small size	(3 to 16A) EMI/EMC filter for medical applications Low leakage current type General purpose from 150kHz to 1MHz Small size, Screwless terminal type	(6 to 30A) EMI/EMC filter for medical applications Low leakage current type General purpose from 150kHz to 1MHz with stand voltage 4,000VAC
■Option -D (4 to 30A)	■Option -D	■Option -D	■Option -D
■Use:A case when using multiple switching power supplies, or for medical applications like endoscope, etc	■Use:A case when using multiple switching power supplies, or for medical applications like endoscope, etc	■Use:A case when using multiple switching power supplies, or for medical applications like endoscope, etc	■Use:A case when using multiple switching power supplies, or for medical applications like endoscope, etc

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