

# Ziegler

Redefine Innovative Metering

# Technical Datasheet

CHALLENGER SERIES

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ANALOG PANEL METERS

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## ANALOG PANEL METER

### CHALLENGER SERIES

Ziegler Challenger Series Analog Panel Meters Provides accurate measurement of Electronic and Electrical AC& DC parameters as per the Industrial standard. The detachable lower fascia feature allow user to mount the meter either surface or window way. The Anush series comes in 4 sizes 1<sup>1/2</sup>, 2<sup>1/2</sup>, 3<sup>1/2</sup>, 4<sup>1/2</sup> with a accuracy of 1.5%.

#### Product Features

- AC moving coil and moving iron mechanism
- Reduced inventory
- ANSI standard case sizes
- Detachable lower fascia plate
- Measuring AC and DC Amps, Volt and frequency
- High torque pivot and jewel movement
- Easy to modify for distributions

#### Applications

- Marine
- Switchgear
- Distribution Systems
- Control Panels
- Embedded generation
- Energy Management & Building Management
- Utility Power monitoring
- Process control and motor monitoring



#### Specifications:

Application	
<b>Accuracy</b>	
DC Ammeters and Voltmeters	1.5% 0 to 100% of full scale deflection
AC Ammeters and Voltmeters	Moving Iron: 1.5% 10 to 100% of full scale deflection
Frequency Meters	0.5% of end scale value
<b>Input Ratings</b>	
DC Moving Coil Ammeters	50mA to 30A
DC Moving Coil Voltmeters	50mV to 600V
AC Moving Coil Ammeters(VQ)	1mA to 1A
AC Moving Coil Voltmeters(VQ)	6V to 600V
AC Moving Iron Ammeters(EQ)	100mA to 60A* <sup>1</sup>
AC Moving Iron Ammeters (EQ)	6V to 600V* <sup>1</sup>
Burden	20 to 500V AC. Standard 900 ohms/volt
Frequency Meters	45-55-55Hz, 55-60-65Hz, 45-55-65Hz

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<b>Overload</b>	
Voltmeters	2 times for 0.5 sec : 9 overloads, 2 times for 5 sec : 1 overload
Ammeters DC Center Zero Voltmeter	10 times for 0.5 sec:9 overloads 10 times for 5 sec : 1 overload
<b>Enclosure</b>	
Movement	High torque pivot and jewel moving coil and moving iron
Scale Balance	Within 1% of scale length
Relative Humidity	25% to 80% nominal range of use
Operating Temperature	0° C to +40° C
Storage Temperature	20° C to +55° C
Enclosure Code	IP 42
Case and Cover	Matt black Case UL94V0 Polycarbonate Cover
Bezel	Matt Black
Window	Shatter proof polycarbonate
Fixing	Surface mounting: 4 corner studs 4-40 UNC Rear of panel mounting: 2 through hole mounts
Terminals	011-8-32 UNC, 012-1/4"-28 UNC
<b>Compliant With</b>	
Performance	ANSI C 39.1 and IEC 60051
Manufacture	UL3111-1
Scaling	ANSI C39.1
Safety	IEC 61010-1 (LVD) and BS EN 61326:(EMC)
Vibration	ANSI C39.1 cl. 5.13

<b>Applicable Standards</b>	
Nominal case and cutout dimensions for indicating electrical instruments.	DIN 43700
Scale and pointer for electrical measuring instruments.	DIN 43802, IEC 60051
Connections and Terminal markings for panel meters	DIN 43807 IEC 60051
Terminal bolts / leads	DIN 46200/46282
Clamp straps for connections.	DIN 46282
Safety requirements and protective measures for Electrical indicating instruments and their accessories.	DIN 40050 / 8-70 VDE 0110 /11-72 VDE 0410 /10-76 IEC 60529, IEC 61010
Performance specifications for direct acting indicating analogue electrical measuring instruments & their accessories	IEC 60051/DIN EN 60051 DIN 43701
Environmental conditions	VDE / VDI 3540, IEC60051
Front frames for indicating measuring instruments principle dimensions.	DIN 43718

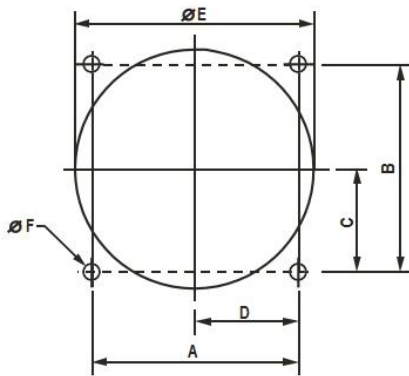
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UL Compatibility Class	UL 94 V-0
Technical conditions of delivery for electrical instruments.	DIN 43701
Mechanical strength (Free fall test,vibration test)	VDE 0411, part I, Sec.43/44, IEC 61010 , IEC 60051
Comply with following European directives	2004/108 EC (EMC directive), 2006/95/EC (low voltage directive) , amendment 93/68/EEC , FOR CE marking

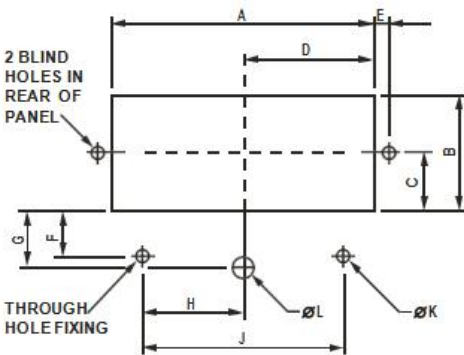
## Dimensions

### Surface Mount Cut Out



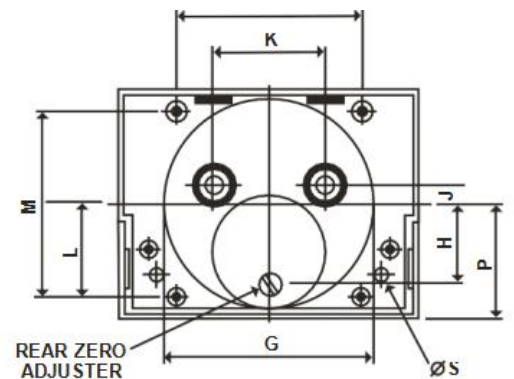
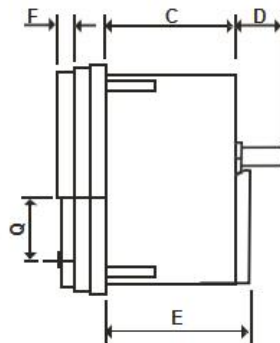
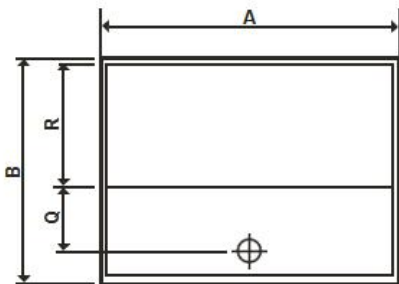
Model 362 and 363 Surface Mount Cut Out

	A	B	C	D	E	F
<b>362 INCHES</b>	1.88	1.88	0.94	0.94	2.16	0.15
<b>362 MM</b>	47.8	47.8	23.9	23.9	54.9	3.8
<b>363 INCHES</b>	2.25	2.25	1.12	1.12	2.16	0.16
<b>363 MM</b>	57.2	57.2	28.5	28.5	54.9	3.6



Model 362 and 363 Surface Mount Cut Out

	A	B	C	D	E	F	G	H	J	K	L
<b>362 INCHES</b>	2.92	1.28	0.63	1.46	0.16	0.64	0.81	1.13	2.26	0.14	0.23
<b>362 MM</b>	74.2	35.5	16.0	37.1	4.1	16.3	20.6	28.7	57.4	3.6	5.8
<b>363 INCHES</b>	3.63	1.61	0.8	1.82	0.16	0.81	0.81	1.48	2.96	1.14	0.23
<b>363 MM</b>	92.2	40.9	20.3	46.2	4.1	20.6	20.6	37.6	75.2	3.6	5.8



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## ANALOG PANEL METER

### Model 362 and 363

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
<b>362 INCHES</b>	3	2.3	1.3	0.5	1.46	0.15	2.12	0.81	0.2	1.12	0.94	1.88	1.88	1.16	0.63	1.27	0.14
<b>362 MM</b>	76.2	58.5	33.0	12.7	37.0	3.8	53.8	20.6	5.1	28.4	23.9	47.8	47.8	29.5	16.0	32.4	3.6
<b>363 INCHES</b>	3.75	2.91	1.3	0.5	1.46	0.16	2.12	0.81	0.2	1.12	0.92	2.25	2.25	1.25	0.81	1.42	0.14
<b>363 MM</b>	95.3	73.9	33.0	12.7	37.0	4.1	53.8	20.6	5.1	28.4	23.4	57.2	57.2	31.8	20.6	36.1	3.6

## Ordering information

For Ordering the product please contact our of sales engineer.

# Ziegler

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