

MICROMASTER 4th *Generation*



Presentation structure

Technical features



FS A

FS B

FS C



Supplementary presentations:

- Quality measures
- Reference applications
- Application examples
- Performance comparison
- Prices and discounts
- Tools and service

Products at a glance

Hardware features

Software features

New parameter structure

Standard display

Options

PROFIBUS

Software tools

MICROMASTER 420 - an overview



FS A

FS B

FS C



- CE, UL, CUL and c-tick certified
- Degree of protection IP20/NEMA 1
- Integrated/sub-chassis filter (A, B)
- Easily accessible and color-coded termination technology
- Frame sizes A, B, C
- Output up to 11kW
- FCC closed loop control
- 3 DI (Digital Input), 1 AI (Analog Input), 1 DO (Digital Output, relay), 1 AO (Analog Output)
- 150% Irated overload capability for 60 s within 5 min
- Integrated PI controller [US: Regulator]
- Output frequency 0 - 650Hz
- DC current and compound braking
- Operating temperature -10°C to 50°C
- BiCo technology for internal interconnection

MICROMASTER 440 - an overview



- CE, UL, CUL and c-tick certified
- Degree of protection IP20/NEMA 1
- Integrated/sub-chassis filter (A, B)
- Easily accessible and color-coded termination technology
- Frame sizes A, B, C, D, E, F
- Output up to 200 kW (CT) or 250 kW (VT)
- Vector Control (no encoder)
- 6 DI, 2 AI, 3 DO (relay), 2 AO
- Integrated braking chopper
- Overload capability for CT rating: 200% I_{rated} for 3 s, 150% for 60 s within 5 min
- Integrated high quality PID controller [US: Regulator], (auto-tuning)
- Output frequency 0 - 650Hz
- DC current and compound braking
- Operating temperature -10°C to 50°C
- BiCo – technology for internal interconnection

MM440 and MM420 - The essential differences



- **Frame sizes, voltages and output**
 - ➔ MM440 is also available in frame size D (>11kW)
 - ➔ MM440 is also available in the voltage range 3-ph. 500V..600V AC
- **Overload capability**
 - ➔ MM440 can be additionally loaded, within the load duty cycle (CT) for 3 s up to 200%
- **I/O**
 - ➔ MM440 has twice as many I/O as the MM420 (and 3 relay outputs instead of one)
 - ➔ MM440 provides more flexible analog inputs - a load switch can be activated for a current input using a DIP switch, an input can be configured as bipolar input (-10 V ..0 V.. +10 V)
- **Closed-loop control**
 - ➔ MM440 has high-quality vector control
 - ➔ MM440 has three drive data sets which can be toggled between
- **Braking**
 - ➔ MM440 has an integrated braking chopper - thus permitting shorter deceleration times
- **Freely-assignable PID controller [US: Regulator]**
 - ➔ Instead of a PI controller, the MM440 has a PID controller with Autotuning

MICROMASTER 420/440 Comparison to MM3



- Same mounting dimensions as frame sizes A, B, C
- Frame sizes D, E, F significantly more compact than MIDIMASTER 5, 6, 7
- The same terminal designation for the power connections
- The same terminal designation for control signals (additional analog output and terminals for RS485 port), for MM440, new logic from the sixth digital input due to expanded functionality
- Frame size A, 8mm deeper
- Removable BOP (Basic Operator Panel) replaces the integrated MM3 operator panel, AOP (Advanced Operator Panel) with the same size replaces the OPm2
- Stand-alone tools: DRIVE MONITOR (SIMOVIS), under WinNT also STARTER
- DRIVE ES Engineering System
- **New parameter structure – standardized for all future generations of SIEMENS drive inverters**

MICROMASTER 420/440

Voltage and output range



MICROMASTER 420

	200 V - 240 V ± 10%	380 V - 480 V ± 10%	500 V - 600 V ± 10%
FS A	0.12 kW - 0.75 kW	0.37 kW - 1.5 kW	-
FS B	1.1 kW - 2.2 kW	2.2 kW - 4.0 kW	-
FS C	3.0 kW - 5.5 kW up to 3kW, also 1-ph.230AC	5.5 kW - 11.0 kW	0.75 kW - 11.0 kW
FS D	7.5 kW - 11.0 kW	15.0 kW - 22.0 kW	15.0 kW - 22.0 kW
FS E	15.0 kW - 22.0 kW	30.0 kW - 37.0 kW	30.0 kW - 37.0 kW
FS F	30.0 kW - 45.0 kW	45.0 kW - 75.0 kW	45.0 kW - 75.0 kW

MICROMASTER 440

* VT ratings available from FSC

MICROMASTER 420/440

Filter overview



Drive inverter ...	200 V - 240 V ± 10%	380 V - 480 V ± 10%	500 V - 600 V ± 10%
... without internal filter	0.12 kW - 5.5 kW	0.37 kW - 11.0 kW	
	0.12 kW - 45.0 kW	0.37 kW - 75.0 kW	0.75 kW - 75.0 kW
... without internal filter plus EMC filter, Class A	0.12 kW - 2.2 kW	0.37 kW - 1.5 kW	
	0.12 kW - 2.2 kW	0.37 kW - 1.5 kW	
... with internal EMC filter, Class A	0.12 kW - 5.5 kW	2.2 kW - 11.0 kW	-
	0.12 kW - 5.5 kW	2.2 kW - 75.0 kW	
... without internal filter plus EMC filter, Class B	0.12 kW - 2.2 kW	0.37 kW - 1.5 kW	
	0.12 kW - 2.2 kW	0.37 kW - 1.5 kW	
... with internal filter, Class A plus additional EMC filter, class B	0.12 kW - 5.5 kW	2.2 kW - 11.0 kW	
	0.12 kW - 5.5 kW	2.2 kW - 75.0 kW	
... without internal filter, plus EMC filter, Class B with lower discharge currents	0.12 kW - 2.2 kW		
	0.12 kW - 2.2 kW		

MICROMASTER 420

MICROMASTER 440

Please observe the color coding in the table

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Frame sizes A to F



Frame sizes A to F
120 W ... 200 kW



MICROMASTER 4 – high lights

- MICROMASTER 4 in FS C has an output range up to 11 KW
- Extended voltage range 500 V..600 V +/-10%, all of the ranges are now standardized for all Siemens drive inverters
- Simpler and faster installation using spring-loaded terminal system and clearly structured terminal arrangement
- Shield connection plate to connect the cable shield (or NEMA cable glands) – already included for frame sizes D, E, F as standard - available as options from frame sizes A, B, C
- Fast inputs with reproducible response time (On: 9ms +/- 3ms; Off: 6ms +/- 2ms)
- MM440 has three integrated drive data sets which can be toggled between - independent of the AOP
- Up to 10 different parameter sets with the AOP can be stored and downloaded
- The *PROFIDrive* profile Version 3.0 is supported - this also means that the new PNO concepts for visualization and web integration are also supported (OPC server)
- PROFIBUS module with external 24V power supply - also for the control board
- Complete series of sub-chassis options: Input and output reactors and EMC filters (if these are not already integrated in the drive unit).

MICROMASTER 420/440

Hardware feature



MICROMASTER 420 and 440	
λ	Rugged EMC characteristics Metal rear panel
λ	Can be operated on IT line supplies The noise suppression capacitors can be disconnected (Y capacitors)
λ	New current actual value sensing Optimum drive inverter and motor protection (i ² t) MM440: High-precision current actual value sensing using a Sigma Delta CT
λ	Power terminals can be simply connected-up Power terminals are accessible from the front and clearly labeled Easy to connect-up, even when the drive unit is in an unfavorable position

MICROMASTER

Hardware features – I/O

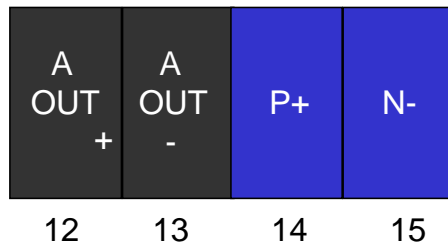


MICROMASTER 420	MICROMASTER 440
<p align="center">Multi-color, screwless control terminals Designated according to the functionality, permits error-free wiring</p>	
<p>1 output relay Can be directly connected to 230V line sup.</p>	<p>3 output relays Can be directly connected to 230V line supply</p>
<p>1 analog output 0 - 20mA Variable, parameter and scalable</p>	<p>2 analog outputs 0 - 20mA Variable, parameter and scalable</p>
<p>3 floating and switchable npn/pnp digital inputs Active high/Active low for compatibility to PLC control systems</p>	<p>6 floating and switchable npn/pnp digital inputs Active high/Active low for compatibility to PLC control systems</p>
<p>1 analog input (or 4th digital input) 0 – 10V, 0 – 20mA with ext. load resistor Variable, parameter and scalable</p>	<p>2 analog inputs (or 7th/8th digital input) Variable, parameter and scalable</p>
	<p>Input for PTC PTC, KTY84 and KTY83 evaluation is supported</p>

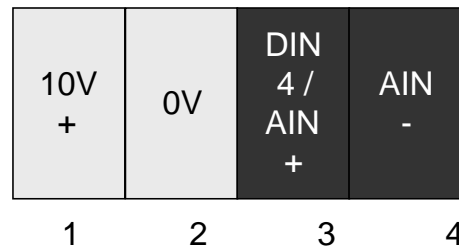
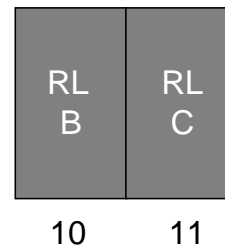
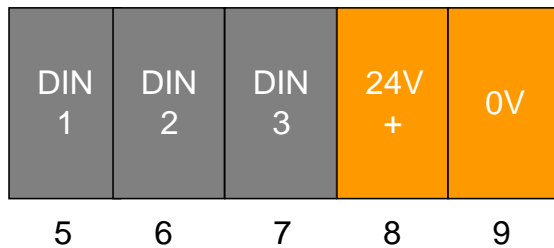
MICROMASTER 420

Hardware features – control connections

MICROMASTER 420 I/O terminal layout



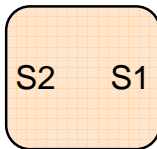
Colour coding helps when connecting-up the unit



MICROMASTER 440

Hardware features – control connections

MICROMASTER 440 I/O board can be removed



DIP switch for changeover:
0..20mA or [-10V..] 0V.. +10V

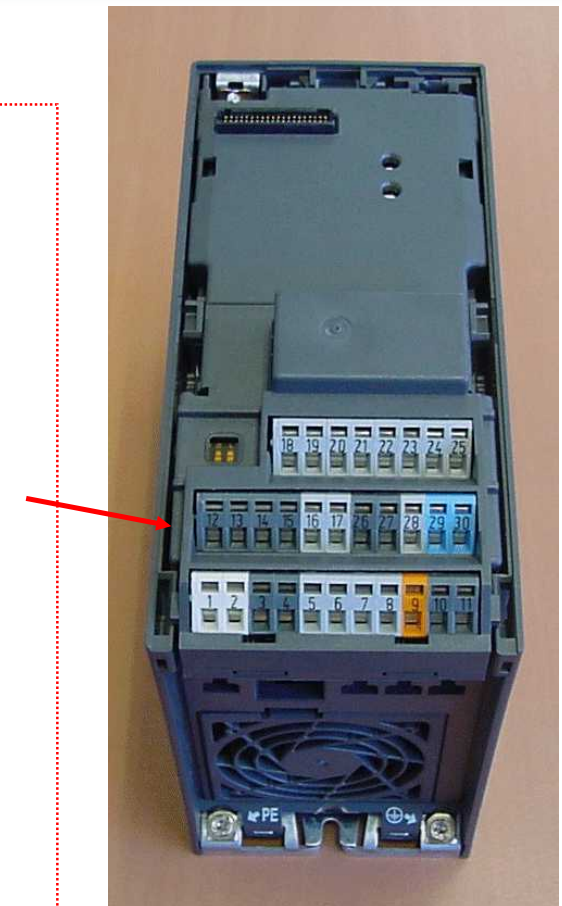
RL1 NC	RL1 NO	RL1 COM	RL2 NO	RL2 COM	RL3 NC	RL3 NO	RL3 COM
18	19	20	21	22	23	24	25

AOUT 1P	AOUT 1N	PTC A	PTC B	DIG IN5	DIG IN6	AOUT 2P	AOUT 2N	Isol 0V	P+	N-
12	13	14	15	16	17	26	27	28	29	30

(DIG IN7)

(DIG IN8)

+10V	0 V	AIN 1P	AIN 1N	DIG IN1	DIG IN2	DIG IN3	DIG IN4	Isol +24V	AIN 2P	AIN 2N
1	2	3	4	5	6	7	8	9	10	11



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Hardware features – power connections (1)



Frame size A

L3
L2
N
L1
L

	NC	NC
	DC+	DC-
U	V	W

PE connections

MICROMASTER 420

Hardware features – power connections (2)



L3
L2
N
L1
L

PE connections

Frame size B

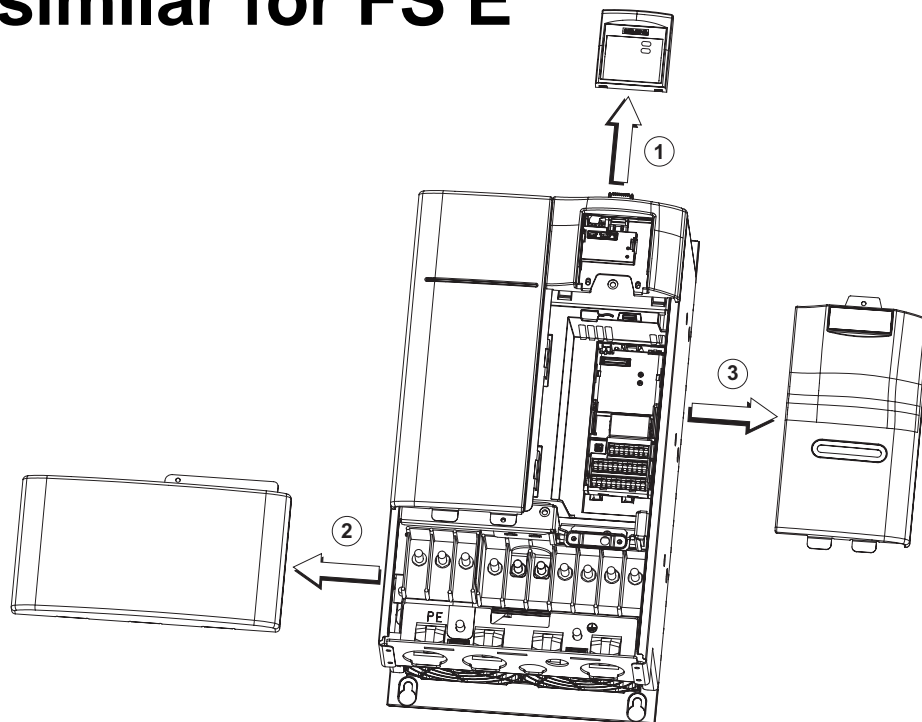
Similar for FS C

DC-	DC+	NC	NC	U	V	W
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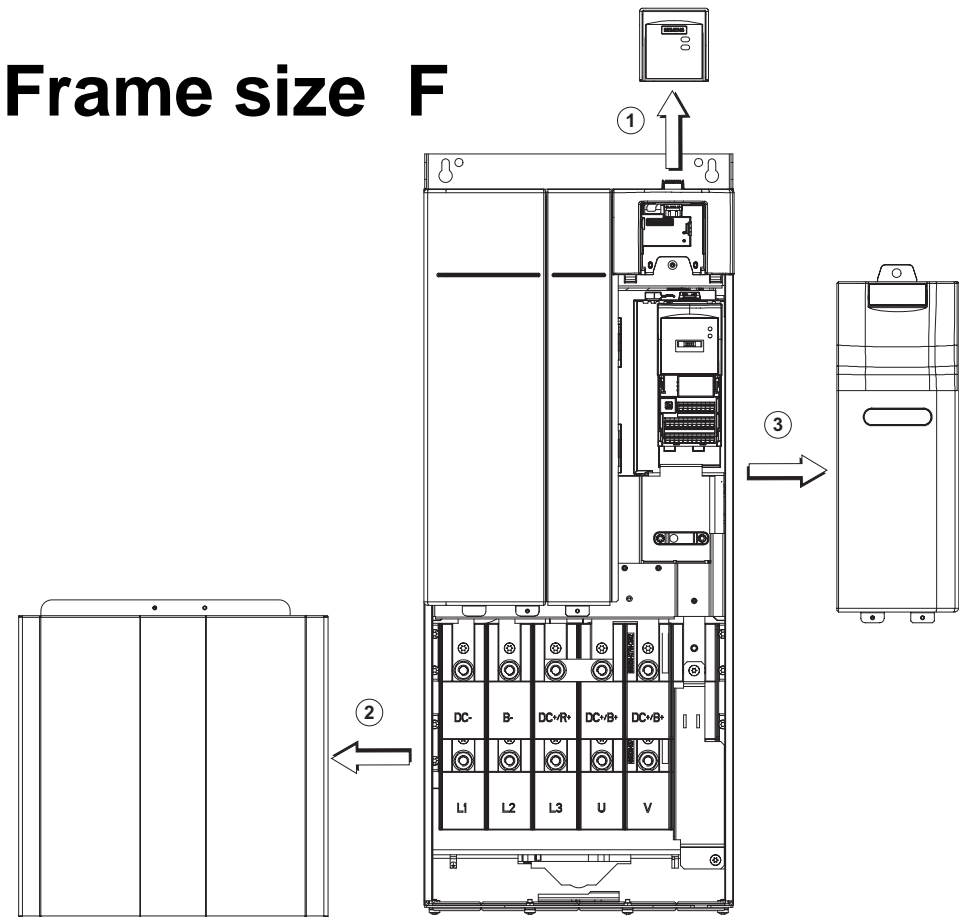
MICROMASTER 440

Hardware features – power connections (3)

Frame size D,
similar for FS E



Frame size F



MICROMASTER 420

Software features



- **Fast, reproducible inputs**
Can be used for basic positioning tasks
- **FCC closed-loop control**
High torque, even at low frequencies
- **Analog input (0 - 10 V)**
Can be used as 4th binary input
- **Profibus interface and operator interface can be used at the same time**
Local parameterization and diagnostics capability
- **BiCo technology**
Flexible configuring of inputs/outputs
- **Selectable up/down ramps**
e.g. to optimize traversing characteristics
- **4-point ramp rounding-off**
To reduce the stressing on mechanical systems
- **Multi-point V/Hz characteristic**
Load characteristic adaptation - this allows synchronous motors to also be used

MICROMASTER 440

Software feature *in addition to those of MM420*

- **3 drive data sets integrated in the drive inverter which can be toggled between (also available without OP)**
allows the motor to be changed-over, set point channel changeover which means, e.g. one drive inverter can be used for two alternative processes.
- **Fast braking - supported by the integrated braking chopper**
Resistor braking permits the shortest braking ramps and avoids motor losses
- **Two analog inputs**
Configurable as unipolar voltage input, one input also as bipolar input (-10 V ..0.. +10 V);
Can be configured as unipolar current input with integrated load resistor;
Can also be used as 7th or 8th digital input
- **PID controller [US: Regulator] with autotuning**
To control [US: regulate] e.g. temperature, pressure or velocity with the lowest associated commissioning costs
- **Even more detailed status information and integrated message functions**
Technology support using message functions such as limit value violations (e.g. result after comparing the torque with a parameter), or providing comprehensive status information (read parameters r)

MICROMASTER 440

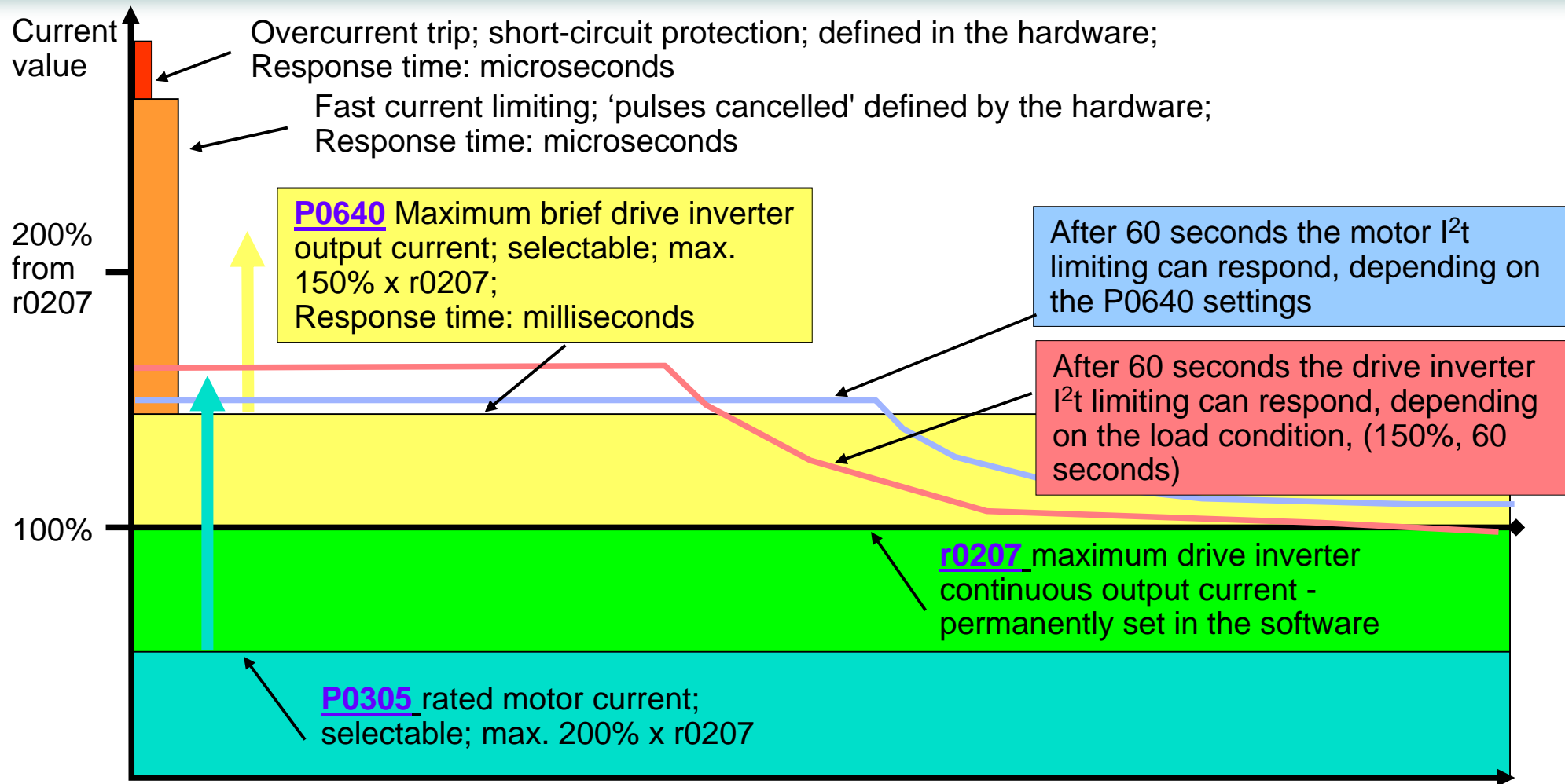
Vector control



- **Output frequency**
No with an output frequency up to 200 Hz (for V/Hz operation up to 650 Hz)
- **Complete motor model with flux monitor**
Optimum torque, even at frequencies < 2 Hz and when reversing
- **Motor identification routine**
Reliable closed-loop control operation [US: Regulation] by identifying all of the motor resistances
- **“Closed-loop torque control” mode [US: Torque regulation]**
allows e.g. master and slave drives to be implemented (load sharing)
- **Improved dynamic response in the control and noise behavior**
The sampling time has been halved which allows shorter rise and settling times, and more stable control loops and results in an output frequency of 200 Hz in the VC control mode

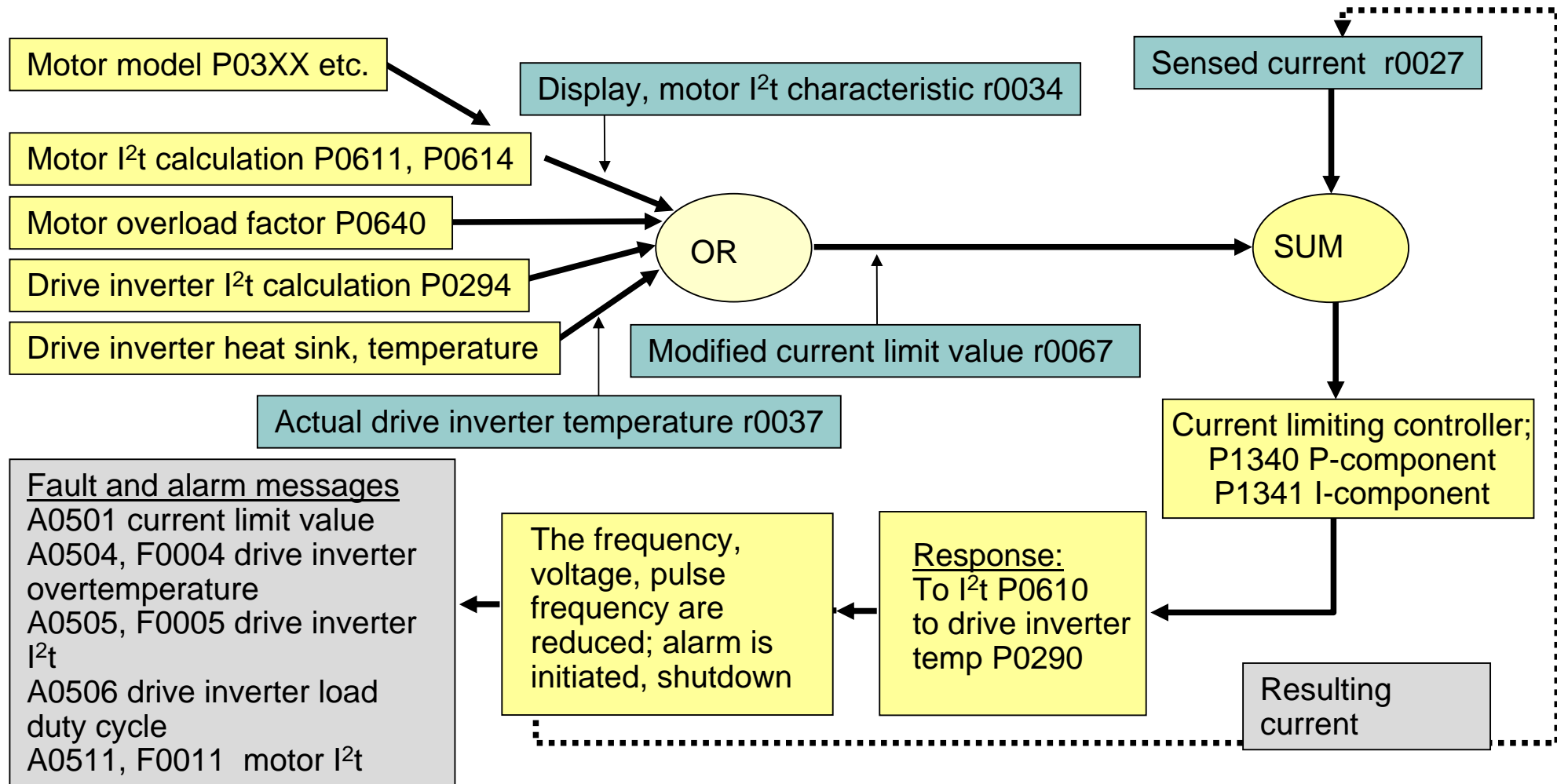
MICROMASTER 420

Mode of operation, current limits [1]



MICROMASTER 420

Motor of operation current limit [2]



MICROMASTER 4

Standard parameterization for all drives

The goals

- The parameter structure of the drives has been standardized
- All A&D drives have a standardized parameter structure
- In the future, MICROMASTER and MASTERDRIVES will have the same parameter sets
- Standard parameter sets reduce commissioning and service times and therefore provide clear customer benefits when using Siemens drives for all application requirements

The solution

- The parameter settings must be re-structured to achieve these goals!
- MM4 parameters are completely different than MM3 parameters
- For all Siemens drive inverters, in the future, this parameter structure will be used
- “Read-only parameters” are now designated with an **r** instead of a **P**
- All of the parameter numbers have been changed. The parameters are grouped together for simple access, e.g. the PI control parameters are included in P2200 to P2300

MICROMASTER 4

New parameter structure – overview

- **Parameter structure - user-related**
 - ➔ Structured parameter set
Fast and simple commissioning, sub-divided into 4 access stages (for the user)
- **Parameter structure - technology-related**
 - ➔ Parameter grouping
 - Simple-to-handle, parameters can be quickly found and set
 - Technology-related
- **Fast commissioning mode**
 - ➔ In the standard (factory setting), only 17 (for MM420) or 21 (for MM440) selected parameters are visible, which are used for fast commissioning

MICROMASTER 4

The parameter structure - user-related



- The parameters can be grouped user-related (access stages)
- The user groups can be simply selected via parameter P0003
- The appropriate user view only shows the parameters which are actually required, e.g. “Standard”, “Expert”, etc.
- The user can only see those parameters which are accessible corresponding to the access stage

0 User parameter list

____ Defined by the OEM, optimized for the end customer__

1 Standard (factory setting)

____ Only the most important 17 parameters (in Getting Started)__

2 Extended

Detailed setting of the I/O functionality (Instruction Manual)
Parameters have a similar functionality as for MM3

3 Experts

The complete functional scope can be used (in the Reference Manual)

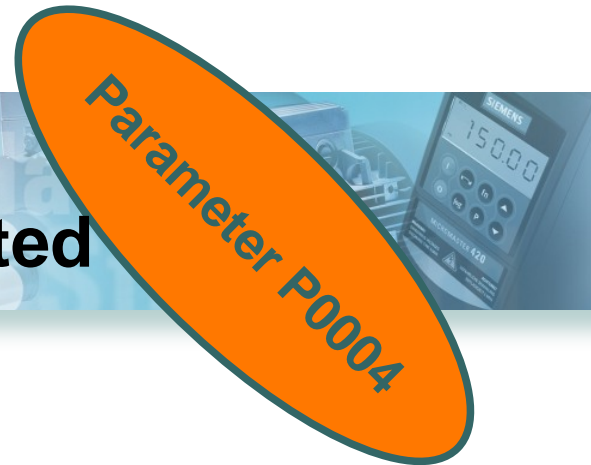
4 Service

Only for authorized service and factory use

Parameter structure
user-related,
selected via
parameter P0003

MICROMASTER 4

The parameter structure - technology-related



- The parameters are grouped together as a function of the technology
- The technology groups can be simply selected using parameter P0004
- When the appropriate technology is selected, only those parameters which are in this case required are listed, e.g. “motor data”, “communications”, etc.
- The user only sees those which he wishes to presently optimize at the machine
 - 0 All parameters
 - 2 Drive inverter data
 - 3 Motor data
 - 7 Control commands and digital I/O
 - 8 Analog I/O
 - 10 Set point channel and ramp-function generator
 - 12 Drive inverter functions
 - 13 Motor control (open-loop)
 - 20 Communications
 - 21 Fault messages, alarms, and monitoring functions
 - 22 PI control [US: Regulation]



*Parameter structure
technology-related;
selected via
parameter P0004
using as an example
the MICROMASTER 420*

MICROMASTER 420

New parameter structure - Fast commissioning

<p>P0010 start Fast commissioning 0 = Ready 1 = Fast commissioning 30 = Factory setting (default) Please note, that P0010 must always be reset to '0' before commissioning the motor. If P3900 is set to 1 after commissioning, then this is realized automatically</p>	<p>P0310 *rated motor frequency 12 – 650 Hz Rated motor frequency (Hz) from the rating plate</p>	<p>P1082 max. motor frequency Sets the max. motor frequency (0-650Hz) with which the motors independent of the frequency setpoint. The value set here applies to both directions of rotation</p>
	<p>P0311 *rated motor speed 0 – 40000 RPM Rated motor speed (RPM) from the rating plate</p>	<p>P1120 ramp-up time 0 – 650 s Time to accelerate from standstill up to the max. motor frequency</p>
	<p>P0700 select the command sources (ON / OFF / direction of rotation reversal) 0 = Factory setting 1 = Basic operator panel 2 = Terminals</p>	<p>P1121 ramp down time 0 – 650 s Time to decelerate from the max. motor frequency down to standstill</p>
	<p>P1000 select the frequency setpoint 0 = No frequency setpoint 1 = BOP frequency control (open-loop) 2 = Analog setpoint 3 = Fixed frequency setpoint</p>	<p>P3900 end fast start-up 0 = end, fast commissioning without motor calculation nor reset to the factory defaults 1 = end, fast commissioning with motor calculation and reset to the factory setting (recommended) 2 = end, fast commissioning with resetting parameters and I/O 3 = end, fast commissioning with I/O reset</p>
	<p>P1082 min. motor frequency Sets the minimum motor frequency (0-650Hz) with which the motor runs independent of the frequency setpoint. The value set here applies to both directions of rotation.</p>	
	<p>P0304 *rated motor voltage 10 – 2000 V Rated motor voltage (V) from the rating plate</p>	<p>RESET with P0010 & P0970 When resetting the drive inverter, P0010 must be set to 30 (factory setting). P0970 can then be set to '1'</p>
<p>P0305 *rated motor current 0 – 2 x rated drive inverter current (A) Rated motor current (A) from the rating plate</p>		
<p>P0307 *rated motor output 0 – 2000 kW Rated motor output (kW) from the rating plate. For P0100 = 1, the values are in hp</p>		

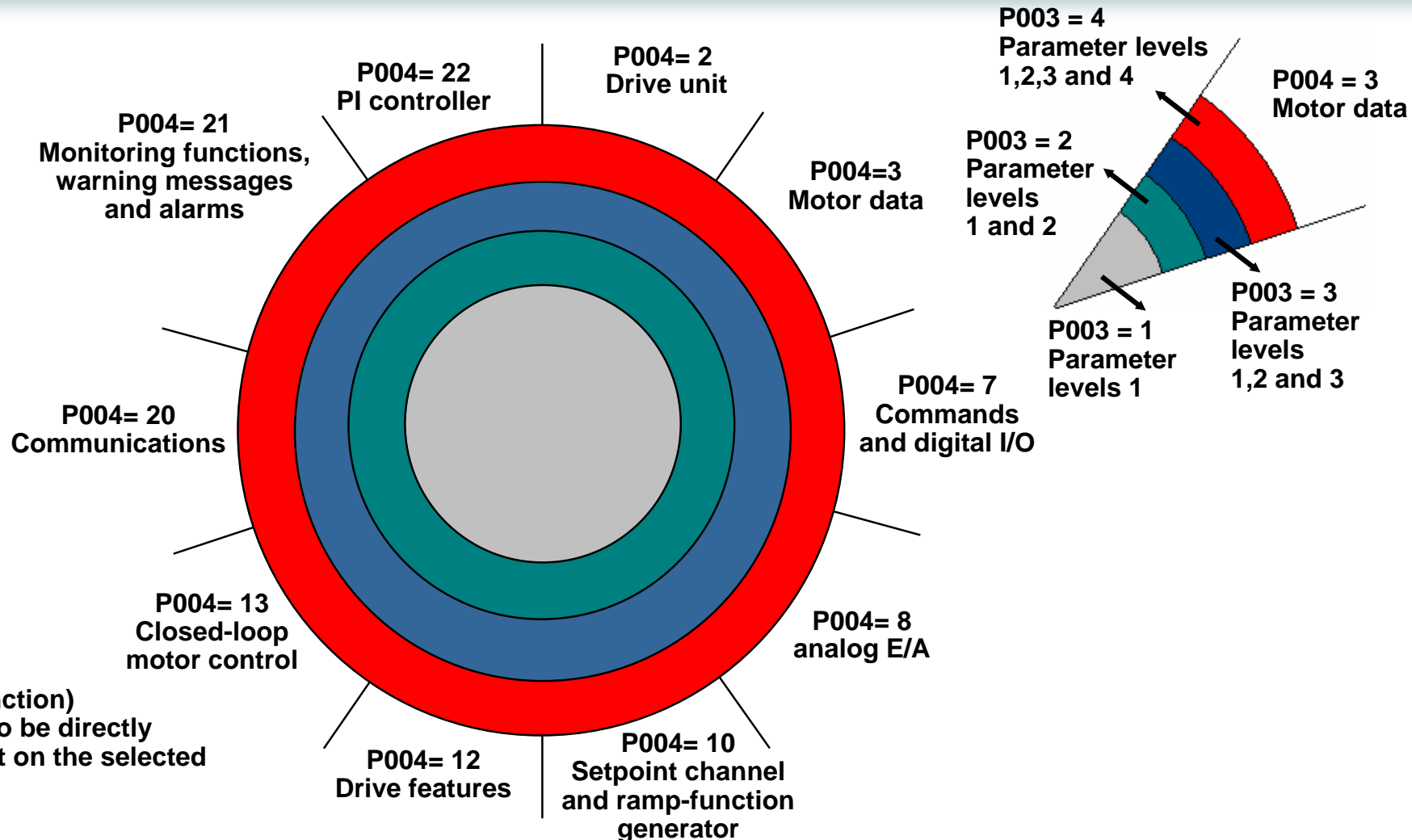
MICROMASTER 4 – new parameter structure – parameter model using as an example, MICROMASTER 420

P003=1 Standard

P003=2 Extended

P003=3 Expert

P003=4 Service



SIEMENS

MICROMASTER 4 Status Display Panel (SDP)



- Unit shipped ex-factory with SDP
- Status display of the drive unit with green and yellow LEDs
- I/Os with pre-defined function
- Parameters with pre-defined function (*can be toggled between kW and HP mode*)
- Basic operator panel or plain text operator panel can be separately ordered

The OEM can completely re-parameterise the drive using the BOP, AOP or PC, and then shipped to end customers with SDP

MICROMASTER 420 SDP LED status



Green

- DARK
- DARK
- BRIGHT
- BRIGHT
- DARK
- Flashing - R1
- Flashing - R1
- BRIGHT
- Flashing - R1
- Flashing - R1
- Flashing - R1
- Flashing - R1
- Flashing - R2
- Flashing - R2
- Flashing - R2

Yellow

- DARK
- BRIGHT
- DARK
- BRIGHT
- Flashing - R1
- DARK
- BRIGHT
- Flashing - R1
- Flashing - R1
- Flashing - R1
- Flashing - R2
- Flashing - R1
- Flashing - R2
- Flashing - R2

Status definition

- No line supply voltage
- Drive unit fault (refer below)
- Drive running
- Ready, pulse inhibit active
- Overcurrent fault
- Overvoltage fault
- Motor overtemperature fault
- Drive unit overtemperature fault
- Current limit reached
- Other warnings/alarms (*)
- Undervoltage
- Drive not ready
- ROM fault
- RAM fault (*)

R1: Slow flashing
 R2: Fast flashing
 (*): Both LEDs flash alternating

MICROMASTER 4 Options



- Basic and Advanced Operator Panel (BOP, AOP)
- Mounting and connection kits
- Shield connection plates
- Filter, Classes A and B and a version for low discharge currents
- Input and output reactors
- PROFIBUS module
- Software tools

MICROMASTER 4 Options – Basic Operator Panel (BOP)

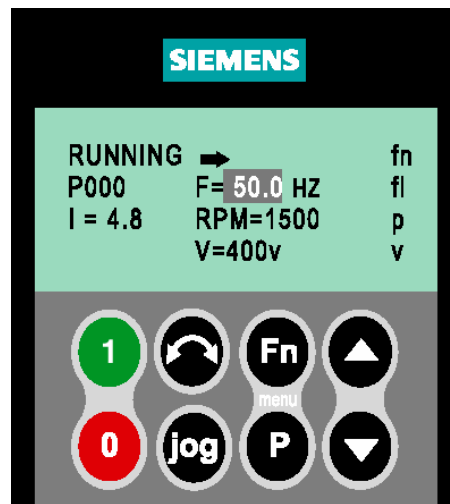


Fn: Fast function selection as well as fault acknowledgment

- Can be plugged-in instead of the status display panel
- All of the parameters can be accessed
- LCD status display with 5-character, 7-segment display and symbols for units (Hz, RPM, V, A, kWh)
- Door mounting kit available

MICROMASTER 4

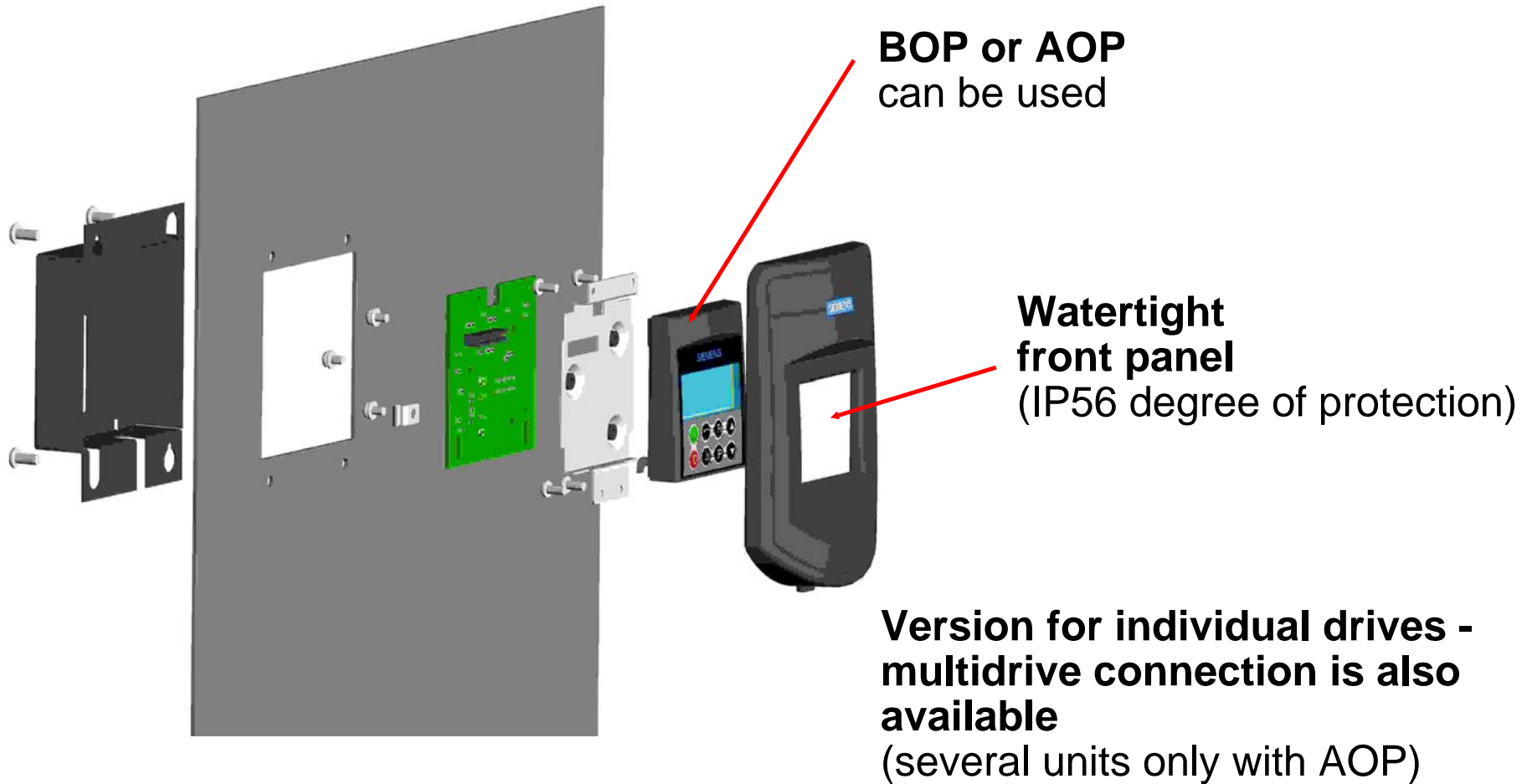
Options – Advanced Operator Panel (AOP)



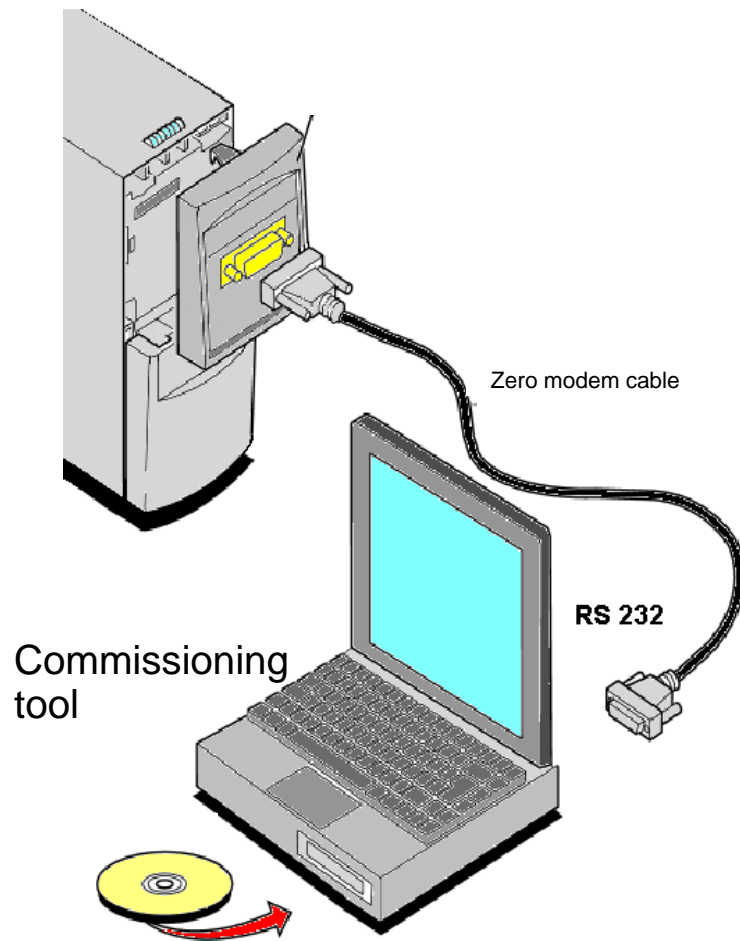
- Can be plugged-in instead of the status display panel
- 4x24 plain text display
- Multi-language
- Parameter sets can be downloaded and uploaded from the drive
- Up to 10 parameter sets can be saved in the AOP
- Parameter sets can be copied between various drives
- Real-time clock
- Door mounting kit available

MICROMASTER 4

Options – door mounting kit



MICROMASTER 4 Options – PC connection kit



- **Electrically isolated RS232 connection**
via 9-pin sub-D connector
(standard PC connection)
- **USS protocol**
- **DRIVE MONITOR (SIMOVIS, also for MM420)**
or
STARTER
for user-friendly parameter setting
via the PC
- **Standard cable can be used**
(zero modem)

MICROMASTER 4

Options – PC AOP connection set



The Advanced Operator Panel is used here

Connection to the PC via RS232 standard interface to program the AOP in the office

Power supply and connecting cable included in the scope of supply

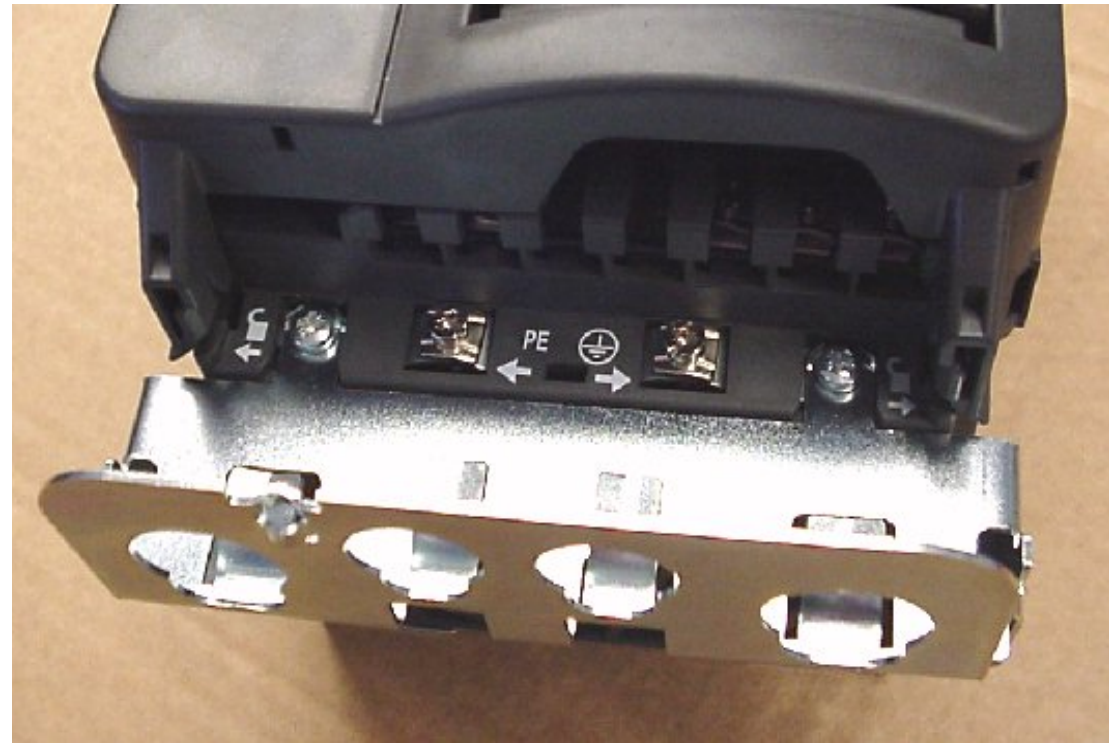
SIEMENS

MICROMASTER 4

Options - shield connecting plates



Shield connecting plate for FSB



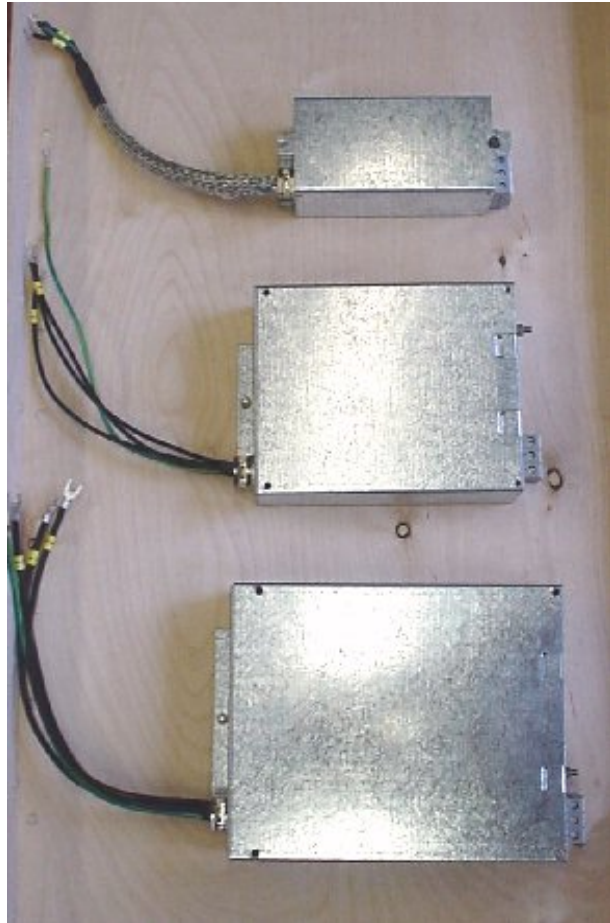
Shield connecting plate without cover

MICROMASTER 4 (frame sizes A and B) Options – filters, Classes A and B



- **Sub-chassis filter, Class A**
(for 3-ph. 400V AC FS A
and 3-ph. 230V AC FS A / FS B)
- **Supplementary filter, Class B**
(for drive inverters with integrated filter A)
- **Filter Class B with low discharge currents**
(for drive inverters without integrated filter)

MICROMASTER 4 (frame size A, B and C) Options – input and output reactors



- **Input reactors - sub-chassis type**
(for line supplies with a low impedance and high fault rating)
- **Output reactors - sub-chassis type**
(for especially long cables > 50m shielded, 100m non-shielded)

SIEMENS

MICROMASTER 4 Options – PROFIBUS module [1]



SDP, BOP or AOP

PROFIBUS module

**MICROMASTER 420
unit, example FS A**

**SUB-D plug connector
for PROFIBUS connection**

MICROMASTER 4

Options – PROFIBUS- module [2]



Grounding point

40-pin connector to the BOP / AOP

Rating plate

PROFIBUS connection

Can be used in all enclosure sizes from MM420 and MM440

Drive unit status LEDs

PROFIBUS address switch

BUS status LED

External V24 supply

MICROMASTER 4

Features of the PROFIBUS- module (1)



- **Supports the *PROF*Drive profile V3.0 (& V2.0)**
 - Drives are therefore open and standardized !
 - Now with parameter channel (non-cyclic access to parameters and diagnostic data) and slave-to-slave communications
 - Prerequisite for new PNO concepts for visualization and web integration (OPC server)
- **Fully integrated into TIA**
 - Drive ES with STARTER integrates MICROMASTER 4 into the SIMATIC Engineering STEP7
 - Drive ES SIMATIC 5.1 includes standard FBs for simple integration into the control program + integration into the drive profile, HW catalog (HW configuration)
 - SIMOTION integration from July 2001

MICROMASTER 4

Features of the PROFIBUS module (2)



- **Routing-capability**

The drive inverter can be accessed from all levels of the Ethernet & PROFIBUS network hierarchy; MICROMASTER 4 drive inverters are the connection end point

- **Improved performance over MICROMASTER 3**

PZD data transfer faster by a factor of between 3 and 4 (approx. 20 ms),
PKW in 50 ms

- **Supports slave-to-slave communications**

Halves the bus loading for communications to other PROFIBUS slaves
Prerequisite is a PROFIBUS master which supports this function (e.g. S7-CPU*)

- **GSD file SIEM80B5.GSD**

From SIMATIC STEP7 V5.2, the GSD file is integrated,
up until then, it must be imported on a case-for-case basis

* **Tip:** In the catalog, S7-CPU's which are capable of slave-to-slave communications are designated with "isochroous operation"

MICROMASTER 4

Software tools - an overview



- **Engineering tool**

- ➔ DRIVE ES

- Drives are integrated into the automation environment of SIEMENS (TIA) based on STARTER

- **Commissioning tools**

- ➔ STARTER (only from Win NT 4) / DRIVE MONITOR (SIMOVIS)
“Stand-alone” system environment

- The drives are controlled and parameterized via a PC

- **Pre-sales tools**

- ➔ SELECTOR - selection help

- ➔ MASTERSAVE - calculation program for energy saving

- ➔ HARMAC - program for calculating harmonics fed back into the line supply

MICROMASTER 4 commissioning/tools STARTER & DRIVE MONITOR for stand-alone use

Tools, free-of-charge
(on the new documentation CD):



USS

STARTER*)

- Goal: Extremely simply commissioning**
- Prompted, fast commissioning
 - Technological / graphic parameter view
 - Expert view (from 03'01)
 - Offline mode planned

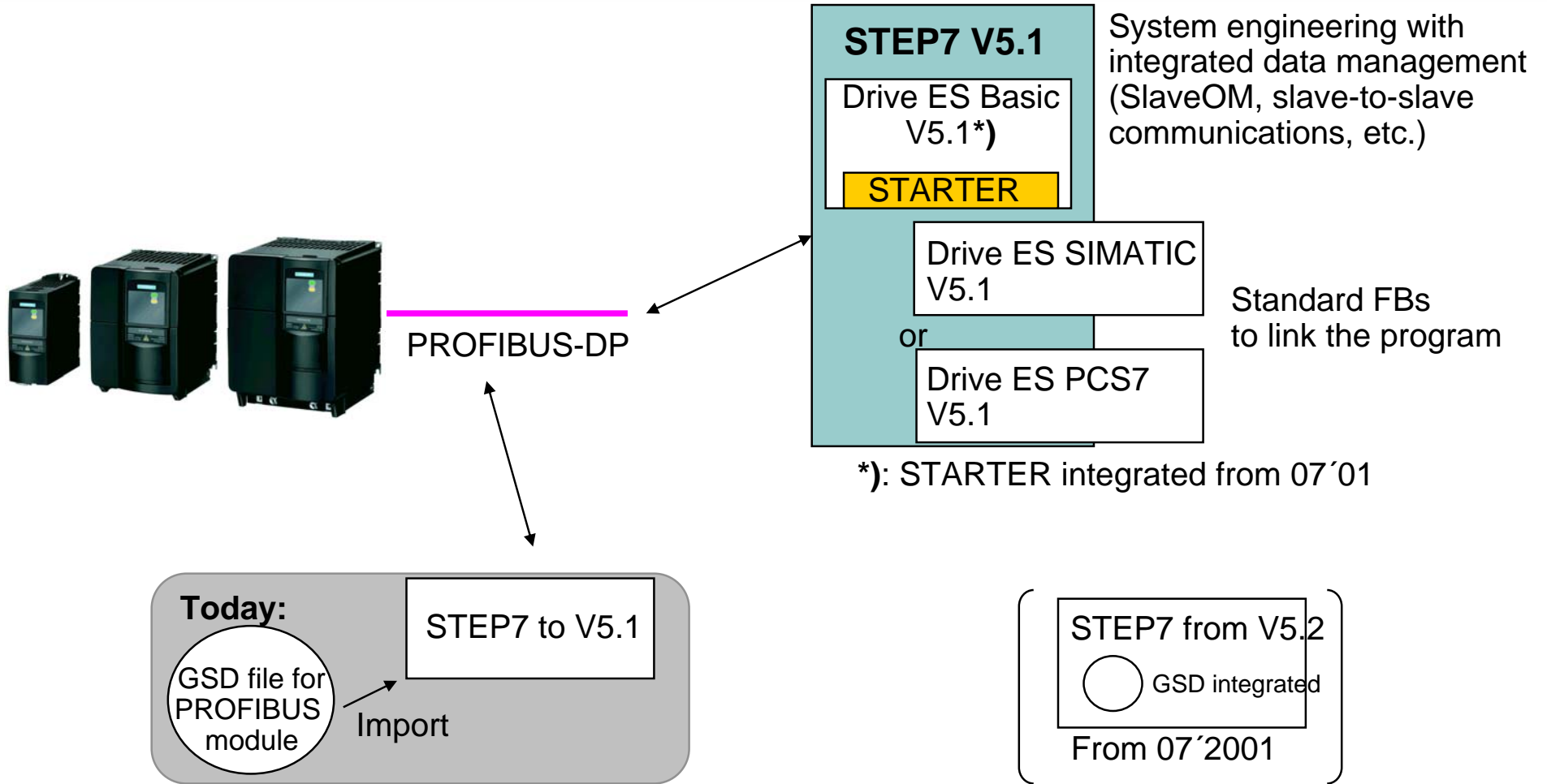
*) : WIN2000/NT required

Drive Monitor

- Actual version V5.0 SP2
- Replaces SIMOVIS

"Medium-term replacement"

MICROMASTER 4 Commissioning/tools on the PROFIBUS for TIA



MICROMASTER 4 Tool STARTER [1]



Parameterization...

Monitoring...

Control...

MICROMASTER 4 Tool STARTER [2]



Prompted fast commissioning ...

... the drive is then ready to run !

Antriebskonfiguration - Motor

- Antriebstyp
- Norm
- Motor
- Betriebsmodus
- Befehls- / Sollwert
- Wichtigste Parameter

Nennspannung: 230 V
Nennstrom: 0.9 A
Nennleistung: 0.12 Kw
Nenn Drehzahl: 1350 U/min
Nennfrequenz: 50 Hz

weitere Motordaten

< Zurück Weiter > Hilfe

Achskonfiguration - Abschluß

Alle zur Konfiguration erforderlichen Daten sind eingegeben:

- Norm
- Motor
- Betriebsmodus
- Befehls- / Sollwert
- Wichtigste Parameter
- Abschluß

Antriebstyp:
MLFB : 6SE6420-2AB11-2AA0.MM4_Basic..1AC200-240V_+10%
Firmware : 104

Norm:
GR:Europe

Motor:
Typ : GR:Asynchron motor
Nennspannung [V] : 230
Nennstrom [A] : 0.9
Nennleistung [Kw/Hp] : 0.12
Nennfrequenz [Hz] : 50
Nenn Drehzahl [min⁻¹] : 1350

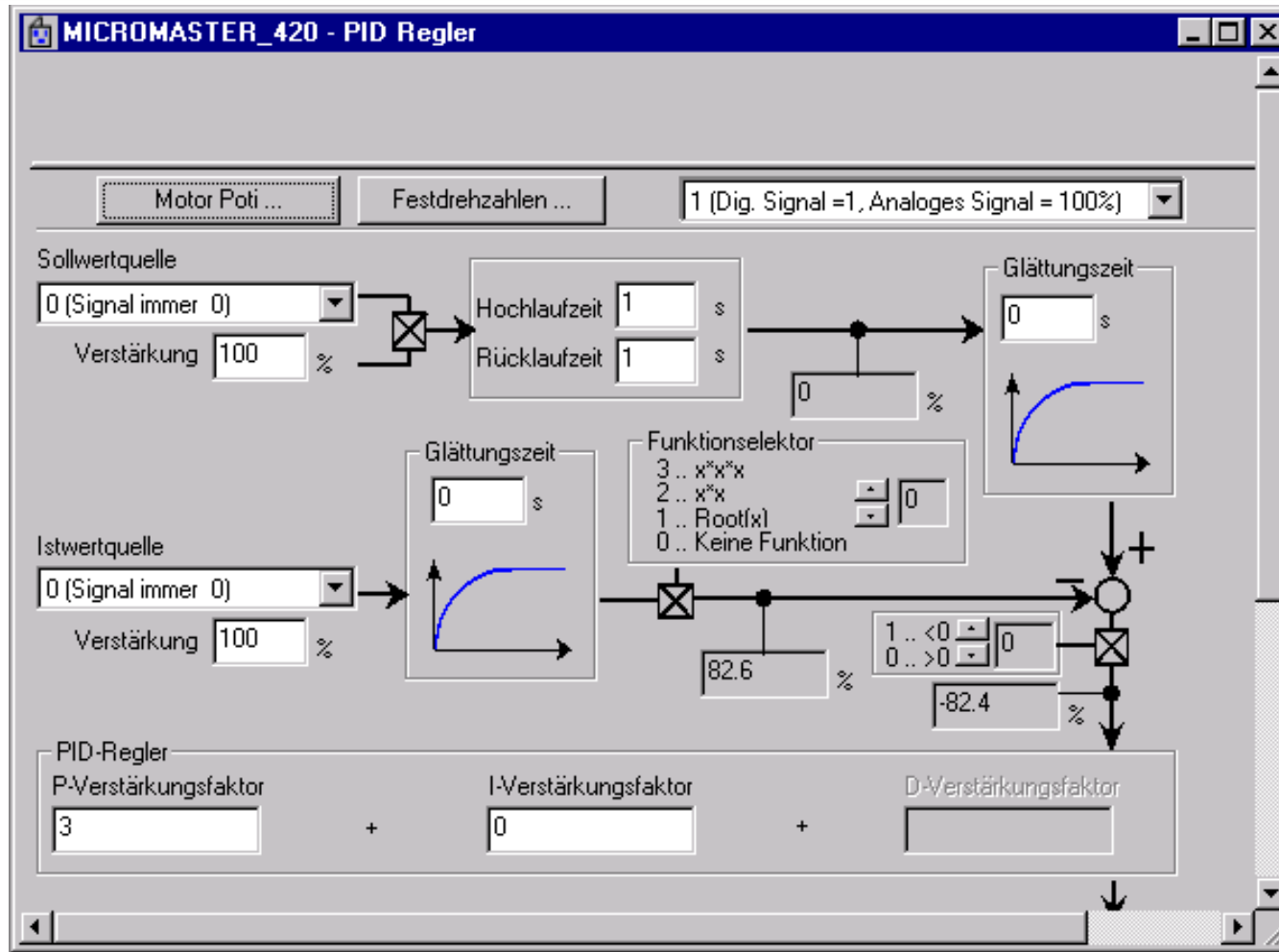
Betriebsmodus:

Schnell IBN mit Werkseinstellungen, RAM->ROM

Experte

< Zurück Fertig stellen Hilfe

MICROMASTER 4 Tool STARTER [3]



Graphically supported parameterization ...

MICROMASTER 4 Tool Drive Monitor



DriveMon - [MICROMASTER 420 - MICROMASTER 420 : test]

Parameterliste komplett

P.-Nr.	Name	Ind	Indextext	Parameterwert	Dim
r0002	Umrichterstatus			1 Betriebsbereit	
P0003	Benutzer-Zugangsebene			1 Standard	
P0004	Parameterfilter			0 Alle Parameter	
P0005	Auswahl der Anzeige			21	
P0006	Anzeigemodus			2 Wechsel P0004/ Ausg.frequ.	
P0007	Wartezeit Hintergrundbel.			0	
P0010	Parameterfilter - Inbetriebn.			0 Betriebsbereit	
P0011	Sperrf. anwenderdef. Param.			0	
P0012	Schlüssel anwenderdef. Param.			0	
P0013	Anwenderdefinierter Parameter	+ 000		0	
r0018	Firmwareversion			1.05	
r0019	CO/BO:BOP-Steuerwort			0000000000000000	
r0020	CO: Akt. Frequenzsollwert			0.00	Hz
r0021	CO: Umrichter Ausgangsfrequenz			0.00	Hz
r0022	Akt. Läuferdrehzahl			0	min ⁻¹
r0024	CO: Akt. Ausgangsfrequenz			0.00	Hz
r0025	CO: Ausgangsspannung			0	V
r0026	CO: Zwischenkreis-Spannung			0	V
r0027	CO: Motorstrom			0.00	A
r0034	CO: Motor-Auslastung			0.0	%
r0036	CO: Umrichter-Auslastung			0.0	%
r0037	CO: Umrichter-Temperatur			0	°C
r0039	CO: Energieverbrauchszaehler			0.0	kWh
P0040	Energieverbrauchszaehler Reset			0	
r0052	CO/BO: Statuswort 1			0000000000000000	
r0053	CO/BO: Statuswort 2			0000000000000000	
r0054	Steuerwort 1			0000000000000000	

Gerätestatus: OFFLINE

Drücken Sie F1, um Hilfe zu erhalten

Using the same well-proven SIMOVIS look and feel ...