

Technical data

TitroLine alpha *plus* and TITRONIC® 110 *plus*

Conformity	ISO 8655, mark of conformity
CE sign	
Valve	motor-driven 3/2-way valve made of PTFE/ETFE
Hoses	FEP with UV protection
Keyboard	PS2 socket for connection of a PC keyboard. Connection TZ 2825 possible with adapter
RS-232-1	PC, input for concatenation of several devices (Daisy chain)
RS-232-2	piston burettes types TITRONIC® 110, TITRONIC® 110 <i>plus</i> , TITRONIC® 200 and TITRONIC® <i>universal</i> sample changer types TW 280, TW alpha und TW alpha <i>plus</i> TitroLine alpha <i>plus</i> : balances (Mettler, Sartorius, Kern, Ohaus, others on request)
Power supply	mains: 230 V~, 50 / 60 Hz; or 115 V~; 50 / 60 Hz, power consumption: 43 VA
Housing	polypropylene
Front foil	polyester
Housing dimensions	145 x 260 x 270 mm (W x H x D), only exchangeable unit 145 x 360 x 295 mm (W x H x D) height inclusive of exchangeable unit
Weight	basic device approx. 4.1 kg, complete device with exchangeable unit approx. 5.1 kg
Climate	ambient temperature: + 10 ... + 40 °C for operation and storage
Units	1, 5, 10, 20 and 50 ml units with calibrated glass cylinder made of DURAN® (borosilicate glass) size coding allows automatic detection of unit
Burette resolution	1/10,000, smallest step 0.1 µl with 1 ml burette size
Dosing accuracy	trueness: 0.1 ... 0.3 %, referred to nominal volume (in dependence on burette size) precision: 0.05 ... 0.1 % (in dependence on burette size)

Achievable accuracies in the entire system with exchangeable unit

Exchangeable unit	Volume	Tolerances of inside diameter of the glass cylinder	Dosing error referred to 100 % volume	Reproduce- ability
TA 01	1.00 ml	± 0.003 mm	± 0.3 %	0.10 %
TA 05 <i>plus</i>	5.00 ml	± 0.003 mm	± 0.15 %	0.07 %
TA 10 <i>plus</i>	10.00 ml	± 0.003 mm	± 0.1 %	0.05 %
TA 20 <i>plus</i>	20.00 ml	± 0.003 mm	± 0.1 %	0.05 %
TA 50 <i>plus</i>	50.00 ml	± 0.003 mm	± 0.1 %	0.05 %

TitroLine alpha *plus* only

Display	matrix LCD display, 69 x 69 mm, with background illumination, contrast adjustable via keyboard
Measuring input A	pH/mV input with electrode socket in accordance with DIN 19 262/or BNC
Measuring input B	pH/mV input with electrode socket in accordance with DIN 19 262/or BNC, galvanic separated
Measuring input KF/µA	Karl-Fischer (dead-stop) connection for double-platinum electrode (connection sockets: 2 x 4 mm), polarization voltage adjustable
Measuring input Pt 1000	temperature sensor connection of resistance thermometer Pt 1000 (connection sockets: 2 x 4 mm)
Printer connection	centronics interface for connection of an Epson (ESC/P2 and Raster) and HP (PCI 3) -compatible printers

TITRONIC® 110 *plus* only

Display	LCD display, 4-digit with floating point
I/O multifunction port	15-pole sub D-socket for connection of the TR 160 manual controller for manual titration Special applications on request
Volume display	00.00 ... 9.999 ml
Indication resolution	0.000 ... 9.999 ml
Dosing volume	0.01 ... 9.999 ml
Dosing speed	0.01 ml/h ... 100 ml/min (in dependence on burette size)
Filling speed	30 ... 999 s, freely selectable

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TW alpha *plus* sample changer – automatic titration in series

The number of samples to be processed is growing constantly while at the same time the demands on reliability are increasing in accordance with GLP and ISO 900X standards. The TW alpha *plus* sample changer by SCHOTT Instruments helps you meet these increased requirements and relieve qualified employees from routine work.

Control by titrator or by PC

You can control the sample changer from the TitroLine alpha *plus* titrator or from a PC with the TitrSoft software.

Higher flexibility due to exchangeable sample racks

With four sample racks for up to 24 samples and titration head fittings for a variety of beaker and titrator vessels you get the flexibility your lab needs. A mere flick of the wrist is sufficient to change the sample racks and titrator heads. The size of the rack can be selected in the TitroLine alpha *plus* or in the ›Titration Center‹ of the TitrSoft software.

Stirring from “above” or “below”

As standard, the TW alpha *plus* comes with an integrated magnetic stirrer to stir the samples from “below”. Alternatively, you can use a rod stirrer which enables stirring from “above”.



plus



Washing the electrode and the titration tip

To ensure accuracy of the results, the electrodes and the titration tips are rinsed after each titration. This can, for example, be done by immersing the electrodes and titration tips into a washing solution. The number of rinsing positions to be used (up to a maximum of three) and the rinsing time are set in the method. Direct and fast rinsing of the electrodes and titration tips can be ensured by using the MP 25 washing unit that rinses directly after the titration. In addition to this, a waiting position may also be used for example to immerse the pH electrodes into a KCl solution.

Up to 24 samples in 50 ml glass beakers or 16 samples in 250 ml glass beakers will fit in the rotating sample tray. A sample tray for 24 COD containers is also available.