

Data Sheet

040.D.101.02

Operating Hours Counters

BWQ 48
BWQ 55
BWQ 72
BWQ 96
BGQ 48
BGQ 55
BGQ 72
BGQ 96



WEIGEL

Application

Operating hours counters are used for recording the operating time of vehicles, machines, or installations.

BWQ ... models are suitable for use in AC systems 50 Hz or 60 Hz.

BGQ ... models are quartz controlled and DC supplied.

Functional Principle

Cyclometer register driven by a wheel gearing and

– synchronous motor (BWQ ...)

– stepper motor with quartz controlled electronics (BGQ ...)

General Technical Data

case details	square case for mounting in switchboards, stackable			
material of case	thermoplastics, flame retardant			
material of window	thermoplastics			
colour of bezel	black			
position of use	any position permissible			
panel fixing	clamping frame (BWQ/BGQ 48), clamping bracket (BWQ/BGQ 55/72/96)			
terminals	screw clamps			
dimensions (in mm)	BWQ 48 BGQ 48	BWQ 55 BGQ 55	BWQ 72 BGQ 72	BWQ 96 BGQ 96
bezel	□ 48 ▶	□ 55	□ 72	□ 96
case	□ 45	∅ 50	□ 67	□ 90
case depth	31	58	53	53
panel cutout	□ 46	∅ 50 ⁺¹	□ 68 ^{+0.7}	□ 92 ^{+0.7}
panel thickness	1 ... 10	1 ... 10	1 ... 10	1 ... 10
weight approx.	60 g	60 g	140 g	180 g
enclosure front side code	IP 50 (BWQ/BGQ 48) ▶ IP 54 (BWQ/BGQ 55) IP 52 (BWQ/BGQ 72/96)			
terminals	IP 00 without protection against accidental contact ▶			

Measuring Ranges

measuring unit	time	
counting range		
BGQ 48/55/72/96	000,000.0 ... 999,999.9 h	
BWQ 48/55/72/96	00,000.00 ... 99,999.99 h	
operating voltage	tolerance	power consumption
BWQ 48		
24 V ~	±15%	approx. 1 VA
115 V ~	±15%	approx. 1 VA
230 V ~	±15%	approx. 1 VA
BWQ 55/72/96		
110 V ~	+10% to –15%	approx. 1.5 VA
230 V ~ ▶	+10% to –15%	approx. 1.5 VA
BGQ 48		
12 ... 48 V = ▶	±10%	approx. 20 mW at 12 V
BGQ 55/72/96		
10 ... 50 V =		0.07 ... 2 W

rated frequency BWQ 50 Hz ▶

▶ also refer to "Options"

Indication

size of numerals	4.4 mm (BWQ/BGQ 48) 4 mm (BWQ/BGQ 55/72/96)
colour of numerals	pre-decimal places white on black, decimal places red on black
running indicator	by a running gear

Accuracy at Reference Conditions

accuracy	same as supply frequency (BWQ ...) ±0.02 s in 24 h (BGQ ...)
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reference conditions

ambient temperature	23 °C ± 1K
frequency (BWQ ...)	rated frequency
operating voltage	within limits specified

Environmental

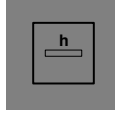
ambient temperature range	–15 ... +55 °C (BWQ 48) –10 ... +55 °C (BWQ/BGQ 55/72/96) –10 ... +50 °C (BGQ 48)
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Rules and Standards

DIN 43 718	Measurement and control; front-frames and frontpanels of measurement and control equipment; principal dimensions
DIN EN 60 529	Enclosure codes by housings (IP-code)
DIN EN 61 010-1	Safety requirements for electrical measuring, control and laboratory equipment Part 1: General requirements
DIN EN 61 326-1	Electrical equipment for measurement, control and laboratory use – EMC requirements Part 1: General requirements (BWQ/BGQ 55/72/96: DIN EN 61 000-6-4)
DIN IEC 61 554	Panel mounted equipment – Electrical measuring instruments – Dimensions for panel mounting

Options (on Request)

operating voltage	
BWQ 55	24, 48, 60 V~
BWQ 72	24, 48 V~
BWQ 96	24 V~
BGQ 48	5 ... 24 V=, 36 ... 110 V=, others on request
rated frequency	60 Hz
BWQ ...	
zero reset	pushbutton
case	
front mask for BWQ/BGQ 48	Q55 bezel 55 mm x 55 mm, Q72 mask 72 mm x 72 mm, or D72 mask 72 mm ∅
enclosure code	IP 54
BWQ/BGQ 48	
terminal protection against accidental contact	terminal cover
BWQ/BGQ 72/96	

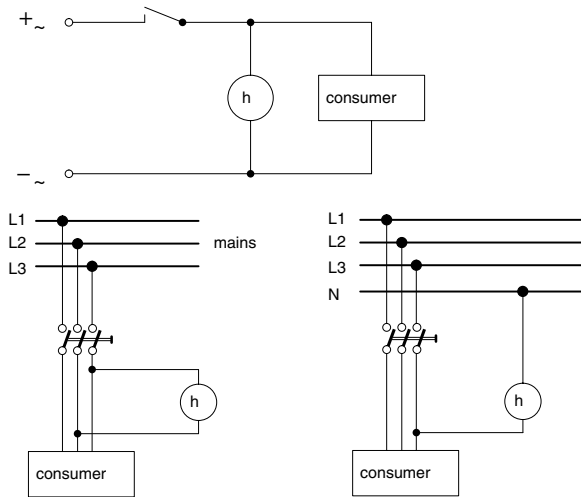


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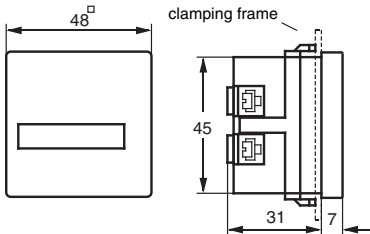
Connections



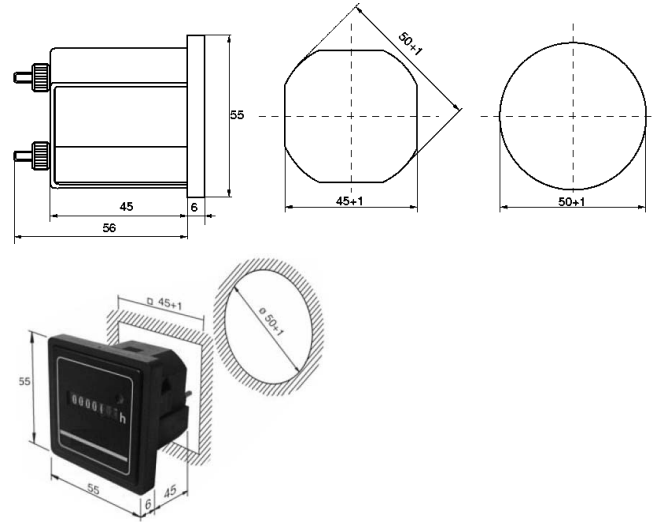
Dimensions

(dimensions in mm)

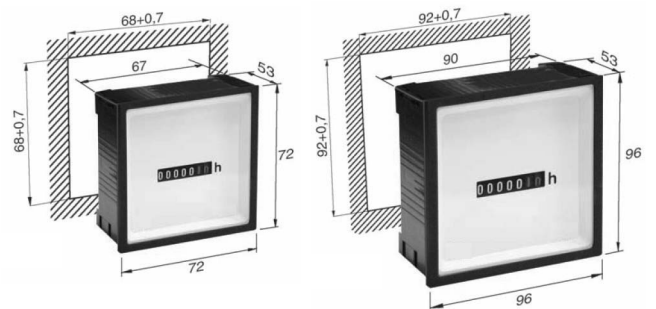
BWQ/BGQ 48



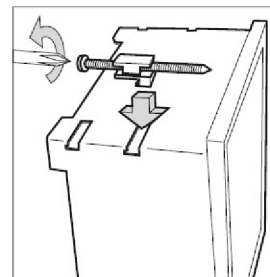
BWQ/BGQ 55



BWQ/BGQ 72/96



mounting



Ordering Information

Type BWQ BGQ	Operating hours counters, square for AC voltage for DC voltage
Front dimensions 48 55 72 96	48 mm x 48 mm 55 mm x 55 mm 72 mm x 72 mm 96 mm x 96 mm
Operating voltage BWQ 48 BWQ 55/72/96 BGQ 48 BGQ 55/72/96	24 V AC 115 V AC 230 V AC ¹⁾ 24 V AC 48 V AC (BWQ 55/72 only) 60 V AC (BWQ 55 only) 110 V AC 230 V AC ¹⁾ 12 ... 48 V DC ¹⁾ 5 ... 24 V DC 36 ... 110 V DC others ²⁾ 10 ... 50 V DC
Rated frequency BWQ ...	50 Hz ¹⁾ 60 Hz
Front mask for BWQ/BGQ 48	none (□ 48 mm) ¹⁾ Q55 □ 55 mm Q72 □ 72 mm D72 ø 72 mm
Enclosure code front side	IP 50 BWQ/BGQ 48 ¹⁾ IP 52 BWQ/BGQ 72/96 IP 54 BWQ/BGQ 55, BWQ/BGQ 48 ²⁾
Terminal protection BWQ/BGQ 72/96	none ¹⁾ terminal cover

¹⁾ Standard

²⁾ On request, please clearly add the desired specifications.

Ordering example

BWQ 72, operating voltage 230 V AC, 50 Hz

– specifications subject to change without notice; date of issue 04/11 –

Weigel Meßgeräte GmbH

Postfach 720 154 • 90241 Nürnberg • Phone: 0911/42347-0
Erlenstraße 14 • 90441 Nürnberg • Fax: 0911/42347-39
Sales: Phone: 0911/42347-94
Internet: <http://www.weigel-messgeraete.de>
e-mail: vertrieb@weigel-messgeraete.de

