

# MA500-SERIES



## INCREMENTAL ENCODER 30Ø MM

Encoder with synchro flange and 3 mounting holes M3

- Ø 30 mm
- 4 mm solid shaft without face or 6 mm with face
- Enlarged sturdy bearings
- Ingress protection to IP67
- Standard: 7-35V Power supply, 100kHz  
2 Square Wave signals
- Options: Markerpulse, and/or inverted signals  
5V Power supply, 300 kHz
- Customization upon request



*Flexible and durable  
encoder for demanding  
applications*



File E342441

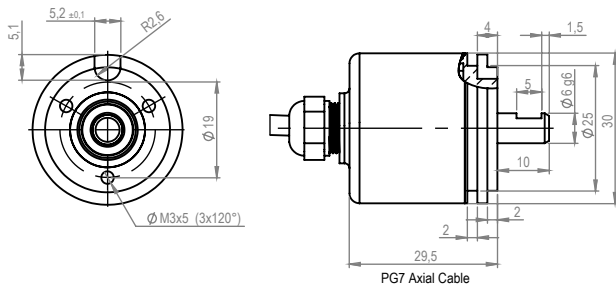


Conforms to european EMC directive  
89/336/EEC standards:  
EN61000-6-4 emission in industrial environments  
EN61000-6-2 immunity in industrial environments

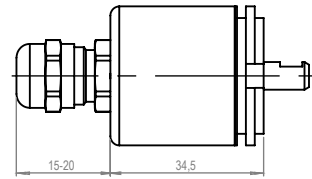
# INCREMENTAL ENCODER MODEL

# MA500

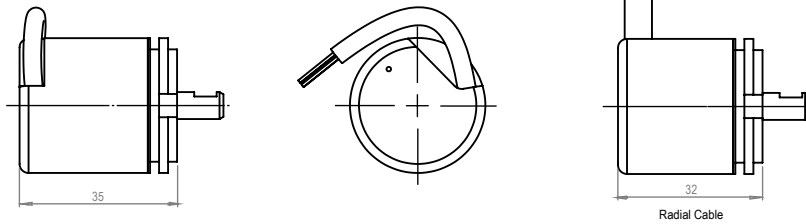
Con. 1XU & 1XS



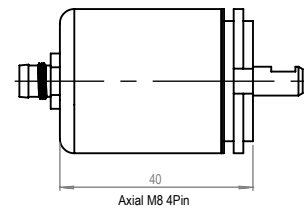
Con. 1LU



Con. 2XU & 2XS



Con. 9

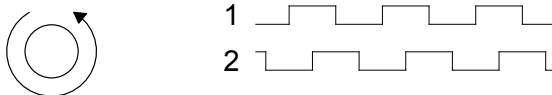


## ELECTRICAL SPECIFICATION, STANDARD

|                           |                                   |
|---------------------------|-----------------------------------|
| Power supply              | Vcc 7–35 Vdc                      |
| Current consumption       | Max 40 mA, without load           |
| Output circuit            | HTL                               |
| Low level output volt Max | <0,5 V at 20 mA load and 20°C     |
| High level output volt    | Min >Vcc-2V at 20mA load and 20°C |
| Short circuit protected   | Yes                               |
| Polarity protected        | Yes                               |
| Transient protected       | Yes                               |
| Max load                  | 70 mA                             |

## OUTPUT SIGNALS, STANDARD

CCW rotation viewed  
from shaft end



## SIGNAL ACCURACY

|                       |                |
|-----------------------|----------------|
| Dividing error max    | ±50 el°        |
| Channel separation    | 90 ±25 el°     |
| Max frequency         | 100 kHz        |
| Operating temperature | 40° till +80°C |

## MECHANICAL SPECIFICATION

|                              |                                                                            |
|------------------------------|----------------------------------------------------------------------------|
| Housing                      | Aluminum, electrically conductive<br>for increased interference protection |
| Sealing                      | IP67 dust and splash proof<br>(IP66 at shaft outlet)                       |
| Bearings                     | Permanently greased                                                        |
| Bearing load at<br>1 000 rpm |                                                                            |
| Radial                       | 30 N Gives 50 000 hrs                                                      |
| Axial                        | 30 N bearing life                                                          |
| Max rpm                      | 3 000 (12 000)                                                             |
| Vibration                    | 20g 20-2000 Hz                                                             |
| Chock                        | 200g at 11 ms                                                              |

## CONNECTIONS

|      |                                 |
|------|---------------------------------|
| 1xU  | Axial cable, Unitronic          |
| 1xLU | Axial cable, Unitronic          |
| 1xS  | Axial cable, Shielded Bröckske  |
| 2xU  | Radial cable, Unitronic         |
| 2xS  | Radial cable, Shielded Bröckske |
| 9    | Axial 4-pin M8 male connector   |

## FUNCTIONS

|                       | B, Bröckske | U, Unitronic | 9 | Mating cable M8 |
|-----------------------|-------------|--------------|---|-----------------|
| 1                     | Green       | Green        | 3 | Blue            |
| 2                     | Yellow      | Yellow       | 4 | Black           |
| +V                    | Red         | Brown        | 1 | Brown           |
| 0V                    | Blue        | White        | 2 | White           |
| Screen <sup>(*)</sup> | Chassis     |              |   | Chassis         |

\* Only available on cable type S, Shielded cable

## MATING CONNECTOR

|        |                                 |
|--------|---------------------------------|
| M8SR5, | Snap Straight 5m 4x0,25 PUR/PUR |
| M8SV2, | Snap Angled 2m 4x0,25 PUR/PUR   |
| M8SV5, | Snap Angled 5m 4x0,25 PUR/PUR   |

## ORDERING CODE

| Model                | MA500 | 6 | 100 | 1 | x | U |
|----------------------|-------|---|-----|---|---|---|
| Shaft 4 or 6 mm      |       |   |     |   |   |   |
| Pulse rate 1-1250    |       |   |     |   |   |   |
| Connection           |       |   |     |   |   |   |
| x = cable length (m) |       |   |     |   |   |   |
| Cable type           |       |   |     |   |   |   |



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