



## Company profile



# PT. VERTECH perdana

AUTOMATION | CONTROL | FILTRATION |  
ME CONTRACTOR



Our product :



**HI-TECH**

**SIEMENS**



# ABOUT US

**2007**

Founded in August 1st, 2007, Vertech Perdana is a controls and automation system integrator for many brands such as : Schneider, Allen Bradley, Siemens, GE Fanuc, Omron, Mitsubishi etc.

**2008**

Authorized System Integrator on 2008, specialize in SIEMENS Automation & Control products and services.

**2012**

Create new strategic partnership with Hi-Tech Filter Sdn.Bhd & KIJ Ultra Filtration Sdn.Bhd M'Sia - specialize in Industrial Filtration System

**2017**

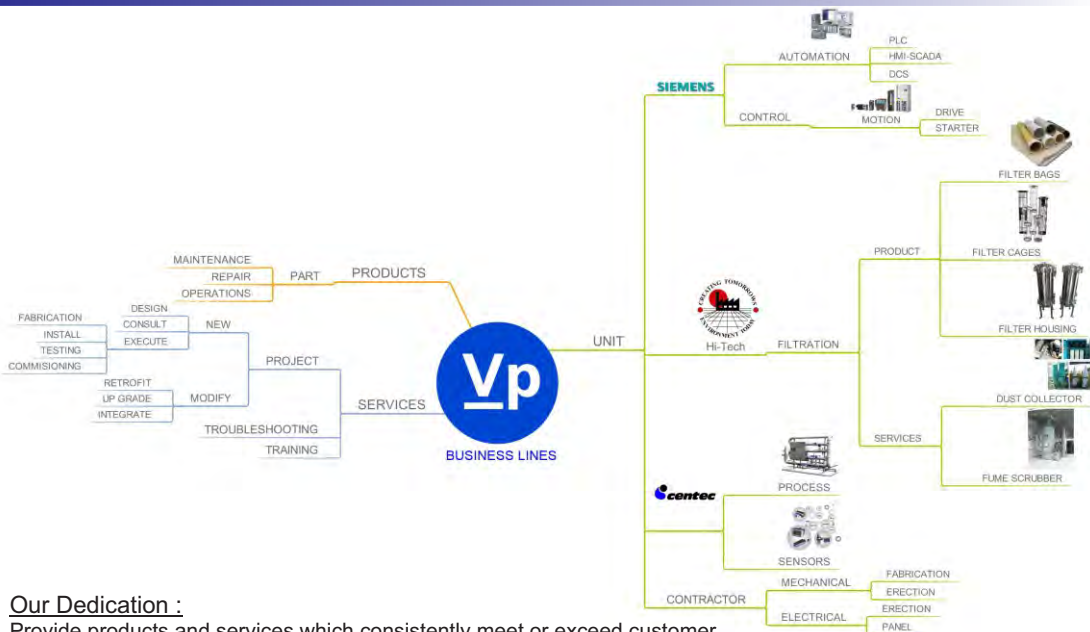
- Trusted by CENTEC as a Sales Partner for Marketing CENTEC product in Indonesia.
- Fulfill customer needs, create new strategic with mechanical & electrical engineering. Electrical Erection (Pulling, Laying, Cable Support, Termination, IO Test, Testing & Commissioning.)

## CURRENT BUSINESS UNIT

Product & Service for :

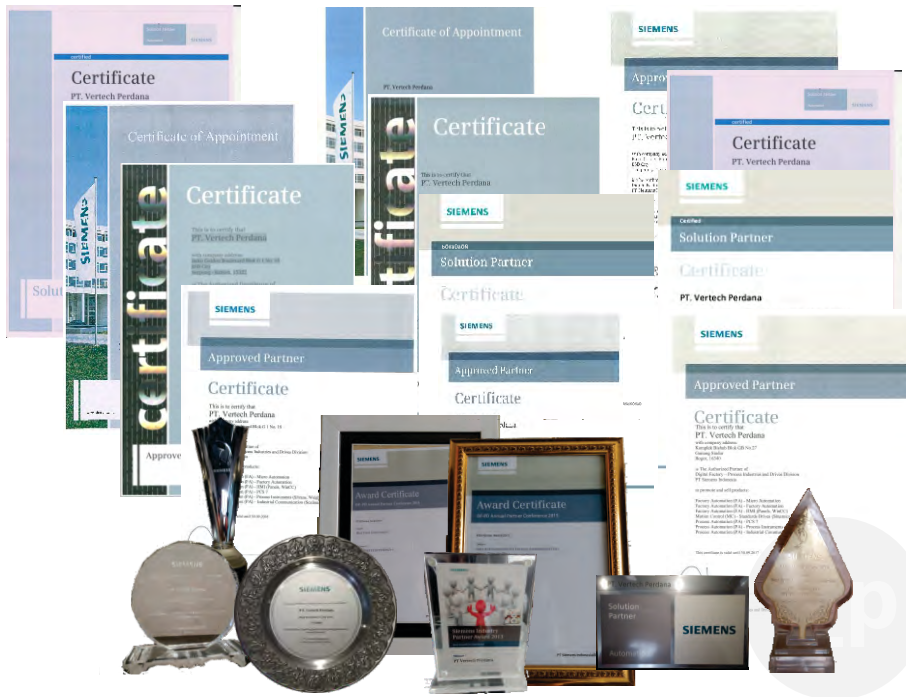
- AUTOMATION & CONTROL
- INDUSTRIAL FILTRATION
- MECHANICAL & ELECTRICAL (Fabrication - Erection)

# BUSINESS LINE



# CERTIFICATES

PT. VERTECH perdana



## VISION & MISSION



Our VALUES in bringing Solution :  
**Trustworthy - Optimism - Prudence - Innovate**

### Our Mission

To be a superior and reliable solution partner provider in the field of Engineering.

### Our Vision

Creating Innovation for Industry Efficiency.



# Our PRODUCTS

# AUTOMATION



## LOGO! Logic Module

Simply ingenious for small automation task.  
Integrated Ethernet interface for entire LOGO! 8 product family.



## NEW LOGO! TDE

With two Ethernet interface.  
Display with six lines and 20 characters per line.

## SIMATIC S7-1200 (Basic Controller)

A modular concept for compact automation in a scalable design.  
Integrated PROFINET interface for programming.



## SIMATIC S7-300

The SIMATIC S7-300 advanced controller is modular and compact.  
Available as standard and failsafe version.



## SIMATIC S7-1500

The SIMATIC S7-1500 advanced controller with its many innovations sets.  
This is a benefit both for small series machines and for complex plants with high demands in terms of speed and deterministic response.



## SIMATIC S7-400

The powerful controller for system solutions in the manufacturing and process industries.  
Within the controller family, the SIMATIC S7-400 is designed for system solutions in the manufacturing and process automation industry





## ET-200 CPU (Distributed Controllers)

The SIMATIC ET 200 CPU distributed controllers combine a compact design with versatility. Especially in the mid performance range for machine with distributed intelligence or series machine offering little space, the distributed controllers are the perfect solution for standard and fail-safe application.

ET 200 SP, ET 200 S, ET 200 Pro,



## SIMATIC WinAC RTX (F)

SIMATIC PC-Based Automation uses the real-time-capable software controller WinAC RTX or its fail-safe version WinAC RTX F on basis of Windows operation system. Any PC application, operator control and monitoring task as well as technological functions can simply be combined here to form an overall automation solution.



SIMATIC IPC227D, IPC427D, IPC277D,  
HMI IPC477D (PRO),  
S7-mEC Embedded Controller

## SIMATIC Field PG M4

High-performance industrial notebook with new design  
The latest SIMATIC Field PG M4, a member of the SIMATIC family, offers you a whole range of advantage in addition to wireless technology and Bluetooth.



## SIMATIC Software

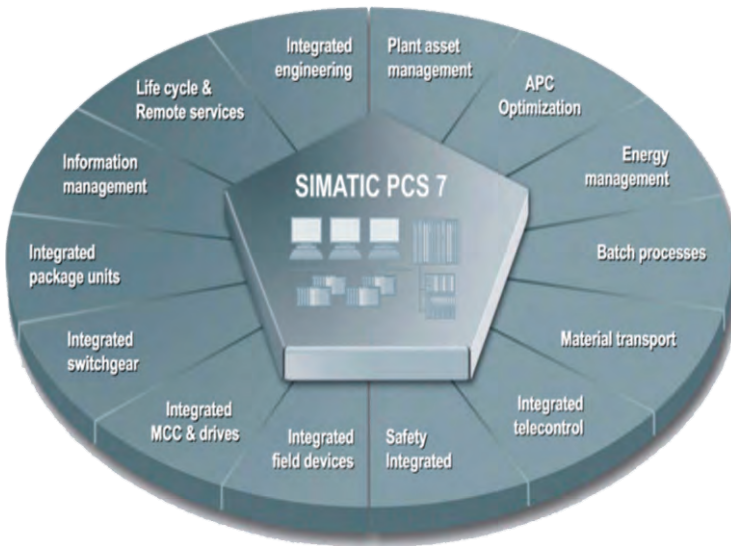
Efficient engineering for all SIMATIC controllers.  
Totally Integrated Automation Portal (TIA Portal).  
- Simatic STEP 7 for S7 controllers (PLC)  
- SIMATIC WinCC for machine-level operation (HMI)  
- SIMATIC Startdrive for SINAMICS drives

## SIMATIC HMI

With the innovative human-machine interface products, HMI solutions at the machine level and SCADA solutions can be implemented even more quickly, economically and efficiently.



The homogenous and uniform SIMATIC PCS 7 process control system, with its unique scalable architecture and outstanding system characteristics, is an ideal basis for cost-effective implementation and economic operation of process control plants.



## ACCESSORIES

- PROFIBUS cable & connector
- PROFINET cable & connector
- Memory PLC & HMI
- Front Connector PLC,
- Din Rail,
- PC Adapter, etc

# FIELD INSTRUMENTS

## • Pressure Measurement

SITRANS LH100  
SITRANS P200/210/220/250/280  
SITRANS P COMPACT  
SITRANS P300, P DS III  
SITRANS P500,



## • Temperature Measurement

SITRANS TH100, 200, 300, 400  
SITRANS TW200, 300  
SITRANS TF280  
SITRANS TS500

## • Flow Measurement

SITRANS F, MAG5000, MAG6000, MAG8000  
SITRANS FX, SITRANS FO



## • Positioner

SIPART PS2



## • Level Measurement

SITRANS LR, SITRANS LU  
SITRANS LG, SITRANS LC



## • Process Protection

ACOUSTIC SENSORS, SITRANS As100, SITRANS CUO2  
MOTION SENSORS, Miltronics MFA 4p, Sitrans WM100

SIEMENS



# Industrial Controls

SIRIUS



- DOL Starter
- Star Delta Starter
- Motor Starter Protection
- Contactor
- Overload Relays
- Contactor Relays



- 3RV5, 3RV6
- Accessories

## Motor Starter Protection



- DOL Starter
- Star Delta Starter
- Motor Starter Protection
- Contactor
- Overload Relays



- 3RT50, 3RT60
- 3TF68, 3TF69, 3RT26
- Accessories

## Contactor



- 3VS

## Motor Starter Protection



- 3RU5, 3RU6
- 3RB20, 3RB21
- Accessories

## Overload Relay



- 3TS

## Contactor



- Contactor Relays (Aux. supply AC)
- Contactor Relays (Aux. supply DC)

## Contactor Relay



- 3US

## Overload Relay

Motor control and protection

Motor control and protection



# Motor Control and Protection

Direct On Line

Motor starter protector + contactor

Class 10, 2 komponen, performa tinggi



AC 400 V

Standard three-phase  
motor 4-pole at 400 V AC

Norm- Iq leistung P	Motor current (nominal value) I	Setting range Overload release Motor starter protector	Motor starter protector	Contactor	Size
kW	A	A			
0,04	0.16	0.11...0.16	3RV6011-0AA10	3RT6015-1AP01	S00/S00
0,06	0.2	0.14...0.2	3RV6011-0BA10	3RT6015-1AP01	S00/S00
0,06	0.2	0.18...0.25	3RV6011-0CA10	3RT6015-1AP01	S00/S00
0,09	0.3	0.22...0.32	3RV6011-0DA10	3RT6015-1AP01	S00/S00
0,09	0.3	0.28...0.4	3RV6011-0EA10	3RT6015-1AP01	S00/S00
0,12	0.5	0.35...0.5	3RV6011-0FA10	3RT6015-1AP01	S00/S00
0,18	0.63	0.45...0.63	3RV6011-0GA10	3RT6015-1AP01	S00/S00
0,18	0.8	0.55...0.8	3RV6011-0HA10	3RT6015-1AP01	S00/S00
0,25	1.00	0.7...1	3RV6011-0JA10	3RT6015-1AP01	S00/S00
0,37	1.25	0.9...1.25	3RV6011-0KA10	3RT6015-1AP01	S00/S00
0,55	1.5	1.1...1.6	3RV6011-1AA10	3RT6015-1AP01	S00/S00
0,75	1.9	1.4...2	3RV6011-1BA10	3RT6015-1AP01	S00/S00
0,75	1.9	1.8...2.5	3RV6011-1CA10	3RT6015-1AP01	S00/S00
1,1	2.7	2.2...3.2	3RV6011-1DA10	3RT6015-1AP01	S00/S00
1,5	3.6	2.8...4	3RV6011-1EA10	3RT6015-1AP01	S00/S00
1,5	3.6	3.5...5	3RV6011-1FA10	3RT6015-1AP01	S00/S00
2,2	5	4.5...6.3	3RV6011-1GA10	3RT6015-1AP01	S00/S00
3	6.5	5.5...8	3RV6011-1HA10	3RT6015-1AP01	S00/S00
4	8.5	7...10	3RV6011-1JA10	3RT6016-1AP01	S00/S00
5,5	11.5	9...12.5	3RV6011-1KA10	3RT6017-1AP01	S00/S00
7,5	15.5	11...16	3RV6011-4AA10	3RT6018-1AP01	S00/S00
7,5	15.5	14...20	3RV6021-4BA10	3RT6025-1AP00	S0/S0
11	22	20...25	3RV6021-4DA10	3RT6026-1AP00	S0/S0
15	29	27...32	3RV6021-4EA10	3RT6027-1AP00	S0/S0
18,5	35	30...36	3RV6021-4PA10	3RT6028-1AP00	S0/S0
18,5	35	34...40	3RV6021-4FA10	3RT6028-1AP00	S0/S0
15	29	22...32	3RV5031-4EA10	3RT5034-1AP00	S2/S2
18,5	35	28...40	3RV5031-4FA10	3RT5035-1AP00	S2/S2
22	41	36...45	3RV5031-4GA10	3RT5036-1AP00	S2/S2
22	41	40...50	3RV5031-4HA10	3RT5036-1AP00	S2/S2
30	55	45...63	3RV5041-4JA10	3RT5044-1AP00	S3/S3
37	66	57...75	3RV5041-4KA10	3RT5045-1AP00	S3/S3
45	80	70...90	3RV5041-4LA10	3RT5046-1AP00	S3/S3
45	80	80...100	3RV5041-4MA10	3RT5046-1AP00	S3/S3

# Motor Control and Protection

Motor starter protector + contactor  
Class 10, 3 componen, performa tinggi

Direct On Line



Standard three-phase  
motor 4-pole at 400 V AC

Norm- Iq leistung P	Motor current (nominal value) I	Motor starter protector	Contactor	Thermal Overload	Setting range Overload release Motor starter protector	Size
kW	A				A	
0,06	0.2	3RV6311-0BC10	3RT6015-1AP01	3RU6116-0BB0	0.14...0.2	S00/S00
0,06	0.2	3RV6311-0CC10	3RT6015-1AP01	3RU6116-0CB0	0.18...0.25	S00/S00
0,09	0.3	3RV6311-0DC10	3RT6015-1AP01	3RU6116-0DB0	0.22...0.32	S00/S00
0,09	0.3	3RV6311-0EC10	3RT6015-1AP01	3RU6116-0EB0	0.28...0.4	S00/S00
0,12	0.5	3RV6311-0FC10	3RT6015-1AP01	3RU6116-0FB0	0.35...0.5	S00/S00
0,18	0.63	3RV6311-0GC10	3RT6015-1AP01	3RU6116-0GB0	0.45...0.63	S00/S00
0,18	0.8	3RV6311-0HC10	3RT6015-1AP01	3RU6116-0HB0	0.55...0.8	S00/S00
0,25	1.00	3RV6311-0JC10	3RT6015-1AP01	3RU6116-0JB0	0.7...1	S00/S00
0,37	1.25	3RV6311-0KC10	3RT6015-1AP01	3RU6116-0KB0	0.9...1.25	S00/S00
0,55	1.5	3RV6311-1AC10	3RT6015-1AP01	3RU6116-1AB0	1.1...1.6	S00/S00
0,75	1.9	3RV6311-1BC10	3RT6015-1AP01	3RU6116-1BB0	1.4...2	S00/S00
0,75	1.9	3RV6311-1CC10	3RT6015-1AP01	3RU6116-1CB0	1.8...2.5	S00/S00
1,1	2.7	3RV6311-1DC10	3RT6015-1AP01	3RU6116-1DB0	2.2...3.2	S00/S00
1,5	3.6	3RV6311-1EC10	3RT6015-1AP01	3RU6116-1EB0	2.8...4	S00/S00
1,5	3.6	3RV6311-1FC10	3RT6015-1AP01	3RU6116-1FB0	3.5...5	S00/S00
2,2	5	3RV6311-1GC10	3RT6015-1AP01	3RU6116-1GB0	4.5...6.3	S00/S00
3	6.5	3RV6311-1HC10	3RT6015-1AP01	3RU6116-1HB0	5.5...8	S00/S00
4	8.5	3RV6311-1JC10	3RT6016-1AP01	3RU6116-1JB0	7...10	S00/S00
5,5	11.5	3RV6311-1KC10	3RT6017-1AP01	3RU6116-1KB0	9...12.5	S00/S00
7,5	15.5	3RV6311-4AC10	3RT6018-1AP01	3RU6116-4AB0	11...16	S00/S00
7,5	15.5	3RV6321-4AC10	3RT6025-1AP00	3RU6126-4AB0	11...16	S0/S0
7,5	15.5	3RV6321-4BC10	3RT6025-1AP00	3RU6126-4BB0	14...20	S0/S0
11	22	3RV6321-4DC10	3RT6026-1AP00	3RU6126-4DB0	20...25	S0/S0
15	29	3RV6321-4EC10	3RT6027-1AP00	3RU6126-4EB0	27...32	S0/S0
18,5	35	3RV6321-4PC10	3RT6028-1AP00	3RU6126-4PB0	30...36	S0/S0
18,5	35	3RV6321-4FC10	3RT6028-1AP00	3RU6126-4FB0	34...40	S0/S0
15	29	3RV5331-4EC10	3RT5034-1AP00	3RU5136-4EB0	22...32	S2/S2
18,5	35	3RV5331-4FC10	3RT5035-1AP00	3RU5136-4FB0	28...40	S2/S2
22	41	3RV5331-4GC10	3RT5036-1AP00	3RU5136-4GB0	36...45	S2/S2
22	41	3RV5331-4HC10	3RT5036-1AP00	3RU5146-4HB0	40...50	S2/S2
30	55	3RV5341-4JC10	3RT5044-1AP00	3RU5146-4JB0	45...63	S3/S3
37	66	3RV5341-4KC10	3RT5045-1AP00	3RU5146-4KB0	57...75	S3/S3
45	80	3RV5341-4LC10	3RT5046-1AP00	3RU5146-4LB0	70...90	S3/S3
45	80	3RV5341-4MC10	3RT5046-1AP00	3RU5146-4MB0	80...100	S3/S3

# Motor Control and Protection

Star - Delta

Motor starter protector + star-delta combination + thermal overload relay  
Class 10, perma tnggi



Standard three-phase  
motor 4-pole at 400 V AC

Norm- Iq leistung P	Motor current (nominal value) I	Motor starter protector	Contactor (2 Unit)		Overload relay	Timer	Setting range Overload release Overload relay
			Line contactor + delta contactor	Star contactor			
kW	A						A
5.5	11.5	3RV6311-1KC10	3RT6015-1AP01	3RT6015-1AP01	3RU6116-1HB0	7PV1578-1BW30	5,5...8
7.5	15.5	3RV6311-4AC10	3RT6016-1AP01	3RT6015-1AP01	3RU6116-1JB0	7PV1578-1BW30	7...10
7.5	15.5	3RV6321-4AC10	3RT6016-1AP01	3RT6015-1AP01	3RU6116-1JB0	7PV1578-1BW30	7...10
7.5	15.5	3RV6321-4AC10	3RT6024-1AP00	3RT6024-1AP00	3RU6116-1JB0	7PV1578-1BW30	7...10
11	22	3RV6321-4DC10	3RT6025-1AP00	3RT6024-1AP00	3RU6126-4AB0	7PV1578-1BW30	11...16
15	29	3RV6321-4EC10	3RT6025-1AP00	3RT6024-1AP00	3RU6126-4BB0	7PV1578-1BW30	14...20
18.5	35	3RV6321-4PC10	3RT6026-1AP00	3RT6024-1AP00	3RU6126-4DB0	7PV1578-1BW30	20...25
22	41	3RV5331-4GC10	3RT5034-1AP00	3RT5026-1AP00	3RU5136-4EB0	7PV1578-1BW30	22...32
30	55	3RV5341-4JC10	3RT5034-1AP00	3RT5034-1AP00	3RU5136-4FB0	7PV1578-1BW30	28...40
37	66	3RV5341-4KC10	3RT5035-1AP00	3RT5034-1AP00	3RU5136-4GB0	7PV1578-1BW30	36...45
45	80	3RV5341-4LC10	3RT5036-1AP00	3RT5034-1AP00	3RU5136-4HB0	7PV1578-1BW30	40...50
55	97	3VM1110-4EE32-0AA0	3RT5044-1AP00	3RT5035-1AP00	3RU5146-4KB0	7PV1578-1BW30	57...75
75	132	3VM1116-4EE32-0AA0	3RT5045-1AP00	3RT5036-1AP00	3RU5146-4LB0	7PV1578-1BW30	70...90
90	160	3VM1220-4EE32-0AA0	3RT5054-1AP36	3RT5044-1AP00	3RU5146-4MB0	7PV1578-1BW30	80...100
110	195	3VM1225-4EE32-0AA0	3RT5054-1AP36	3RT5044-1AP00	3RU5156-3JB2	7PV1578-1BW30	110...135
132	233	3VM1225-4EE32-0AA0	3RT5055-6AP36	3RT5045-1AP00	3RU5156-3KB2	7PV1578-1BW30	120...150
160	280	3VA1332-4EE32-0AA0	3RT5056-6AP36	3RT5045-1AP00	3RU5156-3MB2	7PV1578-1BW30	150...180
200	350	3VA1340-4EE32-0AA0	3RT5064-6AP36	3RT5054-1AP36	3RU5166-5GB1	7PV1578-1BW30	220...320
250	430	3VA1450-4EE32-0AA0	3RT5065-6AP36	3RT5055-6AP36	3RU5166-5GB1	7PV1578-1BW30	220...320

# Motor Control and Protection

Direct On Line



**Motor starter protector + contactor +**  
thermal overload relay

Standard three-phase  
motor 4-pole at 400 V AC

Norm- Iq leistung P	Motor current (nominal value) I	Setting range Overload release value) Motor starter protector	Motor starter protector	Contactor
<b>kW</b>	<b>A</b>	<b>A</b>		
0,06	0.2	0,16...0,24	3VS1300-0ME00	3TS2910-0AN2
0,09	0.3	0,24...0,4	3VS1300-0ME00	3TS2910-0AN2
0,12	0.4	0,4...0,6	3VS1300-0ME00	3TS2910-0AN2
0,18	0.6	0,4...0,6	3VS1300-0ME00	3TS2910-0AN2
0,25	0.85	0,6...1	3VS1300-0MF00	3TS2910-0AN2
0,37	1.1	1...1,6	3VS1300-0MG00	3TS2910-0AN2
0,55	1.5	1...1,6	3VS1300-0MG00	3TS2910-0AN2
0,75	1.9	1,6...2,4	3VS1300-0MH00	3TS2910-0AN2
1,1	2.7	2,4...4	3VS1300-0MJ00	3TS2910-0AN2
1,5	3.6	2,4...4	3VS1300-0MJ00	3TS2910-0AN2
2,2	5	4...6	3VS1300-0MK00	3TS2910-0AN2
3	6.5	6...10	3VS1300-0ML00	3TS3010-0AN2
4	8.5	6...10	3VS1300-0ML00	3TS3010-0AN2
5,5	11.5	10...16	3VS1300-0MM00	3TS3110-0AN2
7,5	15.5	10...16	3VS1300-0MM00	3TS3210-0AN2
11	22	16...25	3VS1300-0MP00	3TS3311-0AN2
15	29	22...32	3VS1600-0MP00	3TS3411-0AN2
18,5	35	28...40	3VS1600-0MQ00	3TS3511-0AN2
22	41	36...52	3VS1600-0MR00	3TS3611-0AN2
30	55	63	3RV5041-4JA10	3TS4711-0AN2
37	66	75	3RV5041-4KA10	3TS4811-0AN2
45	80	100	3RV5041-4MA10	3TS4911-0AN2



# Motor Control and Protection

Direct On Line

**Motor starter protector + contactor +**  
thermal overload relay



Standard three-phase  
motor 4-pole at 400 V AC

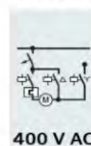
Norm- Iq leistung P	Motor current (nominal value) I	Motor starter protector	Contactor	Overload relay	Setting range Overload release Overload relay
<b>kW</b>	<b>A</b>				<b>A</b>
0,06	0.2	3RV6311-0BC10	3TS2910-0AN2	3US5000-0C	0,16...0,25
0,09	0.3	3RV6311-0DC10	3TS2910-0AN2	3US5000-0E	0,25...0,4
0,12	0.4	3RV6311-0FC10	3TS2910-0AN2	3US5000-0G	0,4...0,63
0,18	0.6	3RV6311-0GC10	3TS2910-0AN2	3US5000-0G	0,4...0,63
0,25	0.85	3RV6311-0JC10	3TS2910-0AN2	3US5000-0J	0,63...1
0,37	1.1	3RV6311-0KC10	3TS2910-0AN2	3US5000-1A	1...1,6
0,55	1.5	3RV6311-1AC10	3TS2910-0AN2	3US5000-1A	1...1,6
0,75	1.9	3RV6311-1BC10	3TS2910-0AN2	3US5000-1C	1,6...2,5
1,1	2.7	3RV6311-1DC10	3TS2910-0AN2	3US5000-1E	2,5...4
1,5	3.6	3RV6311-1EC10	3TS2910-0AN2	3US5000-1E	2,5...4
2,2	5	3RV6311-1GC10	3TS2910-0AN2	3US5000-1G	4...6,3
3	6.5	3RV6311-1HC10	3TS3010-0AN2	3US5000-1J	6,3...10
4	8.5	3RV6311-1JC10	3TS3010-0AN2	3US5000-1J	6,3...10
5,5	11.5	3RV6311-1KC10	3TS3110-0AN2	3US5500-2A	10...16
7,5	15.5	3RV6311-4AC10	3TS3210-0AN2	3US5500-2A	10...16
11	22	3RV6321-4DC10	3TS3311-0AN2	3US5500-2C	16...25
15	29	3RV6321-4EC10	3TS3411-0AN2	3US5500-2N	20...32
18,5	35	3RV6321-4PC10	3TS3511-0AN2	3US5600-2Q	25...36
22	41	3RV5331-4GC10	3TS3611-0AN2	3US5600-8M	36...45
30	55	3RV5341-4JC10	3TS4711-0AN2	3US5800-2V	57...70
37	66	3RV5341-4KC10	3TS4811-0AN2	3US5800-8W	70...88
45	80	3RV5341-4MC10	3TS4911-0AN2	3US5800-8X	88...105

# Motor Control and Protection

Motor starter protector + star-delta combination + thermal overload relay

Standard three-phase  
motor 4-pole at 400 V AC

Star - Delta



400 V AC

Norm- Iq leistung P	Motor current (nominal value) I	Motor starter protector	Contactor (2 Unit)		Overload relay	Timer	Setting range Overload release Overload relay
			Line contactor + delta contactor	Star contactor			
kW	A						A
5.5	11.5	3RV6311-1KC10	3TS3010-0AN2	3TS3010-0AN2	3US5000-1J	7PV1578-1BW30	5.5...8
7.5	15.5	3RV6321-4BC10	3TS3110-0AN2	3TS3010-0AN2	3US5000-1K	7PV1578-1BW30	7...10
11	22	3RV6321-4DC10	3TS3210-0AN2	3TS3110-0AN2	3US5000-2L	7PV1578-1BW30	11...16
15	29	3RV6321-4EC10	3TS3311-0AN2	3TS3210-0AN2	3US5500-2C	7PV1578-1BW30	14...20
18.5	35	3RV6321-4PC10	3TS3311-0AN2	3TS3210-0AN2	3US5500-2C	7PV1578-1BW30	20...25
22	41	3RV5331-4GC10	3TS3411-0AN2	3TS3311-0AN2	3US5500-2N	7PV1578-1BW30	22...32
30	55	3RV5341-4JC10	3TS3511-0AN2	3TS3411-0AN2	3US5600-2Q	7PV1578-1BW30	28...40
37	66	3RV5341-4KC10	3TS3611-0AN2	3TS3511-0AN2	3US5600-8M	7PV1578-1BW30	36...45
45	80	3RV5341-4MC10	3TS4722-0AN2	3TS3611-0AN2	3US5800-2T	7PV1578-1BW30	40...50
55	97	3VM1110-4EE32-0AA0	3TS4722-0AN2	3TS3611-0AN2	3US5800-2V	7PV1578-1BW30	57...75

## Three-phase infeed system (3RM19 three-phase busbar system)

The system permits an easy, time-saving and safe means of feeding two or more 3RM1 motor starters. It can be used only with motor starters with screw terminals and in combination with 8US1716-0RK00 adapters for mounting rails in the main circuit.

The maximum summation current must not exceed 25 A. The primary infeed is connected via a three-phase infeed terminal. The busbars are available in three lengths, for two, three or five motor starters. More than five devices can be connected by clamping the connection tags of a second busbar rotated by 180°.

The three-phase busbars are finger-safe but empty connection tags must be fitted with covers.



## 3RM1 Hybrid Motor Starter



- Line Monitoring
- Voltage, Current, and Power Factor & Active Current
- Residual Current
- Temperature Relays 3RS10,11
- Temperature Relays 3RS10,11,20,21
- Temperature Relays 3RN
- Coupling Relays
- Timers

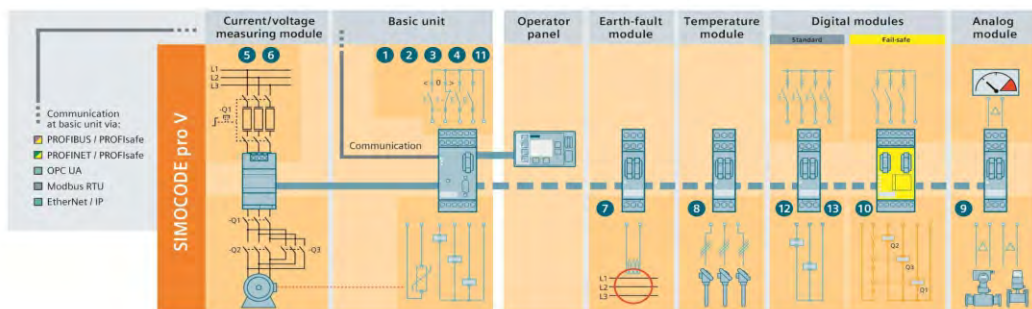
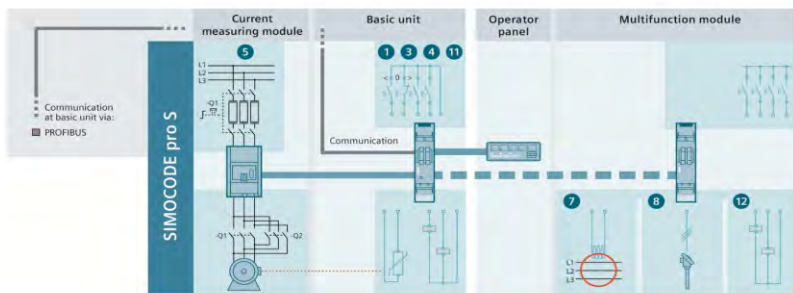
### Monitoring Relays

## Motor Management - Simocode

- Basic Unit
- Expansion Modules
- Accessories
- Parameterization software for Simocode Pro



# Motor Management SIMOCODE





# Soft Starters SIRIUS

## As versatile as your application

### SIRIUS 3RW5 soft starter - the next generation

#### Strong portfolio

Comprehensive, coordinated soft starter portfolio for simple to demanding starting applications:  
Basic, General, High Performance

#### Efficient switching

Energy-efficient switching and mechanical protection of the drive train thanks to soft starters with hybrid switching technology

#### Intelligent operation

Concentrated application-specific functionality thanks to intelligent features such as automatic parameterization, pump cleaning and condition monitoring

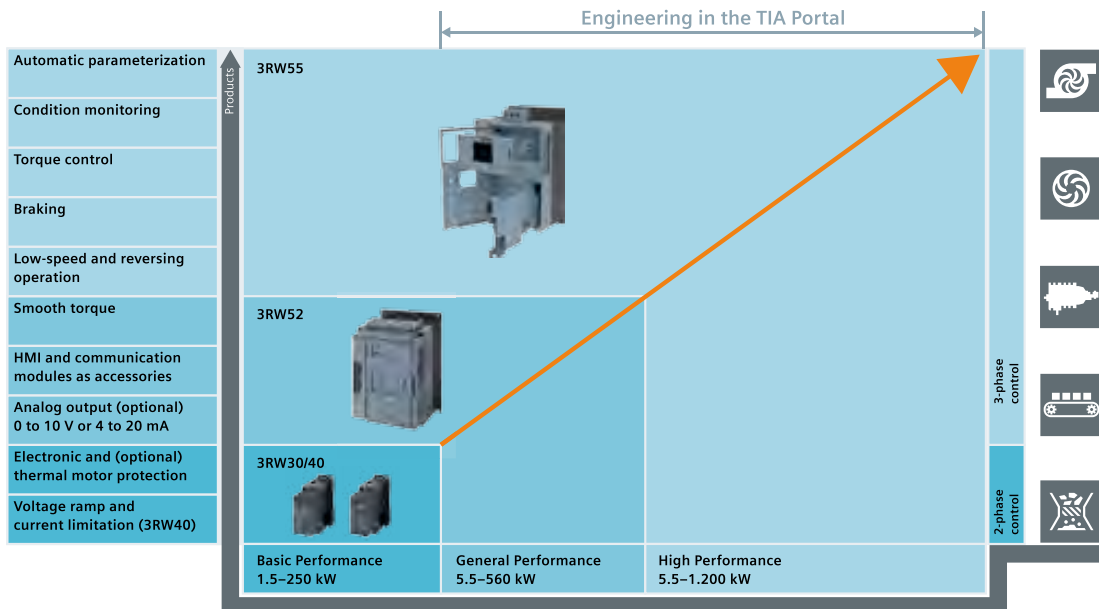
#### Ready for a digital future

Support of digital engineering processes with tools and data as well as data provision for local visualization or cloud-based analysis



## SIRIUS 3RW5

### SIRIUS 3RW5 – A strong, versatile portfolio with many application opportunities



## Basic Performance

SIRIUS 3RW30/40 soft starters are the world's most compact two-phase controlled soft starters in the power range from 1.5 kW (at 400 V) to 250 kW (at 400 V) thanks to their innovative control principle. Their compact design helps you save space in the control panel configurations. SIRIUS 3RW30/40 soft starters are the ideal solution for simple applications of all kinds.

## General Performance

SIRIUS 3RW52 soft starters are an ideal solution for standard applications. With 3-phase motor control, they cover the power range from 5.5 kW (at 400 V) to 315 kW in standard circuits or up to 560 kW (at 400 V) in inside-delta circuits. With optional HMI modules, communication options (PROFINET, PROFIBUS, Modbus TCP) and the choice between an analog output or thermistor motor protection, they offer maximum flexibility.

## High Performance

Offering the highest functionality, the SIRIUS 3RW55 handles difficult starting and stopping tasks. Thanks to its innovative torque control feature, the device can be used for drives up to 710 kW (at 400 V) in standard circuits or up to 1,200 kW (at 400 V) in inside-delta circuits. The functions have been specifically designed for user-friendliness.

Your application  
in mind



### Pump cleaning and pump stopping mode

The pump cleaning function prevents pumps from blocking, therefore, increasing your productivity and system availability. The pump stopping mode avoids mechanical loading in the piping system and extends the service life of the equipment.



### Electrical ruggedness

Due to the wide control voltage range from 110 V to 250 V AC, soft starters have a high degree of electrical ruggedness. This guarantees reliable operation even in the event of falling voltages.



### Condition monitoring

The condition monitoring function supports optimal planning of maintenance work on bearings or seals, therefore maximizing availability.



### Automatic parameterization

Automatic parameterization simplifies the commissioning and operation of critical applications, even in the case of highly dynamic load characteristics.



### Integrated braking functions

Intelligent functions such as soft starter braking ensure a fast and reliable stop without engineering and configuration work.



### Design Awards 2018

The SIRIUS 3RW5 soft starter received both the RedDot Design and the iF Design awards in 2018. Among other things, the iF design institute recognized the slim, coordinated, uniform design across all sizes. Despite their size and materials, the devices look harmonious due to the consistent design throughout the entire family. The most important elements for the user, such as LEDs and safety locking, have been placed on the first level in a user-oriented manner.

# Soft Starter 3RW



Applications

High Performance

General Performance

Basic Performance

3RW55

3RW44

3RW52

3RW40

3RW30

## Selection aid for soft starters

### Normal starting (CLASS 10)

Pumps	●	●	●	●	●
Pumps with special pump stop (to prevent water hammer)	●	●	○		
Heat pumps	●	●	●	●	●
Hydraulic pumps	●	●	●	●	○
Presses	●	●	●	●	○
Conveyor belts	●	●	●	●	○
Roller conveyors	●	●	●	●	○
Screw conveyors	●	●	●	●	○
Escalators	●	●	●	●	
Piston compressors	●	●	●	●	
Screw compressors	●	●	●	●	
Small fans <sup>1)</sup>	●	●	●	●	
Centrifugal blowers	●	●	●	●	
Bow thrusters	●	●	●	●	

### Heavy starting (CLASS 20)

Stirrers	●	●	○	○	
Extruders	●	●	○	○	
Lathes	●	●	○	○	
Milling machines	●	●	○	○	

### Very heavy starting (CLASS 30)

Large fans <sup>2)</sup>	●	●			
Circular saws/bandsaws	●	●			
Centrifuges	●	●			
Mills	●	●			
Crushers	●	●			

- Recommended soft starter  
○ Possible soft starter

- <sup>1)</sup> The mass inertia of the fan is <10 times the mass inertia of the motor.  
<sup>2)</sup> The mass inertia of the fan is ≥10 times the mass inertia of the motor.

# Soft Starter 3RW



		High Performance		General Performance	Basic Performance	
SIRIUS soft starters		3RW55	3RW44	3RW52	3RW40	3RW30
General technical specifications						
Operational current at 40 °C	A	13 ... 887	29 ... 1 214	13 ... 887	12.5 ... 432	3 ... 106
Operational voltage	V	230 ... 690 <sup>1)</sup>	200 ... 690 <sup>1)</sup>	200 ... 600	200 ... 600	200 ... 480
Operating power for three-phase motors						
• At 400 V, at 40 °C						
- In-line circuit	kW	5.5 ... 315	15 ... 710	5.5 ... 315	5.5 ... 250	1.5 ... 55
- Inside-delta circuit	kVA	11 ... 560	22 ... 1 200	11 ... 560	—	—
• At 400/480 V at 50 °C						
- In-line circuit	hp	7.5 ... 400	15 ... 950	7.5 ... 400	7.5 ... 300	1.5 ... 75
- Inside-delta circuit	hp	10 ... 750	30 ... 1 700	10 ... 750	—	—
Ambient temperature <sup>2)</sup>	°C	-25 ... +60	0 ... +60	-25 ... +60	-25 ... +60	-25 ... +60
Soft starting/ramp-down		✓	✓	✓	✓	✓ <sup>3)</sup>
Voltage ramp		✓	✓	✓	✓	✓
Starting voltage	%	20 ... 100	20 ... 100	30 ... 100	40 ... 100	40 ... 100
Ramp-up and ramp-down time	s	0 ... 360	0 ... 360	0 ... 20	0 ... 20	0 ... 20 <sup>3)</sup>
Pump stop (torque control) <sup>4)</sup>		✓	✓	—	—	—
• Starting torque	%	10 ... 100	20 ... 100	—	—	—
• Torque limit	%	20 ... 200	20 ... 200	—	—	—
Soft Torque (torque limit)		—	—	✓	—	—
Integral bypass contact system		✓	✓	✓	✓	✓
Intrinsic device protection		✓	✓	✓	✓	—
Motor overload protection		✓	✓	—	✓ <sup>5)</sup>	—
Thermistor motor protection evaluation		✓	✓	✓ <sup>6)</sup>	✓ <sup>6)</sup>	—
Analog output		✓	—	✓ <sup>6)</sup>	—	—
Remote RESET		✓	✓	✓	✓ <sup>6)</sup>	—
Adjustable current limiting		✓	✓	✓	✓	—
Inside-delta circuit <sup>1)</sup>		✓	✓	✓	—	—
Breakaway pulse		✓	✓	—	—	—
Automatic parameterization		✓	—	—	—	—
Pump cleaning		✓	—	—	—	—
Reversing duty		✓	—	—	—	—
Condition monitoring		✓	—	—	—	—
User account administration <sup>8)</sup>		✓	—	—	—	—
Creep speed in both directions of rotation		✓	✓	—	—	—
DC braking <sup>4)</sup> 7)		✓	✓	—	—	—
Combined braking <sup>4)</sup> 7)		✓	✓	—	✓	—
Motor heating		✓	✓	—	—	—
Communication function <sup>9)</sup>		✓	✓	✓	—	—
HMI module installable in the cabinet door		✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	—	—
Operating measured value display		✓	✓	✓ <sup>2)</sup>	—	—
Logbooks		✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	—	—
Event list		✓	✓	—	—	—
Slave pointer function		✓	✓	—	—	—
Trace function <sup>9)</sup>		✓	✓	—	—	—
Programmable control inputs and outputs		✓	✓	—	—	—
Number of parameter sets		3	3	1	1	1
• Parameterizable via software <sup>2)</sup>		✓	✓	—	—	—
Number of controlled phases		3	3	3	2	2
Heavy starting CLASS 30 <sup>4)</sup>		✓	✓	—	—	—

✓ Function available

— Function not available

<sup>1)</sup> Inside-delta circuit only up to line voltage 600 V

<sup>2)</sup> Not derating above 40 °C.

<sup>3)</sup> Only soft starting available for 3RW30.

<sup>4)</sup> Calculate soft starter and motor with size allowance where required.

<sup>5)</sup> When using the motor overload protection according to ATEX, an upstream contactor is required.

<sup>6)</sup> Special device versions only.

<sup>7)</sup> Not possible in inside-delta circuit.

<sup>8)</sup> With software Soft Starter ES (TIA Portal)

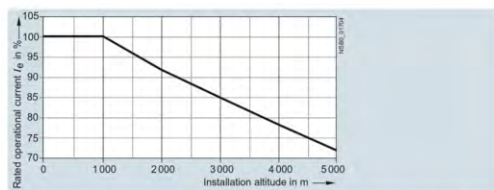
<sup>9)</sup> Only in conjunction with special accessories.



## Boundary conditions

The 3RW soft starter should always be designed on the basis of the required rated operational current of the motor. The motor ratings listed in the selection and ordering data are rough guide values and designed for basic starting conditions (CLASS 10). For other starting conditions we recommend the Simulation Tool for Soft Starters (STS).

Motor rating data in kW and hp is based on IEC 60947-4-1.



At an installation altitude above 2 000 m, max. permissible operational voltage is reduced to 480 V.

The selection and ordering data were determined for the following boundary conditions (stand-alone installation without additional fan)

						
		High Performance		General Performance	Basic Performance	
SIRIUS soft starters		3RW55	3RW44	3RW52	3RW40	3RW30
Boundary conditions						
Maximum starting time	s	20	10		10	3
Maximum starting current in % of motor current	$I_c$	300				
Maximum number of starts per hour	1/h	5				20

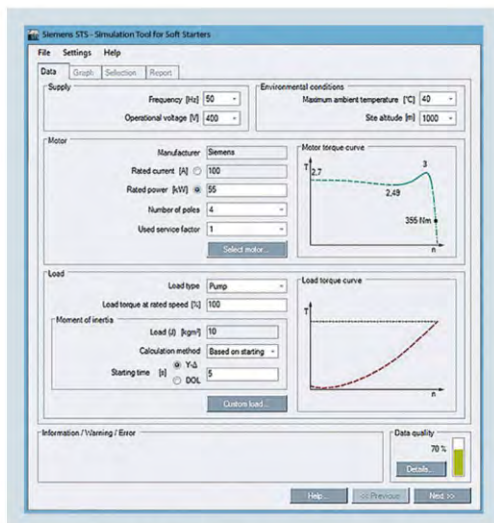
## Simulation Tool for Soft Starters (STS)

The Simulation Tool for Soft Starters (STS) provides a convenient means of designing soft starters using a simple, quick and easy-to-use interface.

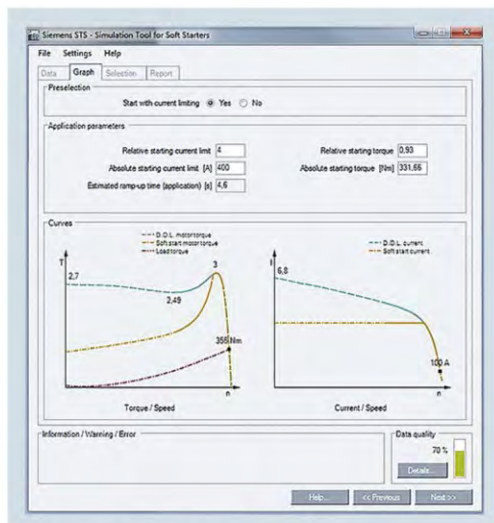
Entering the motor and load data will simulate the application and prompt suggestions for suitable soft starters.

Link to the free download of the [Simulation Tool for Soft Starters \(STS\)](#).

- Simple, quick and user-friendly interface
- Detailed and up-to-date Siemens motor database, including IE3 and IE4 motors.
- Simulation of heavy starting up to CLASS 30
- Update-capable (e.g. motors, load types, functions)
- Fast simulations with minimum input data
- Immediate, graphical curve charts of start operations with limit values
- Table view of suitable soft starters for the application



Easy input of motor and load data



Graphic display of start operations

## Circuit concept

Three-phase controlled SIRIUS 3RW soft starters can be operated in two different types of circuit:

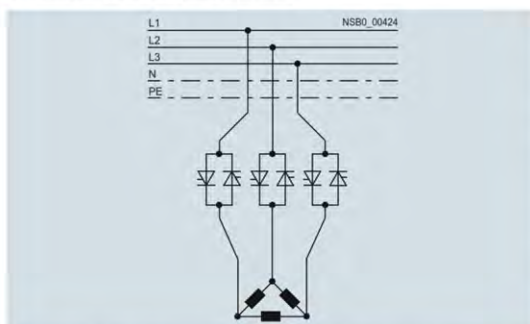
- **Inline circuit**

The controls for isolating and protecting the motor are simply connected in series with the soft starter. The motor is connected to the soft starter with three leads.

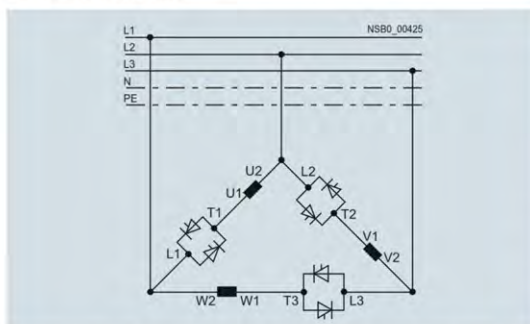
- **Inside-delta circuit**

The wiring is similar to that of wye-delta starters. The phases of the soft starter are connected in series with the individual motor windings. The soft starter then only has to carry the phase current, amounting to about 58% of the rated motor current (conductor current).

## Comparison of the types of circuit:



Inline circuit: Rated current  $I_e$  corresponds to the rated motor current  $I_n$ , three cables to the motor



Inside-delta circuit: Rated current  $I_e$  corresponds to approx. 58% of the rated motor current  $I_n$ , six cables to the motor (as for wye-delta starters)

## Which circuit?

Using the inline circuit involves the lowest wiring outlay. If the soft starter to motor connections are long, this circuit is preferable.

The wiring complexity is twice as high when using the inside-delta circuit, but a smaller device can be used with the same rating. Thanks to the choice of operating mode between the inline circuit and inside-delta circuit, it is always possible to select the most favorable solution.

The braking function is possible only in the inline circuit. The inside-delta circuit cannot be used in 690 V line supplies.

## Configuration

The solid-state 3RW soft starters are designed for normal starting. In case of heavy starting or increased starting frequency, a larger unit must be selected. The 3RW44 and 3RW52 soft starters may be used in isolated supply networks (IT systems) up to 600 V AC and the 3RW55 soft starter even up to 690 V.

For long starting times it is recommended to have a PTC sensor or temperature switch in the motor. This also applies for the "torque control", "pump stop" and "DC braking" ramp-down modes, because during the ramp-down time in these modes, an additional current loading applies in contrast to free ramp-down.

No capacitive elements are permitted in the motor feeder between the SIRIUS 3RW soft starter and the motor (e.g. no reactive-power compensation equipment). In addition, neither static systems for reactive-power compensation nor dynamic PFC (Power Factor Correction) must be operated in parallel during starting and ramp-down of the soft starter. This is important to prevent faults arising on the compensation equipment and/or the soft starter.

All elements of the main circuit (such as fuses and controls) should be dimensioned for direct-on-line starting, following the load short-circuit conditions. Fuses and switching devices must be ordered separately. The harmonic component load for starting currents must be taken into consideration for the selection of motor starter protectors (selection of release). Please observe the maximum switching frequencies specified in the technical specifications.

## Notes:

When three-phase motors are switched on, voltage drops occur as a rule on starters of all types (direct-on-line starters, wye-delta starters, soft starters). The infeed transformer must always be dimensioned such that the voltage dip when starting the motor remains within the permissible tolerance. If the infeed transformer is dimensioned with only a small margin, it is best for the control voltage to be supplied from a separate circuit (independently of the main voltage) in order to avoid the potential switching off of the soft starter.

For dimensioning soft starters, we recommend our Simulation Tool for Soft Starters (STS), [see page 6/7](#).

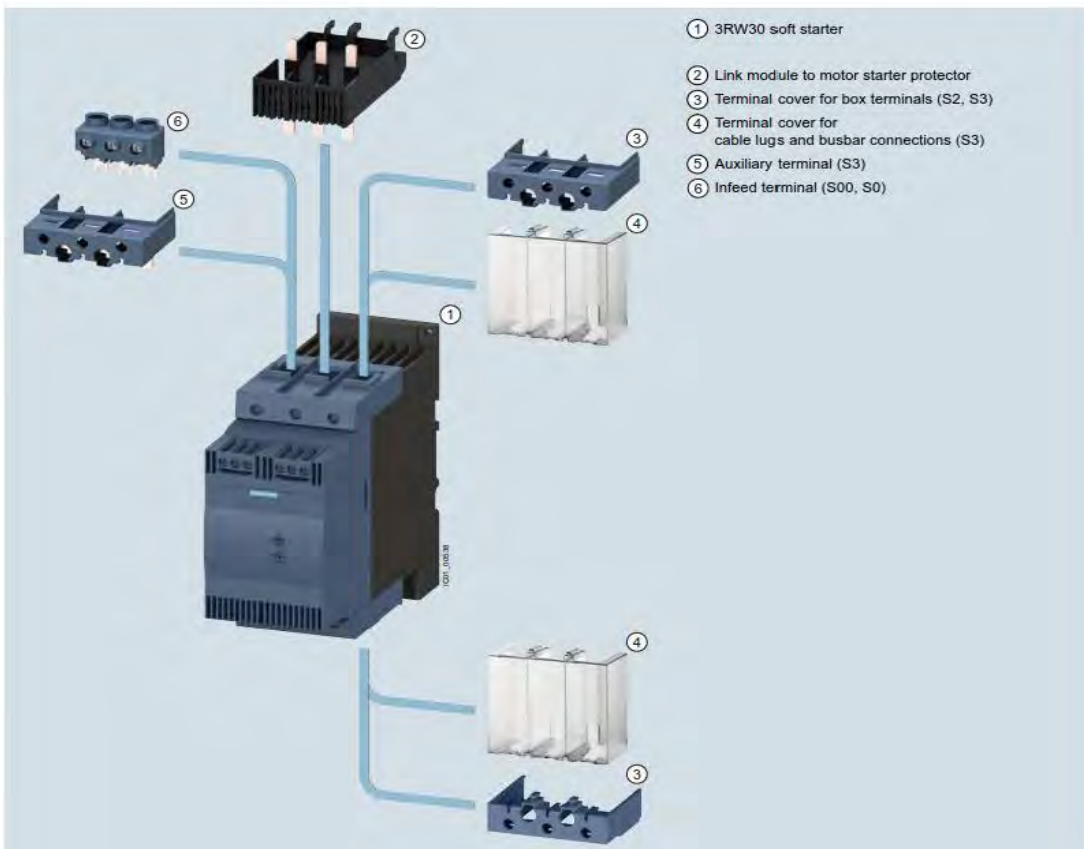
or our Technical Assistance:

Phone: +49 911 895-5900,

email: [technical-assistance@siemens.com](mailto:technical-assistance@siemens.com).

Recommended parameters for the initial commissioning of our SIRIUS 3RW soft starters are listed in every report of our Simulation Tool for Soft Starters (STS). In addition, our High Performance soft starters provide support by means of their commissioning wizards.

## 3RW30 Basic Performance










# DRIVE

## Sinamics

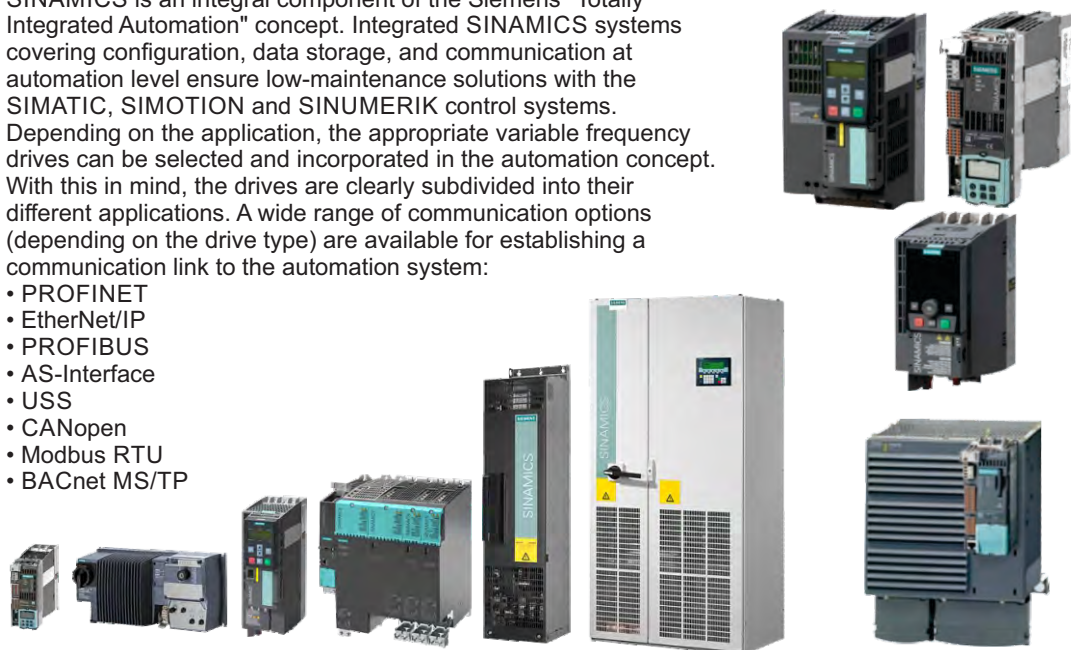
### SINAMICS Series : V-Series, G-Series, S-Series, DCM & Medium Voltage Series

Low voltage AC			DC voltage	Medium voltage AC
Basic Performance	General Performance	High Performance	DC applications	For applications with high power ratings
				
V-series	G-series	S-series	DCM	Medium voltage series
0.12 – 30 kW	0.37 – 6,600 kW	0.15 – 5,700 kW	6 kW – 30 MW	0.15 – 85 MW
When it comes to the hardware as well as the functionality, SINAMICS V converters concentrate on the essentials. This results in a high degree of ruggedness with low associated investment costs.	The functionality of SINAMICS G converters makes them the perfect choice when addressing basic and medium requirements relating to the control dynamic performance.	SINAMICS S converters are predestined for demanding single-axis and multi-axis applications in plant and machinery construction – as well as for the widest range of motion control tasks.	In addition to the highest power ratings, SINAMICS DC converters also offer the maximum degree of availability.	Our seamless and integrated range – which is unique worldwide – encompasses all dynamic response and performance levels in voltage classes 2.3 to 11 kV.

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SINAMICS is an integral component of the Siemens "Totally Integrated Automation" concept. Integrated SINAMICS systems covering configuration, data storage, and communication at automation level ensure low-maintenance solutions with the SIMATIC, SIMOTION and SINUMERIK control systems. Depending on the application, the appropriate variable frequency drives can be selected and incorporated in the automation concept. With this in mind, the drives are clearly subdivided into their different applications. A wide range of communication options (depending on the drive type) are available for establishing a communication link to the automation system:

- PROFINET
- EtherNet/IP
- PROFIBUS
- AS-Interface
- USS
- CANopen
- Modbus RTU
- BACnet MS/TP



# SINAMICS G120

## The modular, safe and energy-efficient inverter system

Quality*)	Continuous motion			Discontinuous motion		
	Basic	Medium	High	Basic	Medium	High
Use						
Pumping/ ventilating/ compressing	Centrifugal pumps Radial/axial fans Compressors	Centrifugal pumps Radial/axial fans Compressors	Eccentric screw pumps	Hydraulic pumps Dosing pumps		Descaling pumps Hydraulic pumps
Moving	Conveyor belts Roller conveyors Chain conveyors	Conveyor belts Roller conveyors Chain conveyors Vertical material handling Elevators Escalators Gantry cranes Ship's drives Cable railways	Elevators Container cranes Mine hoists Open-cast mine excavators Test stands	Accelerating conveyors Rack feeders	Accelerating conveyors Rack feeders Crosscutters Roll changers	Rack feeders Robotics Pick-and-place Indexing tables Crosscutters Roller feeds Engaging/disengaging
Processing	Mills Mixers Kneaders Crushers Agitators Centrifuges	Mills Mixers Kneaders Crushers Agitators Centrifuges Extruders Rotary furnaces	Extruders Winders/unwinders Leading/following drives Calenders Main press drives Printing machines	Tubular bagging machines Single-axis motion control such as • Positioning profiles • Path profiles		Servo presses Rolling mill drives Coordinated multi-axis motion control such as • Multi-axis positioning • Cam discs • Interpolation
Machining	Main drives for • Turning • Milling • Drilling	Main drives for • Drilling • Sawing	Main drives for • Turning • Milling • Drilling • Gear cutting • Grinding	Axis drives for • Turning • Milling • Drilling	Axis drives for • Drilling • Sawing	Axis drives for • Turning • Milling • Drilling • Laser machining • Gear cutting • Grinding • Nibbling and punching

\*) Requirements placed on the torque accuracy/speed accuracy/positioning accuracy/axis coordination/functionality







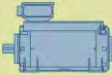
Functions	Benefits
<b>Modularity</b> <ul style="list-style-type: none"> <li>Components can be simply combined, also locally on site</li> <li>Only part of the inverter must be replaced</li> <li>The customer only pays for the functions that he actually requires</li> <li>Modules can be replaced under voltage and without software reinstallation</li> <li>Power rating and functions can be expanded by replacing individual components</li> <li>All typical applications can be addressed using one inverter</li> </ul>	<ul style="list-style-type: none"> <li>Lower costs <ul style="list-style-type: none"> <li>– initial purchase price</li> <li>– when stocking parts</li> <li>– when replacing devices/parts</li> </ul> </li> <li>Fast replacement when service is required</li> <li>Favorably priced and fast system upgrade</li> <li>Simple selection of the optimum inverter</li> </ul>
<b>User-friendly installation and commissioning</b> <ul style="list-style-type: none"> <li>Integrated USB port</li> <li>Pluggable operator panels can be selected <ul style="list-style-type: none"> <li>– with graphic display</li> <li>– with 2-line display</li> </ul> </li> <li>Depending on the application, advanced or basic panel can be selected</li> <li>Micro memory card slot (MMC)</li> <li>Pluggable terminal strips and power connectors</li> </ul>	<ul style="list-style-type: none"> <li>Going online is intuitive and simplifies engineering and diagnostics</li> <li>Fast commissioning without any expert know-how</li> <li>Minimized maintenance work times</li> <li>Simplified, central commissioning, maintenance and diagnostics</li> <li>Simple series commissioning and data backup when service is required</li> <li>Simple installation without special tools</li> </ul>
<b>Communication (PROFINET, PROFIBUS, Modbus RTU, CANopen, USS, BacNet)</b> <ul style="list-style-type: none"> <li>PROFINET IO features <ul style="list-style-type: none"> <li>– Neighboring device detection (LLDP)</li> <li>– Wireless communication with Industrial Wireless LAN</li> <li>– Ring-type structure possible (MRP, MRPD)</li> <li>– PROFIenergy</li> <li>– PROFIsafe</li> <li>– Shared device</li> </ul> </li> <li>2 integrated PROFINET ports <ul style="list-style-type: none"> <li>– Standard and fail-safe I/Os can be used as distributed I/O for the control</li> </ul> </li> <li>Many nodes and different network topologies without requiring any additional components</li> <li>Direct integration of the communication in the inverter</li> </ul>	<ul style="list-style-type: none"> <li>PROFINET IO features <ul style="list-style-type: none"> <li>– Fast communication with innovative functions</li> <li>– High degree of plant/system availability</li> <li>– Diagnostics capability; energy management</li> <li>– Simple replacement when a fault occurs</li> </ul> </li> <li>Line-type structure without any additional components <ul style="list-style-type: none"> <li>– reduced wiring costs</li> <li>– cost-saving</li> </ul> </li> <li>Simple handling</li> <li>Fewer interfaces</li> <li>High performance, no interface problems</li> </ul>
<b>Integrated software functions</b> <ul style="list-style-type: none"> <li>Integrated PLC functions for local control tasks</li> <li>Freely parameterizable PID controller</li> <li>Buffering of brief line failures using kinetic buffering</li> <li>Automatic restart after a power failure</li> <li>Flying restart</li> <li>Energy saving using the hibernation mode</li> <li>Load monitoring to monitor belts and flow</li> </ul>	<ul style="list-style-type: none"> <li>Flexible use of integrated functions</li> <li>Mini PLC functionality without additional components</li> <li>Operation can be maintained even on unstable line supplies</li> <li>Numerous software functions for flexible use in a wide range of applications</li> </ul>





# MOTORS

## Simotics

	Low-voltage motors for line and converter operation						
	General Purpose SIMOTICS GP	Severe Duty SIMOTICS SD	Explosion Protected SIMOTICS XP	Definite Purpose SIMOTICS DP	Flexible Duty SIMOTICS FD	Trans-standard SIMOTICS TN	High Torque SIMOTICS HT
							
<b>Power</b>							
IEC:	0.09 – 45 kW	0.18 – 315 kW	0.09 – 1,000 kW	0.37 – 481 kW	200 – 1,600 kW	200 – 5,000 kW	150 – 2,100 kW
NEMA:	1 – 20 HP	1 – 400 HP	1 – 400 HP			125 – 2,250 HP	
<b>Torque</b>							
IEC:	0.61 – 294 Nm	150 – 2,022 Nm	0.61 – 8,090 Nm	0.61 – 8,500 Nm	500 – 6,300 Nm	800 – 8,500 Nm	6,000 – 42,000 Nm
NEMA:	2 – 883 lb-ft	1.5 – 1,776 lb-ft	1.5 – 1,187 lb-ft				
<b>Speed</b>	750 – 3,600 rpm	750 – 836 rpm	750 – 3,600 rpm	750 – 3,600 rpm	750 – 3,600 rpm	750 – 3,600 rpm	0 – 800 rpm
<b>Applications</b>	Pumps, fans, compressors, conveyor technology – with special demands regarding low weight and high-efficiency	Pumps, fans, compressors, conveyor technology, marine applications, offshore, mixers, mills, extruders, rolling mills with special requirements on the ruggedness, chemical and petrochemical industries	For general industrial applications with special requirements on the explosion protection, e.g. in the process industry	Special motors, e.g. for operating and transport roller tables, ventilating tunnels, parking houses, shopping centers, harbor cranes, container terminals, marine certified motors as well as special customized versions	Pumps, fans, compressors and conveyor systems with high power ratings – as well as cranes, extruders, bow thrusters - in sectors such as chemical, paper, oil & gas, marine, metals, cement and mining	Pumps, fans, compressors, mixers, extruders in the chemical and petrochemical industries, paper machines, mining, cement, steel industry, marine applications including propulsion	Gearless motors with high torques for paper machines, slow-running pumps, mills, shears for steel applications, bow thrusters, winches and main propulsion drives for ships
<b>SINAMICS converters</b>	G120, G120P, S120, G180	G120, G120P, S120, G130, G150, G180, S150	G120, S120, G180	G120, S120, G130, G150, G180, S150	G120P, G130, G150, S120, S150	G120P, S120, G130, G150, G180, S150	S150, S120



### Ideal for standard and special applications:





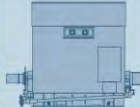


- SIMOTICS GP – light standard motors for general drive tasks
- SIMOTICS SD – rugged, compact motors for use under adverse conditions
- SIMOTICS XP – explosion-protected motors that offer maximum safety for man and machine
- SIMOTICS DP – sector-specific and customized motors for special requirements
- SIMOTICS FD – the rugged, versatile all-rounder starting at 200 kW to address a wide range of applications
- SIMOTICS TN – trans-standard motors up to 5,000 kW with an especially long service life for applications under harsh, demanding environments
- SIMOTICS HT – gearless torque motor for applications demanding high torques

## SIMOTICS

*The ideal partner for our  
SINAMICS DCM converters for  
low investment costs and high  
availability in the widest range  
of applications as:*

- Extruders for the plastics industry
- Hoisting and travel gear drives for cranes
- Rolling mill drives and winders
- Rotary kilns for cement factories
- Drives for wire-drawing machines
- Press drives
- Drives for lifts and cable railways
- Paper machine drives



	Motion control motors					DC motors	High-voltage motors
	Servomotors SIMOTICS S		Main motors SIMOTICS M	Linear motors SIMOTICS L	Torque motors SIMOTICS T	SIMOTICS DC	SIMOTICS HV
	Servomotors	Servo geared motors					
							
<b>Power</b>							
IEC:	0.05 – 34.2 kW	0.5 – 7 kW	2.8 – 1,340 kW	1.7 – 81.9 kW	1.7 – 380 kW	30 – 1,610 kW	200 kW – 100 MW and more
NEMA:							270 – 135,000 HP
<b>Torque</b>							
IEC:	0.08 – 125 Nm	14 – 3,070 Nm	13 – 12,435 Nm	150 – 10,375 Nm	10 – 7,000 Nm	up to 44,500 Nm	up to 25,000,000 Nm
NEMA:							
<b>Speed</b>							
	up to 10,000 rpm	up to 1,300 rpm	up to 40,000 rpm	up to 836 m/min	up to 1,200 rpm	up to 3,600 rpm	7 – 15,900 rpm
<b>Applications</b>	Applications demanding high-dynamic performance and high precision, e.g. handling systems, storage and retrieval machines, wood, glass, ceramic and stone processing, packaging, plastics and textile machines, machine tools		High-precision rotary axes with a high dynamic performance, e.g. main drives for presses, printing machines, rolling mill drives and winders in foil machines and other converting applications, main spindle drives in machine tools	Applications with the highest demands on the dynamic performance and precision for linear motion, e.g. machining centers, turning, grinding, laser machining, handling and in the machine tool domain	Rotary axis applications with the highest requirements on precision and force, e.g. extruders, winders, rolling mill drives, rotary axes in machine tools, rotary indexing tables, machine tool magazines	Motors for standard drive applications in all industrial areas and in infrastructure projects	Medium- and high-voltage drive applications, including compressors, blast furnace blowers, refiners, pumps, extruders, rolling mills, mine hoists, conveyor systems, mills, ships' propulsion systems
<b>SINAMICS converters</b>	S110, S120		G120, S110, S120, S150	S120	S120	DCM	GM150, SM150, SL150, GL150, SM120, GH180, GH150

# Electrical Installation Technology

Protection, switching, measuring, and monitoring devices

NEW!

## Certificate

Standard: **SNI 04-6507.1-2006**

Certificate Register No / Nomor registrasi sertifikat: **624 18093**

PT TÜV Rheinland Indonesia certifies in accordance to product certification system No. 5

Company name and address: **PT. Siemens Indonesia**  
Jl. Jend. A. Yani, 67-68 Putomas, Kayu Putih, Pulo Gadung, Jakarta Timur 13210

Company's representative: **Suarno Gosali**  
Management Representative

Manufacture site: **Siemens Circuit Protection Systems Ltd., Shanghai**  
2395 Shida Avenue, Jinshan Industrial Zone, Jinshan District 201506, Shanghai, P.R.China

Importer name and address: **PT. Siemens Indonesia**  
Jl. Jend. A. Yani, 67-68 Putomas, Kayu Putih, Pulo Gadung, Jakarta Timur 13210

API Number / Nomor API: **05005040-8**

Scope: **MCB (Mini Circuit Breaker)**  
Ruang Injup  
Pemutus Sirkuit Mini

Type: **Siemens**

Brand: **Siemens**

Model: **Siemens**

Audit and Testing were performed (see Annex 1). Proof has been furnished that the above requirements according are fulfilled. Audit dan Pengujian telah dilakukan (lihat Annex 1). Bukti kesesuaian telahlapar persyaratan diatas telah terpenuhi.

Validity: **The certificate is valid from 2015-04-27 until 2018-04-26**  
Masa berlaku: **Sertifikat berlaku dari 2015-04-27 sampai dengan 2018-04-26**

The factory/manufacturer site is subject to annual surveillance audit with the due date for all future audits is 30-03 (dd-mm). Audit tahunan akan dilaksanakan setiap tahun dengan batas waktu audit berikutnya adalah 30-03 (dd-mm).

Jakarta, 2015/04/27

PT TÜV Rheinland Indonesia  
Indra Park Block B 42-43,  
A. Dr. Soewarno No. 40, Jakarta 12860

www.tuv.com



MCB type : 5SL6

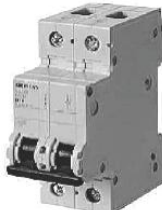
SNI 04-6507.2-2006



1 Pole



2 Pole



3 Pole



## Miniature Circuit Breakers



MCB type 5SL6 (IEC/EN 60898-1 : 6 kA)

MCB type 5SL4 (IEC/EN 60898-1 : 10 kA)

MCB type 5SY7 (IEC/EN 60898-1 : 15 kA)

MCB type 5SY8 (IEC/EN 60947-2 : 25 kA)

MCB type 5SY5 (DC Application)

Accessories for MCB

Auxiliary Switch, Shunt Trip, Undervoltage, etc

## Residual Current Protective Devices

RCCB/ELCB type 5SV3

RCBO type 5SU9



**SIEMENS**  
Ingenuity for life

# Switching Devices

Remote Control Device type STT41

Switching Relay type STT42



## Molded Case Circuit Breakers

MCCB Non Adjustable type

Switch Disconnecter Switch

MCCB Adjustable type

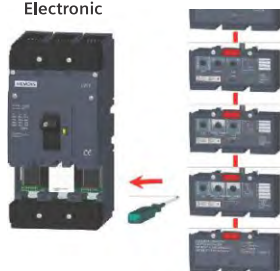
Accessories for MCCB

Auxiliary Switch, Shunt Trip, Undervoltage, Motorized, etc

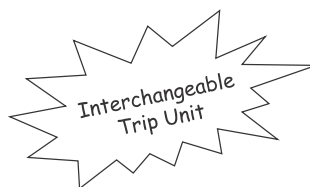
MCCB for Motor Protections

### Overcurrent Release

Electronic



3VT2  
3VT3  
3VT4  
and 3VT5



Ø Adjustment  $I_n = -60\%$

Ø Trip units are interchangeable.

Ø By interchanging of trip units, it is possible to:

- expand regulation range to 87%

- change characteristics LP, DP, MP, UP

- LP : Lines Characteristics - For protection of lines

- DP : Distribution Characteristics - For standard application

- MP : Motor Characteristics - For motor and protection

- UP : Universal Characteristics - For motor and lines/distribution protection

- change to switch-disconnector



## Molded Case Circuit Breakers

Type 3VA

Rated Current  $I_n$

Rated Operational Voltage

Rated Frequency

: TM - Thermal Magnetic Trip Unit

: 11 - 160A

:  $U_e$  Max AC 690

: 50/60Hz

NEW!

IEC/EN : 60947-2

MCCB (Adjustable type)

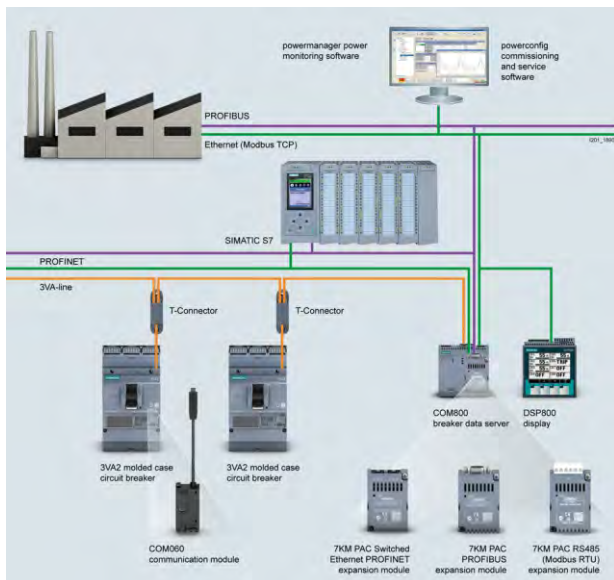




SENTRON

## 3VA Molded Case Circuit Breakers with UL Certification

## High transparency thanks to flexible communication options



The communication-capable 3VA UL molded case circuit breakers can be connected to higher-level management systems by means of various bus systems.

In addition, the Electronic Trip Unit (ETU) of the 8-series can measure current, voltage and also power and energy values and can forward the values by means of communication modules according to requirements.

Similarly, the communication of status, error and alarm messages is possible via internal auxiliary switches – for efficient operation and optimum system monitoring.

### The benefits for you

- Flexible plant adaptation to market requirements
- Ensuring quality standards in production
- Reliable engineering and commissioning
- Shorter commissioning, maintenance and service times
- Exclude expensive faulty planning right from the outset
- Reduce downtimes and rectify faults more quickly



### Knowledge Manager

Technical information about installation, parameterization or maintenance can be called up directly from the system by QR code on a smartphone.



# Air Circuit Breakers



## Standard Applications

### ACB type 3WT

ACB Fixed Mounted Versions

ACB Withdrawable Versions

## High Applications

### ACB type 3WL

ACB Fixed Mounted Versions

ACB Withdrawable Versions

## Accessories for ACB

Auxiliary Switch, Shunt Trip, Undervoltage, Motorized, etc

## Overcurrent Release

### ETU35WT :

Protection Functions LSI with LCD Display

### ETU37WT :

Protection Functions LSING with LCD Display

- Current transformer for overload protection in the neutral conductor and for ground fault protection must be ordered separately.

### ETU45WT :

Protection Functions LSIN with LCD Display and additional features

- Current transformer for overload protection in the neutral conductor and for ground fault protection must be ordered separately.

### ETU47WT :

Protection Functions LSING with LCD Display and additional features

- Current transformer for overload protection in the neutral conductor and for ground fault protection must be ordered separately.



# Measuring Devices and Power Management

## Power Meter - PAC

## Expansion Module

## Three-Phase Counter

## LAN Couplers

## Single-Phase Counter



## SENTRON PAC Power Monitoring Devices for all measuring tasks

The compact and high performance power monitoring devices SENTRON PAC detect the power values for electrical feeder or individual consumers. Furthermore, they provide



important measured values for assessing the system state and the power quality.

Thanks to their integrated communication interface as standard, these power monitoring devices represent the perfect basis for efficient power management.

### The advantage at a glance :

- Easy mounting and commissioning
- Easy operation via four function keys and plain text display
- Multiple and global applicability (IP65, multi-lingual text displays, international approvals)
- Communication capable
- Various monitoring and control functions via digital inputs and outputs
- Compact design



**SIEMENS**  
Ingenuity for life

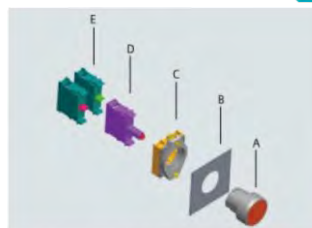
The power monitoring devices SENTRON PAC show when, where and how much energy is being used

# Safety Devices and Signalling

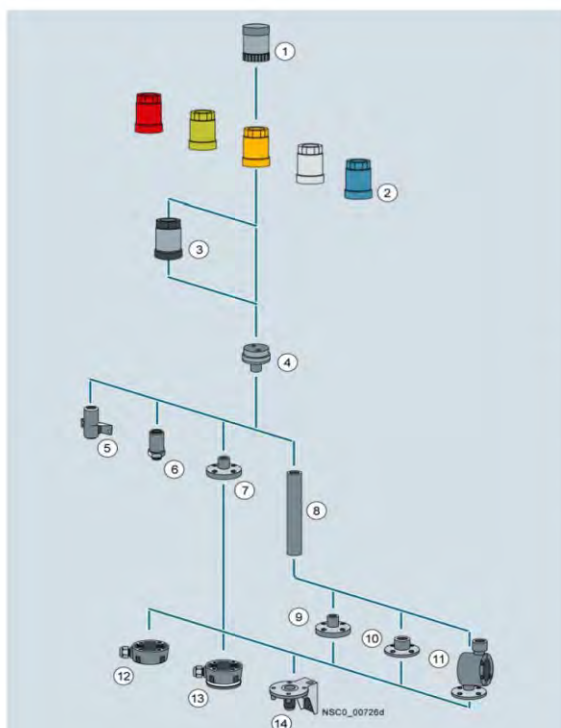
Cable Operated Switch

Signalling Columns

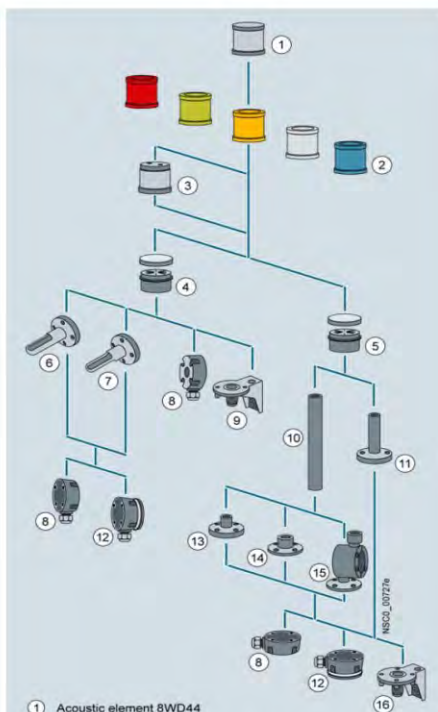
Pushbutton & Indicator Light



A: Actuator B: I



- 1 Acoustic element 8WD42.0-0FA
- 2 Light element 8WD42
- 3 AS-Interface adapter element 8WD4228-0BB
- 4 Connection element 8WD4208-0AA
- 5 Bracket for wall mounting 8WD4208-0CD
- 6 Adapter for single-hole mounting 8WD4208-0EH
- 7 Foot for mounting 8WD4208-0DE
- 8 Pipe 8WD4208-0EF/8WD4308-0E
- 9 Foot for mounting with pipe 8WD4308-0DB
- 10 Foot for mounting with pipe (> 400 mm) 8WD4308-0DC
- 11 Adjustable-angle foot for mounting on pipes 8WD4408-0DF
- 12 Socket 8WD4308-0DD
- 13 Socket (magnetic fixing) 8WD4308-0DE
- 14 Bracket for mounting with foot 8WD4408-0CC



- 1 Acoustic element 8WD44
- 2 Light element 8WD44
- 3 AS-Interface adapter element 8WD4428-0BD/8WD4428-0BE
- 4 Connection element for mounting on bracket, base and floor 8WD4408-0AB/8WD4408-0AE
- 5 Connection element for mounting on pipe 8WD4408-0AA/8WD4408-0AD
- 6 Bracket for wall mounting 8WD4308-0CA
- 7 Bracket for wall mounting (two-sided) 8WD4308-0CB
- 8 Socket 8WD4308-0DD
- 9 Bracket for base mounting 8WD4408-0CD
- 10 Pipe 8WD4208-0EF/8WD4308-0E
- 11 Foot with pipe 8WD4308-0DA
- 12 Socket (magnetic fixing) 8WD4308-0DE
- 13 Foot for mounting with pipe 8WD4308-0DB
- 14 Foot for mounting with pipe (> 400 mm) 8WD4308-0DC
- 15 Adjustable-angle foot for mounting on pipes 8WD4408-0DF
- 16 Bracket for mounting with foot 8WD4408-0CC



# HI-TECH

## FILTRATION SYSTEM SOLUTION PARTNER

- Dust Bag, Liquid/Filter Press Cloth, Cartridges
- Dust Collector, Fume Scrubber



\*Custom Made Filter Bags- Cages and Cartridges for dry & wet filtration



Liquid Filters Cartridges







Centec offer fully automated, skid-mounted process units and high precision measurement technology from a single source.

Our system and sensors are engineered to perfectly meet the most demanding requirements for your specific application

## The Company: Market Segments



### Beverage & Food

### Chemical

### Pharmaceutical

### Energy

Brewery

Soft Drink

Wine & Spirit

Dairy & Food

Chemical

Petrochemical

Electronics

Semiconductor

Pharmaceutical

Biotechnology

Power Plants

Biofuel

Automated process skids and high precision sensors. From a single source.



## Centec Measurement Instruments

Centec sensor are used in laboratory and process environments as stand-alone devices or as part of a process control system. Typical applications are measurement of :

Oxygen ( $O_2$ ) in liquids and gases

Carbon dioxide ( $CO_2$ ) in liquids

Density, sound velocity & concentration (e.g. alcohol, Brix, Plato, vol. %, mass %)



### High Precision Sensors: Overview

#### Name of Sensor

OXYTRANS

CARBOTEC

RHOTEC

SONATEC

#### Measured Parameter

$O_2$  Concentration  
& Temperature

$CO_2$  Concentration  
& Temperature

Density &  
Temperature

Sound Velocity &  
Temperature

#### Determined Parameter

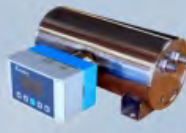
$O_2$  Concentration

$CO_2$  Concentration

Concentration

Concentration

#### Illustration of Sensor

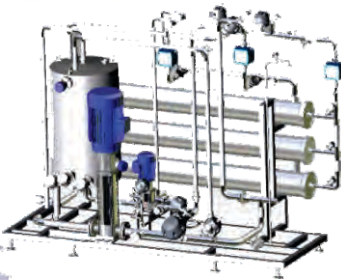
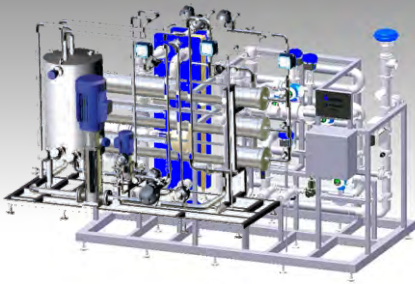




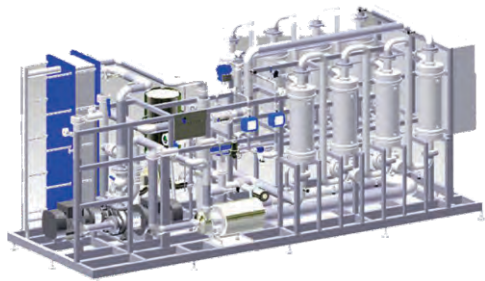
## Centec Process System

Centec skids are customized to greatest extent possible. They are used in beverage and food industries throughout the entire manufacturing process. We are leading supplier of technologies for water purification and for water deaeration in most various fields.

- Water Pre-Treatment
- Water Softening & Disinfection
- Reverse Osmosis (RO)
- WFI Distillation
- Pure steam Generation
- Water & Product Deaeration
- Wort Cooling & Wort Aeration



- Yeast Pitching & Yeast Propagation -
- Carbonation & Nitrogenation -
- High Gravity Blending & Carboblending -
- Multi Component Mixing -
- Additive Dosing -
- Pasteurization -
- Cleaning-in-Place (CIP) -
- Valve Manifolds, Tank & Vessel -



## Our REFERENCES - MECHANICAL ERECTION :

1. MECHANICAL ERECTION ALL BUHLER EQUIPMENTS OF MILL C -D AT  
PT. WILMAR NABATI (FLOUR MILL) – GRESIK – EAST JAVA  
START : MID AUGUST 2020  
STATUS : WAITING FOR TESTING & COMMISIONING





## Our REFERENCES - MECHANICAL ERECTION :

2.MECHANICAL ERECTION SYMAGA SILO AT  
PT. BUYUNG PUTRA PANGAN – TANJUNG API API  
BANYUASIN – SOUTH SUMATERA  
START : NOVEMBER 2020  
STATUS : FINISH



## Our REFERENCES - MECHANICAL ERECTION :

3. MECHANICAL & ELECTRICAL ERECTION SYMAGA SILO AT  
PT. NUTRINDO BOGARASA – MAYORA GROUP – CILEGON – BANTEN  
START : MID JANUARI 2021  
STATUS : ON PROGRESS





# Our REFERENCES

COCA-COLA  BOTTLING  
INDONESIA

 AJE

PT. INDOLAKTO



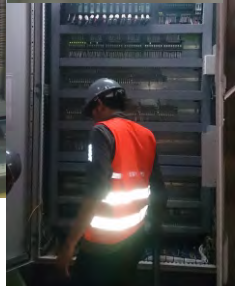
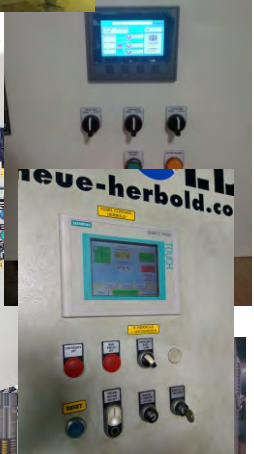
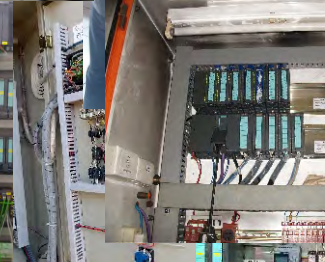
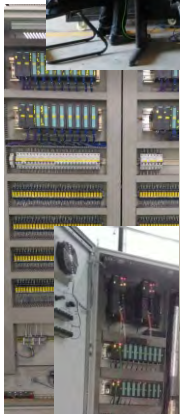
Indofood  
LAMBAUNG MAKANAN BERMUTU



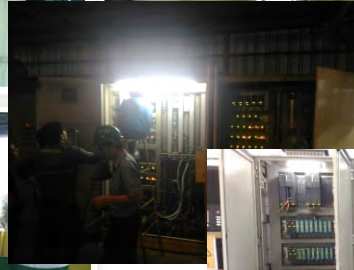
INDONESIA  
POWER



KALBE







PT WIJAYA KARYA (Persero) Tbk

Bakrie Pipe Industries

KRAKATAU

MEDCOENERGI

PT. MECO INOXPRIMA



SETIEN INDONESIA LOGISTIK



INDORAMA



SOUTH PACIFIC VISCOSE



ORGANICA

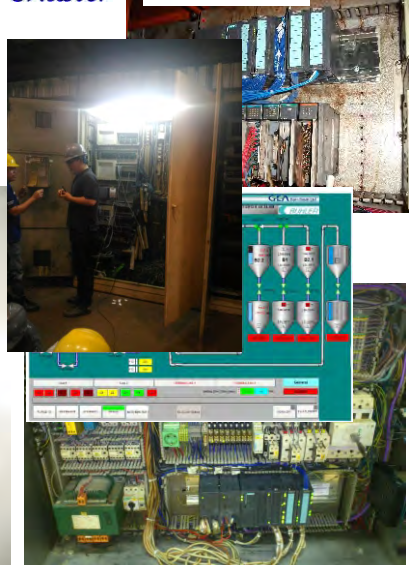
BKP



Unilever



RAPP







Our Location :

