Ordering Information

Ver. 01 July 2008

1. TABLE OF CONTENT

2. HRVS-DN IPXX

HRVS-DN (Cabinet enclosed)	Internal Order No:		Rev.:
Cabinet Manufacturer: **Solcon**		Solcon cat. No.:	
Customer Name:			

Project Name:		**Motor Name Plate:**	
Initiator (to be indicated on drawings)			
Contact Person:		**Application:**	
Tel:		**Qty:**	
Fax:		**Delivery:**	
E-mail:		**Order number**	

HRVS-DN	Rated current	Voltage	Control voltage supply	Control Input supply	Options	Lexan
	See below	See below	115VAC 230VAC 110VDC 125VDC 220VDC 24VDC	115VAC 230VAC 110VDC 125VDC 220VDC 24VDC/AC	**3M**-Modbus **3P**-Profibus **5**-analog Card **D**-remote display **RU**-Russian characters. **ROC**-Chinese characters **Relay**-Relay card	S RU N

No.	Main Components Model - P/N	QTY.
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		

MV Soft Starter Specification			
No.	**ITEM**	**Options**	**Specify**
1.	Mains Voltage	2300, 3300, 4160, 6000, 6600, 10000,11000 ,13800,15000	
2.	Starter FLC (Amp.)	At 2300-4160V: 60,110, 200, 320, 400, 700, 800,1000, 1200	
		At 6000-15000V: 70,140,250,300,400,500,700,800,1000, 1200	
3.	Control Supply Voltage	115VAC, 230VAC, 110VDC, 125VDC, 220VDC, 24VDC	
4.	Control Input Voltage	115VAC, 230VAC, 110VDC, 125VDC, 220VDC, 24VDC/AC	
5.	Test Voltage	230, 400, 500, 600, 690	
6.	Control Wiring	Standard - Fig. 1 (see manual) / Other-drawings attached	
7.	Control wires type		
8.	Relay Card	NO / YES	

MV Soft Starter Specification				
No.	**ITEM**	**Options**		**Specify**
9.	Analogue Output	NO / YES		
10.	MODBUS Communication	NO / YES		
11.	PROFIBUS Communication	NO / YES		
12.	Insulation Test Module	NO / YES		
13.	Enclosure Class	IP31,IP32,IP54,IP65	Keypad - Behind glass Window	
14.	Motor Insulation Protection (MIP)	YES/NO		
15.	Short Circuit Capacity			
16.	Paint 80µM	RAL 7032	Other	
17.	Incoming Cabinet	NO / YES		
18.	Input Cables	Top / Bottom		
19.	Output Cables	Top / Bottom		
20.	Door Opening	Open to the Left / Right		
21.	Door Locks & Stoppers	YES/NO		
22.	Mains On Load Switch			
23.	Main Fuse + Fuse Holder			
24.	Blown fuse indicator (striker-pin)			
25.	Line Contactor	NO / YES		
26.	By-Pass Contactor	NO / YES		
27.	Capacitor Bank Contactor	NO / YES		
28.	Provision for Bank Connections	NO / YES		
29.	Motor Protection Relay	MPS-6, MPS 3000-P/C		
30.	Lamp Test System	NO / YES		
31.	Digital Panel Meter	NO / DPM10		
32.	Space heater	NO / YES		
33.	Cooling Fan	NO / YES		
34.	Special Thick Painting	NO / YES		
35.	Packing	Sea fright, Air fright, No		
36.	Labeling			
36.1.	Solcon cabinet logo	NO / YES		
37.	Instruction Manuals	Standard – 2 sets at door pocket		
38.	Approvals			
38.1.	Marine Design Review	NO / YES		
38.2.	Requested Date			
39.	Drawings for Approval			
40.	Delivery - Chassis			
41.	Delivery – Final			
42.	Special Notes			
43.	Spare Parts	1.	7.	
		2.	8.	
		3.	9.	
		4.	10.	
		5.	11.	
		6.	12.	
44.	Packing Instructions			
45.	Marking			
	Issued by (Tech Support) :		Date :	
	Approved by (Sales Manager) :		Date :	

3. **HRVS-DN IP00**

HRVS-DN (IP00)	Internal Order No:	Rev.:
		Solcon cat. No.:
Customer Name:		

Project Name:		**Motor Name Plate:**	
Contact Person:		**Application:**	
Tel:		**Qty:**	
Fax:		**Delivery:**	
E-mail:		**Order number**	

HRVS-DN	Rated current	Voltage	Control voltage supply	Control Input supply	Options	Lexan
	See below	See below	115VAC 230VAC 110VDC 125VDC 220VDC 24VDC	115VAC 230VAC 110VDC 125VDC 220VDC 24VDC/AC	**3M**-Modbus **3P**-Profibus **5**-analog Card **D**-remote display **RU**-Russian characters. **ROC**-Chinese characters **Relay**-Relay card	S RU N

No.	Main Components Model - P/N	QTY.
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		

MV Soft Starter Specification			
No.	**ITEM**	**Options**	**Specify**
1.	Mains Voltage	2300, 3300, 4160, 6000, 6600, 10000,11000 ,13800,15000	
2.	Starter FLC (Amp.)	At 2300-4160V: 60,110, 200, 320, 400, 700, 800,1000, 1200 At 6000-15000V: 70,140,250,300,400,500,700,800,1000, 1200	
3.	Control Supply Voltage	115VAC, 230VAC, 110VDC, 125VDC, 220VDC, 24VDC	
4.	Control Input Voltage	115VAC, 230VAC, 110VDC, 125VDC, 220VDC, 24VDC/AC	
5.	Test Voltage	230, 400, 500, 600, 690	
6.	Control wires type		
7.	Harness Side	Left/Right	
8.	Relay Card	NO / YES	
9.	Analogue Output	NO / YES	
10.	MODBUS Communication	NO / YES	
11.	PROFIBUS Communication	NO / YES	
12.	Insulation Test Module	NO / YES	

MV Soft Starter Specification				
No.	**ITEM**	**Options**		**Specify**
13.	**Optional loose Components**	YES/NO		
13.1	Extended Split Phase			
13.2	Motor Protection Relay (Refer to Relay Ordering Information Data)	MPS-6 , MPS 3000-P/C		
13.3	Digital Panel Meter DPM	NO / YES		
13.4	Line Contactor 2300-6600V J.C. model MVC/SVC/Toshiba model CV-6HA	NO / YES (Voltage & Current per selected starter rating)		
13.5	By-Pass Contactor 2300-6600V J.C. model MVC/SVC/Toshiba model CV-6HA	NO / YES (Voltage & Current per selected starter rating)		
13.6	Auxiliary Contacts			
13.7	Coil Control Voltage	ACV:120,240 DCV:125,250		
13.8	Line Contactor 7200-12000V Toshiba model CV-10HA	NO / YES (Voltage & Current per selected starter rating)		
13.9	By-Pass Contactor 7200-12000V Toshiba model CV-10HA	NO / YES (Voltage & Current per selected starter rating)		
13.1	Auxiliary Contacts	4NO+3NC , 6NO+5NC		
13.1	Coil Control Voltage	ACV:110,115,120,125,220,230,240,380,400,415,440,500 DCV:24,60,110,124.220		
13.1	MIP – Motor Insulation Protection	NO / YES		
14.	Packing	Sea fright, Air fright, No		
15.	Labeling			
16.	Instruction Manuals			
17.	Ex-Factory Delivery			
18.	Ship to Box Marking			
19.	Special Notes			
20.	Spare Parts	1.	7.	
		2.	8.	
		3.	9.	
		4.	10.	
		5.	11.	
		6.	12.	
	Issued by (Tech Support) :		Date :	
	Approved by (Sales Manager) :		Date :	

4. **RVS-DN**

RVS-DN	**31-**	**400-**	**230**	**230-**	**0-**	**S**
	Full load Current	Mains Voltage	Control Supply Voltage	Control Input Voltage	Options	Front Panel

Full load Current	
Specify	**Description**
RVS-DN's FLC [A]	8, 17, 31, 44, 58, 72, 85(2), 105(2), 145(2), 170(2), 210, 310, 390, 460, 580, 820, 950(1), 1100(1), 1400(1), 1800(1), 2150(1), 2400(1), 2700(1), 3000(1).
Mains Voltage	
Specify	**Description**
400	230 - 400 VAC, 50/60Hz, +10% -15%
480	480 VAC, 50/60Hz, +10% -15%
600	600 VAC, 50/60Hz, +10% -15%
690	690 VAC, 50/60Hz, +10% -15%
1000(1)	1000 VAC, 50/60Hz, +10% -15%; Models: 105A, 170A, 210A, 310A, 390A, 460A.
Control Supply Voltage (Terminals 1 and 3)	
Specify	**Description**
115	115 VAC, 50/60Hz, +10% -15%
230	230 VAC, 50/60Hz, +10% -15%
110VDC	110 VDC, +10% -15%
Control Input Voltage (Terminals 4 to 9)	
Specify	**Description**
115 or 230	90-230 VAC, 50/60Hz, +10%
24	24V AC/DC, +10% -15%
48	48V AC/DC, +10% -15%
Options	
Specify	**Description**
0	No options
3M	Communication - RS-485 (Modbus) (3) (5)
3P	Communication - Profibus(3) (Must be factory supplied).
4	Insulation tester (4) (5)
5	Analog card – Thermistor in and Analog out (4) (5)
8	Harsh environment treatment. (Must be factory supplied).
9	Preparation for Bypass contactor (1) (2)
B	Line and load bus bars at bottom (Applicable in Marine/UL models 210-820A)
D	Remote panel mounting replacing the original panel.(supplied with 1.5 m cable)
H	Special character set LCD display
M	Marine approval (consult factory)
U	UL & cUL approval (8-820A except 650A)
T	Tachometer card for special drive systems (consult factory) (4) (5)
Front Panel	
Specify	**Description**
S	Standard
RU	Russian front panel and Russian characters LCD display.

Notes:

(1) RVS-DN 950-3000A and RVS-DN for 1000V must be operated with a bypass contactor. For usage without bypass contactor consult the factory.
(2) Preparation for bypass contactor is standard in RVS-DN 85-170A.
(3) Only one option, either 3M or 3P may be installed in one RVS-DN.
(4) Only one option, either 4 or 5 or T may be installed in one RVS-DN.
(5) All options must be factory installed in RVS-DN 8-72A.
(6) Current transformers (CTs) for RVS-DN950A and up are designed to allow installation within 1.5m from the RVS-DN (use the CTs for the RVS-DN only!)
(7) If you need more than one option, make sure to indicate it with a plus sign (+), for example **8+9** for Harsh environment and preparation for bypass contactor.

Ordering Example: RVS-DN rated 820A, mains voltage - 230V, Control Supply voltage - 115V, Control Input - 115V Modbus communication card, Analog card, Harsh environment treatment, preparation for bypass and standard front panel: **RVS-DN 820 - 400 - 115 – 115 - 3M + 5+ 8 + 9 – S**

5. RVS-DX

RVS-DX	31-	400-	230-	0-	S
	Full load Current	Mains Voltage	Control Voltage	Options	Front Panel

Full load Current	
Specify	**Description**
Starter's FLC [A]	8, 17, 31, 44, 58, 72, 85, 105, 145, 170, 210, 310, 390, 460, 580, 650, 820, 950, 1100

Mains Voltage	
Specify	**Description**
400	220 – 440 VAC, 50/60Hz
480	460 – 500 VAC, 50/60Hz
600	575 – 600 VAC, 50/60Hz

Control Voltage	
Specify	**Description**
115	97 – 126 VAC, 50/60Hz
230	195 – 250 VAC, 50/60Hz
Note:	• Control voltage can be changed on site for RVS-DX up to 310A. • For RVS-DX 390A and up control voltage must be ordered from factory.

Options	
Specify	**Description**
0	No options
3M	Communication RS-485 (MODBUS) (1)
5	Analog card – Thermistor in and Analog out (1)
8	Harsh environment treatment
D	Remote panel mounting replacing the original panel.(supplied with 1.5 m cable)
F	Unit supplied with fan (consult factory) (2)
3P	Communication Profibus PCB (RVS-DX210-1100A) (3)
U	UL & cUL approval (RVS-DX8-170A)
Notes:	• For more than one option indicate, for example: 8+L (Harsh environment and Illuminated LCD) • Options must be factory installed. • (1) From RVSDX-8A and up to RVS-DX44A - One option can be installed - either communication (3M) card or analog (5) card. From RVS-DX58A and up - both options 3M & 5 can be installed. Both options **must** be ordered as one package. • (2) Fan option is available from RVS-DX 210A and up. • (3) Profibus PCB optional from RVS-DX 210A and up. From RVS-DX210A and up - both options 3P & 5 can be installed. Both options **must** be ordered as one package.

Front Panel	
Specify	**Description**
S	Standard

Example:
RVS-DX rated 820A, mains voltage- 230V, control voltage- 115V, Modbus communication card, Analog card, Harsh environment treatment and standard front panel:
RVS-DX 820 - 400 - 115 - 3M+5+8 – S

6. RVS-AX

RVS-AX	**31-**	**400-**	**0-**	**S**
	Full load Current	Mains Voltage	Options	Front Panel

Full load Current	
Specify	**Description**
Starter's FLC [A]	8(1), 17(1), 31, 44, 58, 72, 85, 105, 145, 170

Mains Voltage	
Specify	**Description**
230	220 - 240 Vac +10% -15%
400	380 - 415 Vac +10% -15%
440	440 Vac +10% -15%
480	460 - 500 Vac +10% -15%
600	575 - 600 Vac +10% -15%

Options	
Specify	**Description**
0	No options
U	UL & cUL approval
8	Harsh environment treatment

Front Panel	
Specify	**Description**
S	Standard lexan

Notes:
(1) No internal bypass in RVS-AX 8, 17A.

7. SOLSTART PLUS

Solstart Plus	**31-**	**400-**	**2-**	**0-**	**S**
	Full load Current	Mains Voltage	Control Voltage	Options	Front Panel

Full load Current	
Specify	**Description**
Starter's FLC [A]	31, 44, 58, 72, 85, 105, 145, 170

Mains Voltage	
Specify	**Description**
230	208V 50/60Hz (208V-15% to **220V**+10%)
400	400V 50/60Hz (400V-15% to 400V+10%)
480	480V 50/60Hz (480V-15% to 480V+10%)
600	600V 50/60Hz (600V-15% to 600V+10%)

Control Voltage	
Specify	**Description**
2	110 – 230 VAC50/60Hz/DC -15% - +10%
Note:	• Solstart Plus incorporates a universal power supply unit for DC and AC control voltage.

Options	
Specify	**Description**
0	No options
8	Harsh environment treatment
DRM	DIN rail mounting accessory. (1)
Notes:	• For more than one option indicate, for example: 8+DRM (Harsh environment and DIN rail mounting accessory) • Options must be factory installed. • (1) DIN rail mounting accessory is available for models 31-44A.

Front Panel	
Specify	**Description**
S	Standard lexan

Example:
Solstart Plus rated 145A, mains voltage- 208V, control voltage- 110V DC, Harsh environment treatment and standard front panel:
Solstart Plus 145 - 208 - 2 - 8 – S

8. SOLSTART

SOLSTART	**31-**	**400-**	**0-**	**S**
	Full load Current	Mains Voltage	Options	Front Panel

Full load Current	
Specify	**Description**
Starter's FLC [A]	8(1), 17(1), 22(1), 31, 44, 58, 72, 85, 105, 145, 170

Mains Voltage	
Specify	**Description**
230	220 - 240 Vac +10% -15%
400	380 - 415 Vac +10% -15%
440	440 Vac +10% -15%
480	460 - 500 Vac +10% -15%
600	575 - 600 Vac +10% -15%

Options	
Specify	**Description**
0	No options
8	Harsh environment treatment
U	UL & cUL approval (Solstart 8-44A)
DRM	DIN rail mounting accessory. (models 31-58A.)
Notes:	• For more than one option indicate, for example: 8+DRM (Harsh environment and DIN rail mounting accessory) • Options must be factory installed.
Front Panel	
Specify	**Description**
S	Standard lexan

Notes:

(1) No End of Acceleration Relay in Solstart 8, 17, 22

Example:

SOLSTART rated 145A, mains voltage- 230V, harsh environment treatment and standard front panel:

SOLSTART 145 - 230 - 8 – S

9. SOLSTART 1P

Only one model exist: Solstart 1P 18A 230V

10. RVS-BX – OBSOLETE PRODUCT

RVS-BX	31-	400-	0-	S
	Full load Current	Mains Voltage	Options	Front Panel

Full load Current	
Specify	**Description**
Starter's FLC [A]	8, 17, 31, 44, 58

Mains Voltage	
Specify	**Description**
230(1)	220 - 240 Vac +10% -15%
400	380 - 415 Vac +10% -15%
440	440 Vac +10% -15%
480(1)	460 - 500 Vac +10% -15%
600	575 - 600 Vac +10% -15%

Options	
Specify	**Description**
0	No options
8	Harsh environment treatment (must be factory supplied)
Front Panel	
Specify	**Description**
S	Standard lexan

Notes:

(1) For 31-58A an internal jumper toggles between 230 And 480V mains.

11. SOLBRAKE

Solbrake	31-	400-	0-	S
	Full load Current	Mains Voltage	Options	Front Panel

Full load Current	
Specify	**Description**
Starter's FLC [A]	8, 17, 31, 58, 105, 210, 310, 390, 460

Mains Voltage	
Specify	**Description**
230	230 Vac +10% -15%
400	400 Vac +10% -15%
440	440 Vac +10% -15%
480	480 Vac +10% -15%
600	600 Vac +10% -15%

Options	
Specify	**Description**
0	No options
E	Consuly Factory
8	Harsh environment treatment (must be factory supplied)
Front Panel	
Specify	**Description**
S	Standard lexan

12. TPS

TPS	31-	400-	230-	230-	0-	S
	Full load Current	Mains Voltage	Control Voltage	Control inputs Voltage	Options	Front Panel

Full load Current	
Specify	**Description**
TPS RATED CURRENT [A]	8, 17, 31, 44, 58, 72, 85, 105, 145, 170, 210, 310, 390, 460, 580, 820, 950, 1100, 1500

Mains Voltage	
Specify	**Description**
400	230 – 400 VAC, 50/60Hz, +10% -15%
480	480 VAC, 50/60Hz, +10% -15%
600	600 VAC, 50/60Hz, +10% -15%
690	690 VAC, 50/60Hz, +10% -15%

Control Voltage	
Specify	**Description**
115	115 VAC, 50/60Hz, +10% -15%
230	230 VAC, 50/60Hz, +10% -15%
110 VDC	110 VDC(1)
Notes:	• (1) For DC control voltage or control inputs voltage - consult factory.

Control inputs voltage	
Specify	**Description**
115 or 230	90 – 230 VAC, 50/60Hz or 90 – 230 VDC
24	24VAC, 50/60Hz or 24VDC(1)
48	48VAC, 50/60Hz or 48VDC(1)
Notes:	• (1) For DC control voltage or control inputs voltage - consult factory.

Options	
Specify	**Description**
0	No options
3M	Communication RS-485 (MODBUS) (1)
5	Analogue card.
8	Harsh environment treatment (1)
D	Remote panel mounting replacing the original panel. (Supplied with 1.5 m cable). (1), (2), (3)
DK	Remote panel mounting kit replacing the original panel. (Supplied with 1.5 m cable). (2), (3)
Sync.	Synchronization between up to 9 TPS units.
P	Potentiometer control. (No need for external power source) (1)
Notes:	• For more than one option indicate, for example: 8+L (Harsh environment and Illuminated LCD) • (1) Must be ordered in factory – can not be installed on site. • (2) Remote panel mounting must be ordered with option L – Illuminated LCD. • (3) D and DK options are available for TPS 145A and up. For these options availability in smaller TPSs consult factory.

Front Panel	
Specify	**Description**
S	Standard

Example:
TPS rated 820A, mains voltage - 230V, control voltage- 230VAC, control inputs- 48VDC Modbus communication card, Harsh environment treatment, Synchronized TPS and standard front panel: **TPS 820 - 230 – 230 - 48 - 3M+8+SYNC – S**

13. **MPS 3000**

MPS-3000	**P-** Relay Type	**V-** Construction	**1P-** Thermal Sensor	**2-** Supply/ Control Voltage	**0-** Required Options	**M-** Comm.	**S** Front Panel

Relay Type	
Specify	**Description**
P	Motor Protection Relay
C	Motor protection Controller

Construction	
Specify	**Description**
V	Vertical
H	Horizontal

Thermal Sensor	
Specify	**Description**
1P	Ten RTD Platinum 100 ohm/Nickel 120 ohm
1C	Ten RTD Copper 10 ohm
TP	Four Thermistors + six RTD (Pt100)
TC	Four Thermistors + six RTD (Copper)

Supply/Control Voltage	
Specify	**Description**
2	110-230V 50/60Hz or DC (+10% / -15%)
2S	110 - 230 Vac/dc with separate AUX. Power Supply and Control Voltage
3	19 - 60 Vdc

Required Options	
Specify	**Description**
0	No Option
2	Trip on disconnected RTD
D	Dead see factory
Z	Bazan

Communication	
Specify	**Description**
M	RS485 with MODBUS protocol
P	Rear Profibus connection and front RS232 with MODBUS protocol at fixed baud rate of 9600bps (Option “P” available only in vertical construction. For option “P” in horizontal construction – Consult factory)

Front Panel	
Specify	**Description**
S	Standard
N	Neutral Lexan
I	Consult factory
T	Consult factory

Additional request: Provide RS232 null modem cable for front Modbus programming.

14. MPR 2000/MPC 2000 – OBSOLETE PRODUCT

MPR-2000	P- Relay Type	V- Construction	1P- Thermal Sensor	1- Supply Voltage	0- Required Options	M- Comm.	S Front Panel

Relay Type	
Specify	**Description**
MPR2000	Motor Protection Relay
MPR2000/D	Motor Protection Relay with 2 Relay Alarm & 2 Relay Trip
MPC 2000	Motor Protection Controller

Construction	
Specify	**Description**
V	Vertical
H	Horizontal

Thermal Sensor	
Specify	**Description**
5T	Three Thermistors + two RTD (Pt100)
5R	Five RTD (Pt100)
1C	Ten RTD Copper 10 ohm
1P	Ten RTD Platinum 100 ohm/Nickel 120 ohm

Supply Voltage	
Specify	**Description**
1	115 / 230 Vac
2	85 - 300 Vdc
3	19 - 60 Vdc

Required Options	
Specify	**Description**
	No Option
	U/V Protection active in stop condition

Communication	
Specify	**Description**
M	RS485 with MODBUS protocol

Front Panel	
Specify	**Description**
S	Standard

Note: Relays with 5 thermal sensors are European version.
Relays with 10 thermal sensors are American version.

15. **MPS-6**

MPS-6	**5-** C/T secondary	**2-** Supply Voltage	**0-** Control Inputs Voltage	**3T-** Thermal Sensor	**M-** Comm.	**0-** 0	**S** Front Panel

C/T secondary	
Specify	**Description**
1	1A
5	5A

Supply Voltage	
Specify	**Description**
2	110-230V 50/60Hz or DC (+10% / -15%)

Thermal Sensor	
Specify	**Description**
3T	3 Thermistots
3R	3 RTD (PT100)

Communication	
Specify	**Description**
M	Rear connection with RS485 Modbus protocol (1) and front connection with RS232 Modbus protocol (2)
P	Rear connection with Profibus protocol (1) and front connection with RS232 Modbus protocol (2)
Notes:	(1) MPS-6 is supplied with one rear connection – either Modbus or Profibus (2) The baud rate of the optional rear Modbus connection is programmable, up to 19200 bps. The baud rate of the standard front Modbus connection is 9600 bps (fixed).

Required Options	
Specify	**Description**
0	No Option
1	Reserved for future enhancements

Front Panel	
Specify	**Description**
S	Standard

Additional request: Provide RS232 null modem cable for front Modbus programming.

Approved by:_____ Date:_____

16. **MPR-6**

MPR-6	**1-**	**2-**	**3T-**	**M-**	**0-**	**S**
Relay Type	C/T secondary	Supply Voltage	Thermal Sensor	Comm.	Required Options	Front Panel

Relay Type	
Specify	**Description**
MPR-6	Motor Protection Relay
MPR-6 DGF	Motor protection Controller

C/T secondary	
Specify	**Description**
1	1A
5	5A

Supply Voltage	
Specify	**Description**
2	110-230V 50/60Hz or DC (+10% / -15%)

Thermal Sensor	
Specify	**Description**
3T	3 Thermistor
3R	3 RTD (Pt100)

Communication	
Specify	**Description**
M	RS485 with MODBUS protocol

Required Options	
Specify	**Description**
0	No Option
H	Hebrew Characters LCD Display
M	Marine approval (Consult factory)

Front Panel	
Specify	**Description**
S	Standard

17. **MPC-6**

MPC-6	**1-** C/T secondary	**2-** Supply Voltage	**0-** Control Inputs Voltage	**3T-** Thermal Sensor	**M-** Comm.	**0-** Required Options	**S** Front Panel

C/T secondary	
Specify	**Description**
1	1A
5	5A

Supply Voltage	
Specify	**Description**
2	110-230V 50/60Hz or DC (+10% / -15%)

Control Input Voltage	
Specify	**Description**
0	220V AC/DC
1	110VAC

Thermal Sensor	
Specify	**Description**
1T	1 Thermistor
1R	1 RTD (Pt100)

Communication	
Specify	**Description**
M	RS485 with MODBUS protocol

Required Options	
Specify	**Description**
0	No Option
Z	Bazan
M	Marine approval (Consult factory)

Front Panel	
Specify	**Description**
S	Standard

18. **TPR-6**

TPR-6	**14-** No. Of Temp. Inputs	**2-** Supply Voltage	**M-** Comm.	**0-** Required Options	**S** Front Panel

No. Of Temp. Inputs	
Specify	**Description**
6	6 Temperature Inputs
14	14 Temperature Inputs

Supply Voltage	
Specify	**Description**
2	110-230V 50/60Hz or DC (+10% / -15%)

Communication	
Specify	**Description**
M	RS485 with MODBUS protocol

Required Options	
Specify	**Description**
0	No Option
H	Hebrew Characters LCD Display
M	Marine approval (Consult factory)

Front Panel	
Specify	**Description**
S	Standard

19. **MIP-6**

MIP-6 **LV-** Mains Voltage **0-** Options **S** Front Panel

Mains Voltage	
Specify	**Description**
LV	230 ≤Vn ≤ 690 VAC, 50/60Hz
MV1(1)	690<Vn ≤ 7200 VAC, 50/60Hz
MV2(2)	7200 <Vn ≤ 13800 VAC, 50/60Hz
Notes:	(1) MIP MV1 is supplied with a resistor unit RU-7. (2) MIP MV2 is supplied with a resistor unit RU-13.

Options	
Specify	**Description**
0	No options
M	Communication RS-485 (MODBUS) Rear connection
5	Analogue output.
8	Harsh environment treatment
C	Real time clock
Notes:	For more than one option indicate, for example: RM+5+8 (Rear Modbus communication, analogue output and Harsh environment) All options must be ordered in factory – Options can not be installed on site.

Front Panel	
Specify	**Description**
S	Standard

20. **MAC 2000**

MAC	**2024-**	**0-**	**M-**
	Mains Voltage 50/60Hz	Required Options	Front Panel

Soft starter FLC – 15.2A

Mains Voltage 50/60Hz	
Specify	**Description**
2024	230 - 460 Vac +10% -15%
2050	575 Vac +10% -15%

Required Options	
Specify	**Description**
0	No options
8	Harsh environment treatment (Factory supplied)

Front Panel	
Specify	**Description**
D	Magnatek

21. **DPM-10**

DPM-10	**1-** C/T secondary	**115-** Supply Voltage	**M-** Comm.	**0-** Required Options	**S** Front Panel

C/T secondary	
Specify	**Description**
1	1A
5	5A

Supply Voltage	
Specify	**Description**
115	115VAC
230	230VAC

Communication	
Specify	**Description**
0	No communication
M	RS485 with MODBUS protocol – **Standard!!**

Required Options	
Specify	**Description**
0	Standard
1	kWH High resolution

Front Panel	
Specify	**Description**
S	Standard

Additional request: Provide RS232 null modem cable for front Modbus programming.

22. PFC-10

PFC-10	**6-**	**M-**	**S**
	Max. No. of Steps	Comm.	Front Panel

Max. No. of Steps	
Specify	**Description**
6	6 steps
12	12 steps

Communication	
Specify	**Description**
0	No communication
M	RS485 with MODBUS protocol – **Standard!!**

Front Panel	
Specify	**Description**
S	Standard

23. **SU-124**

SU-124	**G-**	**400-**	**1-**	**S**
	Controller Type	Mains Voltage	Connection	Front Panel

Controller Type	
Specify	**Description**
G	Diesel Gen Controller
D	Diesel Engine Controller
GS	Special Diesel (Consult Factory)

Mains Voltage	
Specify	**Description**
115	3 phase 115
230	3 phase 230
380	3 phase 380
400	3 phase 400
440	3 phase 440
480	3 phase 480

Connection	
Specify	**Description**
1	1.2 meter long cables
2	Pins and plugs only
3	3 meter long cables

Front Panel	
Specify	**Description**
S	Standard

Note: All SU-124 versions (“G”, “D”, “GS”) include preparation for “Remote Control” manual switch incorporated into Plug A, terminal 15.

24. **DGC-2000**

DGC 2000 **0-** **SE**
Option Front Panel

Option	
Specify	**Description**
0	Standard

Front Panel	
Specify	**Description**
SE	English Display
SH	Hebrew Display

25. HOLD-IN UNIT

DE	**230-**	**S-**	**S**
Relay Type	Control Voltage	Socket	Front Panel

Relay Type	
Specify	**Description**
DE	Consult Factory

Control Voltage	
Specify	**Description**
115	110 - 120 Vac +10% -15%
230	220 - 240 Vac +10% -15%

Socket	
Specify	**Description**
0	No socket
S	With Socket KS-1-U (S+S style)
S9	With Round 9 pin Socket

Front Panel	
Specify	**Description**
S	Standard

26. CATHODIC PROTECTION

SCP-C	**12-**	**1-**	**400-**	**00-**	**GPS-**	**S**
Unit Type	Rated Output Current	Number of input phases	Input Voltage	IP degree	Options	Front Panel

Unit Type	
Specify	**Description**
SCP-C	Master Unit of Cathodic Protection with a rectifier.

Rated Output Current	
Specify	**Description**
12	12A
24	24A
50	50A

Number of input phases	
Specify	**Description**
1	1 phase unit
3	3 phase unit

Input voltage	
Specify	**Description**
110	110V
230	230V
400	400V
500	500V

IP Degree	
Specify	**Description**
00	IP-00 (Chassis)
31	IP-31
54	IP-54
65	IP-65

Options	
Specify	**Description**
00	No options
GPS	Time synchronization with GPS
LP1	Lightning protection level 1
LP2	Lightning protection level 2

Front Panel	
Specify	**Description**
S	Standard

Ordering Example: Cathodic Protection Rectifier 50A (output) with 3 phase/400V input installed in an IP-54 with GPS time synchronization and lightning protection level 2:
SCP-C 50 – 3 - 400 – 54 – GPS+LP2 - S