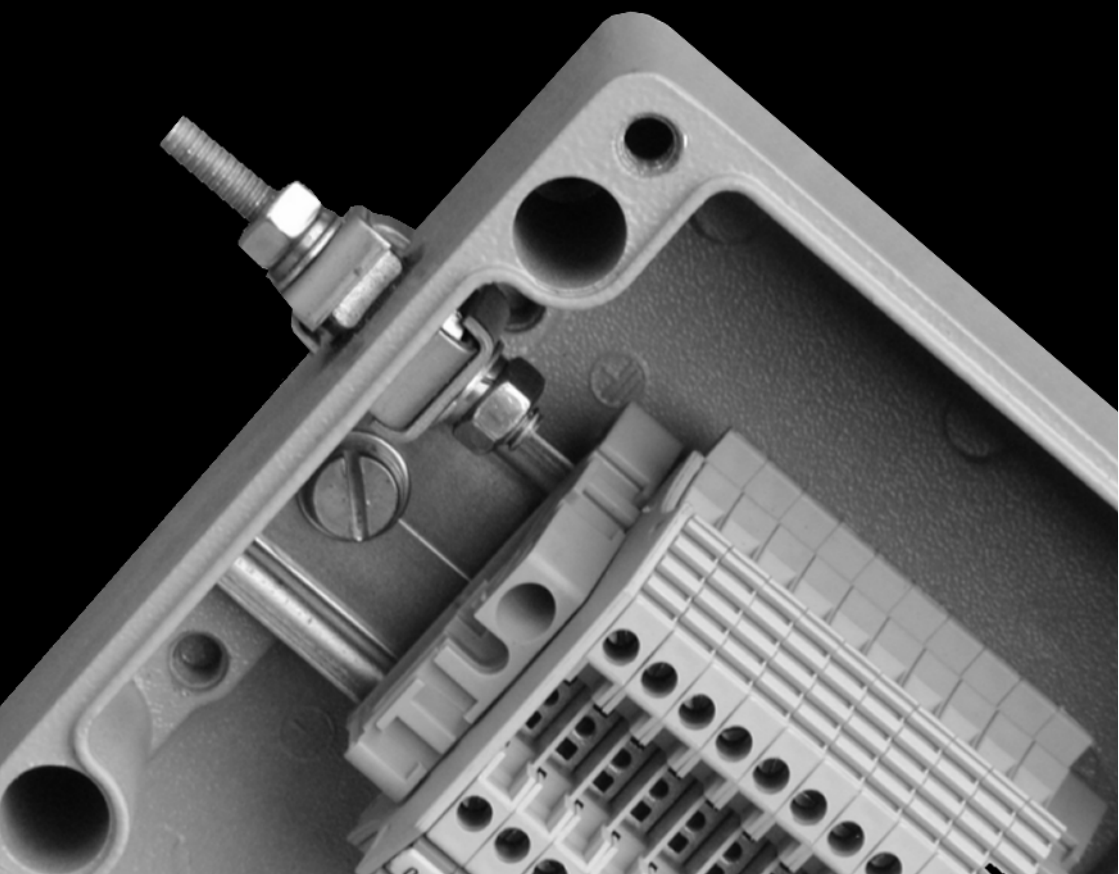




THORNE &
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ZAG

The ZAG range of enclosures comprises of 19 different sizes of enclosures and is precision die cast in AL-Si 12 grade (LM24) aluminium alloy. This is considered to be the most suitable grade of aluminium for maximum corrosion resistance especially in salt laden atmospheres.

Additional optional protection methods such as alocrome, anodising and epoxy polyester painting coupled with the fitment of captive 316 grade stainless steel lid retaining screws further enhance the anti-corrosion properties of the enclosure.



The wall thickness is sufficient to allow tapped entry holes to be machined into the walls or the base of the enclosure.

Due to the enclosure's labyrinth seal system, similar to that of the BPG range of enclosures, whereby the seal is protected from external forces, the ZAG enclosure has excellent ingress protection qualities this means that the enclosure has been tested to and passed IP65/66/67.

The mounting holes, although contained within the profile of the enclosure, sit outside the seal and all the external fasteners and fixings are manufactured from 316 grade stainless steel to ensure the enclosures reliability. External stainless steel mounting feet are offered as an option.

The ZAG range has many features which lend itself to a whole host of applications including junction boxes, both industrial and hazardous area, and especially OEM applications, where the excellent machining qualities of aluminium come to the fore.

The ZAG range can be drilled and tapped with various thread forms and it readily accepts most paint finishes and colours.



The ZAG range is particularly suitable for the engraving of instructions and decals and this method provides excellent durability. Silk screen printing is also available.

All of this can be achieved even in relatively small batches which makes the ZAG range ideal for the small to medium size manufacturers who can achieve a custom enclosure economically.

Earthing of the enclosure can be accomplished by various means. Internal / external stainless steel earth studs which in turn can be connected to the terminal mounting rail or component plate and various rail mounted earth terminals or proprietary earth bars can be fitted inside the enclosure. Due to the fact that aluminium is an excellent conductor, earthing for cable glands is provided through contact with the enclosure wall with no further earthing required.



The ZAG range is suitable for a wide range of ambient conditions. Hazardous Area certified enclosures are suitable for -65°C to +150°C (-85°F to +302°F). Please refer to the relevant Ex certificate for full details.



The ZAG enclosures are suitable for use in hazardous areas and can be supplied with a number of certificates:

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

ZAG Range Features

- Wide Operating Temperature (-65°C to +150°C) (-85°F to +302°F)
- Ingress Protection up to IP67
- Painted and Unpainted versions
- Impact Resistant > 7 Nm
- Corrosion Resistant
- Can be drilled and tapped to accommodate most thread forms (NPT for example)
- Certification for use in Zone 1 and 2
- UL, CSA, IEC Ex, ATEX, FM, InMetro and TR CU Approvals
- Ideal for Petrochemical and Marine applications



Accessories and Options

The following table is a list of the available accessories suitable for particular standard sizes of ZAG enclosures. Care should be taken when ordering accessories for use with enclosures intended for hazardous areas to ensure that compliance with certification is retained.

Part Number	Width (mm)	Height (mm)	Depth (mm)	UP - Unpainted	EX - Ex Certified (see note 1)	AL - Alchromed	ES - Earth Stud	AS - Allen Head Fixing Screws	TP - Tamper Proof Screws	EH - External Hinges	MP - Component Mounting Plate	MF - External Mounting Feet	EB - Internal Earthing Bar	MR - DIN Standard Mounting Rail	RF - RFI Protection (see note 3)
ZAG1	50	45	30	●		●		●	●						●
ZAG2	58	64	34	●	●			●	●		●				●
ZAG3	98	64	34	●	●	●	●	●	●		●				●
ZAG4	150	64	34	●	●	●	●	●	●		●	●			●
ZAG5	75	80	57	●	●	●	●	●	●	●	●	●		●	●
ZAG6	125	80	57	●	●		●	●	●	●	●	●		●	●
ZAG7	175	80	57	●	●	●	●	●	●	●	●	●		●	●
ZAG8	250	80	56	●	●	●	●	●	●	●	●	●		●	●
ZAG9	122	120	80	●	●	●	●	●	●	●	●	●	●	●	●
ZAG9/9	122	120	90	●	●	●	●	●	●	●	●	●	●	●	●
ZAG10	220	120	80	●	●	●	●	●	●	●	●	●	●	●	●
ZAG10/9	220	120	90	●	●	●	●	●	●	●	●	●	●	●	●
ZAG11	160	160	90	●	●	●	●	●	●	●	●	●	●	●	●
ZAG12	260	160	90	●	●	●	●	●	●	●	●	●	●	●	●
ZAG13	360	160	90	●	●	●	●	●	●	●	●	●	●	●	●
ZAG14	560	160	90	●	●	●	●	●	●	●	●	●	●	●	●
ZAG15	202	230	110	●	●	●	●	●	●	●	●	●	●	●	●
ZAG16	330	230	110	●	●	●	●	●	●	●	●	●	●	●	●
ZAG21	120	360	80	●	●	●	●	●	●	●	●	●	●	●	●

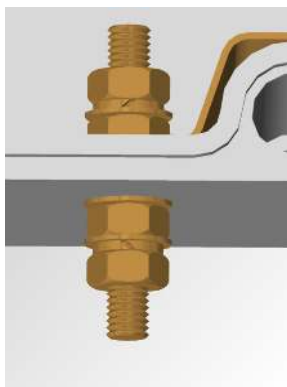
Ordering Example:

ZAG10 UP AS
(ZAG 10 unpainted, Allen Head Fixing Screws)

1. EEx'e' certification may be component or apparatus certified - please specify your requirements.
2. Radio Frequency Interference (RFI) gasket may reduce IP rating. Enclosure may also be internally coated with RFI material.



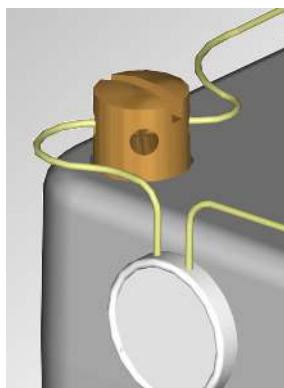
Unpainted (raw) finish



Earth Stud
(either brass or stainless steel)



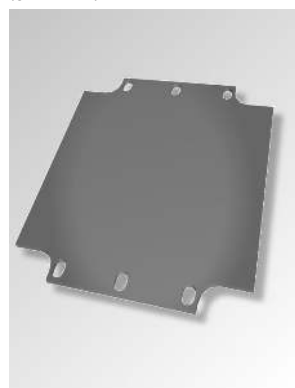
Allen Head fixing screws
(grade 316)



Tamper-proof screws



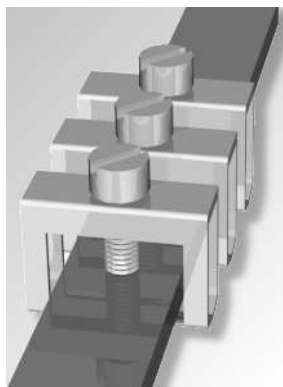
External hinges



Component mounting plate
(tufnol as standard, steel an option)



External mounting feet (stainless
steel 316)



Internal Earthing bar
(can be fitted with clamps)



DIN standard mounting rail
(TS15, TS32 or TS35)

Application

Industrial areas

Protection Degree

IP65

Certification

Not applicable

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150°C (-85° to 302° F)

Power Rating

Not Applicable

**Terminal Populations (Maximum Number of Rails = 0)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmuller		Entrelec		Wago	
BK4 (4 way)	0	MA2.5/5	0	280-992	0
BK6 (6 way)	0	M4/6	0	280-999	0
BK12 (12 way)	0	M6/8	0	281-691	0
MK 6/3	0	M10/10	0	281-992	0
MK 6/4	0	M16/12	0	281-993	0
MK 6/6	0	M35/16	0	282-691	0
SAK 2.5	0			284-691	0
SAK 4	0			283-691	0
SAK 6N	0			285-691	0
SAK 10	0			280-998	0
SAK 16	0			281-998	0
SAK 35	0			264-120	0
				264-220	3
				264-132(2)	0
				264-134(4)	0
				262-132(2)	0
				264-134(4)	0

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	24	16
Height	21	21

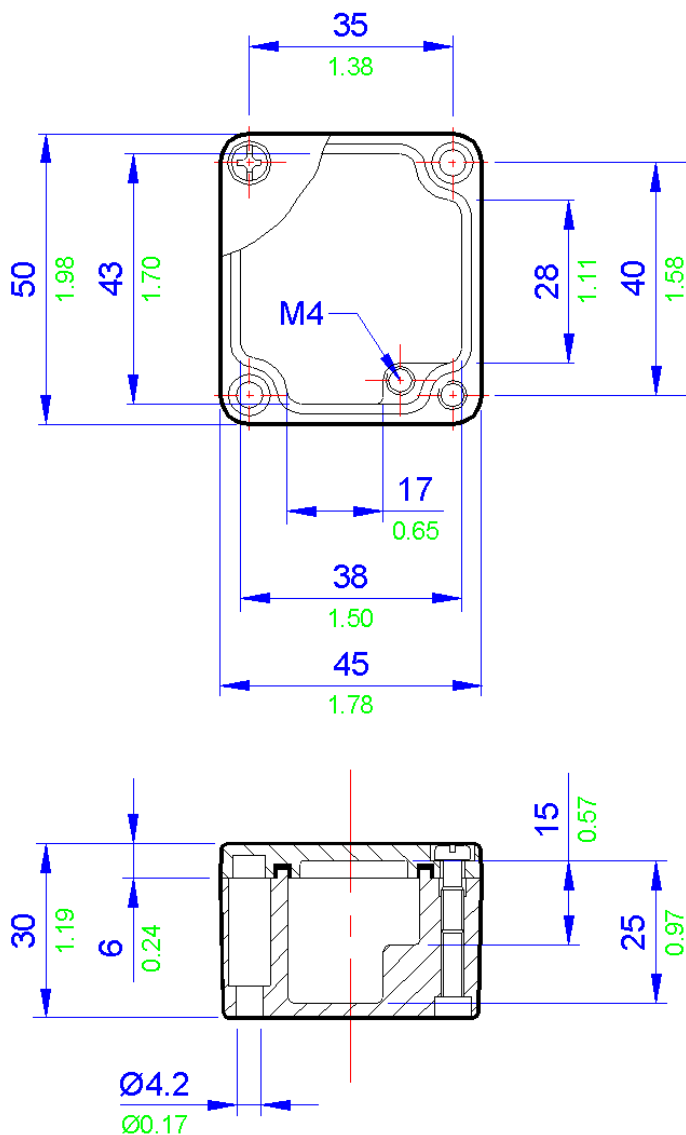
Gland Entry Matrix *

Size	Side A - C	Side B - D
M12	1	0
M16	0	0
M20	0	0
M25	0	0
M32	0	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG1	Painted Aluminium (RAL7001)	50	45	30	75
ZAG1R	Unpainted Aluminium	50	45	30	75



All **blue** dimensions in mm, all **green** dimensions in decimal inches (drawing not to scale)

Application

Hazardous and Industrial areas

Protection Degree

IP65

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex Ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150°C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

0.900W

**Terminal Populations (Maximum Number of Rails = 0)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmuller	
BK4 (4 way)	1
BK6 (6 way)	0
BK12 (12 way)	0
MK 6/3	1
MK 6/4	0
MK 6/6	0
SAK 2.5	0
SAK 4	0
SAK 6N	0
SAK 10	0
SAK 16	0
SAK 35	0

Entrelec	
MA2.5/5	0
M4/6	0
M6/8	0
M10/10	0
M16/12	0
M35/16	0

Wago	
280-992	0
280-999	0
281-691	0
281-992	0
281-993	0
282-691	0
284-691	0
283-691	0
285-691	0
280-998	0
281-998	0
264-120	0
264-220	0
264-132(2)	0
264-134(4)	0
262-132(2)	0
264-134(4)	0

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	21	29
Height	20	20

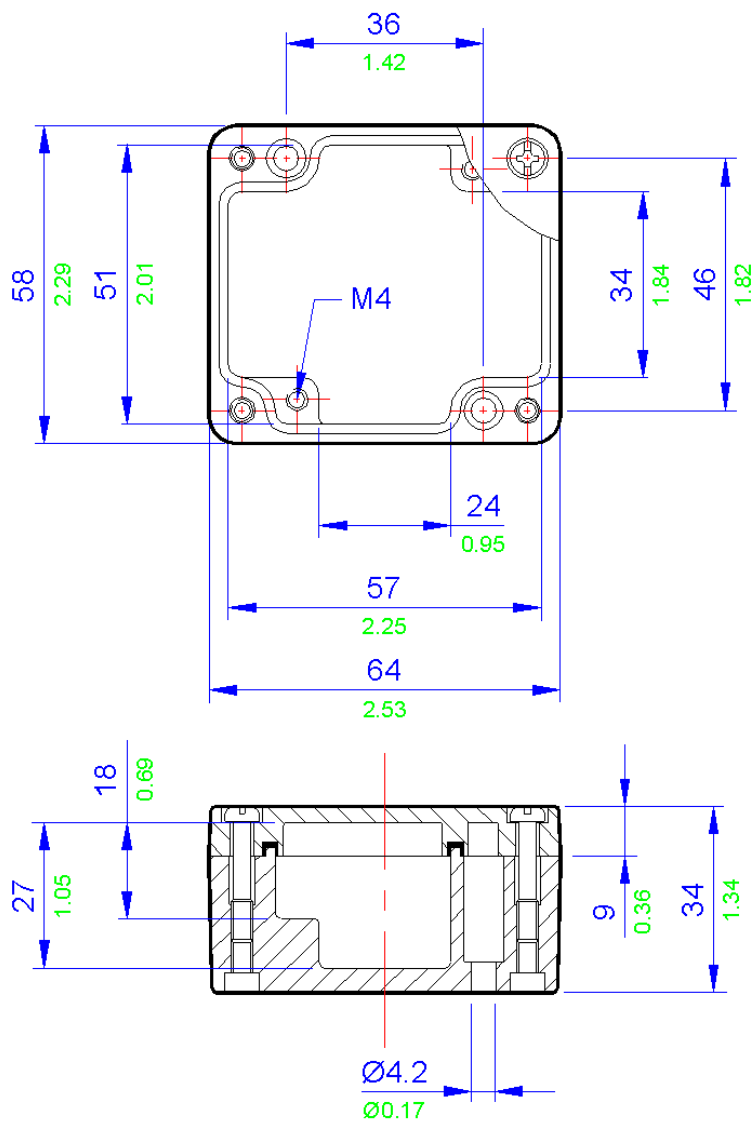
Gland Entry Matrix *

Size	Side A - C	Side B - D
M12	1	1
M16	0	0
M20	0	0
M25	0	0
M32	0	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG2	Painted Aluminium (RAL7001)	58	64	34	170
ZAG2R	Unpainted Aluminium	58	64	34	170



Application

Hazardous and Industrial areas

Protection Degree

IP65

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150° C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

1.200W

**Terminal Populations (Maximum Number of Rails = 0)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	1
BK6 (6 way)	1
BK12 (12 way)	0
MK 6/3	1
MK 6/4	1
MK 6/6	1
SAK 2.5	0
SAK 4	0
SAK 6N	0
SAK 10	0
SAK 16	0
SAK 35	0

Entrelec	
MA2.5/5	0
M4/6	0
M6/8	0
M10/10	0
M16/12	0
M35/16	0

Wago	
280-992	0
280-999	0
281-691	0
281-992	0
281-993	0
282-691	0
284-691	0
283-691	0
285-691	0
280-998	0
281-998	0
264-120	0
264-220	0
264-132(2)	0
264-134(4)	0
262-132(2)	0
264-134(4)	0

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	68	19
Height	21	21

Gland Entry Matrix *

Size	Side A - C	Side B - D
M12	3	1
M16	0	0
M20	0	0
M25	0	0
M32	0	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG3	Painted Aluminium (RAL7001)	98	64	34	220
ZAG3R	Unpainted Aluminium	98	64	34	220

Application

Industrial and Hazardous areas

Protection Degree

IP67

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150° C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

1.700W

**Terminal Populations (Maximum Number of Rails = 0)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	3
BK6 (6 way)	2
BK12 (12 way)	1
MK 6/3	3
MK 6/4	2
MK 6/6	1
SAK 2.5	0
SAK 4	0
SAK 6N	0
SAK 10	0
SAK 16	0
SAK 35	0

Entrelec	
MA2.5/5	0
M4/6	0
M6/8	0
M10/10	0
M16/12	0
M35/16	0

Wago	
280-992	0
280-999	0
281-691	0
281-992	0
281-993	0
282-691	0
284-691	0
283-691	0
285-691	0
280-998	0
281-998	0
264-120	0
264-220	0
264-132(2)	0
264-134(4)	0
262-132(2)	0
264-134(4)	0

Drilling Envelope Dimensions (mm)

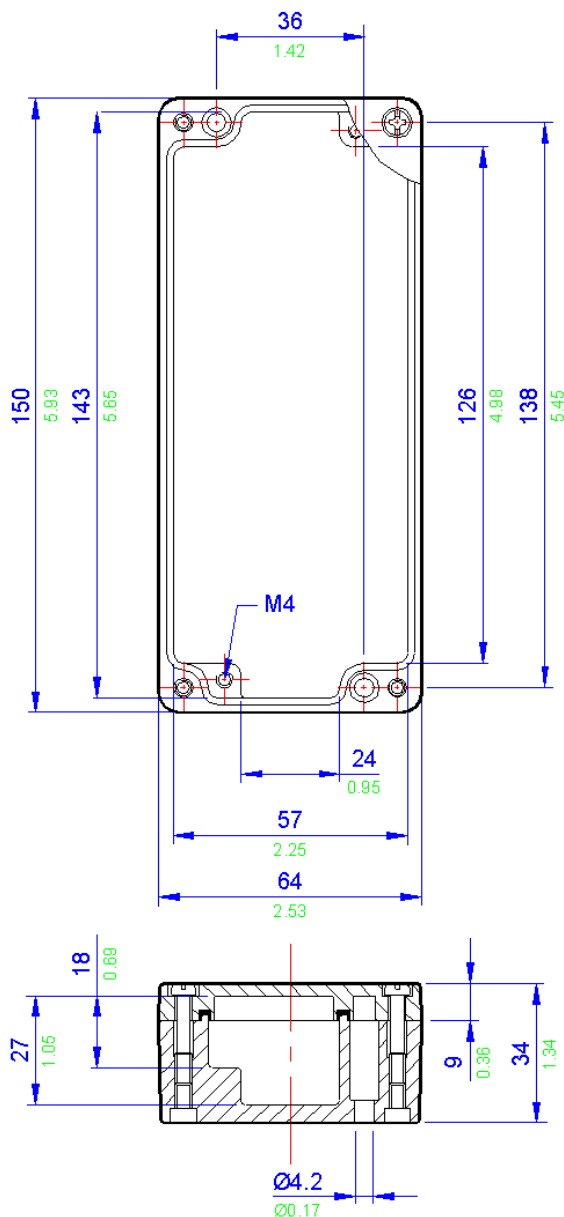
	Side A - C	Side B - D
Width	120	20
Height	22	22

Gland Entry Matrix *

Size	Side A - C	Side B - D
M12	4	1
M16	0	0
M20	0	0
M25	0	0
M32	0	0
M40	0	0

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG4	Painted Aluminium (RAL7001)	150	64	34	330
ZAG4R	Unpainted Aluminium	150	64	34	330



Application

Industrial and Hazardous areas

Protection Degree

IP67

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150° C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

1.500W

**Terminal Populations (Maximum Number of Rails = 1)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	1
BK6 (6 way)	0
BK12 (12 way)	0
MK 6/3	1
MK 6/4	1
MK 6/6	0
SAK 2.5	0
SAK 4	0
SAK 6N	0
SAK 10	0
SAK 16	0
SAK 35	0

Entrelec	
MA2.5/5	0
M4/6	0
M6/8	0
M10/10	0
M16/12	0
M35/16	0

Wago	
280-992	0
280-999	0
281-691	0
281-992	0
281-993	0
282-691	0
284-691	0
283-691	0
285-691	0
280-998	0
281-998	0
264-120	6
264-220	3
264-132(2)	1
264-134(4)	0
262-132(2)	1
264-134(4)	0

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	41	39
Height	37	31

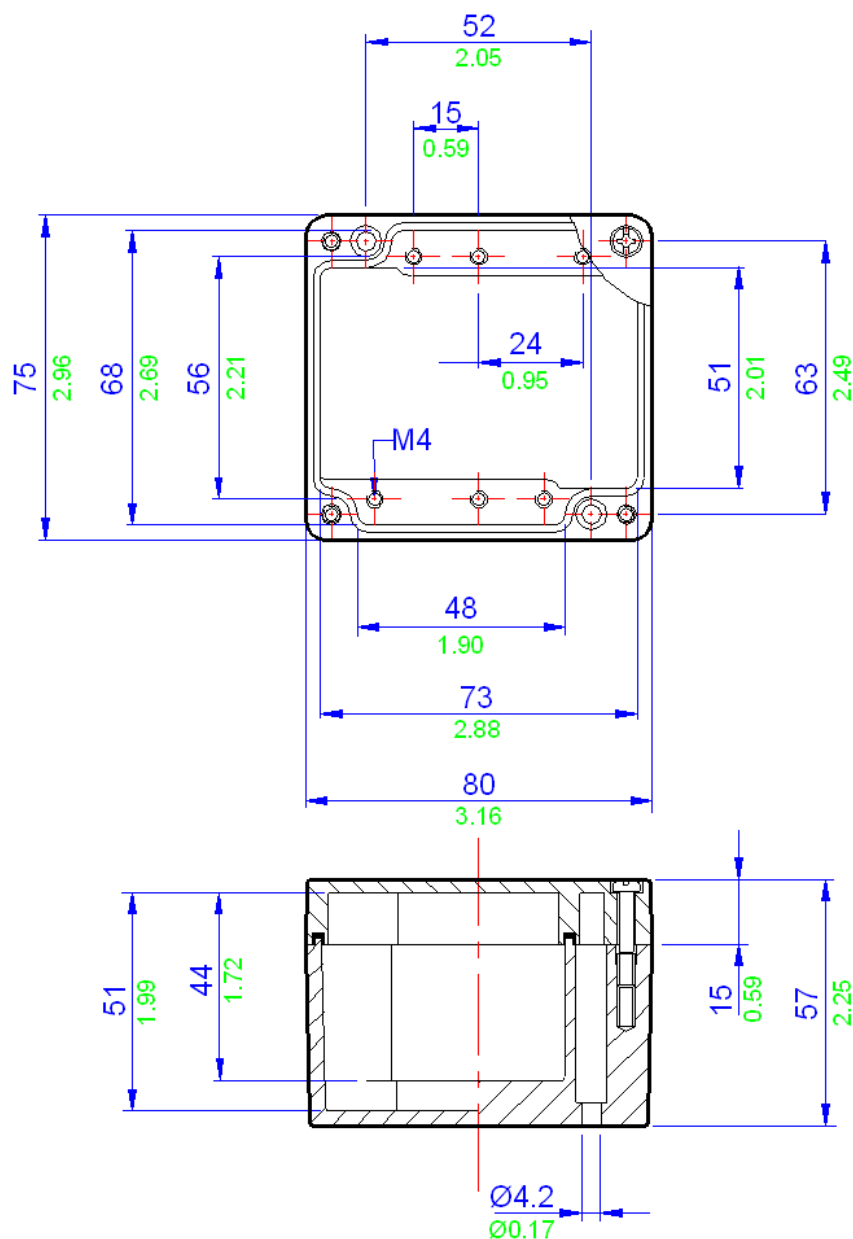
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	1	0
M20	0	0
M25	0	0
M32	0	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG5	Painted Aluminium (RAL7001)	75	80	57	290
ZAG5R	Unpainted Aluminium	75	80	57	290



Application

Industrial and Hazardous areas

Protection Degree

IP67

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex ib (Zone 1) and Ex Ib (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150° C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

2.200W

**Terminal Populations (Maximum Number of Rails = 1)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmuller		Entrelec		Wago	
BK4 (4 way)	2	MA2.5/5	0	280-992	0
BK6 (6 way)	1	M4/6	0	280-999	0
BK12 (12 way)	1	M6/8	0	281-691	0
MK 6/3	2	M10/10	0	281-992	0
MK 6/4	1	M16/12	0	281-993	0
MK 6/6	1	M35/16	0	282-691	0
SAK 2.5	0			284-691	0
SAK 4	0			283-691	0
SAK 6N	0			285-691	0
SAK 10	0			280-998	0
SAK 16	0			281-998	0
SAK 35	0			264-120	14
				264-220	8
				264-132(2)	3
				264-134(4)	2
				262-132(2)	3
				264-134(4)	2

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	95	42
Height	38	31

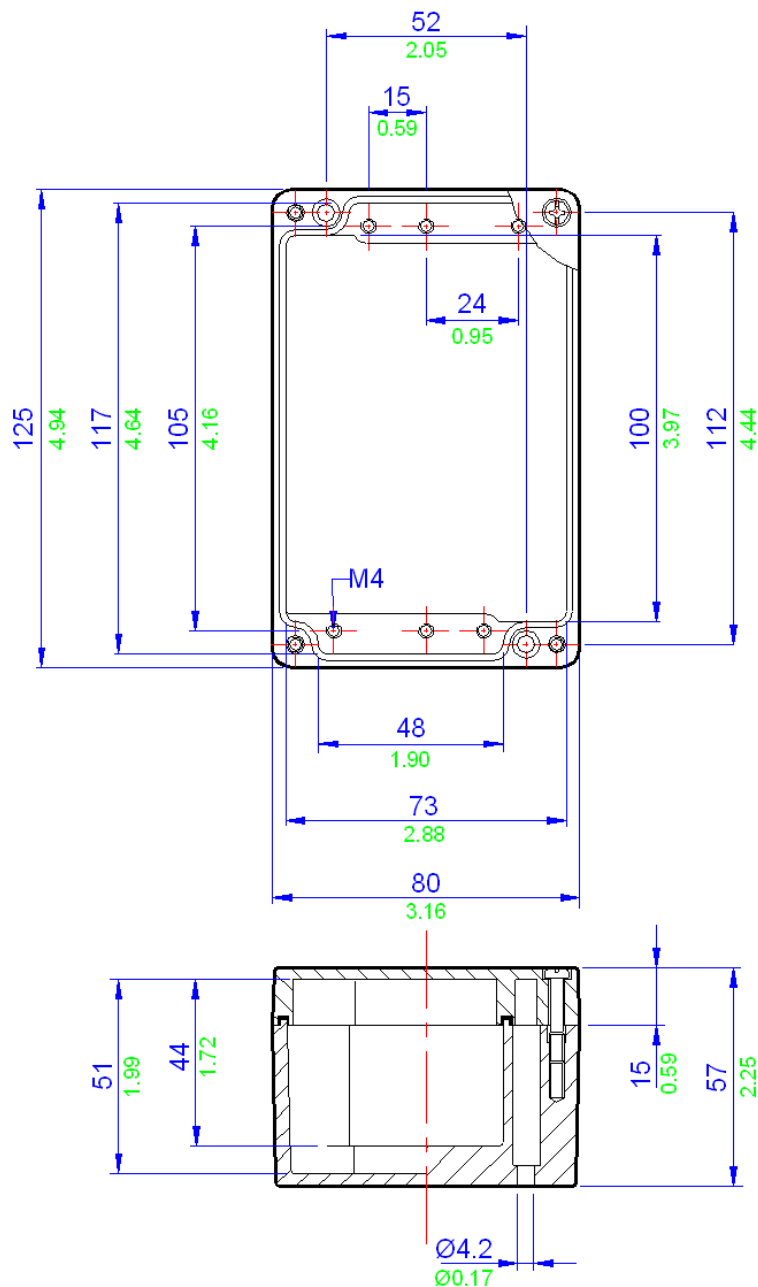
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	2	0
M20	0	0
M25	0	0
M32	0	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG6	Painted Aluminium (RAL7001)	125	80	57	435
ZAG6R	Unpainted Aluminium	125	80	57	435



All blue dimensions in mm, all green dimensions in decimal inches (drawing not to scale)

Application

Industrial and Hazardous areas

Protection Degree

IP67

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150° C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

2.900W

**Terminal Populations (Maximum Number of Rails = 1)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	4
BK6 (6 way)	3
BK12 (12 way)	1
MK 6/3	3
MK 6/4	2
MK 6/6	1
SAK 2.5	0
SAK 4	0
SAK 6N	0
SAK 10	0
SAK 16	0
SAK 35	0

Entrelec	
MA2.5/5	0
M4/6	0
M6/8	0
M10/10	0
M16/12	0
M35/16	0

Wago	
280-992	0
280-999	0
281-691	0
281-992	0
281-993	0
282-691	0
284-691	0
283-691	0
285-691	0
280-998	0
281-998	0
264-120	23
264-220	13
264-132(2)	4
264-134(4)	3
262-132(2)	4
264-134(4)	3

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	141	39
Height	37	31

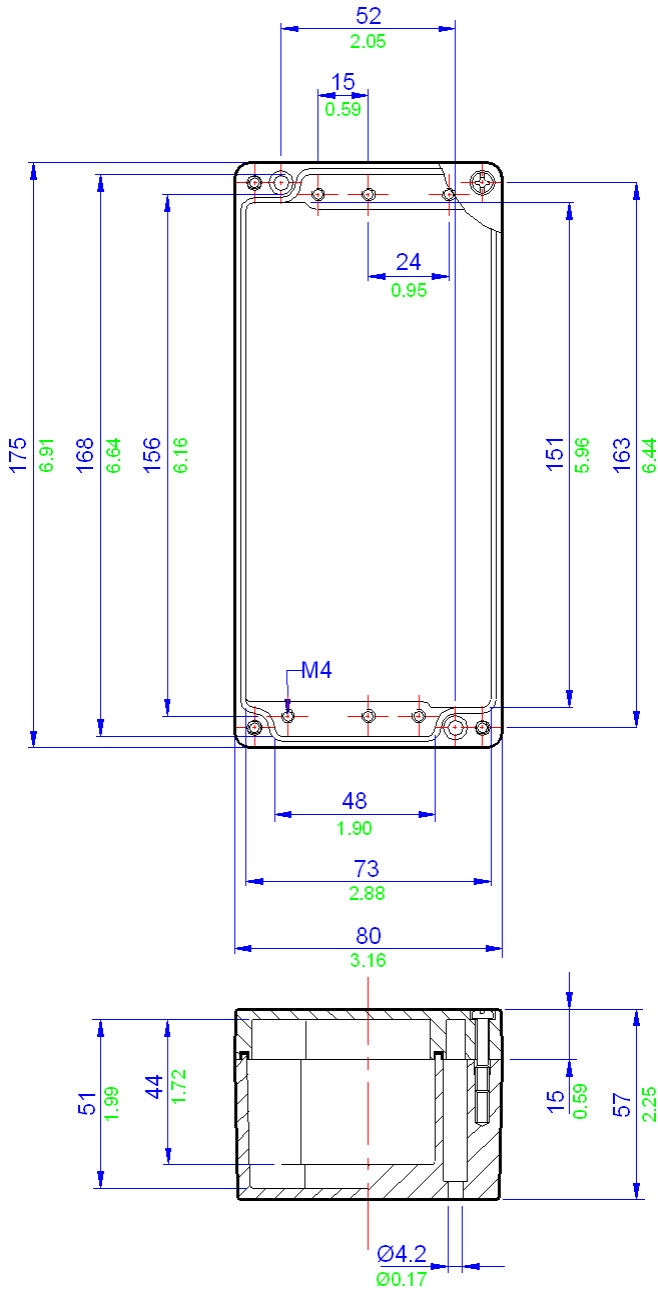
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	4	0
M20	0	0
M25	0	0
M32	0	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG7	Painted Aluminium (RAL7001)	175	80	57	540
ZAG7R	Unpainted Aluminium	175	80	57	540



All blue dimensions in mm, all green dimensions in decimal inches (drawing not to scale)

Application

Industrial and Hazardous areas

Protection Degree

IP65

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150° C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

2.900W

**Terminal Populations (Maximum Number of Rails = 1)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	6
BK6 (6 way)	4
BK12 (12 way)	2
MK 6/3	4
MK 6/4	4
MK 6/6	3
SAK 2.5	0
SAK 4	0
SAK 6N	0
SAK 10	0
SAK 16	0
SAK 35	0

Entrelec	
MA2.5/5	0
M4/6	0
M6/8	0
M10/10	0
M16/12	0
M35/16	0

Wago	
280-992	0
280-999	0
281-691	0
281-992	0
281-993	0
282-691	0
284-691	0
283-691	0
285-691	0
280-998	0
281-998	0
264-120	35
264-220	21
264-132(2)	7
264-134(4)	5
262-132(2)	7
264-134(4)	5

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	222	31
Height	35	42

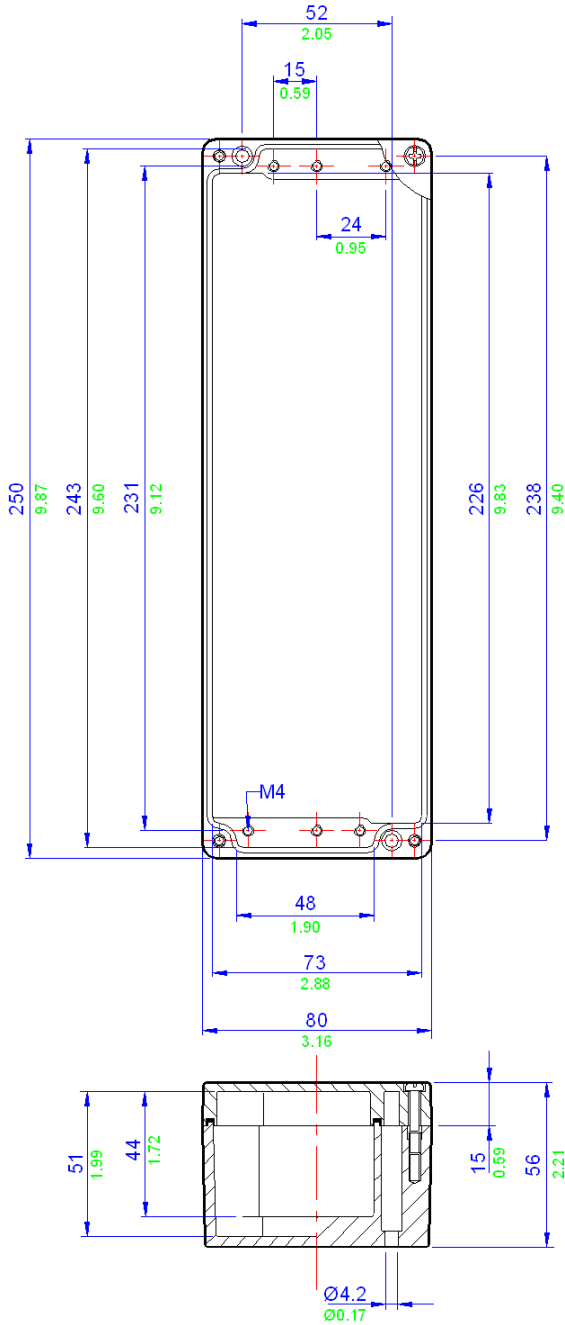
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	6	0
M20	0	0
M25	0	0
M32	0	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG8	Painted Aluminium (RAL7001)	250	80	56	710
ZAG8R	Unpainted Aluminium	250	80	56	710



All blue dimensions in mm, all green dimensions in decimal inches (drawing not to scale)

Application

Industrial and Hazardous areas

Protection Degree

IP67

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex Ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150°C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

3.400W

**Terminal Populations (Maximum Number of Rails = 1)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	2
BK6 (6 way)	2
BK12 (12 way)	1
MK 6/3	1
MK 6/4	1
MK 6/6	1
SAK 2.5	14
SAK 4	13
SAK 6N	10
SAK 10	8
SAK 16	7
SAK 35	5

Enfitelec	
MA2.5/5	17
M4/6	14
M6/8	8
M10/10	8
M16/12	7
M35/16	5

Wago	
280-992	15
280-999	15
281-691	13
281-992	13
281-993	13
282-691	10
284-691	8
283-691	6
285-691	0
280-998	15
281-998	13
264-120	13
264-220	8
264-132(2)	3
264-134(4)	2
262-132(2)	3
264-134(4)	2

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	82	56
Height	55	45

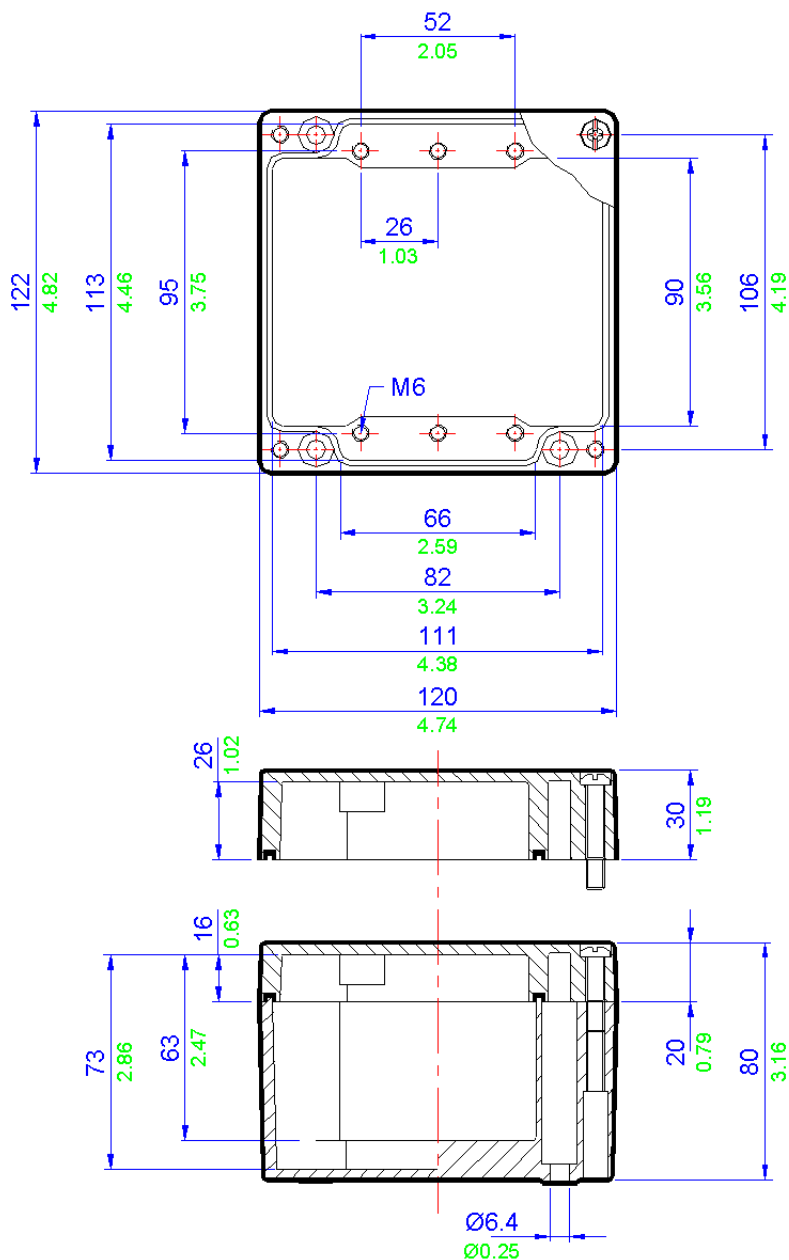
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	2	1
M20	2	1
M25	1	0
M32	0	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG9	Painted Aluminium (RAL7001)	122	120	80	940
ZAG9R	Unpainted Aluminium	122	120	80	940



All **blue** dimensions in mm, all **green** dimensions in decimal inches (drawing not to scale)

Application

Industrial and Hazardous areas

Protection Degree

IP67

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150° C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

3.400W

**Terminal Populations (Maximum Number of Rails = 1)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	2
BK6 (6 way)	2
BK12 (12 way)	1
MK 6/3	1
MK 6/4	1
MK 6/6	1
SAK 2.5	14
SAK 4	13
SAK 6N	10
SAK 10	8
SAK 16	7
SAK 35	5

Entrelec	
MA2.5/5	17
M4/6	14
M6/8	8
M10/10	8
M16/12	7
M35/16	5

Wago	
280-992	15
280-999	15
281-691	13
281-992	13
281-993	13
282-691	10
284-691	8
283-691	6
285-691	0
280-998	15
281-998	13
264-120	13
264-220	8
264-132(2)	3
264-134(4)	2
262-132(2)	3
264-134(4)	2

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	82	56
Height	55	45

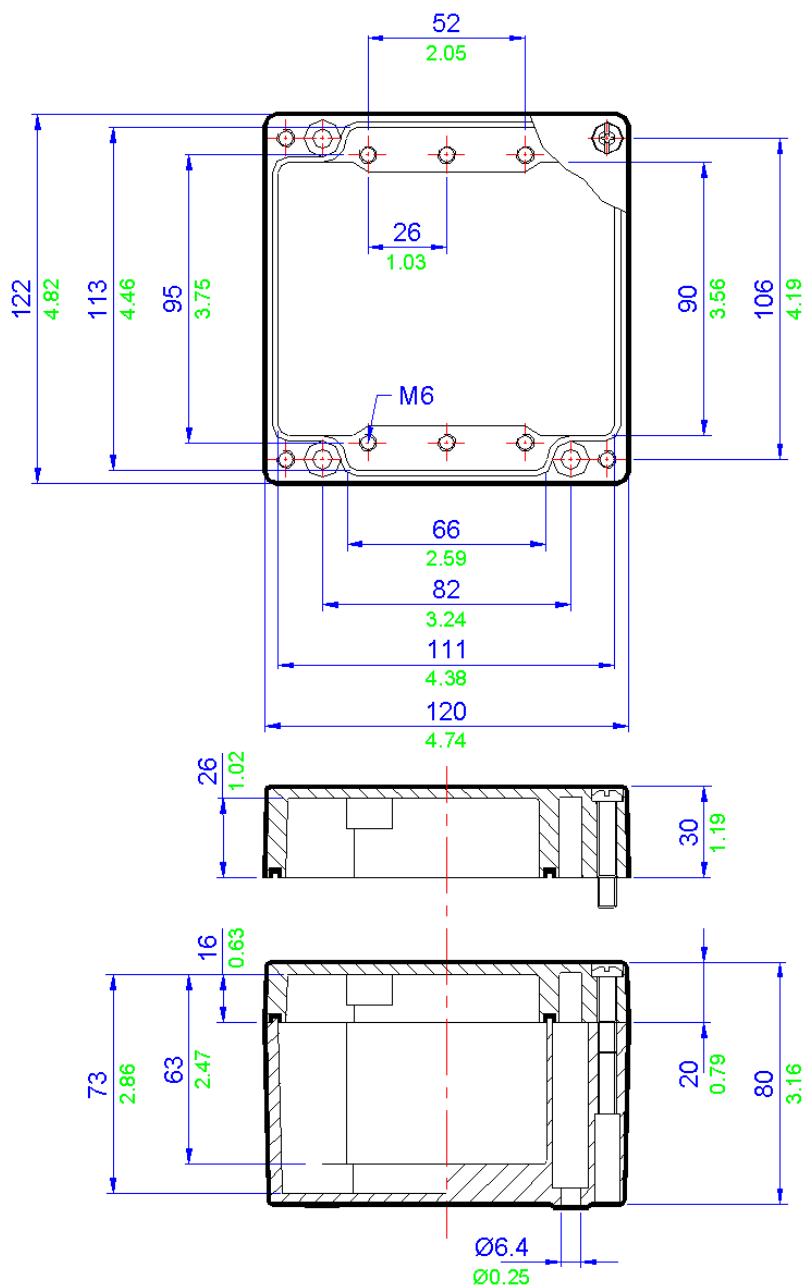
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	2	1
M20	2	1
M25	1	0
M32	0	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG9-9	Painted Aluminium (RAL7001)	122	120	90	965
ZAG9-9R	Unpainted Aluminium	122	120	90	965



All **blue** dimensions in mm, all **green** dimensions in decimal inches (drawing not to scale)

Application

Industrial and Hazardous areas

Protection Degree

IP67

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex Ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150°C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

5.400W

**Terminal Populations (Maximum Number of Rails = 1)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	5
BK6 (6 way)	3
BK12 (12 way)	2
MK 6/3	5
MK 6/4	4
MK 6/6	2
SAK 2.5	30
SAK 4	28
SAK 6N	22
SAK 10	18
SAK 16	15
SAK 35	11

Entrelec	
MA2.5/5	36
M4/6	30
M6/8	22
M10/10	18
M16/12	15
M35/16	11

Wago	
280-992	34
280-999	34
281-691	29
281-992	29
281-993	29
282-691	22
284-691	18
283-691	15
285-691	0
280-998	34
281-998	29
264-120	30
264-220	18
264-132(2)	6
264-134(4)	4
262-132(2)	6
264-134(4)	4

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	178	46
Height	55	56

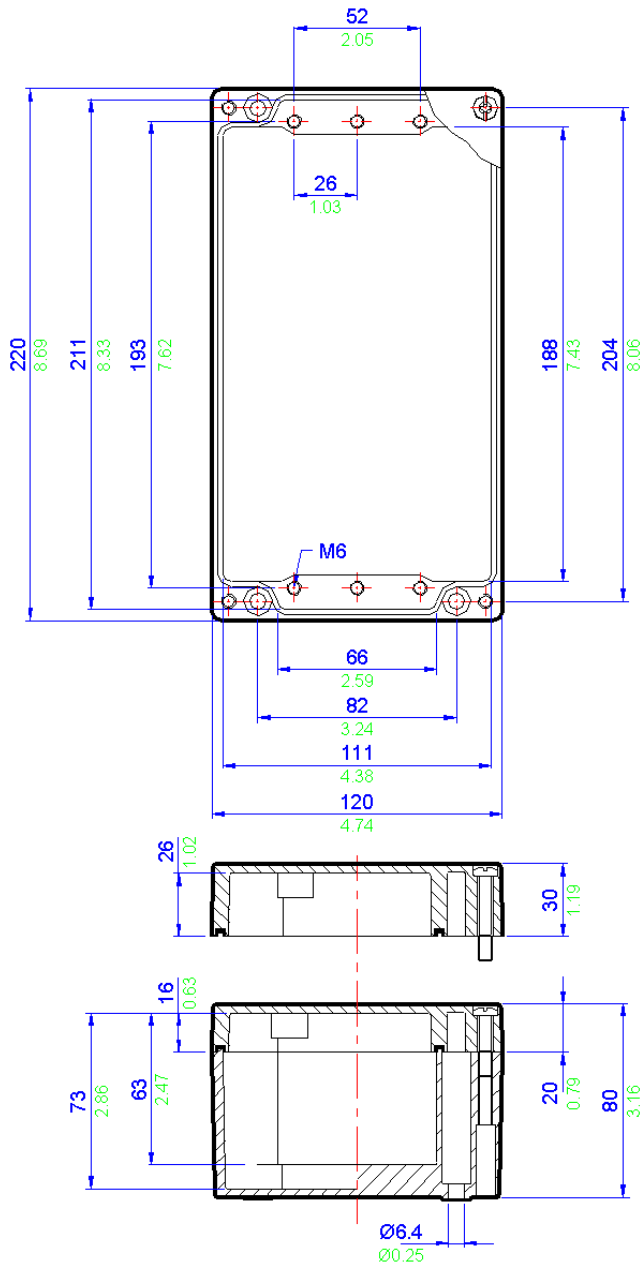
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	6	1
M20	4	1
M25	3	1
M32	0	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG10	Painted Aluminium (RAL7001)	220	120	80	1410
ZAG10R	Unpainted Aluminium	220	120	80	1410



Application

Industrial and Hazardous areas

Protection Degree

IP67

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150°C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

5.400W

**Terminal Populations (Maximum Number of Rails = 1)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	5
BK6 (6 way)	3
BK12 (12 way)	2
MK 6/3	5
MK 6/4	4
MK 6/6	2
SAK 2.5	30
SAK 4	28
SAK 6N	22
SAK 10	18
SAK 16	15
SAK 35	11

Enfitelec	
MA2.5/5	36
M4/6	30
M6/8	22
M10/10	18
M16/12	15
M35/16	11

Wago	
280-992	34
280-999	34
281-691	29
281-992	29
281-993	29
282-691	22
284-691	18
283-691	15
285-691	0
280-998	34
281-998	29
264-120	30
264-220	18
264-132(2)	6
264-134(4)	4
262-132(2)	6
264-134(4)	4

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	178	46
Height	55	56

Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	6	1
M20	4	1
M25	3	1
M32	0	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG10-9	Painted Aluminium (RAL7001)	220	120	90	1440
ZAG10-9R	Unpainted Aluminium	220	120	90	1440



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Application

Industrial and Hazardous areas

Protection Degree

IP67

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150° C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

5,400W

**Terminal Populations (Maximum Number of Rails = 1)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	3
BK6 (6 way)	2
BK12 (12 way)	1
MK 6/3	3
MK 6/4	2
MK 6/6	1
SAK 2.5	20
SAK 4	19
SAK 6N	15
SAK 10	12
SAK 16	10
SAK 35	7

Entrelec	
MA2.5/5	24
M4/6	20
M6/8	15
M10/10	12
M16/12	10
M35/16	7

Wago	
280-992	22
280-999	22
281-691	19
281-992	19
281-993	19
282-691	15
284-691	12
283-691	10
285-691	0
280-998	22
281-998	19
264-120	20
264-220	12
264-132(2)	4
264-134(4)	3
262-132(2)	4
264-134(4)	2

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	110	80
Height	65	56

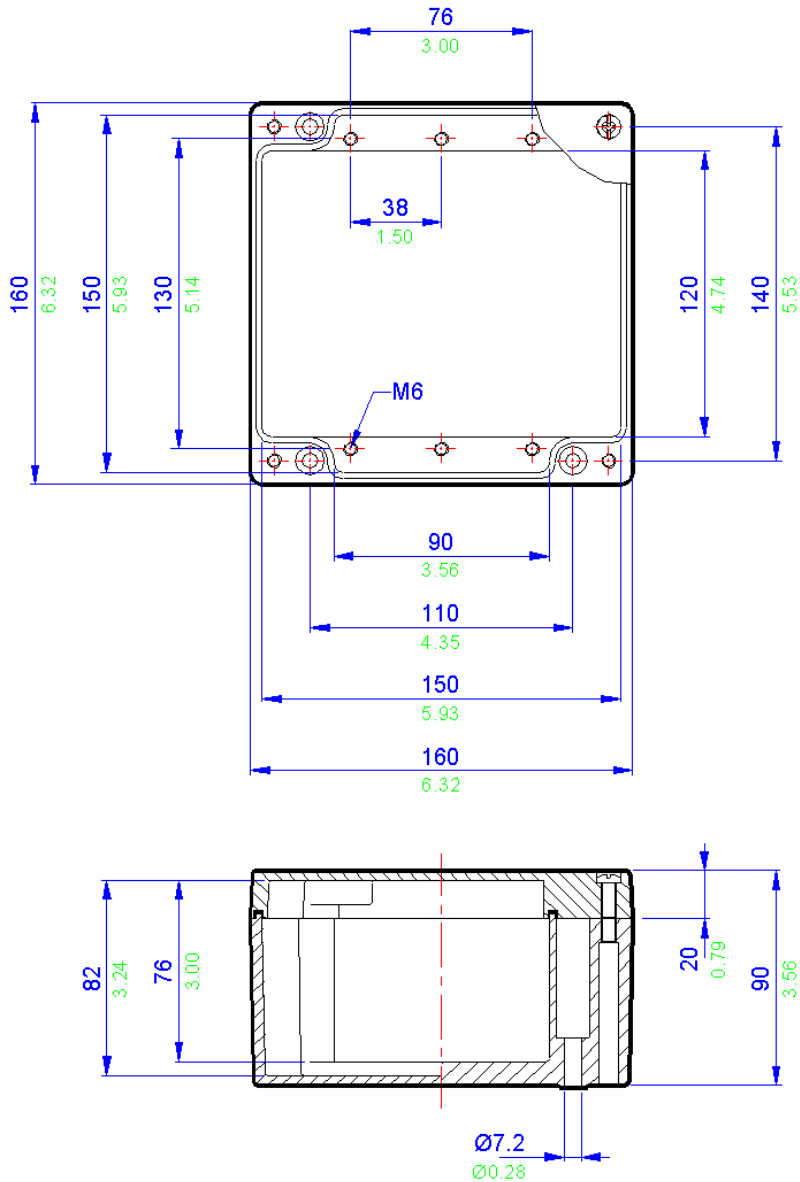
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	6	2
M20	2	2
M25	2	1
M32	1	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG11	Painted Aluminium (RAL7001)	160	160	90	1410
ZAG11R	Unpainted Aluminium	160	160	90	1410



All **blue** dimensions in mm, all **green** dimensions in decimal inches (drawing not to scale)

Application

Industrial and Hazardous areas

Protection Degree

IP67

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150°C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

8,000W

**Terminal Populations (Maximum Number of Rails = 1)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	6
BK6 (6 way)	4
BK12 (12 way)	2
MK 6/3	5
MK 6/4	4
MK 6/6	3
SAK 2.5	36
SAK 4	34
SAK 6N	27
SAK 10	22
SAK 16	18
SAK 35	14

Entrelec	
MA2.5/5	43
M4/6	36
M6/8	27
M10/10	22
M16/12	18
M35/16	14

Wago	
280-992	40
280-999	40
281-691	34
281-992	34
281-993	34
282-691	27
284-691	21
283-691	18
285-691	0
280-998	40
281-998	34
264-120	36
264-220	21
264-132(2)	7
264-134(4)	5
262-132(2)	7
264-134(4)	5

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	210	80
Height	65	56

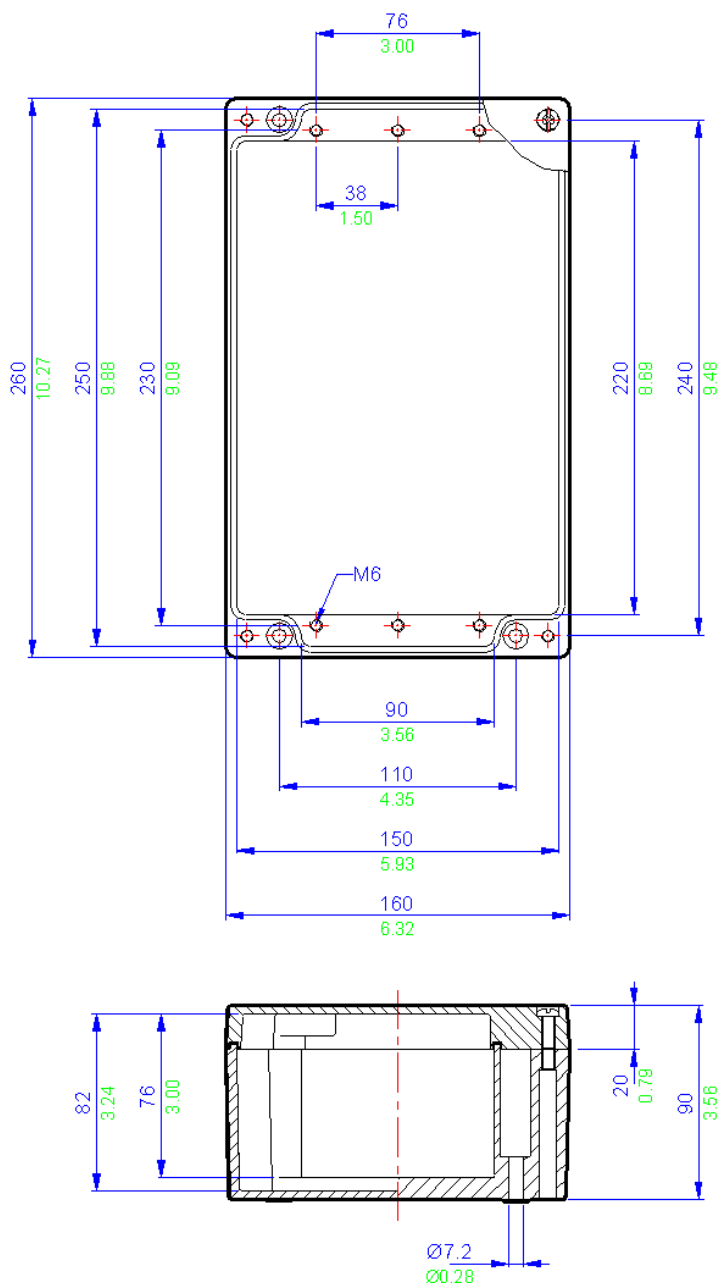
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	12	2
M20	6	2
M25	4	1
M32	3	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG12	Painted Aluminium (RAL7001)	260	160	90	1960
ZAG12R	Unpainted Aluminium	260	160	90	1960



All blue dimensions in mm, all green dimensions in decimal inches (drawing not to scale)

Application

Industrial and Hazardous areas

Protection Degree

IP65

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex Ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150°C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

10.400W

**Terminal Populations (Maximum Number of Rails = 2)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	9
BK6 (6 way)	6
BK12 (12 way)	3
MK 6/3	7
MK 6/4	6
MK 6/6	4
SAK 2.5	52
SAK 4	48
SAK 6N	40
SAK 10	32
SAK 16	26
SAK 35	20

Entelec	
MA2.5/5	63
M4/6	52
M6/8	40
M10/10	32
M16/12	26
M35/16	20

Wago	
280-992	58
280-999	58
281-691	50
281-992	50
281-993	50
282-691	39
284-691	31
283-691	26
285-691	0
280-998	58
281-998	50
264-120	52
264-220	31
264-132(2)	11
264-134(4)	7
262-132(2)	10
264-134(4)	7

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	314	80
Height	65	56

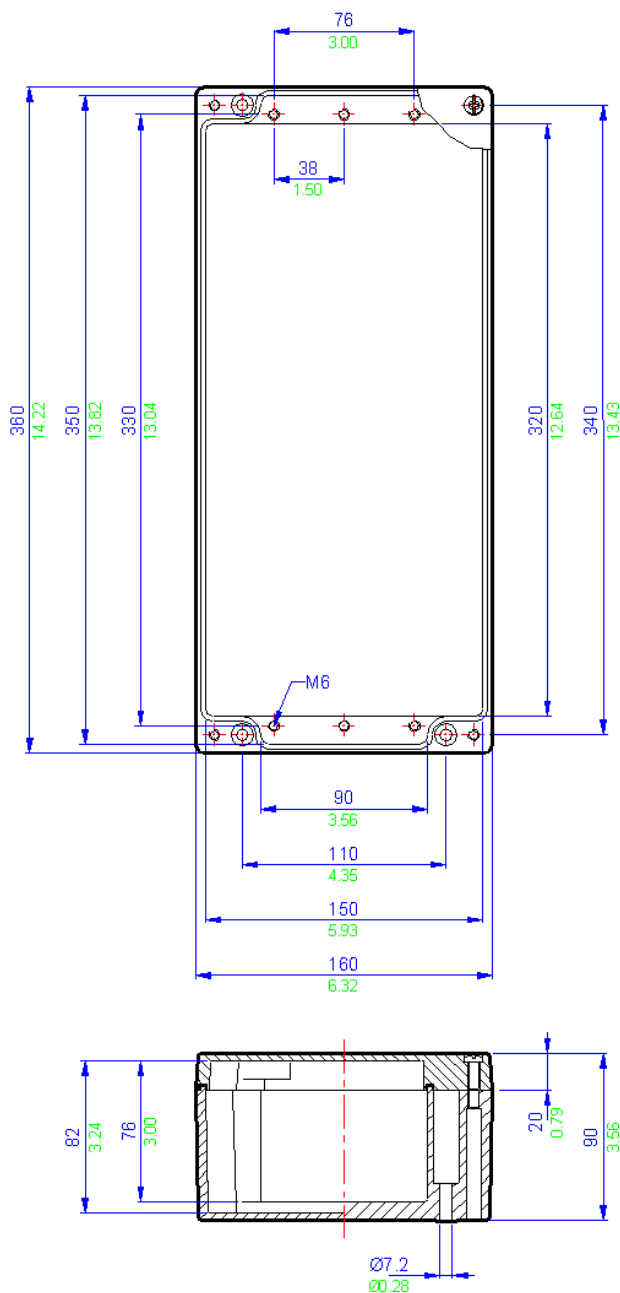
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	18	2
M20	8	2
M25	6	1
M32	5	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG13	Painted Aluminium (RAL7001)	360	160	90	2550
ZAG13R	Unpainted Aluminium	360	160	90	2550



All **blue** dimensions in mm, all **green** dimensions in decimal inches (drawing not to scale)

Application

Industrial and Hazardous areas

Protection Degree

IP65

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150° C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

10.400W

**Terminal Populations (Maximum Number of Rails = 2)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	14
BK6 (6 way)	10
BK12 (12 way)	5
MK 6/3	12
MK 6/4	11
MK 6/6	7
SAK 2.5	85
SAK 4	78
SAK 6N	64
SAK 10	51
SAK 16	43
SAK 35	32

Entrelec	
MA2.5/5	101
M4/6	85
M6/8	64
M10/10	51
M16/12	43
M35/16	32

Wago	
280-992	96
280-999	96
281-691	82
281-992	82
281-993	82
282-691	63
284-691	51
283-691	42
285-691	0
280-998	96
281-998	82
264-120	85
264-220	51
264-132(2)	18
264-134(4)	12
262-132(2)	18
264-134(4)	12

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	240	56
Height	65 (x2)	80

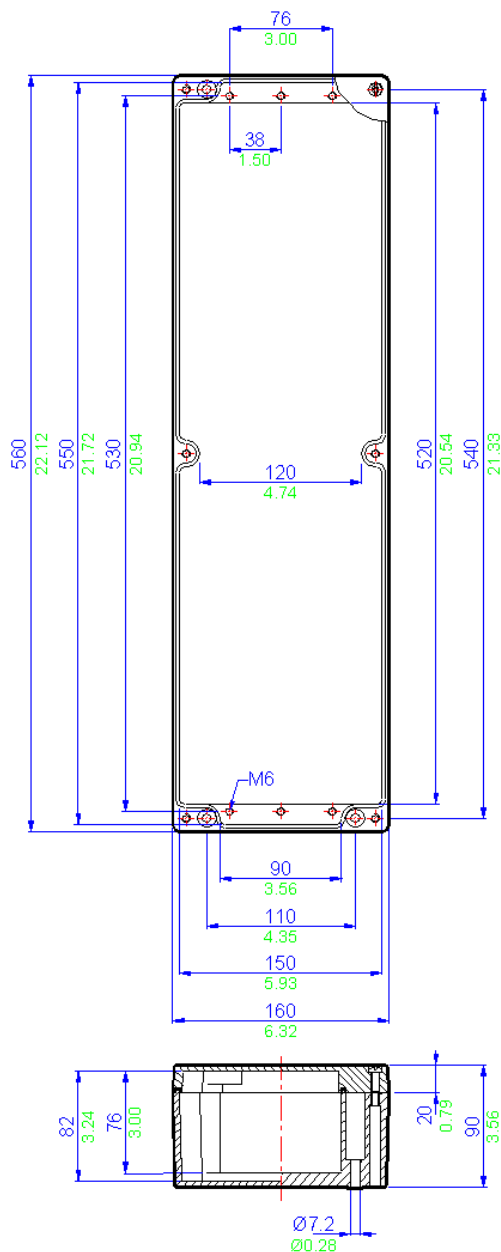
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	28	2
M20	12	2
M25	10	1
M32	8	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG14	Painted Aluminium (RAL7001)	560	160	90	4310
ZAG14R	Unpainted Aluminium	560	160	90	4310



All blue dimensions in mm, all green dimensions in decimal inches (drawing not to scale)

Application

Industrial and Hazardous areas

Protection Degree

IP65

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex Ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150° C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

9.500W

**Terminal Populations (Maximum Number of Rails = 3)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	10
BK6 (6 way)	8
BK12 (12 way)	4
MK 6/3	10
MK 6/4	8
MK 6/6	4
SAK 2.5	62
SAK 4	58
SAK 6N	48
SAK 10	38
SAK 16	32
SAK 35	24

Entrelec	
MA2.5/5	76
M4/6	62
M6/8	48
M10/10	38
M16/12	32
M35/16	24

Wago	
280-992	70
280-999	70
281-691	60
281-992	60
281-993	60
282-691	46
284-691	36
283-691	15
285-691	10
280-998	70
281-998	60
264-120	62
264-220	36
264-132(2)	12
264-134(4)	8
262-132(2)	12
264-134(4)	8

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	150	150
Height	85	76

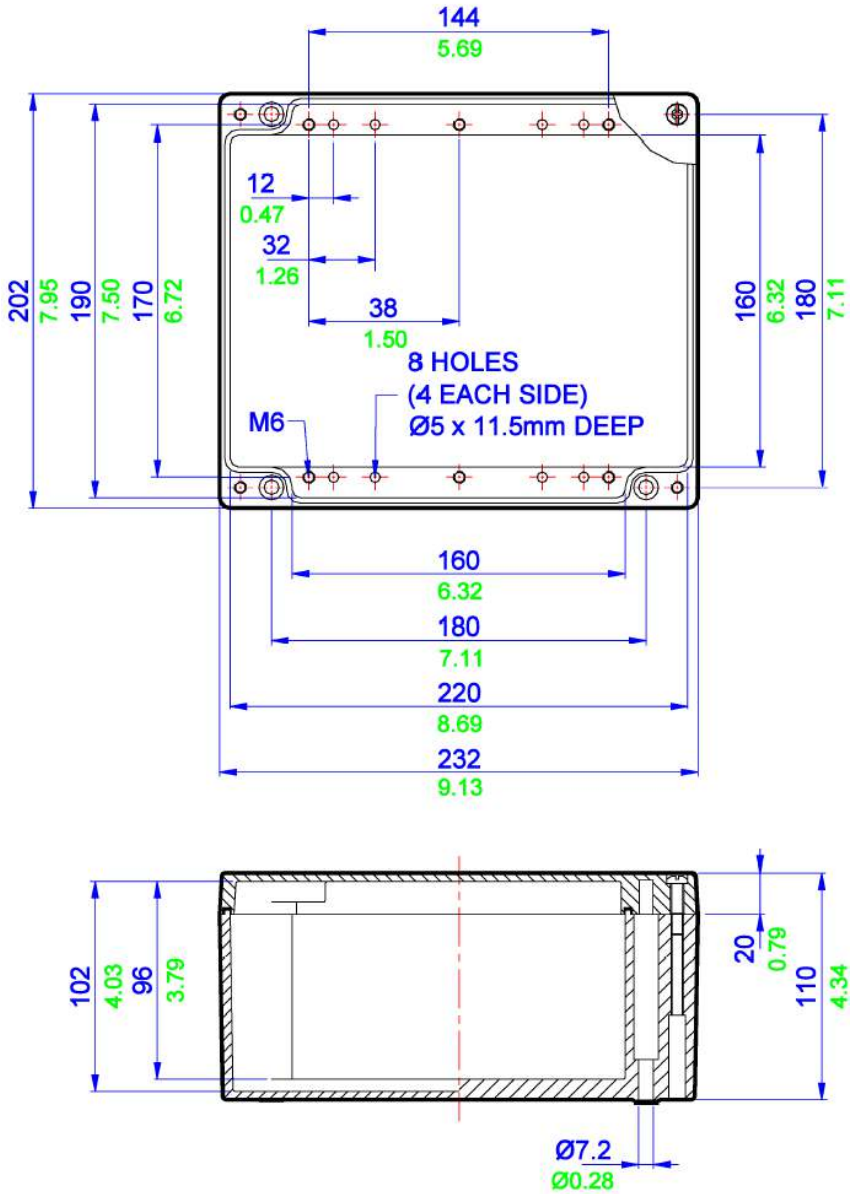
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	9	8
M20	6	6
M25	4	3
M32	2	2
M40	2	2

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG15	Painted Aluminium (RAL7001)	202	230	110	2750
ZAG15R	Unpainted Aluminium	202	230	110	2750



Application

Industrial and Hazardous areas

Protection Degree

IP66

Certification

ATEX and IECEx:

- Ex ia (Zone 0) and Ex ta (Zone 20)
- Ex e Ex ib (Zone 1) and Ex tb (Zone 21)
- Ex nA (Zone 2) and Ex tc (Zone 22)

CSA Ex e (Class 1, Zone 1)

FM AEx e (Class 1, Zone 1)

TYPE 4X (CSA, FM, UL)

TR CU

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150° C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

14.000W

**Terminal Populations (Maximum Number of Rails = 3)**

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmuller	
BK4 (4 way)	16
BK6 (6 way)	12
BK12 (12 way)	6
MK 6/3	14
MK 6/4	12
MK 6/6	8
SAK 2.5	96
SAK 4	88
SAK 6N	72
SAK 10	58
SAK 16	48
SAK 35	36

Entrelec	
MA2.5/5	114
M4/6	96
M6/8	72
M10/10	58
M16/12	48
M35/16	36

Wago	
280-992	108
280-999	108
281-691	92
281-992	92
281-993	92
282-691	72
284-691	56
283-691	24
285-691	16
280-998	108
281-998	92
264-120	96
264-220	56
264-132(2)	20
264-134(4)	14
262-132(2)	20
264-134(4)	12

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	284	150
Height	85	76

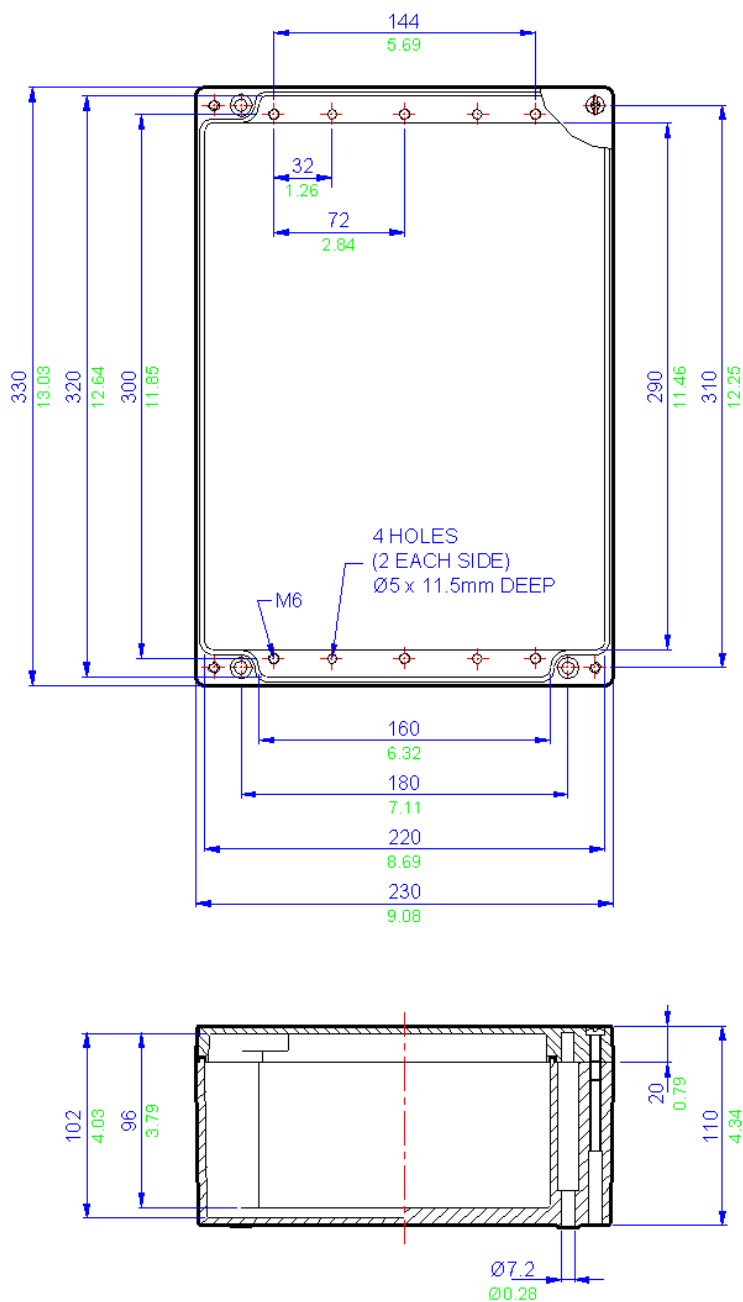
Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	21	8
M20	14	6
M25	10	3
M32	4	2
M40	4	2

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG16	Painted Aluminium (RAL7001)	330	230	110	4270
ZAG16R	Unpainted Aluminium	330	230	110	4270



All blue dimensions in mm, all green dimensions in decimal inches (drawing not to scale)

Application

Industrial areas

Protection Degree

IP66

Certification

Not applicable

Material

Precision Cast AISI12 (LM24) Aluminium Alloy

Temperature Rating

-65° to 150°C (-85° to 302° F)*

*Refer to certificate for further details

Power Rating

8.000W



Terminal Populations (Maximum Number of Rails = 3)

Calculations do not include the use of end stops, end plates and separators. Check that the enclosure can accommodate the cable bending radius and that the earth stud and entry location will permit the required number of terminals to be fitted

Weidmüller	
BK4 (4 way)	9
BK6 (6 way)	6
BK12 (12 way)	3
MK 6/3	6
MK 6/4	6
MK 6/6	4
SAK 2.5	52
SAK 4	48
SAK 6N	40
SAK 10	32
SAK 16	26
SAK 35	0

Entrelec	
MA2.5/5	63
M4/6	52
M6/8	40
M10/10	32
M16/12	26
M35/16	0

Wago	
280-992	58
280-999	58
281-691	50
281-992	50
281-993	50
282-691	39
284-691	31
283-691	26
285-691	0
280-998	58
281-998	50
264-120	52
264-220	31
264-132(2)	11
264-134(4)	7
262-132(2)	10
264-134(4)	7

Drilling Envelope Dimensions (mm)

	Side A - C	Side B - D
Width	320	60
Height	56	47

Gland Entry Matrix *

Size	Side A - C	Side B - D
M16	12	1
M20	8	1
M25	7	1
M32	0	0
M40	0	0

* Using standard gland clearances

Specifications

Part Number	Material	Width (mm)	Length (mm)	Depth (mm)	Weight (g)
ZAG21	Painted Aluminium (RAL7001)	120	360	80	2050
ZAG21R	Unpainted Aluminium	120	360	80	2050

