**On-line analysis device   
type Colormetry CMU 324 HE determination of residual water hardness**

function on-line alarm device for automatic detection of hardness leakages behind water treatment installations

measurement principle colorimetry: limit value monitoring

methode colour change

mixing chamber principle flow-injection with self-cleaning effect

monitoring range 0 … 5 mg/l

corresponding units 0 … 5 ppm CaCO30,01 … 0,05 mmol/l CaCO30 … 0,25 °dH  
0,1 … 0,5 °df

display graphic

power supply DC 24V according to EN60950-1

power apply option - on site   
- via wall power supply / order no. 00730455  
- via Konverterbox (optional equipment ) / order no. 00730454

power consumption 15 W (in operation)

feed water pressure 0,5 … 5,0 bar   
integrated constant flow valve

limit value monitoring thresholds adjustable in device:   
⇨ 1 mg/L   
⇨ 2 mg/L   
⇨ 3 mg/L   
⇨ 5mg/L

reagent residual hardness only one indicator for all limits provided in a clean and easy to handle service cartridge for low maintenance operation  
⇨ cartridge replacement is also wearing parts exchange

output function 3 x open collectors for max. load: DC 24V 70mA  
⇨ limit alarm and device errors (automatic self-check-mode)  
⇨ lack of reagent alert (BOB-alert [regarding German TÜV])  
⇨ water passing/monitoring active

1 x serial interface RS232

input function 1 x potential free contact  
⇨ e.g. remote signal input for external analysis start

scope of delivery Colormetry CMU-324HE on line monitor water hardness / pipe fitting for feed water tube diameter φ1/4”(φ6mm) / app. 5 m feed water tube φ1/4”(φ6mm) / pipe fitting for drain water tube diameter φ 5/16”(φ8mm) / app. 3 m drain water tube φ 5/16”(φ8mm) / fine filter casing assembly with fine filter cartridge / ball valve and plumbing parts for hydraulic connection / mounting bracket and other miscellaneous parts / user`s manuals

dimension H x W x D device in operation app. 550 x 125 x 100 [mm]  
transport packing app. 460 x 290 x 155 [mm]

wight device app. 2,5 kg   
transport wight app. 3,5 kg

customs commodity code 90278017

type Colormetry CMU 324 HE order no. 00730451

consumables HE service-cartridge with reagent order no. 00730452

fine filter cartridge order.no. 00730457

**HE service-cartridge with reagent   
for Colormetry CMU 324 HE**

reagent function determination of residual hardness in water

measuring range 0 … 5 mg/l   
limit values adjustable in device  
- alarm if > 1 mg/l > 0,01 mmol/l CaCO3  
- alarm if > 2 mg/l > 0,02 mmol/l CaCO3  
- alarm if > 3 mg/l > 0,03 mmol/l CaCO3  
- alarm if > 5 mg/l > 0,05 mmol/l CaCO3

expiry genuine packed: app. 2 years from manufacturing   
in operation: app. 4-6 month

storage cool, dry and dark / avoid direct sunlight

delivery condition vacuum packing

service function cartridge replacement is also wearing parts exchange

dimension H x W x D cartridge app. 240 x 90 x 45 [mm]  
transport packing app. 260 x 100 x 50 [mm]

wight cartridge app. 0,5 kg  
transport wight app. 0,6 kg

customs commodity code 38220000

type service cartridge CMU 324 HE order no. 00730452

OPTION

**KONVERTER BOX for Colormetry CMU 324 series   
24V DC-power supply unit and interface adapter**

primary voltage 180…230V

secondary voltage 24 VDC 20VA

outputs 3 x potential free relay   
1 x analog 0/4...20mA

inputs 1 x digital potential free

scope of supply 1 pc. power supply unit 180-230VAC/24VDC in enclosure IP65

6 pc. PG screws [2xM16, 4xM12]

1 pc. communication plug-in card   
 [3 x pot.free relay OUT, 1x pot.free IN, 1x 0/4-20mA OUT]

1 pc. RS232 counter plug

app.3m confectioned connecting cable with plugs,   
 14 strands, 1 shield

1 pc. operation manual

protection class if closed enclosure IP 65

dimension H x W x D Konverterbox in operation app. 230 x 120 x 80 [mm]  
transport packing app. 320 x 250 x 160 [mm]

wight Konverterbox app. 1,0 kg  
transport wight app. 1,5 kg

customs commodity code 90278017

type Konverterbox for Colormetry CMU 324 order no. 00730454