

Data sheet

Analog Output Module for MULTICAL® 403

- Two current outputs
- Outputs selectable as either 0...20 mA or 4...20 mA
- Fast update speed
- Analog outputs are galvanically 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.

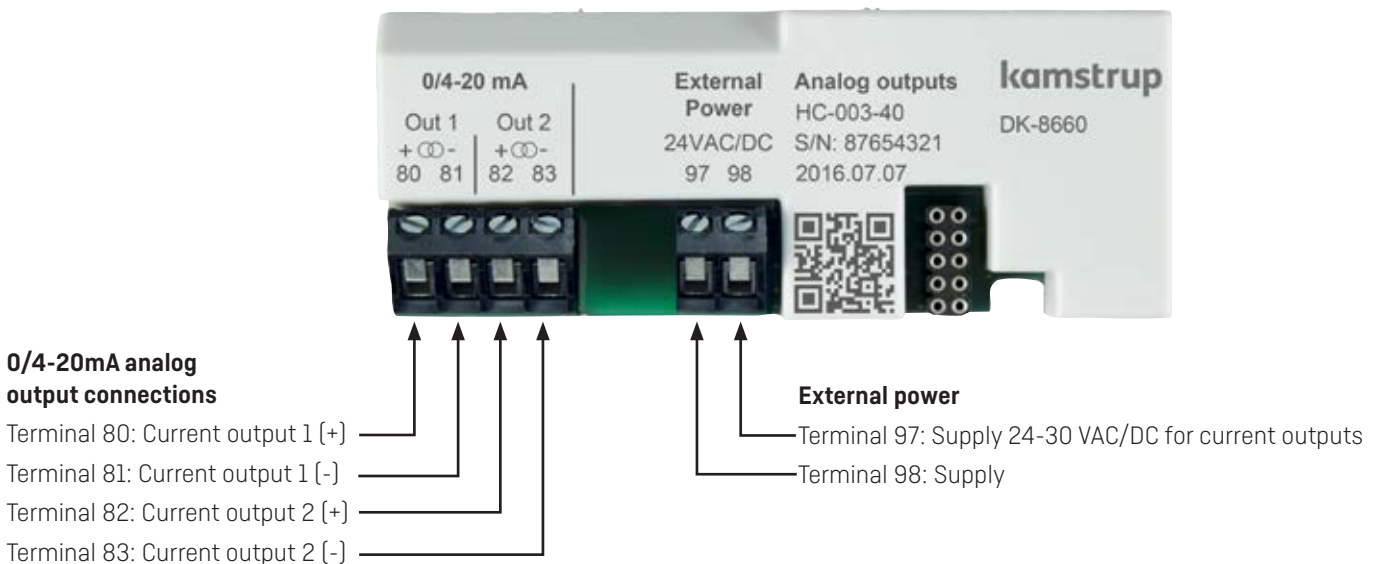
External power

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 mm²



Technical specifications

Physical

Usage Only suitable for installation in MULTICAL® 403

Analog output

Active current outputs 0...20 mA or 4...20 mA
 Open loop voltage ≥ 10 VDC
 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 VDC/AC ± 30 %

Environment

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

Programming

Configuration Via the optical read-out head or 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

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

Configuration

	XX	Y	Y	Z	Z	Z
Module type						
Analog module	40	0	1	1	0	2
Output 1 configuration						
0-20 mA		0				
4-20 mA		1				
Output 2 configuration						
0-20 mA			0			
4-20 mA			1			
Data on Output 1						
Flow V1					0	
Reserved*					1	
Power					2	
Temp 1 inlet					3	
Temp 2 outlet					4	
Reserved*					5	
Differential temp (T1-T2)					6	
Data on Output 2						
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 set up 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 is deliberately limited to ensure an overall high accuracy. Scaling is possible during ordering of the module or via METERTOOL HCW.

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