Maxxis 5
Process Controller with BATCH Application

- Process Controller for the automated control of weighing processes with up to four scales
- Wide range of opportunities for flexible integration such as option cards, housings and EX approvals
- DAT, multilingual easy-operation interface, backup function, service reports, simulation
- BATCHING Application with manual and automatic recipe management
- With an additional license: Internal alibi memory, OPC server, tilt correction
- Supplied with Ethernet TCP|IP, Modbus TCP, RS232, RS485, USB, SD Card, 4 digital I|O

DAT® DIGITAL ASSISTANCE TECHNOLOGY

Made in Germany

The Maxxis 5 from Sartorius Intec combines accuracy, connectivity and functionality to provide a process controller unlike any other. Specifically designed to solve many of the problems faced by today's manufacturers, the Maxxis 5 easily takes control of all modern automation processes.

As a multiple use device, the Maxxis 5 is pre-programmed to control a diverse range of complex applications. Sartorius' expert team of software engineers, in conjunction with industry specialists, have created software solutions that allow the unit to seamlessly integrate into any process. However, users who require it can utilise the easy to use IEC61131 programming language to implement their own unique functionalities.

Equipped with an internal web server, the Maxxis 5 can be controlled via any standard web browser, or a remote display with VNC capabilities. Additionally, a wide range of interface options, USB connections and an Ethernet Port ensure the Maxxis 5 is able to connect with any existing infrastructure.

To suit the diverse requirements of Industry applications, the process controller is available in any of three different constructions allowing panel mounting, direct-at-machine front-end integration or use as a table-top unit.

The harsh environments process controllers are expected to operate in demands a robust design. The Maxxis 5 is constructed from high quality stainless steel and utilises a wide surface area and bright backlit display to ensure inputting and readout accuracies in the toughest conditions.

The Maxxis 5 is equipped with all the features users have come to expect from process technology, and numerous innovative ones that further simplify and increase the accuracy of industrial processes. Automatic back-ups save data to SD cards providing full transparency and traceability, whilst specifically tailored reports and service reports track overload and user changes and deliver this data direct to users.

To make sure that even novice users can control complicated applications with ease, an integrated help function is installed on the Maxxis 5.

The Maxxis 5 with BATCHING application offers users unrivalled levels of flexibility. Whether you need to manually fill products or automatically run batch recipes on up to four scales in your production area, the Maxxis 5 provides the best solution. On the large color display, users can create and manage orders, recipes and materials, and then directly start batching from any of these menus.

Thanks to simple synchronization in a recipe and the implemented process control components, process sequences can be easily and clearly defined by users with any level of expertise. To make process designing simpler than ever, users can take advantage of the simulation function to "dry-run" all weighing processes.

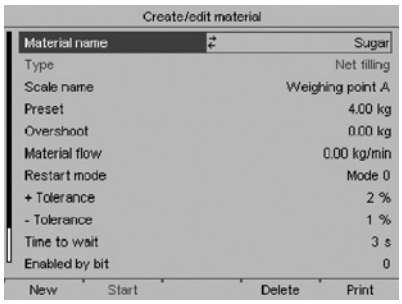
The intelligent batch system
The Maxxis 5 provides a complete user interface for the control of one weighing point. With the use of the integrated PLC, the Maxxis 5 will supervise each related process independently and provide full traceability. Once given a recipe, the Maxxis 5 will take control of production, and follow the recipe line by line. Both recipes and material types are stored within an internal database, and these entries can be modified and edited. During the production process itself, unlike with many other systems there is no need for any external hardware such as a PC or terminal.

Simple recipes
Recipes are defined through the component parameters of raw materials, and by process steps directly at the device. To initiate production, flexible set-points and the required number of batches must be entered. The control and supervision of all components and process steps are realized via the digital I/O interface either internally, or via a fieldbus which offers an excellent production quality.

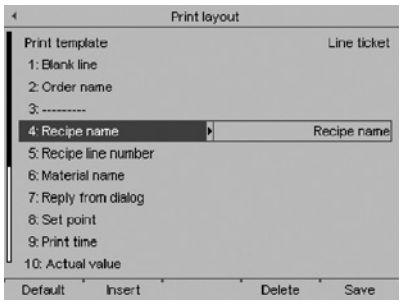
Investment in the future
Integrating a Maxxis 5 guarantees you peace of mind. Not only will you be ensuring the quality of each and every product that passes through your production line, but you can also be certain that the Maxxis 5 will remain an integral part of your process for years to come. Equipped with numerous possibilities for external links and extensions, this forward looking technology promises to make all batching applications quick and easy.

Manual Batching
Depending on the configuration, batching can be started from an individual material, a recipe or an order. Simply choose from a list and start the production run. Recipes can be weighed as individual quantities into separate containers or as one batch into the same hopper. Users are guided by clear dialog functions throughout the procedure. The color bar graph with tolerance limits provides additional visual support, whilst a material ID is used to ensure the material used is the correct one.
The Maxxis 5's recalculation function allows the correction of material volumes within a recipe, if a user exceeds pre-defined tolerances.

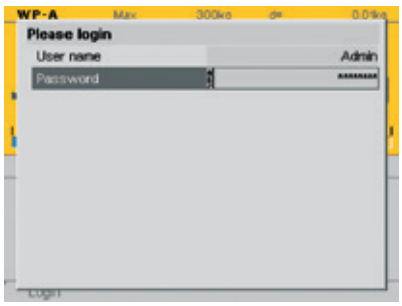
Automatic Batching
The Batching Application package also enables automatic processes to be controlled. Orders, materials and recipes can be automatically processed on up to four scales in parallel. Sections (partial recipes) and control functions enable the accurate control of the sequences, such as time components in order to control a mixer. The Maxxis' standard batching functions guarantee accurate and reproducible results. Intuitive displays provide a complete overview of all a user's scales and process steps, as well as other important information.



Product and recipe memory
Databases with memory space for more than 1,000 data records are supplied to support the digital storage of material, recipe and order data. Users can conveniently enter data in the order database via the keyboard of their PC, which can be connected to the Maxxis 5 via an OPC server. All other information can be read by a user's PC and saved directly (including report data).



Ticket and report printouts
Preconfigured printout templates are available as standard in the Batching Application Package. You can customize these at any time to meet the requirements of your individual operating sequences. The following can be printed: material and order tickets, recipe reports, consumption reports and production statistics. Two different printers can be connected to print tickets and reports in various formats.



User Management
Users can protect all their data and configurations from unauthorized changes by assigning user rights (with user name and PIN) to different users and user groups, This ensures peace of mind, and guarantees that your data is optimally protected.

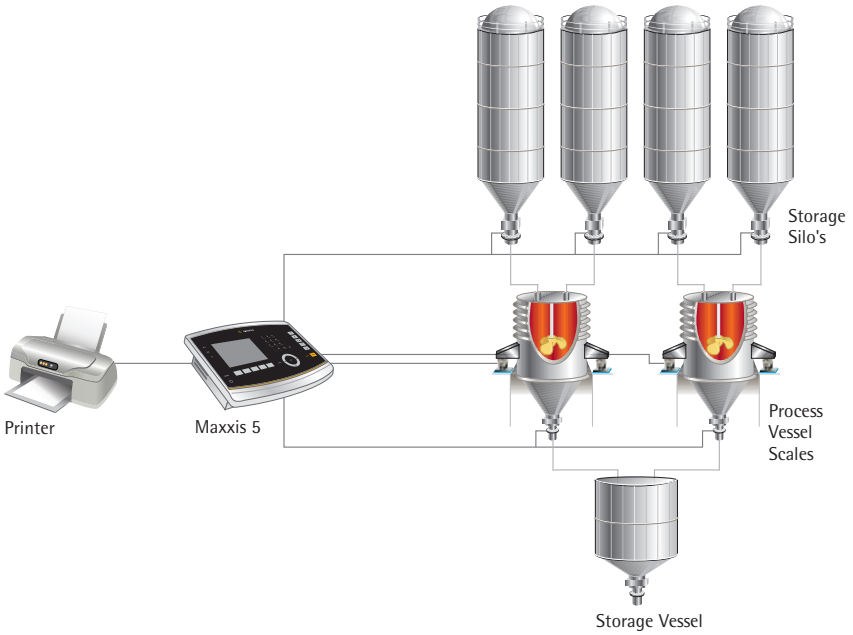
A complete range of potential applications

Standalone Batching

With a Maxxis 5 connected to 2 process vessel scales.

Within a recipe, up to 4 scales can be controlled simultaneously. The recipe stores all process steps and the Maxxis 5 can run the production without any other systems connected.

A printer can be used to printout the batching reports, or alternatively the reports can be exported to a PC.

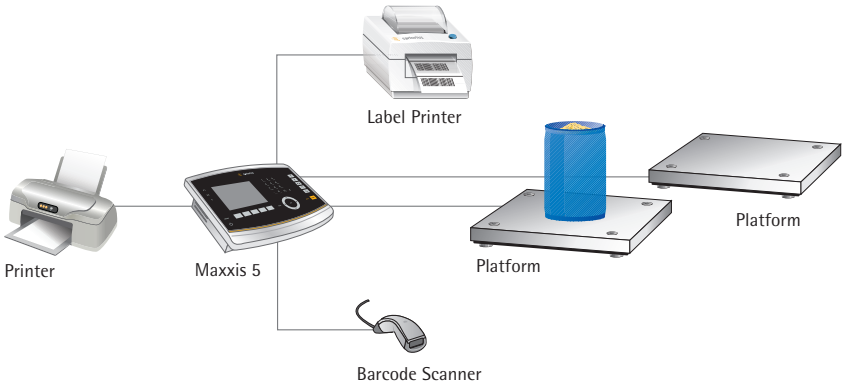


Manual Recipe

With a Maxxis 5 connected to 2 platform scales.

The Maxxis 5 guides the operator through the recipe. The display visualizes the status of the dosing, e.g. via bargraph. Users can utilize a barcode scanner to check if the right material has been used, and connect an additional report printer or label maker to the process controller.

With the recalculation function mistakes made by the user can be corrected immediately, eliminating product giveaway.

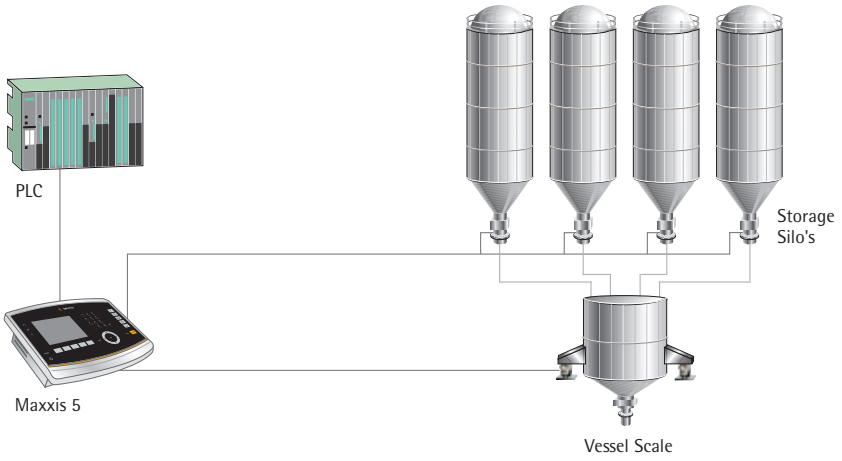


Batching with Fieldbus

With a Maxxis 5 connected to process vessels and a PLC.

The Maxxis 5 runs the recipe, however the control function of the digital I/O s is managed by a PLC, e.g. Siemens.

Via Profibus-DP both systems maintain communication with one another. With this connection the PLC can integrate the process control within other processes.



Technical Data

Housing
For Panel Mounting
IP protection class: IP20
Front panel: IP65
Material: stainless steel
RoHS conform

Other possible housings:
- Stainless steel complete IP65
- Bracket housing IP 65
- Blackbox housing IP20
- For more detailed information please consult the order list

Dimensions
350 × 280 × 94 mm
Depth including screen clamping rail

Display and Status
TFT graphical color display
5.7" with 320 × 240 pixels, graphic
Weight display: 7-digits, up to 3 cm
Available weight units are t, kg, g, mg, lb and oz. 1 Status LED to signal shut-down procedure

Keys
37 keys, key pad foil

Languages | Character sets
ASCII, Latin 1
Latin Ext A
cyrillic
hiragana
katakana
CJK (simplified Chinese only)

Standard Interfaces
RS232
RS485/422
Ethernet TCP | IP, Modbus TCP
USB
4 Digital I/Os
SD Card Slot

Options
2 Analog | Digital Weighing Points
2 Option Slots
1 Fieldbus Slot
For more detailed information please consult the order list

Digital Scales
Connection of digital SBI | XBPI Platforms are possible. (Power supply of one platform)
Connection to digital Pendeo Load cells is possible. (Power supply needed)
For other connectable scales please check manual

Load cell connection
All strain gauge load cells;
6- or 4-wire connection

Load cell supply
12V, short-circuit proof.
External load cell supply possible.

Minimum load impedance
min. 75 Ohm
e.g. 6 load cells with 650 Ohm
or 4 load cells with 350 Ohm

Measuring principle
Measuring amplifier:
Delta-Sigma converter
Measuring time:
min 5 ms – max. 1600 ms

Digital filter for load cell
4th order (low pass), Bessel, Aperiodic or Butterworth

ATEX Zone 2/22 approved (Option)
Zone 2, IIC T4 /
Zone 22, IIIC T80°C
Ta: -10°C ... +40°C

Approved for FM/CSA Class I Div.2 (Option)
NI / I / 2 / ABCD / T4
Ta = -10°C to +40°C – 2015571; NIFW
ANI / I, II, III / 2 / ABCD / T4
Ta = -10°C to +40°C – 2015571; NIFW

A | D Converter Input range
4,8 nV (appr. 7.5 Mio. div.)
Usable resolution: 0.2 µV/d
Measuring signal: 0 to 36mV
(for 100% nominal load)

Linearity
< 0,003%

Control outputs
4 relay two way contact
Max. switching voltage 31 V DC | 24 V AC
Max. switching current: 1 A

Control Inputs
Quantity: 4 opto-decoupled inputs
Can be used as 'passive' or 'active'

Voltage
Input (active):
Can be switched via a potential-free contact
Input (passive):
- Logic 0: 0 to 5 V DC or
- open Logic 1: 10 to 28 V DC

External power supply required

Current: <7 mA @ 24 V
<3 mA @ 12 V

Power Supply
100 – 240 VAC, (+10/-15 %), 50 - 60 Hz max. 21 W/44 VA
Optional: 24 VDC, (+/-10 %), max 20 W

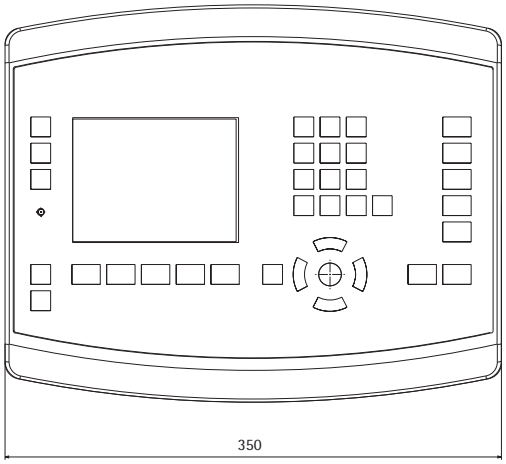
Temperature effects
Zero: TK0 m < 0.05 µV/K RTI
Span: TKspan < +/- 4 ppm/K

Environmental conditions
Temperature
W&M: –10 °C to +40 °C
Operation: –10 °C to +50 °C
Storage: –20 °C to +70 °C

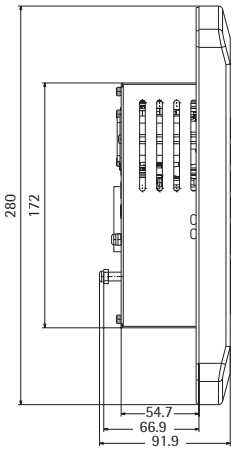
Weight
Net: 3 kg
Shipping weight: approx. 4 kg

Technical Drawings

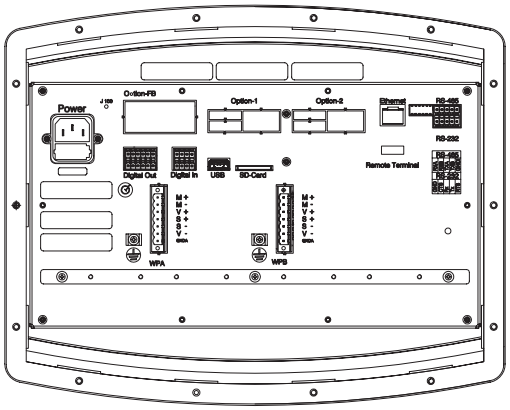
Front view



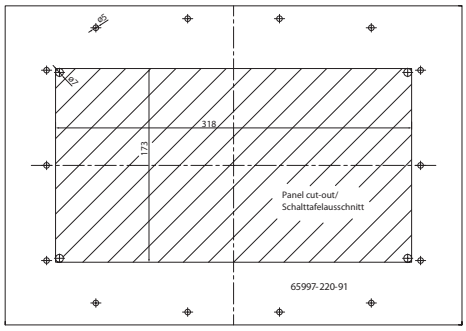
Side view



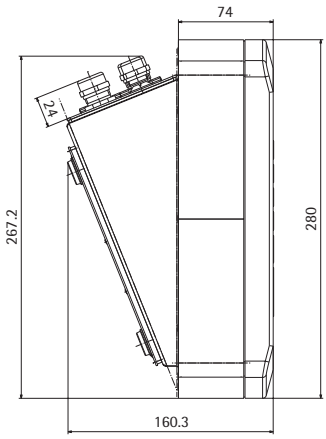
Back view



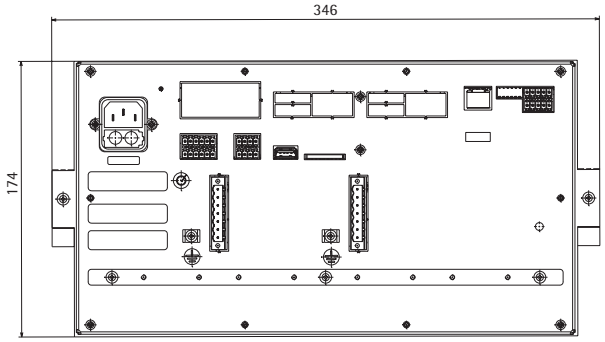
Drill plan | Panel cut out



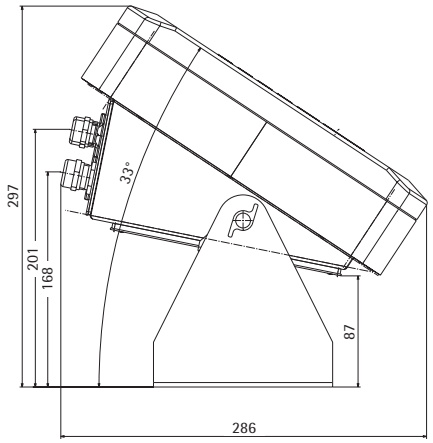
Optional Table top housing

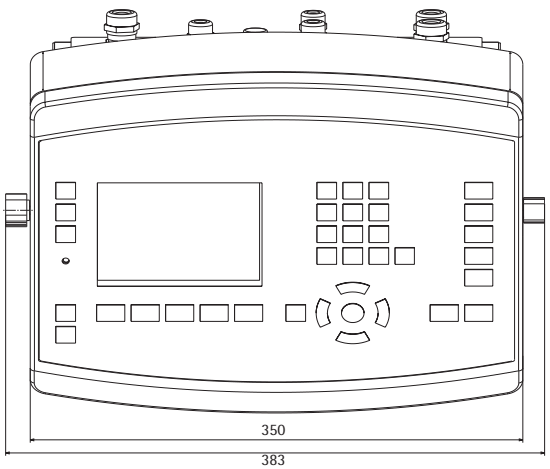


Optional Blackbox housing



Optional Table top housing with brackets





Maxxis 5 Process Controller

Type	Description	Order Number
Maxxis 5	Process Controller, incl. Ethernet TCP | IP and Modbus TCP 1 × RS232 and 1 × 485 | 422, 1 × USB, 1 × SD Card, 4 × digital input (active or passive optional) and 4 × digital outputs as relay	9405 159 00000

Options for Maxxis 5

Weighing Point		Slot A | B
W1 | W2	A | D Converter	0 | 0
WE1	A | D converter with intrinsically safe Load Cell supply	0 | -
X3 | X4	Disconnectable load cell connection	0 | 0

Built-in Inputs		
DE1	Digital Inputs – relays- passive	Standard
DE2	Digital Inputs – relays- active	

Housing		
G1	Maxxis 5 with Panel Housing	Standard
G2	Maxxis 5 in Table Top Housing	
G3	Maxxis 5 in Table Top Housing with U-Bracket (turned front)	
G4	Maxxis 5 in Blackbox Housing (not available with Y2 | Y3)	
L12	Housing back plate with cable glands for Table Top housing (Standard)	
L13	Housing back plate with EzEntry 4 and Cable glands for Table Top housing (not available with Y2 | Y3)	

Approvals		
Y2	ATEX Zone 2 | 22 Approval	
Y3	FM Class I, Div. 2 Approval	
F3	Kit for the legal for trade approval (labels and CD), NAWI according to MID	

Power Supply		
L0	110 | 240 V AC power supply	Standard
L8	24 V DC power supply	

Power Cable		
EU	Power cable with Euro plug, type CEE7 (only if table top housing is ordered)	Standard
GB	Power cable with GB plug, type 360 (only if table top housing is ordered)	
US	Power cable with US plug, type LAP 31 (only if table top housing is ordered)	
N31	Power cable for 24 V with open ended cable (only if table top housing is ordered)	

Applications and Licenses		
H0	BASIC Application	Standard
I4	PHASE Application (OPC included)	
I5	COUNT Application (Available 2015)	
I6	BATCHING Application	
I8	TRUCK Application (Alibi Memory included)	
I11	IBC – One Component Filling	
I12	Tilt Correction License (Software BASIC needed)	
E5	Alibi Memory License	
E6	OPC Server License (AccessIt 2.0 included)	
E9	Special License "Batch Modes" for using in individual programming	

Interface Cards		Slot 1 | 2 | 4
B15 | B25	Interface Card Serial 2 × RS485 (incl. supply for one IS Platform)	0 | 0 | -
B16 | B26	Interface Card Analog 1 Input | 1 Output with 0/4-20 mA	0 | 0 | -
B17 | B27	Interface Card Digital 4 Outputs Relay | 4 Inputs - active	0 | 0 | -
B18 | B28	Interface Card Digital 4 Outputs Relay | 4 Inputs - passive	0 | 0 | -
B19 | B29	Interface Card Digital 8 Outputs Optocoupler | 4 Inputs – passive	0 | 0 | -
C21	Fieldbus Card Profibus DP	- | - | 0
C24	Fieldbus Card DeviceNet	- | - | 0
C25	Fieldbus Card CC-Link (Available 2015)	- | - | 0
C26	Fieldbus Card Profinet	- | - | 0
C27	Fieldbus Card Ethernet | IP	- | - | 0

Cable for integrated Ethernet interface	
M39	Ethernet connector female RJ45, IP66
M40	Ethernet cable with cable gland, 7 m, RJ45 connector

Cable for integrated USB interface	
N29	USB connector female USB type A, IP65 if no USB plugged in (not available with Y2 | Y3)
N30	USB Cable to connect Barcode Scanner YBR03xx

Connection to (EX) Remote Terminal	
CX1	Connector for Maxxis 5 Ex-Remote Terminal for barrier free connection
C1	Connector for Maxxis 5 Remote Terminal

Cable with cable glands

	integrated RS232	**integrated RS485**	**Slot 1 1. RS485**	**2. RS485**	**Slot 2 1. RS485**	**2. RS485**
Serial cable with 9 pin D-Sub male connector, 6 m	M16					
Serial cable with 9 pin D-Sub female connector, 6 m	M17	M81	M77	M86	M79	M91
Serial cable with 12 pin round connector male, 6 m	M18	M74	M61	M63	M66	M68
Serial cable with 12 pin round connector female, 6 m	M19	M75	M62	M64	M67	M69

Maxxis 5 – order numbers with fixed defined configuration, cannot be changed with additional options

Type	**Description**	**Order number**
PR 5900/00	Maxxis 5 Process Controller with options: Panel housing (G1), A | D converter(W1), 110 | 230 V (L0), BASIC Application (H0), Digital Input passive (DE1)	9405 159 00001
PR 5900/01	Maxxis 5 Process Controller with options: Panel housing (G1), A | D converter(W1), 24 V (L8), BASIC Application (H0), Digital Input passive (DE1)	9405 159 00011
PR 5900/02	Maxxis 5 Process Controller with options: Table top housing (G2), Rear plate cable glands (L12), A | D converter (W1), 110 | 230 V (L0), BASIC Application (H0), Digital Input passive (DE1), Power cable with Euro Plug (EU)	9405 159 00021
PR 5900/03	Maxxis 5 Process Controller with options: Housing with bracket (G3), Rear plate cable glands (L12), A | D converter(W1), 110 | 230 V (L0), BASIC Application (H0), Digital Input passive (DE1), Power cable with Euro Plug (EU)	9405 159 00031

Accessories for Maxxis 5

Type	Description	Order Number
PR5900/10	A | D Converter	9405 359 00101
PR5900/04	Interface Card Serial 2 × RS485 (incl. supply for IS platform)	9405 359 00041
PR5900/12	Interface Card Digital 4 × Input | 4 × Output (active)	9405 359 00121
PR5900/13	Interface Card Digital 4 × Input | 4 × Output (passive)	9405 359 00131
PR5900/17	Interface Card Digital 8 Outputs Optocoupler | 4 Inputs – (passive)	9405 359 00171
PR5900/07	Interface Card Analog 1 × Input | 1 × Output 0 | 4 – 20 mA	9405 359 00071
PR1721/51	Interface Card Profibus DP	9405 317 21511
PR1721/54	Interface Card DeviceNet	9405 317 21541
PR1721/55	Interface Card CC-Link (Available 2015)	9405 317 21551
PR1721/56	Interface Card Profinet	9405 317 21561
PR1721/57	Interface Card Ethernet | IP	9405 317 21571
PR5900/41	Serial Cable with cable glands (9 pin D-Sub plug male)	9405 359 00411
PR5900/42	Serial Cable with cable glands (9 pin D-Sub plug female)	9405 359 00421
PR5900/43	Serial Cable with cable glands (12 pin round plug male)	9405 359 00431
PR5900/44	Serial Cable with cable glands (12 pin round plug female)	9405 359 00441
PR5230/30	Ethernet female connector RJ45, IP65	9405 352 30301
PR5230/31	Ethernet cable with cable glands, 7M, RJ45 plug, industrial material	9405 352 30311
PR5900/82	COUNT Application License (Available 2015)	9405 359 00821
PR5900/81	PHASE Application License	9405 359 00811
PR5900/83	BATCHING Application License	9405 359 00831
PR5900/84	TRUCK Application License	9405 359 00841
PR5900/86	IBC – One Component Filling License	9405 359 00861
PR5900/87	Tillt Correction License (Software BASIC)	9405 359 00871
PR5900/91	Alibi Memory License	9405 359 00911
PR5900/92	OPC Server License (AccessIt 2.0 included)	9405 359 00921
PR5900/93	Special License "Batch Modes" for Programming	9405 359 00931
PR5999/99	W&M Approval Labels (1 set)	9405 359 99991

Ex Remote Terminal (option CX1 required) for use in ATEX (IECEx) Zone 1and 21

PR5900/60	EX Remote Terminal for Maxxis 5, panel housing (YPSC* Power Supply needed)	9405 359 00601
PR5900/70	EX Remote Terminal for Maxxis 5, table top housing (YPSC* Power Supply needed)	9405 359 00701

Remote Terminal (option CX1 required) for use in safe area (Available March 2015)

PR5900/61	Remote Terminal for Maxxis 5, panel housing (24 V power supply needed)	9405 359 00611
PR5900/71	Remote Terminal for Maxxis 5, table top housing (24 V power supply needed)	9405 359 00711

The technical data listed are intended to give a product description only and should not be interpreted as guaranteed properties in the legal sense.

Specifications subject to change without notice
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