



| MHK5 & MHM5 SERIES

CANOPEN ABSOLUTE MULTI-TURN ENCODER



Features

- Opto-electronic encoder
- CANopen CiA 406 V3.1 interface
- 58mm diameter
- 25 bits binary
- Solid shaft 10 mm or Hollow shaft 15mm

Applications

- Motor feedback
- Conveyors
- Factory automation
- Automated warehousing



SPECIFICATIONS

Mechanical

Shaft		Solid	Hollow
Shaft diameter		10mm	15mm
Material		Cover: Aluminum Body: Aluminum Shaft: Stainless steel	
Bearings		Balls type: 6000ZZ1	Balls type: 6803ZZ
Maximum Load	Axial	4 daN	
	Radial	11 daN	
Shaft inertia		30 g.cm ²	
Torque		0.003 N.m	
Permissible Max. Speed		6000 rpm	
Continuous Max. Speed		6000 rpm	
Encoder Weight (Approx.)		0.56 kg	0.57 kg
MTTF		13.5 years @ 40°C	

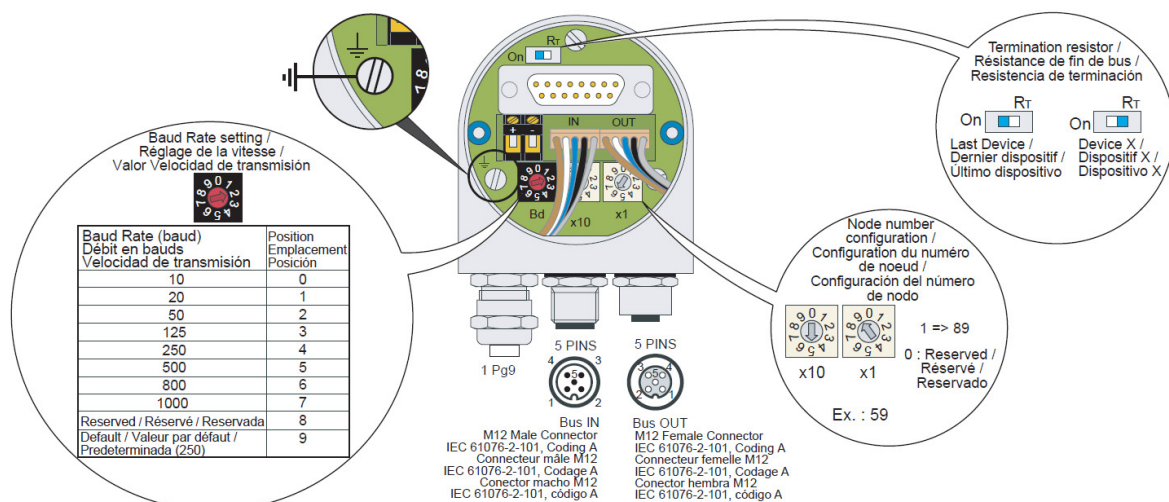
Electrical

Output Signals CANopen	Operating Voltage +V	Supply Current (no loads)	Voltage peaks Protection	Reverse Polarity Tolerant	Short-circuit Protection	Frequency Capability	Operating Temperature Range
CANopen	10V to 30V	230mA (10V) 100mA (24V)	yes	yes	yes	800kHz	-40...85 °C

Environmental

Shocks (EN 60068-2-27)	100 gn for 6 ms
Vibrations (EN 60068-2-6)	10 gn (f= 10...2000 Hz)
Resistance to electrostatic discharge (IEC 61000-4-2)	2 kV contact discharge (level 2) 4 kV air discharge (level 2)
Resistance to electromagnetic fields (IEC 61000-4-3)	10 V/m (level 3)
Resistance to fast transients (IEC 61000-4-4)	1 kV signal ports (level 3) 2 kV power ports (level 3)
Operating Temperature	-40 ...85°C
Storage Temperature	-40 ...85°C
Protection (EN 60529)	IP64
Humidity	98% without condensation

STANDARD CONNECTIONS



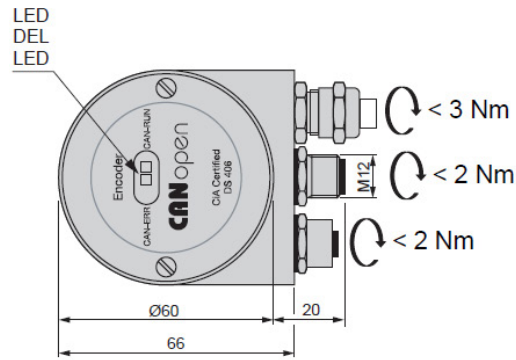
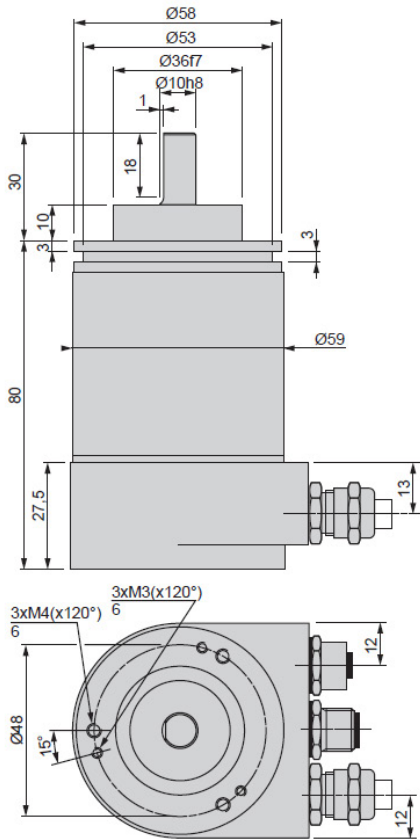
Pin	1	2	3	4	5
Function	CAN_SHLD	(CAN_V+)	CAN_GND	CAN_H	CAN_L

Terminal	+	-
Function	24V	0V

Transmission Rate	20 kbit/s 1000 kbit/s 800 kbit/s 500 kbit/s 250 kbit/s 125 kbit/s 50 kbit/s 10 kbit/s
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Single-turn resolution	13 bits: 8192 points
Multi-turn resolution	12 bits: 4096 turns

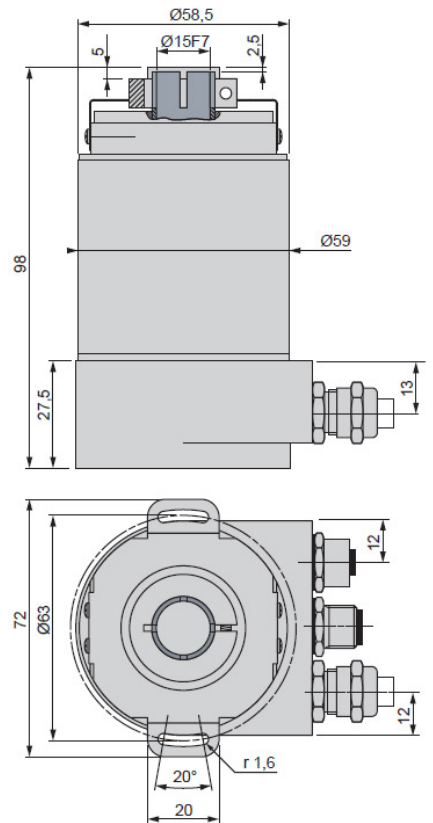
MHM510-CANOS005



All dimensions in mm
Toutes les dimensions en mm
Todas las dimensiones en milímetros

1 mm = 0.0397 inch

MHK515-CANOS003



- | | |
|---|--|
| 1 | Standard M12 Male 5 pins IEC 61076-2-101, Coding A connector |
| 1 | Standard M12 Female 5 pins IEC 61076-2-101, Coding A connector |
| 1 | Pg9 cable gland for power supply |



LED STATUS

N°	LED DEL LED	Type of flashing Type de clignotement Tipo de parpadeo	Status / Possible cause Etat / Cause possible Estado / Causa posible
1	CAN ERR (red / rouge / rojo)	Off Eteinte Inactivo	No error. Pas d'erreur. Sin error.
2		1 flash 1 flash 1 parpadeo	The internal error counter has reached or exceeded the maximum level. Le niveau du compteur d'erreur interne a atteint ou dépassé le niveau maximum. El contador de errores internos ha alcanzado o ha superado el nivel máximo.
3		2 flashes 2 flash 2 parpadeos	Detection of a guard event or a heartbeat event. Détection d'un évènement de type "guard" ou "heartbeat". Detección de un evento de "guard" o de "heartbeat".
4		3 flashes 3 flash 3 parpadeos	Synchronization error: message not received within the defined period. Erreur de synchronisation : message non reçu dans la période définie. Error de sincronización: mensaje no recibido durante el período definido.
5		Flashing Clignotement Parpadeo	Error in the bus address or speed. Erreur dans l'adresse ou dans la vitesse du bus. Error en la dirección o la velocidad del bus.
6		On Allumée Conectado	Bus off. Bus off. Bus desactivado
7	CAN RUN (green / verte / verde)	1 flash 1 flash 1 parpadeo	Module in "Stopped" mode. Module en mode "Stopped". Módulo en modalidad "Stopped".
8		Flashing Clignotement parpadeo	Module in "Pre-operational" mode. Module en mode "Pre-operational". Módulo en modalidad "Pre-operational".
9		On Allumée Conectado	Module in operational mode. Module en mode opérationnel. Módulo en modalidad operativa.

When both LEDs are off, the encoder is not supplied with power.
Lorsque les deux DEL sont éteintes, le codeur n'est pas alimenté.
Cuando los indicadores LED están apagados, el codificador no suministra alimentación.

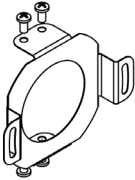
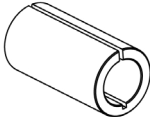
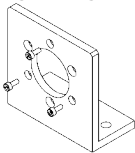
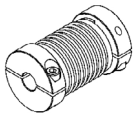
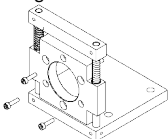
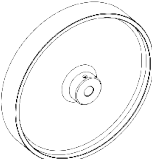


ORDERING OPTIONS

Example: MHM510-CANOS005

Series	MHM5	10	-	CANOS00x
MHK5: Hollow shaft MHM5: Solid shaft				
Shaft Size				
10: 10mm 15: 15mm				

Two references available:
MHM510-CANOS005 (replacement for discontinued Schneider Electric XCC3510PS84CBN)
MHK515-CANOS003 (replacement for discontinued Schneider Electric XCC3515CS84CBN)

Description	Part Number
Flexmount Kit 	Normally is part of the model number construction. For replacement part, use the part number below. M9445/017 comes with all hardware for installation on the encoder
Brass Reduction Sleeve 	9432/06 = 6mm ID 9432/08 = 8 mm ID 9432/9.52 = 9.52 mm (3/8") ID 9432/10 = 10 mm ID 9432/12 = 12 mm ID 9432/12.7 = 12.7 mm (1/2") ID 9432/14 = 14 mm ID
Mounting Bracket Right Angle 	M9202 Note: for mounting aluminum version
Bellows Type Coupling 	9403/6-6 = 6mm x 6mm 9403/6-10 = 6mm x 10mm 9403/10-9 = 10mm x 10mm
Mounting Bracket Spring Loaded For Use with Measuring Wheel 	M9212
Measuring Wheel 200mm Circumference 	9108/10 = Smooth, Polyurethane 9109/10 = Studded, Rubber 9110/10 = Knurled, Aluminum Uses 10mm shaft diameter
Measuring Wheel 500mm Circumference 	9101/10 = Smooth, Polyurethane 9102/10 = Studded, Rubber 9103/10 = Knurled, Aluminum Uses 10mm shaft diameter



AGENCY APPROVALS & CERTIFICATIONS



WARNINGS



RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

Failure to follow these instructions can result in serious injury, or equipment damage.



HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

Failure to follow these instructions can result in death or serious injury.

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