Diehl Sharky 775

Part Code	Name	Size	QP (m3/h)	Output
DI515HM	DN15 Sharky 775 Ultrasonic Heat Meter Selectable F	15	1.5	-
DI520HM	DN20 Sharky 775 Ultrasonic Heat Meter Selectable F	20	2.5	-
DI523HM	DN20 Sharky 775 Wireless MBus Select F or R	20	2.5	WIRELESS MBUS
DI525HM	DN25 Sharky 775 Ultrasonic Heat Meter Return Mount	25	6	-
DI526HM	DN25 Sharky 775 Ultrasonic Heat Meter Flow Mounted	25	6	-
DI532HM	DN32 Sharky 775 Ultrasonic Heat Meter Return Mount	32	6	-
DI533HM	DN32 Sharky 775 Ultrasonic Heat Meter Flow Mounted	32	6	-
DI540HM	DN40 Sharky 775 Ultrasonic Heat Meter Return Mount	40	10	-
DI541HM	DN40 Sharky 775 Ultrasonic Heat Meter Flow Mounted	40	10	-
DI550HM	DN50 Sharky 775 Ultrasonic Heat Meter Return Mount	50	15	-
DI551HM	DN50 Sharky 775 Ultrasonic Heat Meter Flow Mounted	50	15	-
DI565HM	DN65 Sharky 775 Ultrasonic Heat Meter Return Mount	65	15	-
DI566HM	DN65 Sharky 775 Ultrasonic Heat Meter Flow Mounted	65	15	-
DI580HM	DN80 Sharky 775 Ultrasonic Heat Meter Return Mount	80	40	-
DI581HM	DN80 Sharky 775 Ultrasonic Heat Meter Flow Mounted	80	40	-
DI510HM	DN100 Sharky 775 Ultrasonic Heat Meter Return Moun	100	60	-
DI511HM	DN100 Sharky 775 Ultrasonic Heat Meter Flow Mounte	100	60	-
DI752MB	Sharky 775 MBus Module	-	-	MBUS
DI752PU	Sharky 775 Pulse Output Module	-	-	PULSE
DI232MO	Sharky 775 RS232 Module	-	-	RS232
EL775LR	Diehl Sharky 775 LoRa Module	-	-	LoRa
DI753MA	Sharky 775 230V Power Supply Module	-	-	-
DI753BA	Sharky 775 Battery 3.6v D Cell	-	-	-

Technical Datasheet
Diehl Sharky 775

SYCOUS®

SHARKY ultrasonic compact energy meter can be used for measuring the energy consumption in heating / cooling application for billing purposes. The measurement principle is static and based on the measurement of the transit time. Ultrasonic technology offers many benefits: no moving parts (avoids wear and tear of the metering components), low pressure loss, large metering dynamics and low start flowrate, insensitiveness to suspended particles.

Features:

- Approval with dynamic range up to 1:250 (qi:qp) MID in class 2 (depends on meter size), standard 1:100
- Complete range from DN 15 mm qp 0.6m3/h up to DN 100 mm qp 100m3/h
- Extremely low power consumption enabling a long battery lifetime (up to 16 years)
- Radio option integrated
- Modular version, M-Bus, RS232, RS485, Analog outputs 4-20mA, pulse outputs and pulse inputs

General			
Application			Heating - heating with cooling tariff
Approval			MID (DE-10-MI004-PTB013)
Mounting position flow sensor			Any position, calming sections not necessary
Protection class flow sensor			Heating: IP 54; heating with cooling tariff: IP 65
Battery supply			3.6 VDC- D-cell up to 16 years lifetime*
Mains supply			24 VAC (50 - 60 Hz); 230 VAC (50 - 60 Hz)
Temperature sensor type			Pt 500 with 2-wire leads; Ø 5.2 mm or direct sensor
Cable length of temperature sensor			Pt 500: 2 / 3 / 5 / 10m
Absolute temperature range calculator	ϴ	°C	1 ... 180
Volume measuring cycle			With power supply: ⅛ s; with D-cell battery: 1 s
Material of the flow sensor body			Brass or grey cast iron (only qp 15 m³/h up to qp 100 m³/h)
Test possibilities			Via display, optical test pulses, test output or via NOWA software

*Standard conditions of use and temperature. Theoretical life, with no guarantee

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Display	
Display Indication	LCD, 8-digit
Units	MWh - kWh - GJ - Gcal - MBtu - gal - GPM - °C - °F - m³ - m³/h
Total values	99,999,999 - 9,999,999.9 - 999,999.99 - 99,999.999 (depending of the nominal diameter)
Values displayed	Energy - Power - Volume - Flow rate - Temperature

Interfaces	
Optical	ZVEI interface, for communication and testing, M-Bus protocol.
M-Bus	Configurable telegram, according to EN13757-3, data reading and parametrization are via two wires with polarity reversal protection, auto baud detect (300 and 2400 baud), 2 M-Bus with 2 primary addresses.
L-Bus	Adapter for external radio module, configurable telegram, according to EN13757-3, data reading and parametrization are via two wires with polarity reversal protection.
RS232	Serial interface for communication with external devices, a special data cable is required, MBus protocol, 300 and 2400 baud.
RS485	Serial interface for communication with external devices, power supply with 12 V ± 5 V, MBus protocol, 2400 baud.
Pulse output	Module with 2 Open Collector pulse outputs (potential-free), output 1: 4 Hz (pulse width 125ms) pulse or static conditions (e.g. errors); output 2: 100 Hz (pulse width ≥ 5 ms), ratio: pulse duration / pulse break ~ 1:1, configurable via IZAR@SET software1.
Pulse input	Module with 2 pulse inputs, max. 20 Hz, configurable via IZAR@ SET software1, data can be transferred remotely.
Combined pulse in-/output	Module with 2 pulse inputs and 1 pulse output, configurable via IZAR@SET software1, needed for leak detection.
Analogue output	Module for 4 ... 20 mA with 2 programmable passive outputs, programmable value in case of error.

[1] : only with DIEHL support

Temperature Input			
Measuring cycle	T	s	With mainssupply: 2 s; with D-cell battery: 4s
Starting temperature difference	$\Delta\Theta$	K	0.125
Min. temperature difference	$\Delta\Theta_{min}$	K	3
Max. temperature difference	$\Delta\Theta_{max}$	K	177

Data Collection

Wired Networks

Wireless Networks

IoT Technologies

MBus & Pulse for any network

sycous.com

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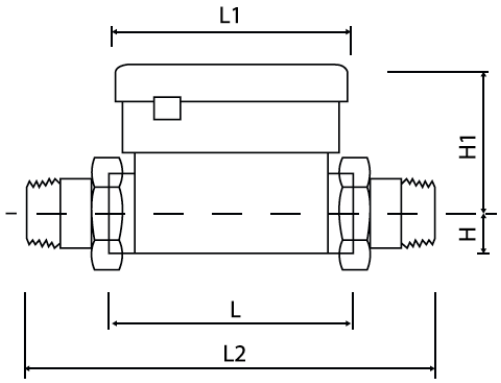
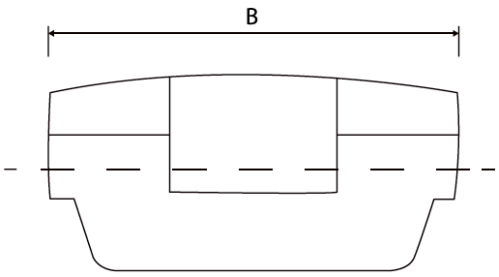
Dimensions Thread Version





Normal flow rate	qp	m³/h	0.6	1.5	1.5	2.5	6	6
Nominal diameter	DN	mm	15	15	20	20	25	32
Overall length	L	mm	110	110	130	130	260	260
Overall length with coupling	L2	mm	190	190	230	230	380	380
Length of calculator	L1	mm	150	150	150	150	150	150
Height	H	mm	14.5	14.5	18	18	23	23
Height	H1	mm	82	82	82	82	82	82
Height of calculator	H2	mm	54	54	54	54	54	54
Width of calculator	B	mm	100	100	100	100	100	100
Connection thread on meter		inch	G¾B	G¾B	G1B	G1B	G1¼B	G1½B
Connection thread of coupling		inch	R½	R½	R¾	R¾	R1	R1¼
Weight		kg	0.76	0.76	0.85	0.85	1.5	1.5

Normal flow rate	qp	m³/h	10	15	25	40	60	100
Nominal diameter	DN	mm	40	50	65	80	100	100
Overall length	L	mm	300	270	300	300	360	360
Overall length with coupling	L2	mm	440	-	-	-	-	-
Length of calculator	L1	mm	150	-	-	-	-	-
Height	H	mm	33	-	-	-	-	-
Height	H1	mm	94	-	-	-	-	-
Height of calculator	H2	mm	54	-	-	-	-	-
Width of calculator	B	mm	100	-	-	-	-	-
Connection thread on meter		inch	G2B	-	-	-	-	-
Connection thread of coupling		inch	R1½	-	-	-	-	-
Weight		kg	3.1	-	-	-	-	-

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Normal flow rate	qp	m³/h	0.6	1.5	1.5	2.5	6	6
Nominal diameter	DN	mm	40	50	65	80	100	100
Overall length	L	mm	300	270	300	300	360	360
Length of calculator	L1	mm	150	150	150	150	150	150
Height	H	mm	69	73.5	85	92.5	108	108
Height	H1	mm	94	99	106.5	114	119	119
Height of calculator	H2	mm	54	54	54	54	54	54
Width of calculator	B	mm	100	100	100	100	100	100
Flange dimension	F	mm	138	147	170	185	216	216
Flange diameter	D	mm	148	163	184	200	235	235
Hole circle diameter	K	mm	110	125	145	160	180¹/10	180¹/10
Screwhole diameter	D1	mm	18	18	18	19	19¹/22	19¹/22
Number of screwholes		pcs	4	4	8	8	8	8
Weight brass body		kg	6.4	7.0	8.9	10.9	16.4	16.4
Weight grey cast iron body		kg	-	5.9	7.7	9.6	15.2	15.2

¹: Value for PN 16 housing

Pressure Loss Graph/ Typical Error Graph