

Data sheet

## Analog Output Module for MULTICAL® 403

- Two current outputs
- Outputs selectable as either 0...20mA or 4...20mA
- Fast update speed
- Analog outputs are galvanic isolated from the meter



## Description

The new high performance Analog Output module for the MULTICAL® 403 energy meter is the optimal choice for control purposes. The analog outputs are primarily used in building management and industrial applications. Here the analog outputs are often used to pass information to other types of equipment, typically a PLC or similar.

The analog output module is designed with focus on reliability and long term stable current outputs of meter data.

## Applications

The analog module provides fast updating of meter values, to support control applications based on flow, energy or temperatures. The galvanic isolation between the meter and the analog circuits ensures an installation with a minimum of electrical interference.

The module offers two independent and programmable current output signals for simple monitoring and control tasks.

## Installation

The module is easily mounted into the module slot of the meter. A configuration might be necessary if a change of values to output or change of output current setting is required.

The module is power supplied from the meter's internal 230 VAC or 24 VAC supply module. The current outputs must be supplied by a separate power supply.

## 0/4...20 mA output connection

Screw terminals for the two Analog outputs + and -.

The load of the current-loop is connected directly between the + and - terminals.

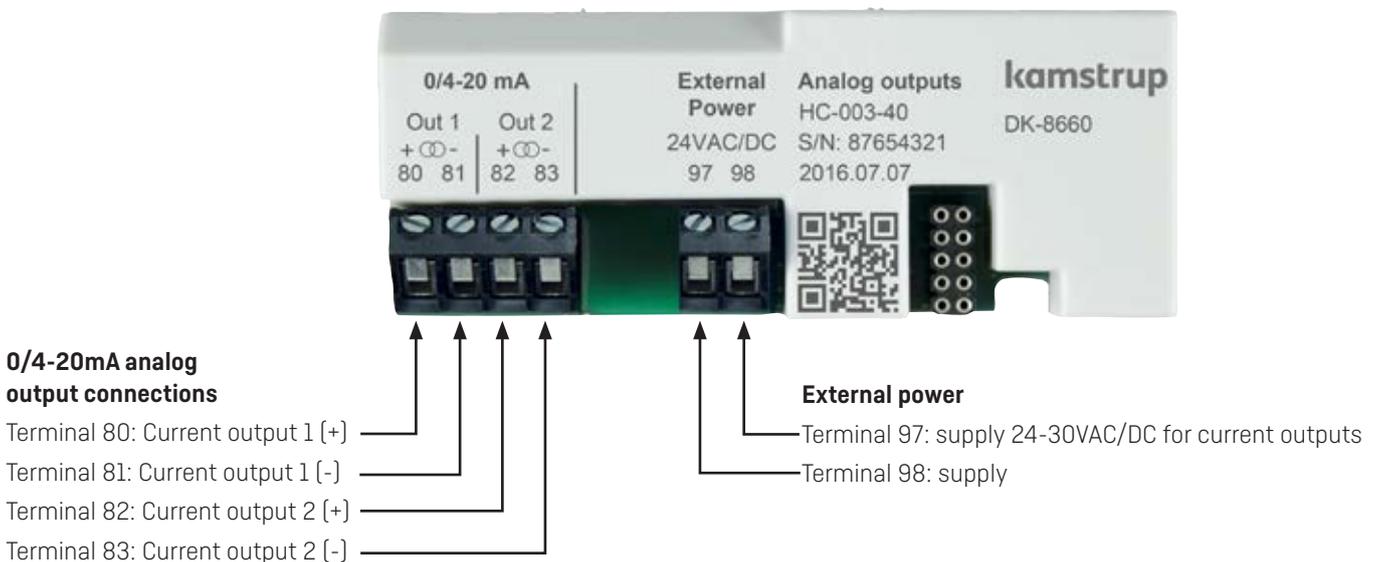
## External Power

Screw terminals for connection of the power supply needed for the current outputs. The power supply should be able to deliver sufficient current and voltage to keep the analog outputs stable.

## Cable connections

### Wire size

Max cable size 1.5 mm<sup>2</sup>



## Technical specifications

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### Physical

Usage Only suitable for installation in MULTICAL® 403

### Analog output

Active current outputs 0...20 mA or 4...20 mA  
 Open loop voltage  $\geq 10V$  DC  
 Resolution 16 bit  
 Overall accuracy Better than 0.1 %  
 Galvanic isolation According to PTB-A50.1

### Supply

Power supply MULTICAL® 403 with 230 VAC supply  
 MULTICAL® 403 with 24 VAC supply

### External power

Supply for Analog Outputs 24 V DC/AC  $\pm 30\%$

### Environment

Operational temperature 5°C – 55°C  
 Humidity 25 – 85 %RH non-condensing.

### Programming

Configuration and Via the optical read-out head or via the multi-pole connector on the module  
 Firmware update With METERTOOL HCW.

### Markings/approvals

CE and EN 1434 in conjunction with the type approval of MULTICAL® 403

## Ordering

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### Description

Analog Output module for MULTICAL® 603  
 Transformer 230/24 VAC  
 USB Configuration Cable for H/C modules  
 Optical read-out head w/USB  
 Optical read-out head w/RS-232 D-SUB 9F  
 METERTOOL HCW

### Order No.

HC-003-40  
 6699-403  
 6699-035  
 6699-099  
 6699-102  
[www.kamstrup.com](http://www.kamstrup.com)

## Configuration

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<b>Module type</b>						
Analog module	40	0	1	0	0	2
<b>Output 1 configuration</b>						
0-20 mA		0				
4-20 mA		1				
<b>Output 2 configuration</b>						
0-20 mA			0			
4-20 mA			1			
<b>Data on Output 1</b>						
Flow V1						0
Reserved*						1
Power						2
Temp 1 inlet						3
Temp 2 outlet						4
Reserved*						5
Differential temp (T1-T2)						6
<b>Data on Output 2</b>						
Flow V1						0
Reserved*						1
Power						2
Temp 1 inlet						3
Temp 2 outlet						4
Reserved*						5
Differential temp (T1-T2)						6

\* Reserved for future use.

An analog module configured to 40-01-002 will be setup like this:

Output 1 is 0-20 mA. Data on output 1 is Flow V1.

Output 2 is 4-20 mA. Data on output 2 is Power.

The configuration of the module is readable in the energy meter display by selecting the TECH-LOOP.

Scaling of the outputs is possible within a wide range. The scaling range are deliberately limited to ensure an overall high accuracy. Scaling is possible during ordering of the module or via METERTOOL HCW.

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