Switching Power Supply
Type SP D 12-05
DIN Rail mounting

SPD

- **Universal AC Input Full range**
- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **Overload protection**
- **High efficiency**
- **LED indicator for power on**
- **Led indication for DC low**
- **Internal input filter**
- **CE, TUV approved and cULus Listed**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the Installation is on a DIN rail and compact dimensions and performance are a must.

Approvals

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Optional Features

Description	Code
Spring connectors	B

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation		**Temperature coefficient**	
		Hold up Time Vi = 115Vac	
		Hold up time Vi = 230Vac	

Input data

Rated input voltage		**Frequency range**	
Voltage range AC DC		**Inrush current** Vi= 115Vac Vi = 230Vac	

*** 5Vdc, 15Vdc and 24Vdc available, see specific data sheets**

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

CARLO GAVAZZI

Controls and Protections

Overload		**Output Short Circuit**	
Input Fuse		**Dc out On, indicator**	
Overvoltage Protection		**Dc out low, indicator**	

General data (@ nominal line, full load, 25°C)

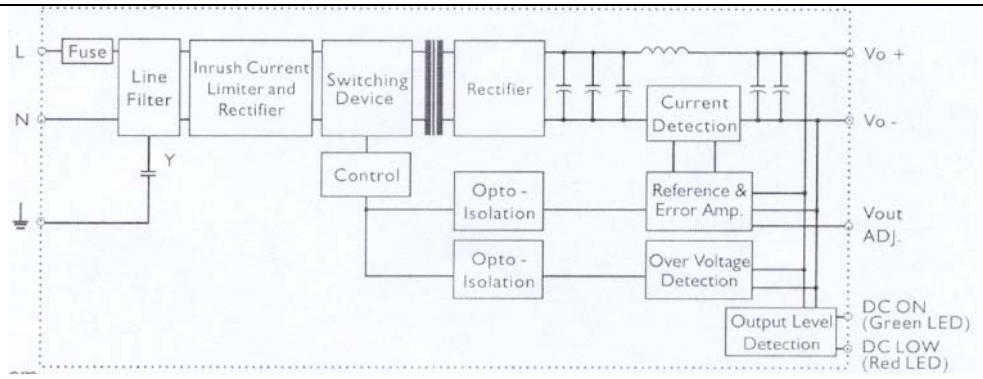
Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +71°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Dimensions L x W x D**	
		Weight	

Approvals and EMC

Insulation voltage I / O		**CE**	**Class B**
Insulation resistance			
UL / cUL	**UL1310 Class 2 Recognised**		
TUV			

* fuse not replaceable by user

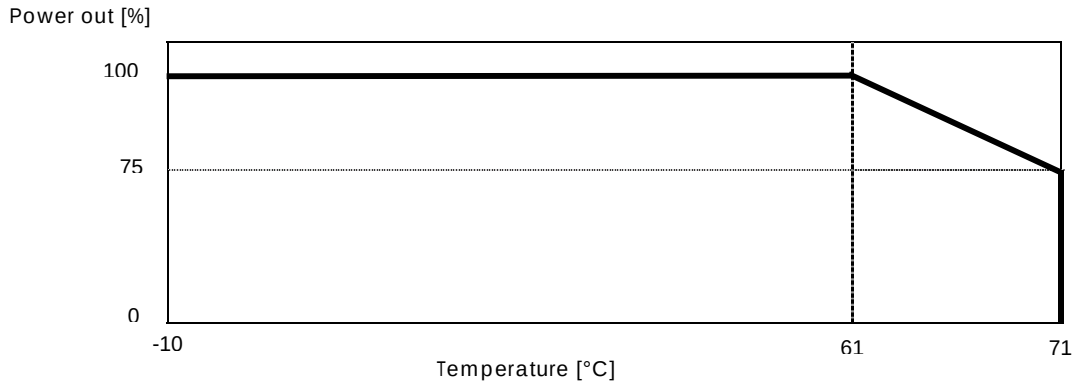
Block diagram



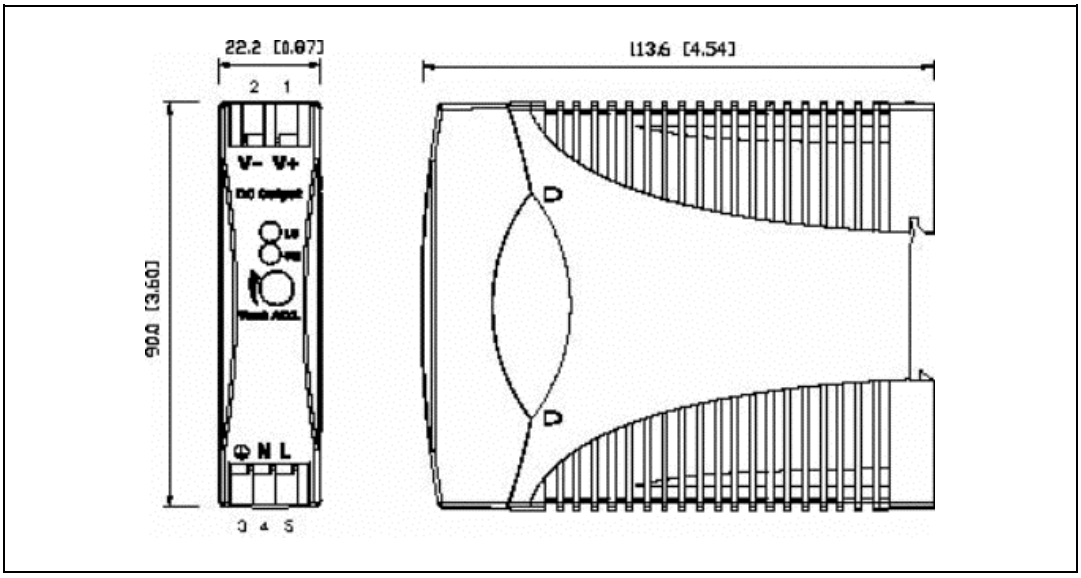
Pin assignement and front controls

Pin No.	Designation	Description
1	**V+**	Positive output terminal
2	**V-**	Negative output terminal
3	**GND**	Ground terminal to minimise High frequency emissions
4	**N**	Neutral input (no polarity with DC input)
5	**L**	Phase input (no polarity with DC input)
	Vout ADJ.	Trimmer for fine output voltage adjustment
	ON	DC output ready LED
	LO	DC low indicator LED

Derating Diagram



Mechanical Drawings



Installation

Ventilation and cooling	**cooling is recommended**
Connector size range	**only)**

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 12 10
DIN Rail mounting

SPD

- **Universal AC Input Full range**
- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **Overload protection**
- **High efficiency**
- **LED indicator for power on**
- **Led indication for DC low**
- **Internal input filter**
- **CE, TUV approved and cULus Listed**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the Installation is on a DIN rail and compact dimensions and performance are a must.

Approvals

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Optional Features

Description	Code
Spring connectors	B

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation		**Temperature coefficient**	
		Hold up Time Vi = 115Vac	
		Hold up time Vi = 230Vac	

Input data

Rated input voltage		**Frequency range**	
Voltage range		**Inrush current**	
AC		Vi= 115Vac	
DC		Vi = 230Vac	

*** 5Vdc, 15Vdc and 24Vdc available, see related datasheets.**

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Controls and Protections

Overload		**Output Short Circuit**	
Input Fuse		**Dc out On, indicator**	
Overvoltage Protection		**Dc out low, indicator**	

General data (@ nominal line, full load, 25°C)

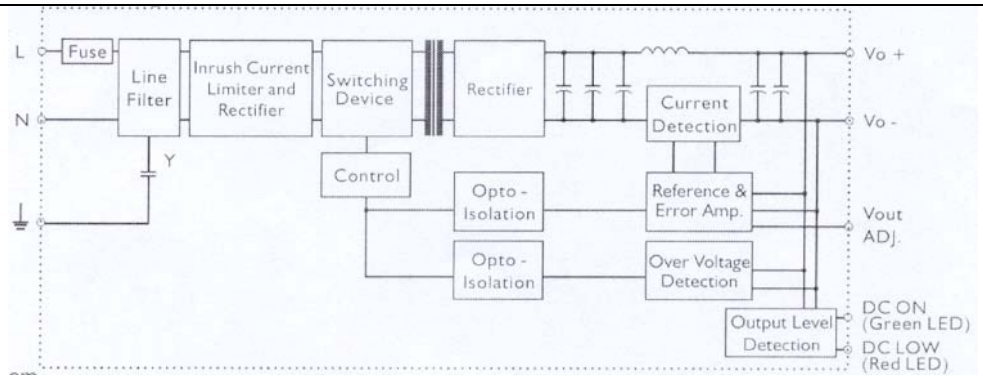
Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +71°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Dimensions L x W x D**	
		Weight	

Approvals and EMC

Insulation voltage I / O		**CE**	**Class B**
Insulation resistance			
UL / cUL	**Recognised**		
TUV			

* fuse not replaceable by user

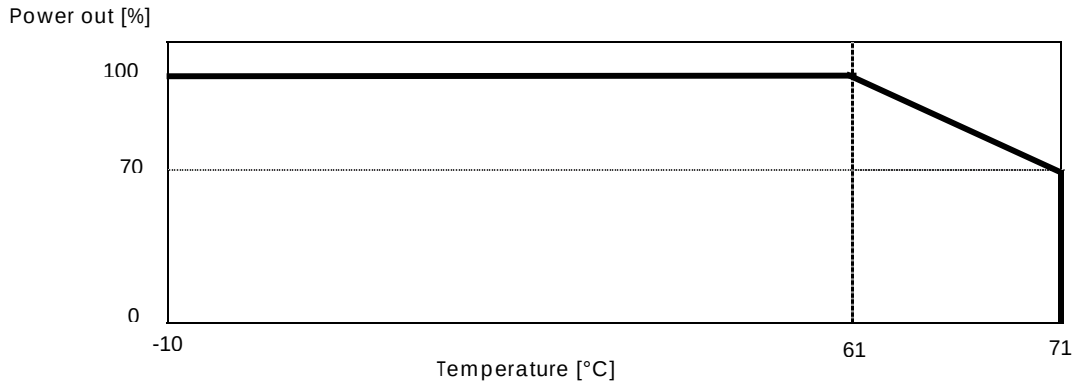
Block diagram



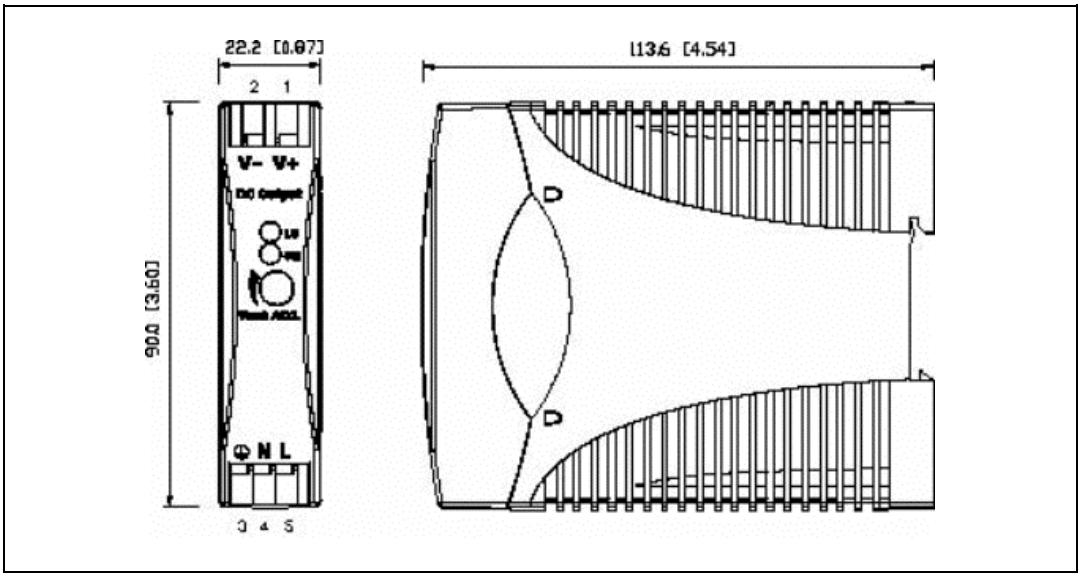
Pin assignement and front controls

Pin No.	Designation	Description
1	V+	Positive output terminal
2	V-	Negative output terminal
3	GND	Ground terminal to minimise High frequency emissions
4	N	Neutral input (no polarity with DC input)
5	L	Phase input (no polarity with DC input)
	Vout ADJ.	Trimmer for fine output voltage adjustment
	ON	DC output ready LED
	LO	DC low indicator LED

Derating Diagram



Mechanical Drawings



Installation

Ventilation and cooling	**cooling is recommended**
Connector size range	**only)**

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 12 120
DIN Rail mounting

SPD

- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **PFC available**
- **High efficiency**
- **Parallel versions available**
- **Compact dimensions**
- **UL, cUL listed and TUV/CE approved**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the Installation is on a DIN rail and compact dimensions and performance are a must.

Approvals

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Optional Features

Description	Code
Plug in connectors	Bxx
With P.F.C.	xFx
With Parallel function	xxP

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation Non parallel model Parallel model		**Temperature coefficient** **Hold up Time Vi = 115Vac** **Hold up time Vi = 230Vac**	
DC indicator ON		**Minimum load**	
DC indicator LOW		**Parallel Operation** (only specific models)	

*** 24Vdc and 48Vdc available, see related datasheets**

Specifications are subject to change without notice

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 12 120
Din Rail Mounting

CARLO GAVAZZI

Input data

Rated input voltage		**Frequency range**	
Voltage range AC in, 115 selected AC in, 230 selected DC in, only 230 selectable		**Inrush current** Vi= 115Vac Vi = 230Vac	
		P.F.C. (optional)	

Controls and Protections

Input Fuse		**Power ready** Threshold at start up Threshold after start up Contact rating at 60Vdc insulation	
Overvoltage protection			
Ouput Short circuit			
Rated Overload Protection			

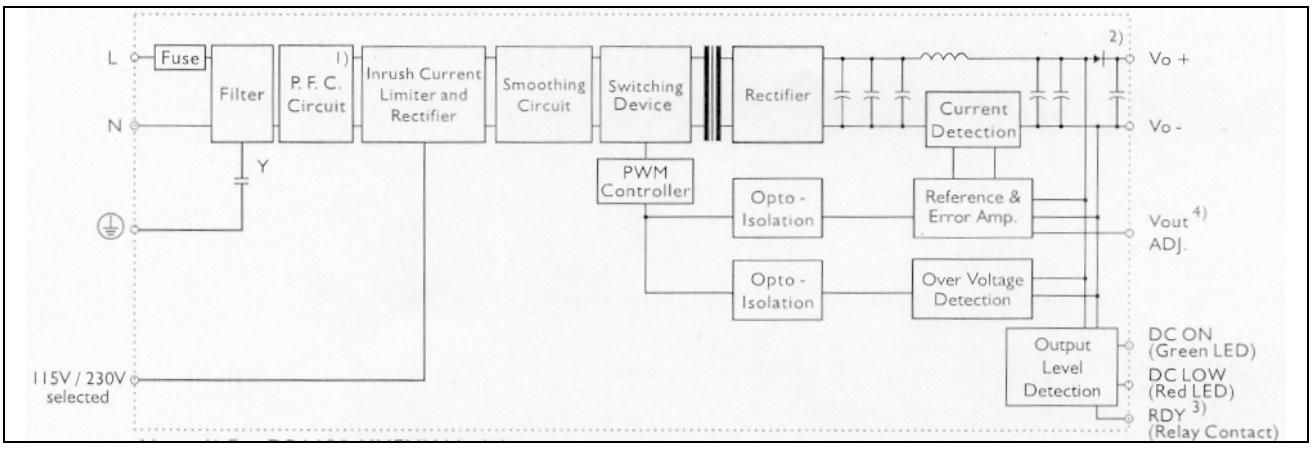
General data (@ nominal line, full load, 25°C)

Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +70°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Dimensions L x W x D**	
		Weight Without P.F.C. With P.F.C.	

Approvals and EMC

Insulation voltage I / O		**CE**	
Insulation resistance			
UL / cUL	**Recognised**		
TUV			

Block diagram



Specifications are subject to change without notice

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Pin assignement and front controls

Pin No.	Designation	Description
1	**RDY**	Not connected
2	**RDY**	Not connected
3	**+**	Positive output terminal
4	**+**	Positive output terminal
5	**-**	Negative output terminal
6	**-**	Negative output terminal
7	**GND**	Ground terminal to minimise High frequency emissions
8	**L**	Phase input (no polarity with DC input)
9	**N**	Neutral input (no polarity with DC input)
	DC ON	Operation LED
	DC LO	LOW DC out LED
	Vout Adj.	Trimmer for fine output voltage adjustment
	115/230	Input voltage selection switch

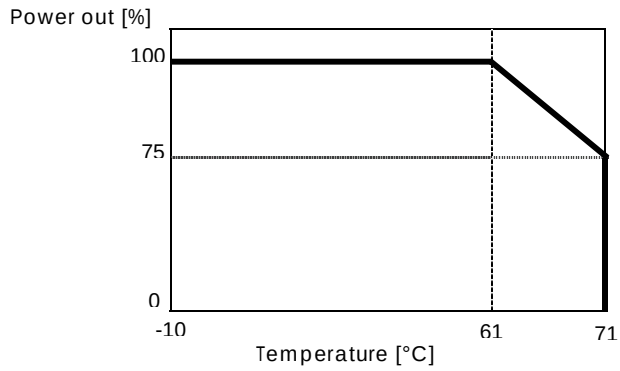
Installation

VENTILATION / COOLING:
- **Normal air convection**
- **25mm of free space along all sides to allow good cooling**

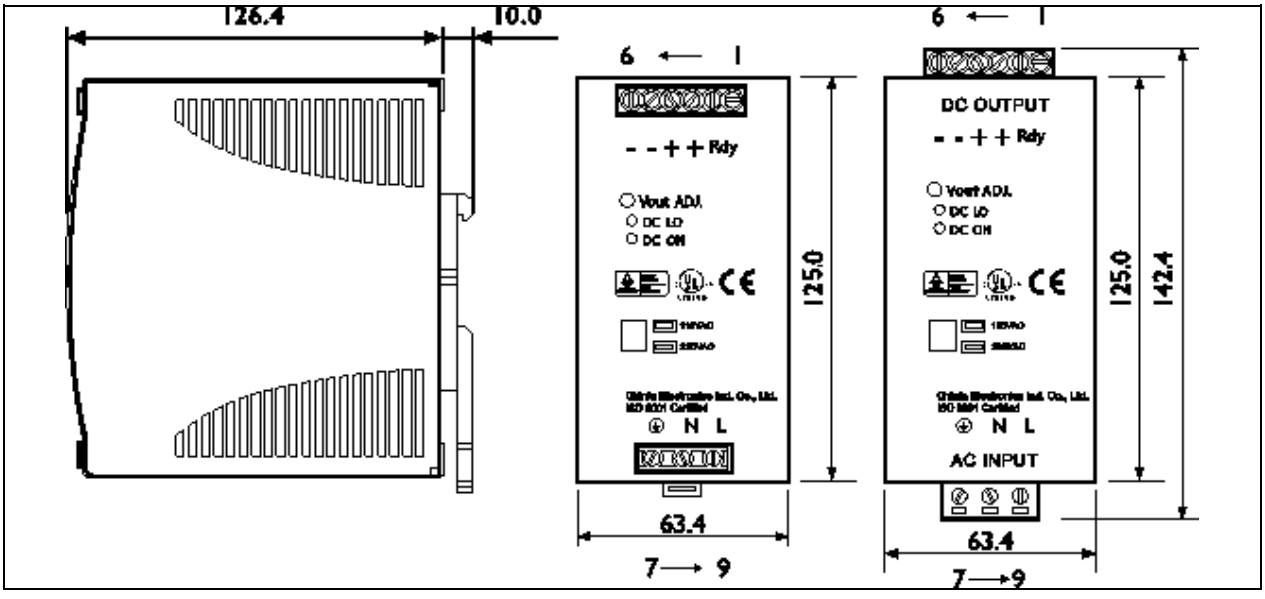
SCREW CONNECTIONS:
- **10-24AWG Flexible or solid cable. 8mm stripping recommended**

PLUG IN CONNECTORS:
- **10-24AWG Flexible or solid cable. 7mm stripping recommended**

Derating Diagram



Mechanical Drawings



Specifications are subject to change without notice

Switching Power Supply
Type SP D 12 18
DIN Rail mounting

SPD

- **Universal AC Input Full range**
- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **Overload protection**
- **High efficiency**
- **LED indicator for power on**
- **Led indication for DC low**
- **Internal input filter**
- **CE, TUV approved and cULus Listed**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the Installation is on a DIN rail and compact dimensions and performance are a must.

Approvals

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Optional Features

Description	Code
Spring connectors	B

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation		**Temperature coefficient**	
		Hold up Time Vi = 115Vac **Hold up time Vi = 230Vac**	

Input data

Rated input voltage		**Frequency range**	
Voltage range AC DC		**Inrush current** Vi= 115Vac Vi = 230Vac	

*** 5Vdc, 12Vdc and 15Vdc available upon request**

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Controls and Protections

Overload		**Output Short Circuit**	
Input Fuse		**Dc out On, indicator**	
Overvoltage Protection		**Dc out low, indicator**	

General data (@ nominal line, full load, 25°C)

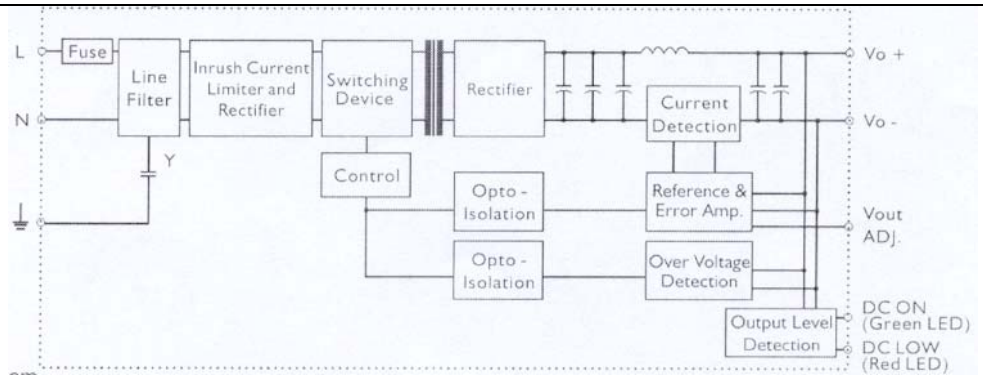
Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +71°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Dimensions L x W x D**	
		Weight	

Approvals and EMC

Insulation voltage I / O		**CE**	**Class B**
Insulation resistance			
UL / cUL			
TUV			

* fuse not replaceable by user

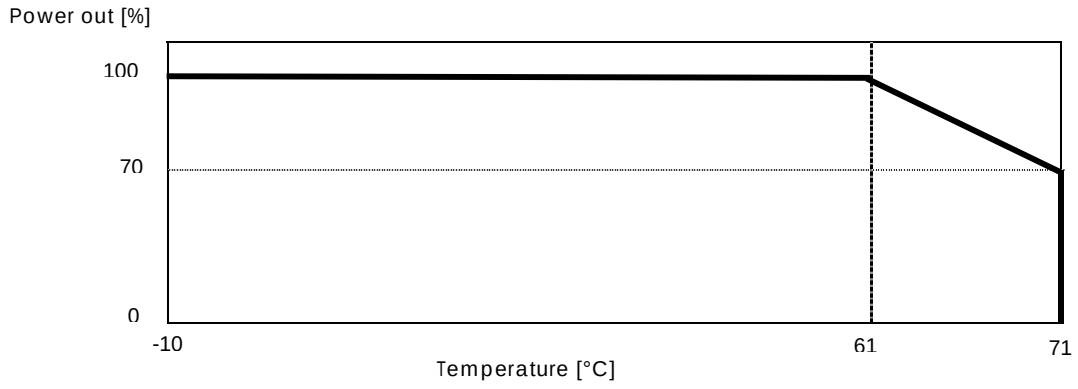
Block diagram



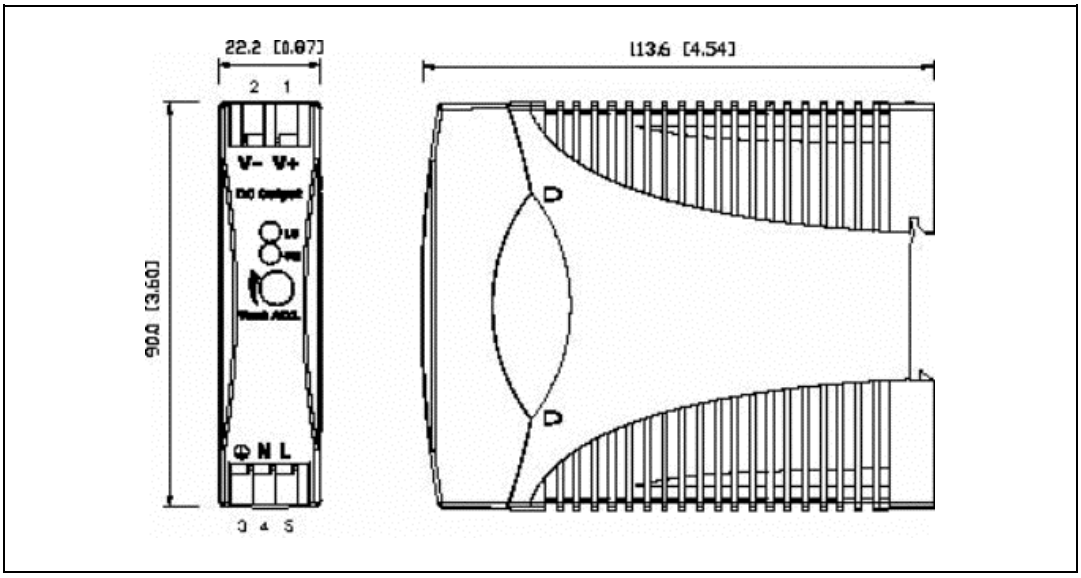
Pin assignement and front controls

Pin No.	Designation	Description
1	V+	Positive output terminal
2	V-	Negative output terminal
3	GND	Ground terminal to minimise High frequency emissions
4	N	Neutral input (no polarity with DC input)
5	L	Phase input (no polarity with DC input)
	Vout ADJ.	Trimmer for fine output voltage adjustment
	ON	DC output ready LED
	LO	DC low indicator LED

Derating Diagram



Mechanical Drawings



Installation

Ventilation and cooling	**cooling is recommended**
Connector size range	**only)**

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 12 30
DIN Rail mounting

SPD

- **Universal AC Input Full range**
- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **Overload protection**
- **High efficiency**
- **LED indicator for power on**
- **CE, TUV approved and cULus Listed**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the Installation is on a DIN rail and compact dimensions and performance are a must.

Approvals

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Optional Features

Description		Code
Spring connectors		B

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation		**Temperature coefficient**	
		Hold up Time Vi = 115Vac	
		Hold up time Vi = 230Vac	

Input data

Rated input voltage		**Frequency range**	
Voltage range AC DC		**Inrush current** Vi= 115Vac Vi = 230Vac	

*** 5Vdc, 24Vdc and 48Vdc available upon request**

Specifications are subject to change without notice

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Controls and Protections

Overload		**Output Short Circuit**	
Input Fuse			

*** not replaceable by user**

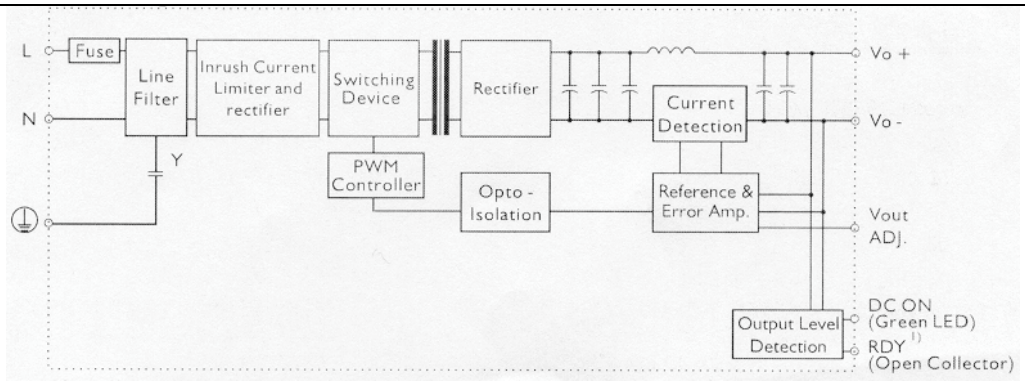
General data (@ nominal line, full load, 25°C)

Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +71°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Dimensions L x W x D**	
		Weight	

Approvals and EMC

Insulation voltage I / O		**CE**	
Insulation resistance			
UL / cUL	**UL1310 Class 2 Recognised**		
TUV			

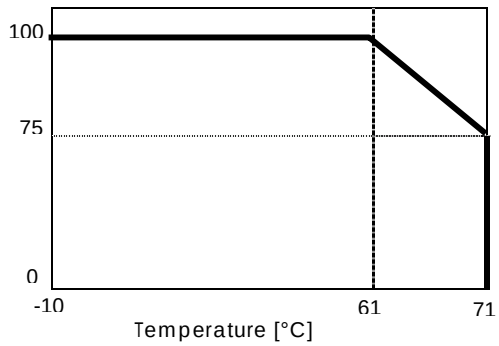
Block diagram



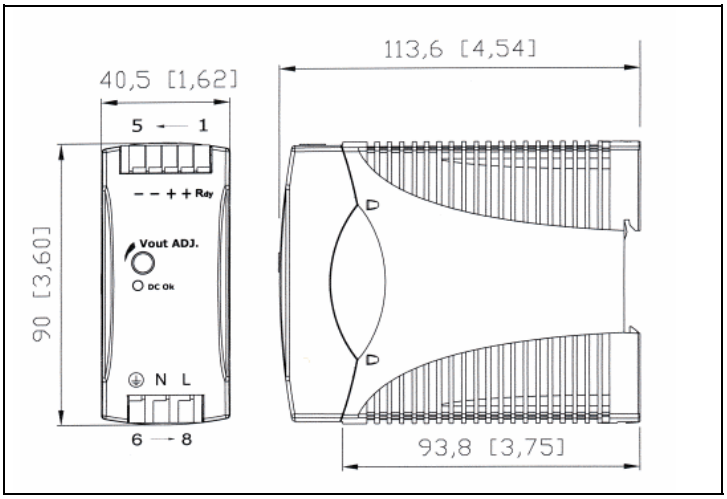
Pin assignement and front controls

Pin No.	Designation	Description
1	RDY	Not connected
2	+	Positive output terminal
3	+	Positive output terminal
4	-	Negative output terminal
5	-	Negative output terminal
6	GND	Ground terminal to minimise High frequency emissions
7	N	Neutral input (no polarity with DC input)
8	L	Phase input (no polarity with DC input)
	Vout ADJ	Trimmer for fine output voltage adjustment
	DC ON	DC output ready LED

Derating Diagram



Mechanical Drawings



Installation

Ventilation and cooling	**cooling is recommended**
Connector size range	

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 12 60
DIN Rail mounting

SPD

- **Universal AC Input Full range**
- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **Overload protection**
- **High efficiency**
- **LED indicator for power on**
- **CE, TUV approved and cULus Listed**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the installation is on a DIN rail and compact dimensions and performance are a must.

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Approvals

Optional Features

Description	Code
Spring connectors	B

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation		**Temperature coefficient**	
		Hold up Time Vi = 115Vac	
		Hold up time Vi = 230Vac	

Input data

Rated input voltage		**Frequency range**	
Voltage range		**Inrush current**	
AC		Vi= 115Vac	
DC		Vi = 230Vac	

*** 5Vdc, 24Vdc and 48Vdc available, see related datasheet**

Specifications are subject to change without notice

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Controls and Protections

Overload		**Output Short Circuit**	
Input Fuse			

***not replaceable by user**

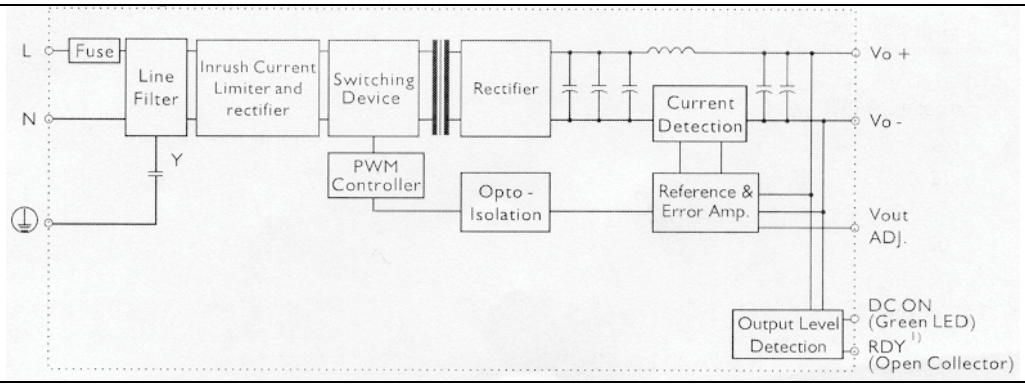
General data (@ nominal line, full load, 25°C)

Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +71°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Dimensions L x W x D**	
		Weight	

Approvals and EMC

Insulation voltage I / O		**CE**	
Insulation resistance			
UL / cUL	**UL1310 Class 2 Recognised**		
TUV			

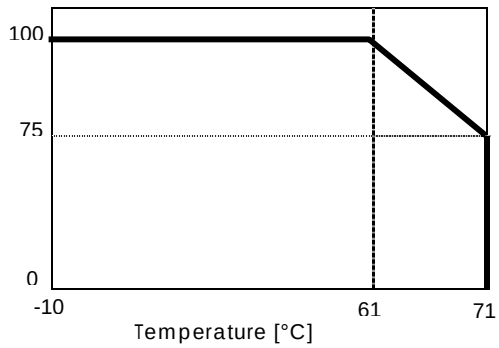
Block diagram



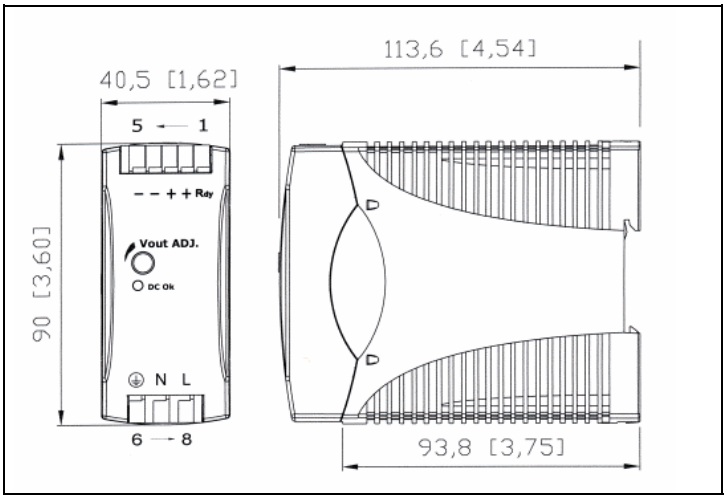
Pin assignement and front controls

Pin No.	Designation	Description
1	RDY	Not connected
2	+	Positive output terminal
3	+	Positive output terminal
4	-	Negative output terminal
5	-	Negative output terminal
6	GND	Ground terminal to minimise High frequency emissions
7	N	Neutral input (no polarity with DC input)
8	L	Phase input (no polarity with DC input)
	Vout ADJ	Trimmer for fine output voltage adjustment
	DC ON	DC output ready LED

Derating Diagram



Mechanical Drawings



Installation

Ventilation and cooling	**cooling is recommended**
Connector size range	

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 24-05
DIN Rail mounting

SPD

- **Universal AC Input Full range**
- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **Overload protection**
- **High efficiency**
- **LED indicator for power on**
- **Led indication for DC low**
- **Internal input filter**
- **CE, TUV approved and cULus Listed**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the Installation is on a DIN rail and compact dimensions and performance are a must.

Approvals

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Optional Features

Description	Code
Spring connectors	B

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation		**Temperature coefficient**	
		Hold up Time Vi = 115Vac	
		Hold up time Vi = 230Vac	

Input data

Rated input voltage		**Frequency range**	
Voltage range AC DC		**Inrush current** Vi= 115Vac Vi = 230Vac	

*** 5Vdc, 12Vdc and 15Vdc available, see specific data sheets**

Specifications are subject to change without notice

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Controls and Protections

Overload		**Output Short Circuit**	
Input Fuse		**Dc out On, indicator**	
Overvoltage Protection		**Dc out low, indicator**	

General data (@ nominal line, full load, 25°C)

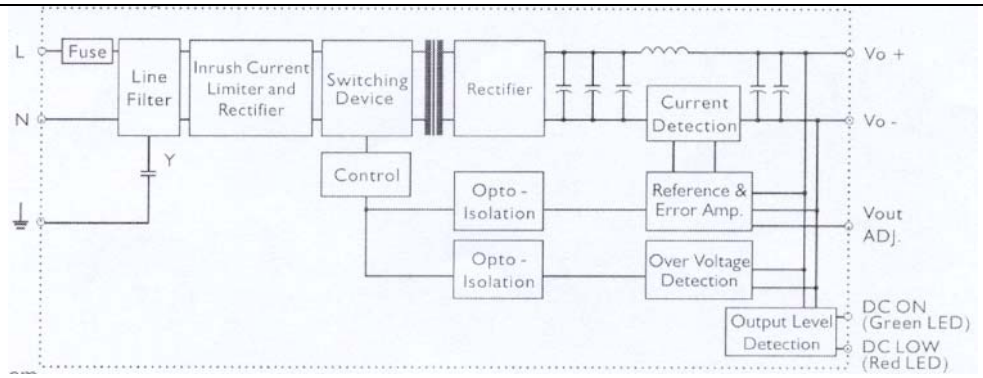
Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +71°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Dimensions L x W x D**	
		Weight	

Approvals and EMC

Insulation voltage I / O		**CE**	**Class B**
Insulation resistance			
UL / cUL	**UL1310 Class 2 Recognised**		
TUV			

* fuse not replaceable by user

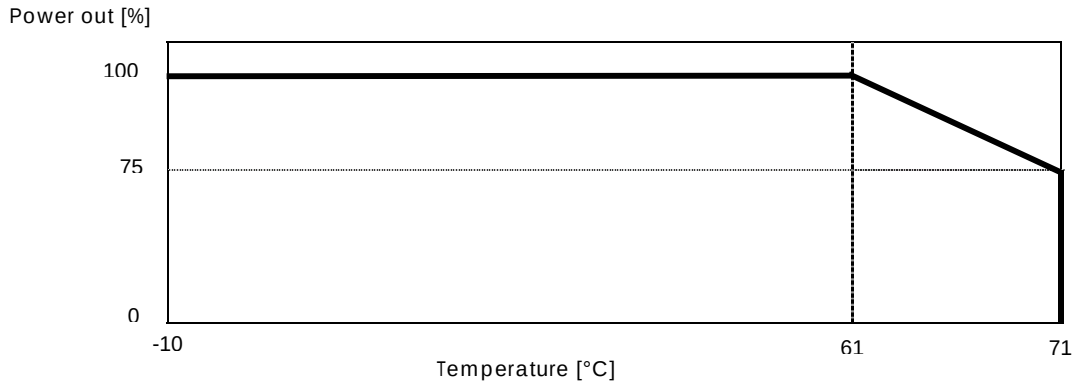
Block diagram



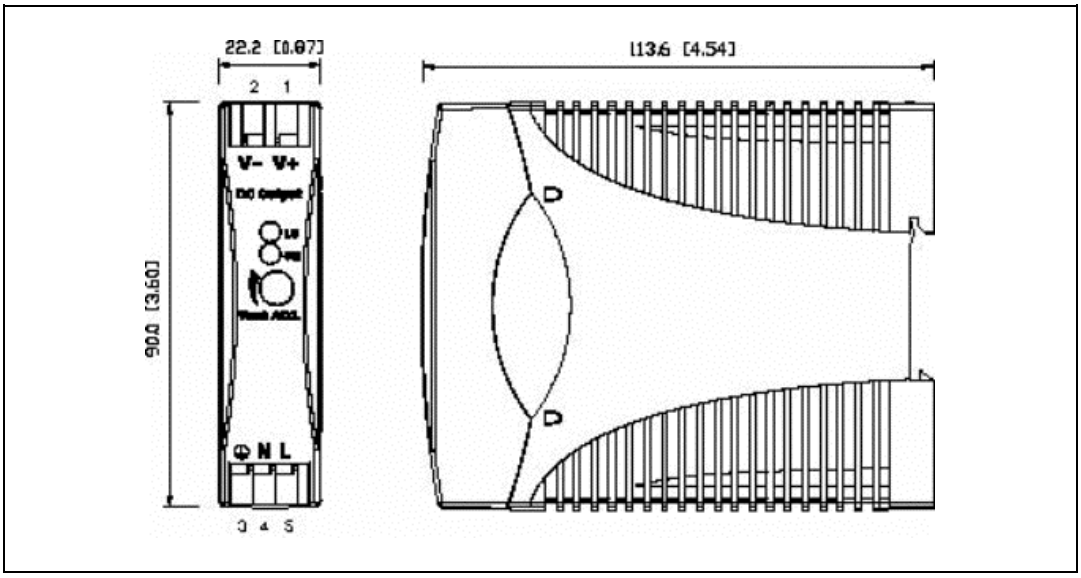
Pin assignement and front controls

Pin No.	Designation	Description
1	**V+**	Positive output terminal
2	**V-**	Negative output terminal
3	**GND**	Ground terminal to minimise High frequency emissions
4	**N**	Neutral input (no polarity with DC input)
5	**L**	Phase input (no polarity with DC input)
	Vout ADJ.	Trimmer for fine output voltage adjustment
	ON	DC output ready LED
	LO	DC low indicator LED

Derating Diagram



Mechanical Drawings



Installation

Ventilation and cooling	**cooling is recommended**
Connector size range	**only)**

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 24-10
DIN Rail mounting

SPD

- **Universal AC Input Full range**
- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **Overload protection**
- **High efficiency**
- **LED indicator for power on**
- **Led indication for DC low**
- **Internal input filter**
- **CE, TUV approved and cULus Listed**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the Installation is on a DIN rail and compact dimensions and performance are a must.

Approvals

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Optional Features

Description	Code
Spring connectors	B

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation		**Temperature coefficient**	
		Hold up Time Vi = 115Vac	
		Hold up time Vi = 230Vac	

Input data

Rated input voltage		**Frequency range**	
Voltage range AC DC		**Inrush current** Vi= 115Vac Vi = 230Vac	

*** 5Vdc, 12Vdc and 15Vdc available upon request**

Specifications are subject to change without notice

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 24-10
Din Rail Mounting

Controls and Protections

Overload		**Output Short Circuit**	
Input Fuse		**Dc out On, indicator**	
Overvoltage Protection		**Dc out low, indicator**	

General data (@ nominal line, full load, 25°C)

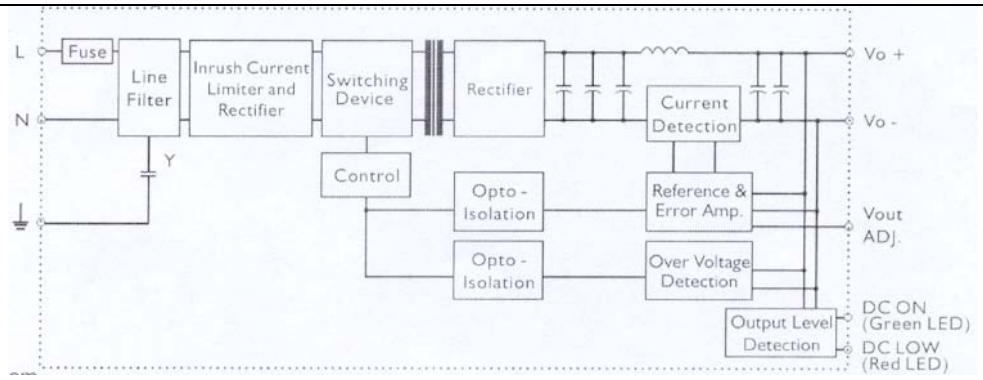
Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +71°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Dimensions L x W x D**	
		Weight	

Approvals and EMC

Insulation voltage I / O		**CE**	**Class B**
Insulation resistance			
UL / cUL	**Recognised**		
TUV			

* fuse not replaceable by user

Block diagram



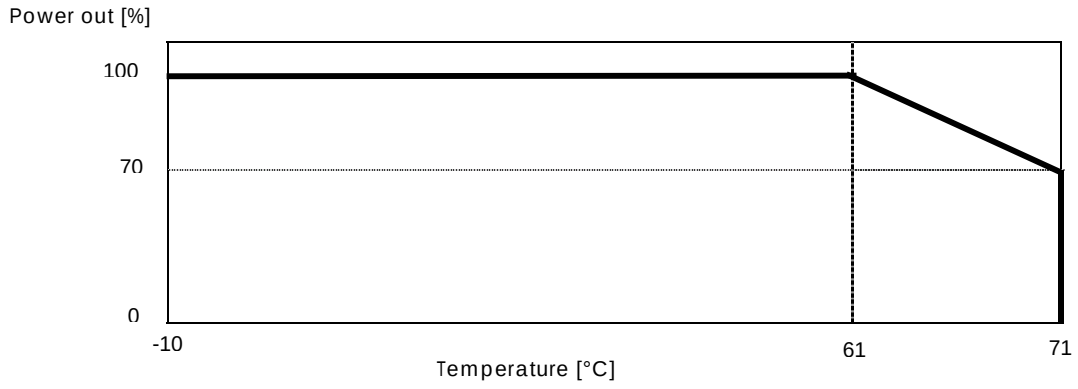
Pin assignement and front controls

Pin No.	Designation	Description
1	V+	Positive output terminal
2	V-	Negative output terminal
3	GND	Ground terminal to minimise High frequency emissions
4	N	Neutral input (no polarity with DC input)
5	L	Phase input (no polarity with DC input)
	Vout ADJ.	Trimmer for fine output voltage adjustment
	ON	DC output ready LED
	LO	DC low indicator LED

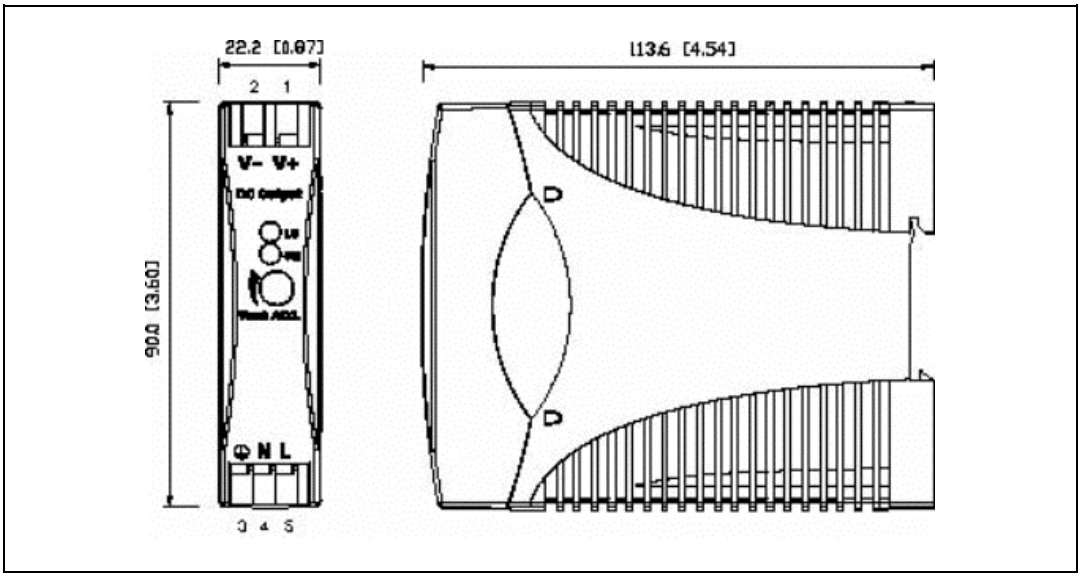
Specifications are subject to change without notice

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Derating Diagram



Mechanical Drawings



Installation

Ventilation and cooling	**cooling is recommended**
Connector size range	**only)**

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 24-120
DIN Rail mounting

SPD

- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **PFC available**
- **High efficiency**
- **Power ready output**
- **Parallel versions available**
- **Compact dimensions**
- **UL, cUL listed and TUV/CE approved**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the Installation is on a DIN rail and compact dimensions and performance are a must.

Approvals

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Optional Features

Description	Code
Plug in connectors	Bxx
With P.F.C.	xFx
With Parallel function	xxP

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation Non parallel model Parallel model		**Temperature coefficient** **Hold up Time Vi = 115Vac** **Hold up time Vi = 230Vac**	
DC indicator ON		**Minimum load**	
DC indicator LOW		**Parallel Operation** (only specific models)	

*** 12Vdc and 48Vdc available upon request**

Specifications are subject to change without notice

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 24-120
Din Rail Mounting

Input data

Rated input voltage		**Frequency range**	
Voltage range AC in, 115 selected AC in, 230 selected DC in, only 230 selectable		**Inrush current** Vi= 115Vac Vi = 230Vac	
		P.F.C. (optional)	

Controls and Protections

Input Fuse		**Power ready (24V only)** Threshold at start up Threshold after start up Contact rating at 60Vdc insulation	
Overvoltage protection			
Ouput Short circuit			
Rated Overload Protection			

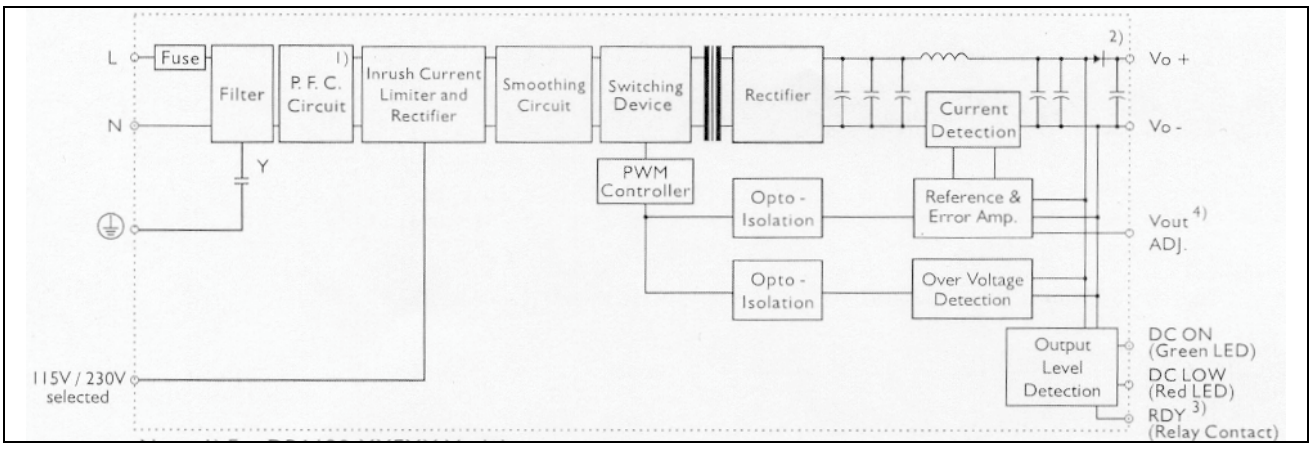
General data (@ nominal line, full load, 25°C)

Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +70°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Dimensions L x W x D**	
		Weight Without P.F.C. With P.F.C.	

Approvals and EMC

Insulation voltage I / O		**CE**	
Insulation resistance			
UL / cUL	**Recognised**		
TUV			

Block diagram



Specifications are subject to change without notice

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Pin assignement and front controls

Pin No.	Designation	Description
1	**RDY**	DC OK, relay normally open contact
2	**RDY**	DC OK, relay normally open contact
3	**+**	Positive output terminal
4	**+**	Positive output terminal
5	**-**	Negative output terminal
6	**-**	Negative output terminal
7	**GND**	Ground terminal to minimise High frequency emissions
8	**L**	Phase input (no polarity with DC input)
9	**N**	Neutral input (no polarity with DC input)
	DC ON	Operation LED
	DC LO	LOW DC out LED
	Vout Adj.	Trimmer for fine output voltage adjustment
	115/230	Input voltage selection switch

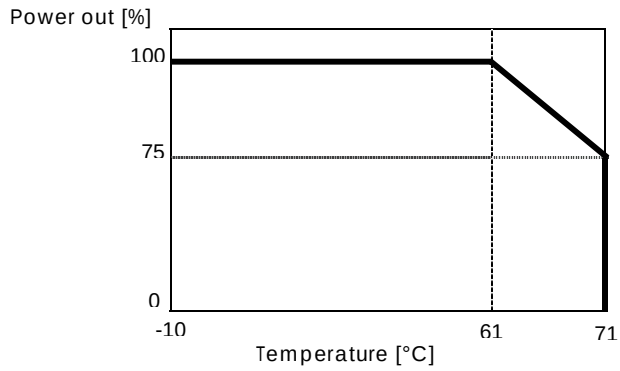
Installation

VENTILATION / COOLING:
- **Normal air convection**
- **25mm of free space along all sides to allow good cooling**

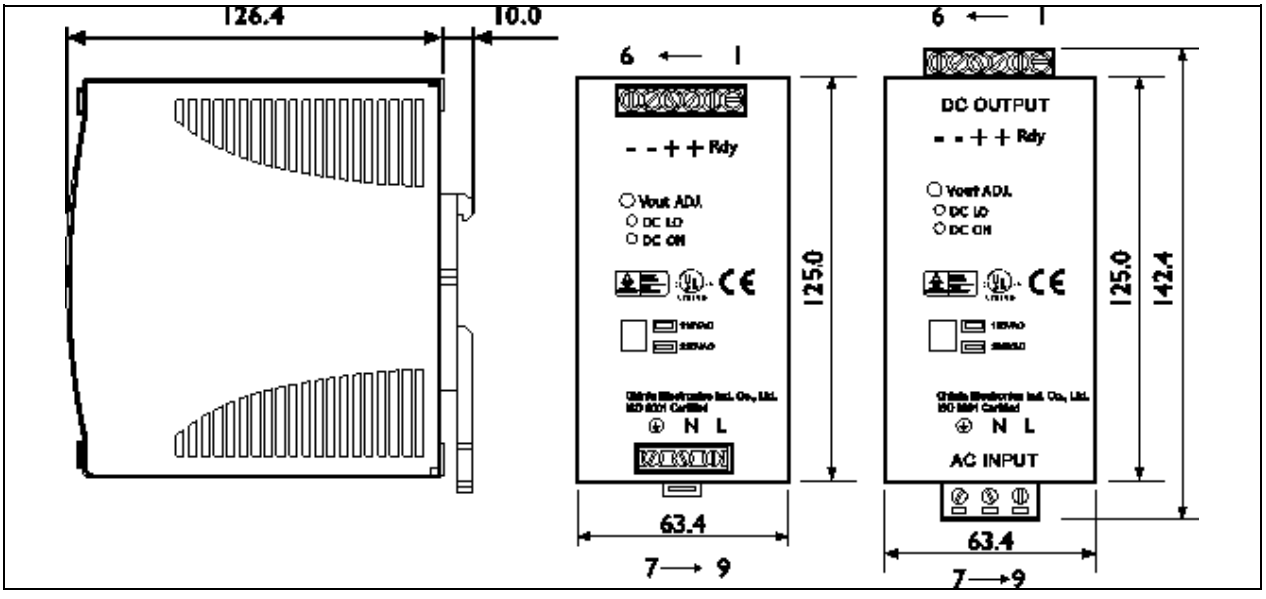
SCREW CONNECTIONS:
- **10-24AWG Flexible or solid cable. 8mm stripping recommended**

PLUG IN CONNECTORS:
- **10-24AWG Flexible or solid cable. 7mm stripping recommended**

Derating Diagram



Mechanical Drawings



Specifications are subject to change without notice

Switching Power Supply
Type SP D 24-18
DIN Rail mounting

SPD

- **Universal AC Input Full range**
- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **Overload protection**
- **High efficiency**
- **LED indicator for power on**
- **Led indication for DC low**
- **Internal input filter**
- **CE, TUV approved and cULus Listed**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the Installation is on a DIN rail and compact dimensions and performance are a must.

Approvals

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Optional Features

Description	Code
Spring connectors	B

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation		**Temperature coefficient**	
		Hold up Time Vi = 115Vac **Hold up time Vi = 230Vac**	

Input data

Rated input voltage		**Frequency range**	
Voltage range AC DC		**Inrush current** Vi= 115Vac Vi = 230Vac	

*** 5Vdc, 12Vdc and 15Vdc available upon request**

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Controls and Protections

Overload		**Output Short Circuit**	
Input Fuse		**Dc out On, indicator**	
Overvoltage Protection		**Dc out low, indicator**	

General data (@ nominal line, full load, 25°C)

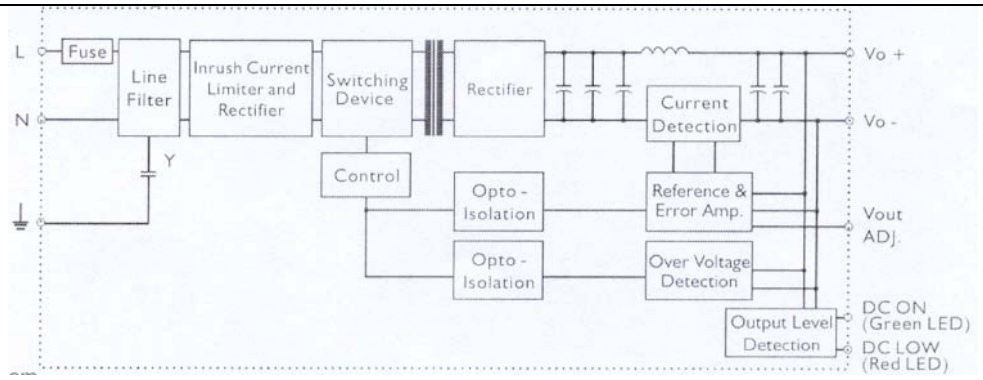
Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +71°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Dimensions L x W x D**	
		Weight	

Approvals and EMC

Insulation voltage I / O		**CE**	**Class B**
Insulation resistance			
UL / cUL			
TUV			

* fuse not replaceable by user

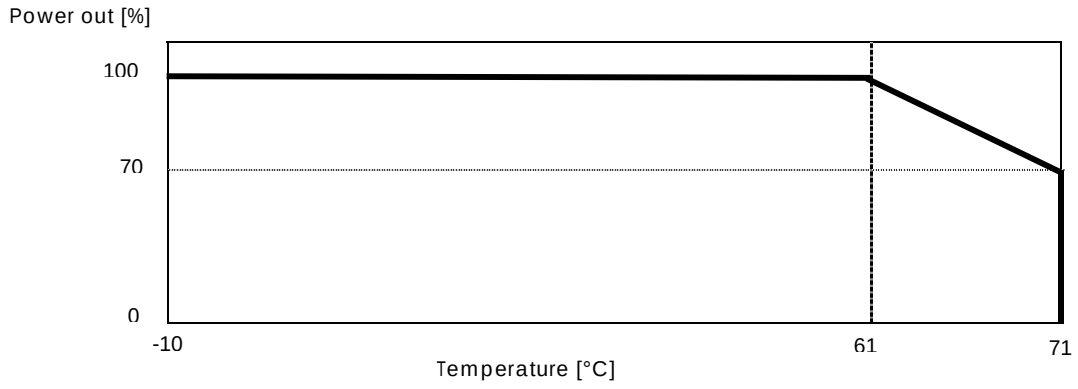
Block diagram



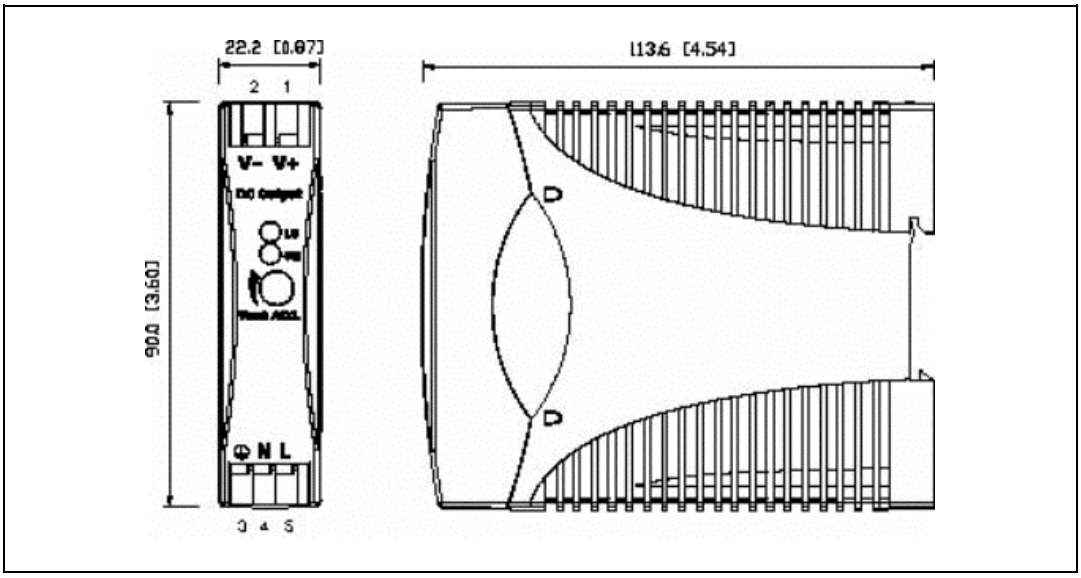
Pin assignement and front controls

Pin No.	Designation	Description
1	**V+**	Positive output terminal
2	**V-**	Negative output terminal
3	**GND**	Ground terminal to minimise High frequency emissions
4	**N**	Neutral input (no polarity with DC input)
5	**L**	Phase input (no polarity with DC input)
	Vout ADJ.	Trimmer for fine output voltage adjustment
	ON	DC output ready LED
	LO	DC low indicator LED

Derating Diagram



Mechanical Drawings



Installation

Ventilation and cooling	**cooling is recommended**
Connector size range	**only)**

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 24 240
DIN Rail mounting

- **Universal AC Input Full range**
- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **PFC as standard**
- **High efficiency**
- **Power ready output**
- **Parallel connection feature**
- **Compact dimensions**
- **UL, cUL Listed and TUV/CE approved**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the Installation is on a DIN rail and compact dimensions and performance are a must.

Approvals

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Optional Features

Description		Code
Plug in connectors		B

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation		**Temperature coefficient**	
Non parallel mode		**Hold up Time Vi = 115Vac**	
Parallel mode		**Hold up time Vi = 230Vac**	
DC indicator ON		**Minimum load**	
DC indicator LOW		**Parallel Operation**	

*** 48Vdc available upon request**

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 24 240
Din Rail Mounting

CARLO GAVAZZI

Input data

Rated input voltage		**Frequency range**	
Voltage range AC in, 115 selected AC in, 230 selected DC in		**Inrush current** Vi= 115Vac Vi = 230Vac	
Rated Input Current		**P.F.C. 230Vac, Io nom.**	

Controls and Protections

Input Fuse		**Power ready** Threshold at start up Threshold after start up Contact rating at 60Vdc insulation	
Overvoltage protection			
Ouput Short circuit			
Rated overload protection			

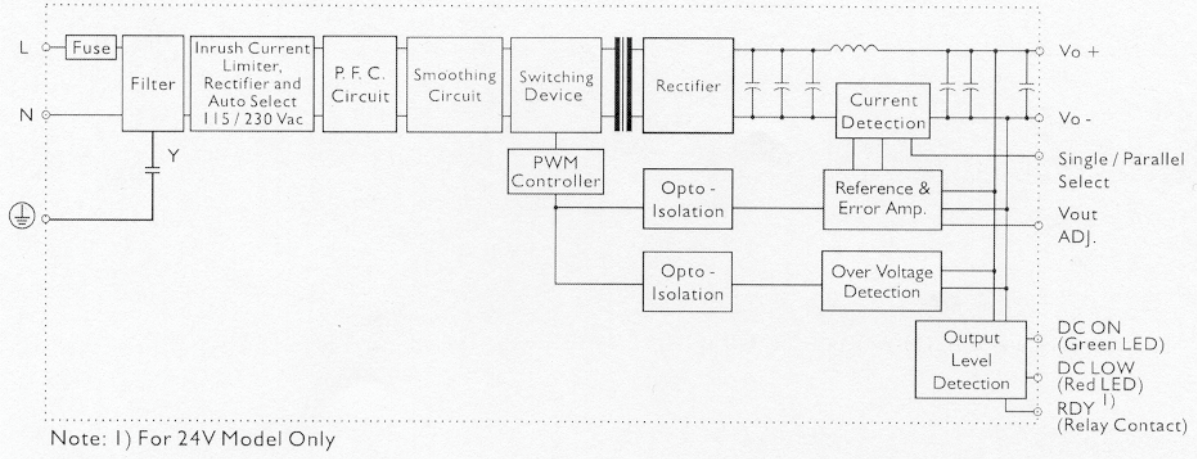
General data (@ nominal line, full load, 25°C)

Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +71°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Weight**	
Dimensions L x W x D Screw terminal type Plug in connectors			

Approvals and EMC

Insulation voltage I / O		**CE**	
Insulation resistance			
UL / cUL	**Recognised**		
TUV			

Block diagram



Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Pin assignement and front controls

Pin No.	Designation	Description
1	**RDY**	DC OK, relay normally open contact
2		
3	**+**	Positive output terminal
4	**+**	Positive output terminal
5	**-**	Negative output terminal
6	**-**	Negative output terminal
7	**GND**	Ground terminal to minimise High frequency emissions
8	**L**	Phase input (no polarity with DC input)
9	**N**	Neutral input (no polarity with DC input)
	DC ON	Operation LED
	DC LO	LOW DC out LED
	Vout Adj.	Trimmer for fine output voltage adjustment
	S / P	Single parallel selection switch

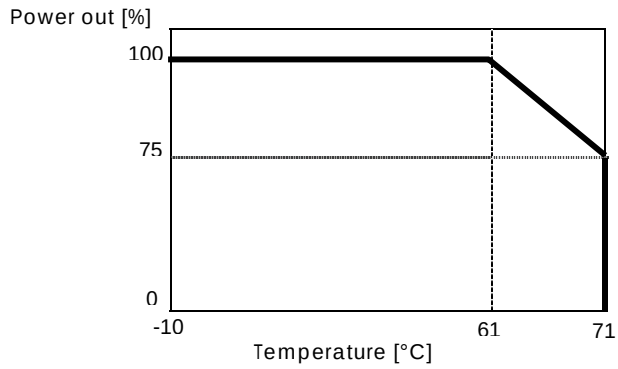
Installation

VENTILATION / COOLING:
- **Normal air convection**
- **25mm of free space along all sides to allow good cooling**

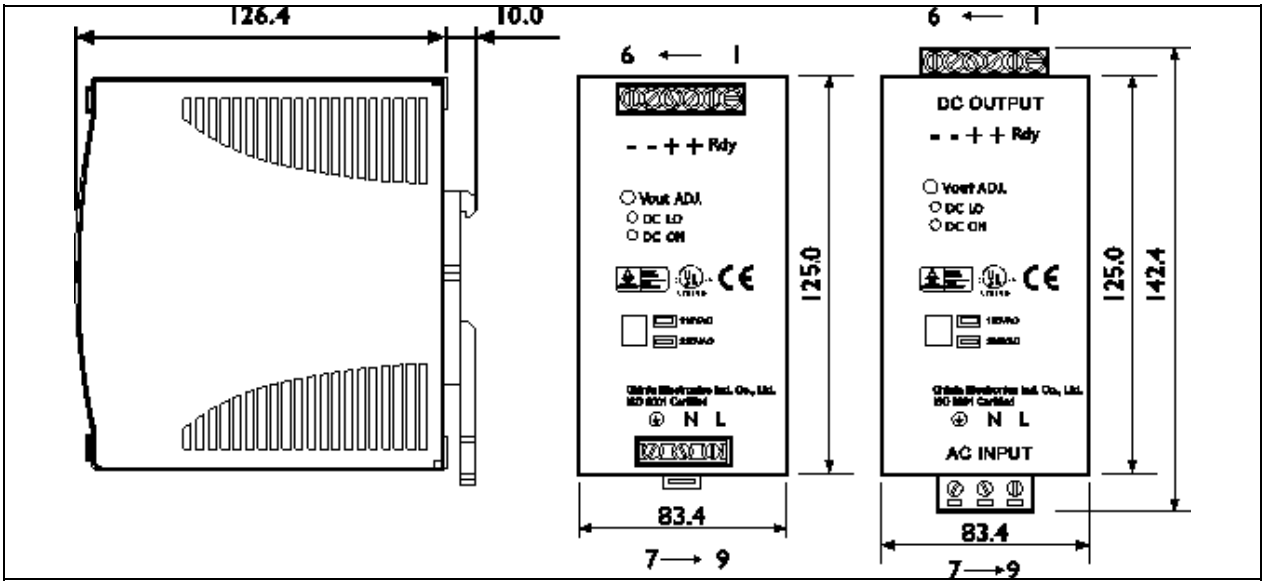
SCREW CONNECTIONS:
- **10-24AWG Flexible or solid cable. 8mm stripping recommended**

PLUG IN CONNECTORS:
- **10-24AWG Flexible or solid cable. 7mm stripping recommended**

Derating Diagram



Mechanical Drawings



Specifications are subject to change without notice

Switching Power Supply
Type SP D 24-30
DIN Rail mounting

SPD

- **Universal AC Input Full range**
- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **Overload protection**
- **High efficiency**
- **LED indicator for power on**
- **Power Ok output**
- **CE, TUV approved and cULus Listed**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the Installation is on a DIN rail and compact dimensions and performance are a must.

Approvals

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Optional Features

Description		Code
Spring connectors		B

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation		**Temperature coefficient**	
		Hold up Time Vi = 115Vac	
		Hold up time Vi = 230Vac	

Input data

Rated input voltage		**Frequency range**	
Voltage range AC DC		**Inrush current** Vi= 115Vac Vi = 230Vac	

*** 5Vdc, 12Vdc and 48Vdc available upon request**

Specifications are subject to change without notice

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Controls and Protections

Overload		**Output Short Circuit**	
Input Fuse		**Power ready**	

*** not replaceable by user**

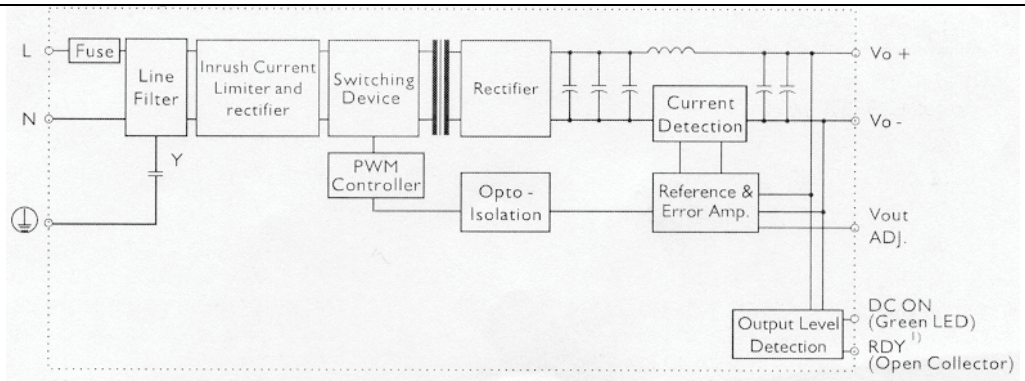
General data (@ nominal line, full load, 25°C)

Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +71°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Dimensions L x W x D**	
		Weight	

Approvals and EMC

Insulation voltage I / O		**CE**	
Insulation resistance			
UL / cUL	**UL1310 Class 2 Recognised**		
TUV			

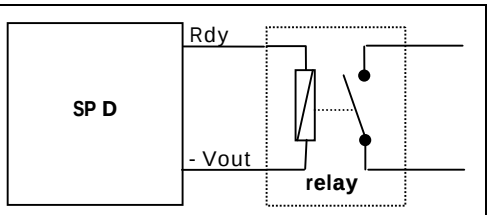
Block diagram



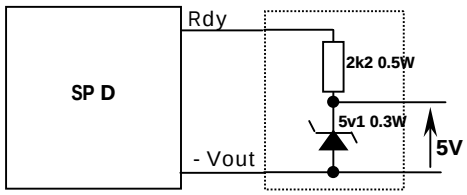
Pin assignement and front controls

Pin No.	Designation	Description
1	**RDY**	DC OK, output for relay (only on 24Vdc models)
2	**+**	Positive output terminal
3	**+**	Positive output terminal
4	**-**	Negative output terminal
5	**-**	Negative output terminal
6	**GND**	Ground terminal to minimise High frequency emissions
7	**N**	Neutral input (no polarity with DC input)
8	**L**	Phase input (no polarity with DC input)
	Vout ADJ	Trimmer for fine output voltage adjustment
	DC ON	DC output ready LED

Output Rdy Wiring diagram

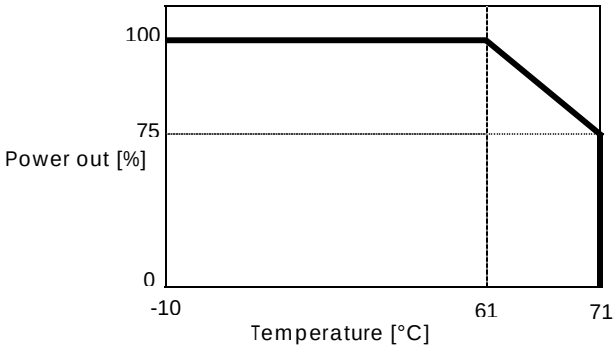


Relay connection diagram

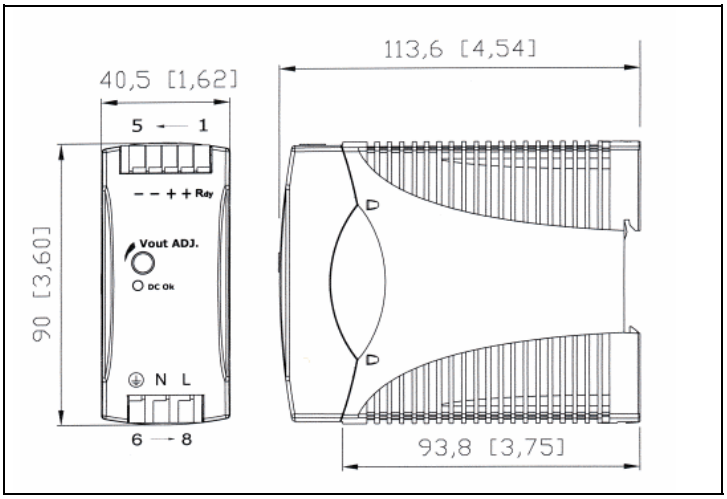


5V signal

Derating Diagram



Mechanical Drawings



Installation

Ventilation and cooling	**cooling is recommended**
Connector size range	

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Switching Power Supply
Type SP D 24-60
DIN Rail mounting

SPD

- **Universal AC Input Full range**
- **Installation on DIN Rail 7.5 or 15mm**
- **Short circuit protection**
- **Overload protection**
- **High efficiency**
- **LED indicator for power on**
- **Power Ok output**
- **CE, TUV approved and cULus Listed**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the installation is on a DIN rail and compact dimensions and performance are a must.

Approvals

Ordering Key

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type
Optional features

Input type : 1= single phase

Optional Features

Description	Code
Spring connectors	B

Output data

Output nominal voltage		**Transient recovery time**	
Current		**Ripple and noise**	
Output voltage range		**Efficiency typ.**	
Line regulation		**Ouput Voltage accuracy**	
Load regulation		**Temperature coefficient**	
		Hold up Time Vi = 115Vac	
		Hold up time Vi = 230Vac	

Input data

Rated input voltage		**Frequency range**	
Voltage range		**Inrush current**	
AC		Vi= 115Vac	
DC		Vi = 230Vac	

*** 5Vdc, 12Vdc and 48Vdc available upon request**

Specifications are subject to change without notice

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee

Controls and Protections

Overload		**Output Short Circuit**	
Input Fuse		**Power ready**	

***not replaceable by user**

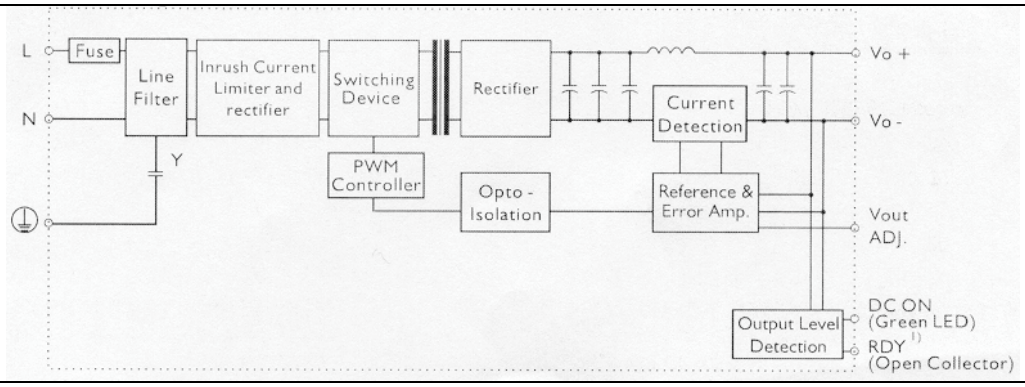
General data (@ nominal line, full load, 25°C)

Ambient temperature		**Cooling**	
Case temperature V/I nom		**Switching frequency**	
Derating (>60°C to +71°C)		**MTBF (MIL-HDBK-217F)**	
Ambient humidity		**Case material**	
Storage		**Dimensions L x W x D**	
		Weight	

Approvals and EMC

Insulation voltage I / O		**CE**	
Insulation resistance			
UL / cUL	**UL1310 Class 2 Recognised**		
TUV			

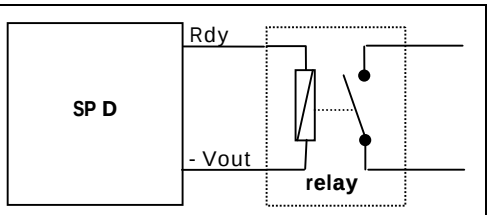
Block diagram



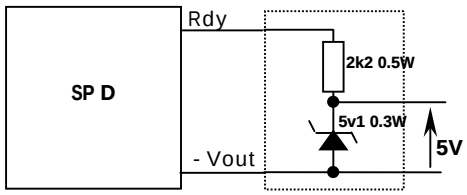
Pin assignement and front controls

Pin No.	Designation	Description
1	**RDY**	DC OK, output for relay (only on 24Vdc models)
2	**+**	Positive output terminal
3	**+**	Positive output terminal
4	**-**	Negative output terminal
5	**-**	Negative output terminal
6	**GND**	Ground terminal to minimise High frequency emissions
7	**N**	Neutral input (no polarity with DC input)
8	**L**	Phase input (no polarity with DC input)
	Vout ADJ	Trimmer for fine output voltage adjustment
	DC ON	DC output ready LED

Output Rdy Wiring diagram

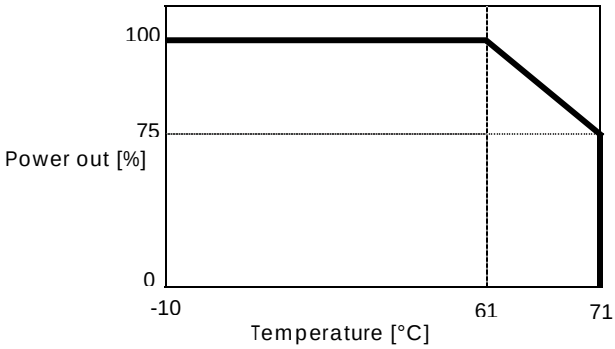


Relay connection diagram

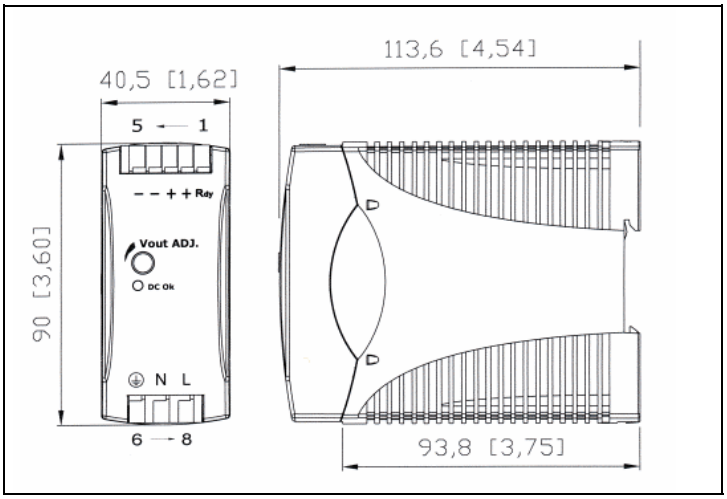


5V signal

Derating Diagram



Mechanical Drawings



Installation

Ventilation and cooling	**cooling is recommended**
Connector size range	

Elmatik AS, Türi 9, 11314 Tallinn Estonia tel. +372 650 3875 tel. +372 650 3876 fax +372 655 8019 e-mail: elmatik@elmatik.ee