# **CQA/MQA 08 SIZE "32.13"**

Compact, metallic enclosures with stainless steel lever

# AXYR® CQYF /M 08E - CRIMP CQF /M 08E

New inserts in crimp and AXYR® technology



CQA 08 I, MQA 08 025 /V25 enclosures size "32.13" for new connectors with PE plate

CQ connectors 8 P +  $\oplus$  with PE plate





## **TECHNICAL FEATURES**



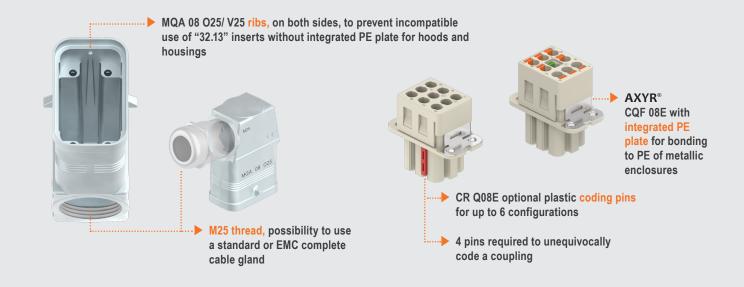
The new metallic enclosures CQA/MQA size "32.13" have been developed with utmost ease of assembly and simplicity in mind.

Being metallic, these new zinc alloy, zinc plated die cast enclosures, require <u>proper bonding to protective earth (PE)</u>, for <u>safety reasons</u>. The existing solutions on the market, in order to fulfil this requirement and provide a safety-robust design in line with the mandatory CE marking statement for such devices, were unsatisfactory in this regard: such a compact design leaves no space for including a separate PE terminal inside the hoods/housings without implying the split of the hood/housing in two parts – thus adding at least two screws and one sealing gasket – and the presence of an additional arm and screw terminal inside the hood, likely to obstruct the wiring space, thus making the assembly utterly complex, expensive, and prone to additional troubles in keeping the high IP degree of protection provided by such enclosures.

On the other hand, insulating enclosures do not provide – although special insulating metallized EMC versions CQS 08 (CN.19 pages 573-575) exist – the necessary shielding of electromagnetic interference that the "32.13" connector inserts typically require for being used in conjunction with pulse width modulation (PWM) drives (inverters) for electric motors' speed/torque motion control, systems that are likely to produce significant harmonic pollution.

The new metallic enclosures, provided with a robust stainless steel locking lever, have their outer surface protected against corrosion by a conductive layer of galvanic zinc plating, thus they can easily serve as <a href="MC">EMC</a> enclosures, once provided with commercially available M25 EMC cable glands, and by replacing the standard rubber sealing gasket provided with the dedicated "32.13" male inserts with special conductive sealing gasket CR 08 EMC (see CN.19 page 575).

- New metallic enclosures CQA/MQA size "32.13" were therefore demanded to serve such applications. The solution envisaged is to let the "32.13" connector inserts provide such bonding to the surrounding metal hood/housing via a newly introduced PE plate reliably in contact with their PE male or female contact.
  - In order to dumb-proof avoid possibly hazardous mounting of any previously available connector inserts not provided with such PE plate (i.e.: CQF /M 08, CQF /M 04/2, CQF /M 17) into these **new series CQA/MQA metallic enclosures**, these ones have been provided by **internal keys** that match only with the corresponding **keyways** foreseen on the new inserts **CQYF /M 08E (AXYR\*) and CQF /M 08E (crimp)**, the only ones suitable for these enclosures.
- Q The new AXYR® CQYF /M 08E connector inserts have been developed already equipped with such additional PE plate, so as to be immediately available for installation either on the traditional insulating housings series CQ/MQ, or on the new size "32.13" series CQA/MQA metallic enclosures.
- The existing crimp equivalent inserts CQF /M 08 unsuitable for metallic hoods/housings needed to be complemented by a new variant, equipped with such additional PE plate; thus, the new crimp version CQF /M 08E (where the E after the polarity means presence of PE plate) is also suitable for use either inside traditional size "32.13" CQ/MQ insulating enclosures or inside the new size "32.13" series CQA/MQA metallic enclosures.



#### CQA - MQA **Metallic version**

inserts page: CQY 08E 8 poles + 🕀 36 **CQ 08E** 8 poles + @ 37

bulkhead mounting housings with single lever



#### hoods with 2 pegs



description	part No.	pait No.	M	
with lever and gasket	CQA 08 I			
with pegs, side entry		MQA 08 O25	25	
with neas ton entry		MOA 08 V25	25	

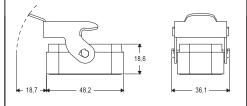
- DNV certified cURus (Type 12, 4, 4X), CQC, BV pending (EAC not applicable)
- ambient temperature limit: -40 °C ... +125 °C
- zinc die-cast, zinc plated
- stainless steel lever
- NBR flange gasket (interface gasket provided with male insert, where applicable)
   EMC (with suitable cable glands) and replacement of interface gasket on male insert with CR 08 EMC (refer to CN.19, page 575)
  - top/side M25 cable entry

#### **☑** IMPORTANT NOTE:

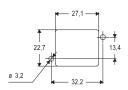
coded for use with "32.13" PE inserts only.



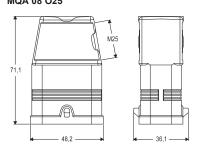
#### CQA 08 I



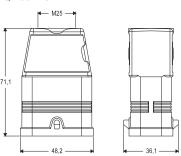
panel cut-out



### MQA 08 O25



#### MQA 08 V25



 $\mathsf{cURus}$ Type 4/4X/12 pending



according to IEC/EN 60529

# THE DEGREE OF PROTECTION

The connector's housing, sealing and locking mechanism protect the connection from external influences such as mechanical shocks, foreign bodies, humidity, dust, water or other fluids such as cleansing and cooling agents, oils, etc. The degree of protection the housing offers is explained in the IEC 60529, DIN EN 60529, standards that categorize enclosures according to foreign body and water protection.

The following table shows the IP (Ingress Protection) Ratings Guide.

FIRST	Degree of protection		SECOND	Degree of protection	
Index figure	SOLIDS		Index figure	WATER	
0		No protection	0		No protection
1	mm 50	Protected against access to hazardous parts with the back of a hand and protected against solid foreign objects of Ø 50 mm and greater	1		Protected against vertically falling water drops
2	mm 12	Protected against access to hazardous parts with a finger - protected against solid foreign objects of Ø 12,5 mm and greater	2	15°	Protected against vertically falling water drops when enclosure tilted up to 15° (on either side of the vertical)
3		Protected against access to hazardous parts with a tool - protected againstsolid foreign objects of Ø 2,5 mm and greater	3		Protected against spraying water (at an angle up to 60° on either side of the vertical)
4		Protected against access to hazardous parts with a wire - protected against solid foreign objects of Ø 1,0 mm and greater	4		Protected against splashing water from any direction
5		Protected against access to hazardous parts with a wire dust-protected (no harmful dust deposit)	5		Protected against water jets from any direction
6		Protected against access to hazardous parts with a wire dust-tight (total protection against dust)	6		Protected against powerful water jets from any direction (similar to sea waves)
RA	TING EXAMPLE		7	© 30'	Protected against the effects of temporary immersion in water at a maximum depth of 1 metre for 30 min
	IP	6 5	8		Protected against the effects of continuous immersion in water at depth and/or duration upon agreement, more severe than for numeral 7
			9		Protected against high pressure and temperature water jets from any direction
Description acc	cording to IEC 60529				



### CHANGEOVER FROM PG THREADS TO METRIC

After 31st December 1999, the German safety standard DIN VDE 0619 (1987-09) and the standards it refers to - DIN 46319 for dimensions with metric threads and DIN 46320 (T1-T4), DIN 46255 and DIN 46259 for dimensions with Pg threads (Pg = Panzerrohr-Gewinde: literally "threads for armoured pipes") - were withdrawn and European standard EN 50262 "Metric cable glands for electrical installations" has been in force since 1st January 2000.

This standard defines the new sizes with metric threads for cable glands according to EN 60423 and establishes the safety prescriptions.

Conversely, it does not specify the dimensions, such as the size of the tightening wrench, the diagonal dimension, or the dimensions of the tightness seals, as was the case in the withdrawn DIN for Pg cable glands.

The standard came definitively into force on 1st April 2001, when the contrasting national standards were withdrawn.

It is valid in all member countries of CENELEC (European Electrical Standardisation Committee) and its publication has led to a broadening of the supply of enclosures for multi-pole connectors for industrial use, to include new enclosure versions with cable entry suitable for metric cable glands.

NOTE – In 2016 the new EN 62444:2013 standard "Cable glands for electrical installations" replaced the former to cover only cable gland with metric thread whose range is now M6 through M110 (previously up to M75).

Cable gland producers have introduced the new metric series to add to the Pg size series, to gradually replace the latter type. The transitional period indicated in the new standard should have ended on 1<sup>st</sup> March 2001, after which date the use of cable entry devices with Pg thread and, as a result, enclosures with Pg thread, should have ended in new installations. Nevertheless, both the cable entry devices and the relevant enclosures with Pg thread, may continue to be used as spare parts. For the mandatory **CE** marking of these items, observance of the safety conditions specified by the Low Voltage Directive is sufficient, however adherence to the safety requirements of EN 62444 provides presumption of conformity.

To distinguish hoods and surface-mounting housings with metric entries from the relevant Pg versions (identified with a C pre-code), the ILME metric types are identified with an M pre-code. The transposition table below indicates the correspondence rule adopted in most cases by ILME for creating the new metric versions.

Pg → metric transposition table

Pg	Metric
Pg 11	M20
Pg 13.5	M20
Pg 16	M20
Pg 21	M25
Pg 29	M32
Pg 36	M40
Pg 42	M50

#### Cable diameter for use with ILME cable glands

Ø in mm	Metric thread					
Series	20	25	32	40	50	
AS MP	6 - 12,5	10 - 18	14 - 24	15 - 24	23 - 30	
AS ME	8 - 12,5	13,5 - 18	17 - 24	_	_	
AG MT	6 - 8 -10	11 - 14 - 17	19 - 21 -24	26 - 29 - 32	35 - 38 - 41	
AG MI	5 - 12,5	9 - 18	14 - 25	18 - 32	24 - 38,5	
AG MR	6 - 8 -10	11 - 14 - 17	19 - 21 - 24	_	_	

For more information, please refer to the technical catalogue on www.ilme.com