

Digitale Wegaufnehmer
Manual pulse generator

Serie ESM 60

- **Impulse / Pulses** (Feinraasterung / Precision click point) 100
- **Kanäle / Channels** A / B
- **Speisespannung / Power supply** 5 V oder/or 12 VDC
- **Ausgangstreiber / Output driver** Pull up
- **Schutzart (montiert) / Protection (mounted)** IP 50

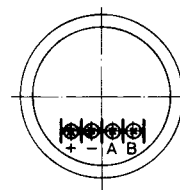
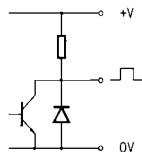
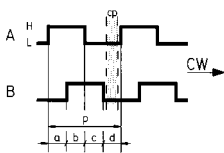


Bestelltext Typ	How to order Type	Digitaler Wegaufnehmer ESM60.2.100.12.R.R
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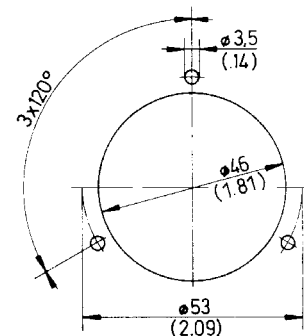
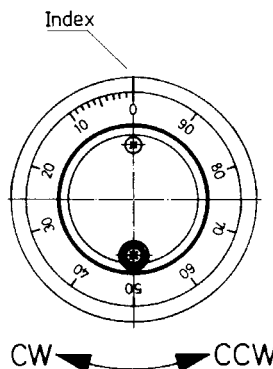
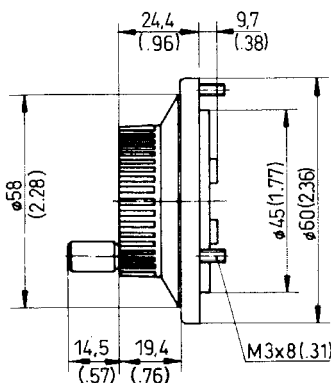
Bestellschlüssel	Order key	ESM60.2.100.x.x.R
Typ	Type	
Gehäusegröße ø 60 mm	Dimension DIA 2.36 inch	
Ausgangskanäle	Number of channels	
Impulse / Umdrehung	Pulses / Revolution	
Speisespannung	Power supply	
Ausgangstreiber	Output driver	2 A / B 100 100 12 4,5...13,2 VDC R Pull up 5³⁾ 5V DC ±10 % F³⁾ Pull-up (330 Ω) R rückseitig / at rear side
Speisespannung (Type FANUC)	Power supply (Type FANUC)	
Ausgangstreiber	Output driver	
Kabelanschluss (Schraubklemme)	Connection (Terminal block)	

Technische Daten	Technical data	
Stromverbrauch	Current consumption	50 mA (4,5...13,2 VDC) 70 mA (5 VDC ±10 %)
Abtastfrequenz	Scanning frequency	<5 kHz
Ausgangsbelastung	Output current	20 mA
Signalpegel	Output voltage	High -1 V / Low 0,5 V
Anstiegs + Abfallzeit	Signal rising + Falling time	1 µs
Auflösung	Resolution	1% = 3,6° (25 Pulses = 14,4°)
Drehmoment	Torque	<0,2 Ncm
Rastmoment (Click point)	Torque (Click point)	4 Ncm
Lebensdauer (Rastmoment)	Rotation life (Notched disc)	1.10 ⁶ Umdr. (200 rpm)
Arbeits-Lagertemperatur	Operating-Storage temperature	-10 °C +60 °C / -20 °C +70 °C
Luftfeuchtigkeit	Atmospheric humidity	85 % RH
Vibration / Schock	Vibration / Shock	10...55 Hz 1,5 mm 2 hr / 50G (11 ms) X,Y,Z
Gewicht	Weight	~200 g

Ausgangskanäle / Output channels	Ausgangstreiber / Output driver	Anschlüsse / Connection
cp = Rasterabstand / Click point p = Periode	Pull up (NPN) 2 KΩ Pull up (NPN) 330 Ω (FANUC)	Schraubklemme / Terminal block



Massbild (Zoll in Klammern) / Outline drawing (inch. in bracket)	Bohrplan / Cut out
³⁾ Auf Anfrage / On request	



Digitale Wegaufnehmer
Manual pulse generator

Serie **ESM 64**

- **Impulse** / Pulses 100
(Feinraasterung / Precision click point)
- **Kanäle** / Channels A / B / A' / B'
- **Speisespannung** / Power supply 5V DC
- **Ausgangstreiber** / Output driver Line driver
- **Schutzart** (montiert) / Protection (mounted) IP 50



Bestelltext **Typ** How to order **Type** Digitaler Wegaufnehmer **ESM64.4.100.5.D.R**

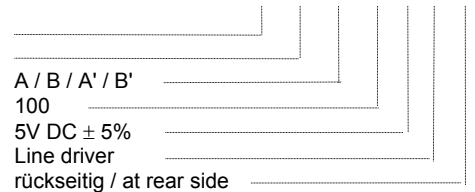
Bestellschlüssel

Typ
Gehäusegröße ø 60 mm
Ausgangskanäle
Impulse / Umdrehung
Speisespannung
Ausgangstreiber
Kabelanschluss (Schraubklemme)

Order key

Type
Dimension DIA 2.36 inch
Number of channels
Pulses / Revolution
Power supply
Output driver
Connection (Terminal block)

ESM64.4.100.5.D.R



Technische Daten

Stromverbrauch
Abtastfrequenz
Ausgangsbelastung
Signalpegel
Anstiegs + Abfallzeit

Technical data

Power consumption
Scanning frequency
Output current
Signal level
Signal rising + Falling time

<150 mA
<5 kHz
20 mA
High = -1V / Low = <0,5V
200 ns

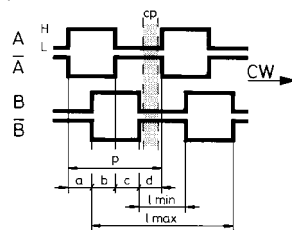
Auflösung
Drehmoment
Rastmoment (Click point)
Lebensdauer (Raster)
Arbeits- / Lagertemperatur
Luftfeuchtigkeit
Vibration / Schock
Gewicht

Resolution
Torque
Torque (Click point)
Rotation life (Notched disk)
Operating- / Storage temperature
Atmospheric humidity
Vibration / Shock
Weight

1 % = 3,6°
<0,2 Ncm
4 Ncm
1.10⁶ Umdr. (200 rpm)
-10 °C +60 °C / -30 °C +80 °C
35...85 % RH
20 m/s² = 50 Hz / 50 G (11 ms)
~200 g

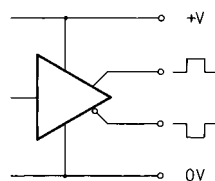
Ausgangskanäle / Output channels

cp = Rasterabstand / Click point
p = Periode

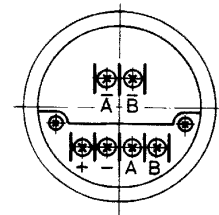


Ausgangstreiber / Output driver

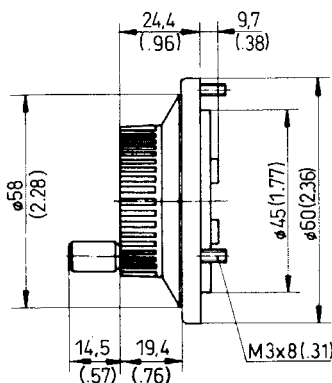
Line driver (RS 422)



Anschlüsse / Connection

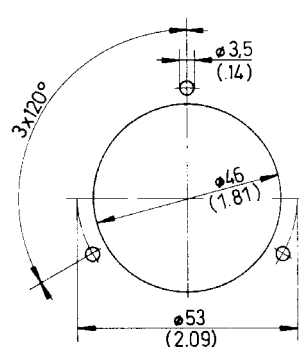
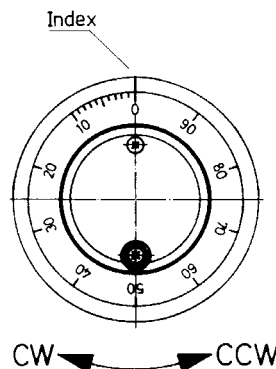


Massbild (Zoll in Klammern) / Outline drawing (inch. in bracket)



Bohrplan / Cut out

¹⁾ Dichtung / Packing



Digitale Wegaufnehmer Manual pulse generator

Serie **ESM 70**



- **Impulse** / Pulses 100
(Feinrastrung / Precision click point)
- **Kanäle** / Channels A / B
- **Speisespannung** / Power supply 5V DC
- **Ausgangstreiber** / Output driver Pull-up
- **Schutzart** (montiert) / Protection (mounted) IP 64

Bestelltext
Typ

How to order
Type

Digitaler Wegaufnehmer
ESM70.2.100.5.R.R

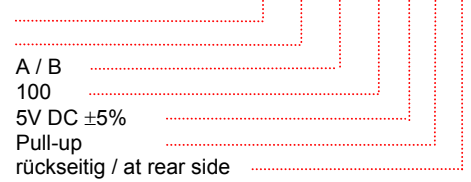
Bestellschlüssel

Order key

ESM70.2.100.5.R.R

Typ
Gehäusegrösse $\phi 70$ mm
Ausgangskanäle
Impulse / Umdrehung
Speisespannung
Ausgangstreiber
Kabelanschluss (Schraubklemme)

Type
Dimension DIA 2.75 inch
Number of channels
Pulses / Revolution
Power supply
Output driver
Connection (Terminal block)



Technische Daten

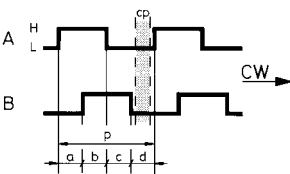
Stromverbrauch
Abtastfrequenz
Ausgangsbelastung
Signalpegel
Anstiegs + Abfallzeit
Auflösung
Drehmoment
Rastmoment (Click point)
Lebensdauer (Raster)
Arbeits- / Lagertemperatur
Luftfeuchtigkeit
Vibration / Schock
Gewicht

Technical data
Power consumption
Scanning frequency
Output current
Signal level
Signal rising + Falling time
Resolution
Torque
Torque (Click point)
Rotation life (Notched disk)
Operating- / Storage temperature
Atmospheric humidity
Vibration / Shock
Weight

<60 mA
<5 kHz
20 mA
High = -1V / Low = <0,5V
1 μ s
1 % = 3,6°
<0,2 Ncm
4 Ncm
1.10⁶ Umdr. (200 rpm)
-10 °C +60 °C / -30 °C +80 °C
35...85 % RH
20 m/s² = 50 Hz / 50 G (11 ms)
~ 220 g

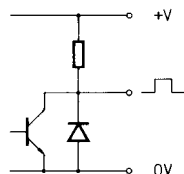
Ausgangskanäle / Output channels

cp = Rasterabstand / Click point
p = Periode



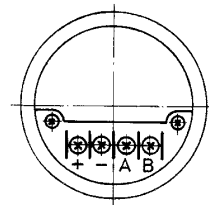
Ausgangstreiber / Output driver

Pull up (2 K Ω intern)



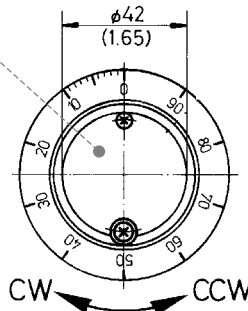
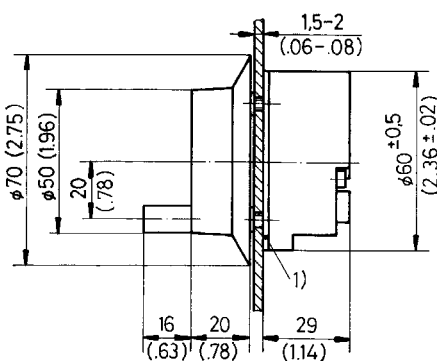
Anschlüsse / Connection

Schraubklemme / Terminal block



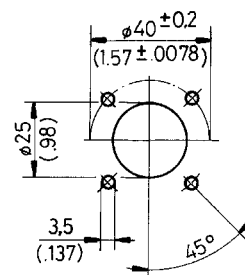
Massbild (Zoll in Klammern) / Outline drawing (inch. in bracket)

Option: Kunden / Customer LOGO



Bohrplan / Cut out

¹⁾ Dichtung / Packing



Digitale Wegaufnehmer Manual pulse generator

Serie **ESM 74**



- | | |
|---|-----------------|
| • Impulse / Pulses
(Feinraasterung / Precision click point) | 100 |
| • Kanäle / Channels | A / B / A' / B' |
| • Speisespannung / Power supply | 5V DC |
| • Ausgangstreiber / Output driver | Line driver |
| • Schutzart (montiert) / Protection (mounted) | IP 64 |

Bestelltext Typ

How to order Type

Digitaler Wegaufnehmer
ESM74.4.100.5.D.R

Bestellschlüssel

Order key

ESM74.4.100.5.D.R

Typ

Gehäusegrösse ϕ 70 mm
Ausgangskanäle
Impulse / Umdrehung
Speisespannung
Ausgangstreiber
Kabelanschluss (Schraubklemme)

Typ

Dimension DIA 2.75 inch
Number of channels
Pulses / Revolution
Power supply
Output driver
Connection (Terminal block)

A / B / A' / B'

100

5V DC \pm 5%

Line driver

rückseitig / at rear side

Technische Daten

Stromverbrauch
Abtastfrequenz
Ausgangsbelastung
Signalpegel
Anstiegs + Abfallzeit

Technical data

Power consumption
Scanning frequency
Output current
Signal level
Signal rising + Falling time

<60 mA

<5 kHz

20 mA

High = -1V / Low = <0,5V

200 ms

Auflösung

Drehmoment
Rastmoment (Click point)
Lebensdauer (Raster)
Arbeits- / Lagertemperatur
Luftfeuchtigkeit
Vibration / Schock
Gewicht

Resolution

Torque
Torque (Click point)
Rotation life (Notched disk)
Operating- / Storage temperature
Atmospheric humidity
Vibration / Shock
Weight

1 % = 3,6°

<0,2 Ncm

4 Ncm

1.10⁶ Umdr. (200 rpm)

-10 °C +60 °C / -30 °C +80 °C

35...85 % RH

20 m/s² = 50 Hz / 50 G (11 ms)

~220 g

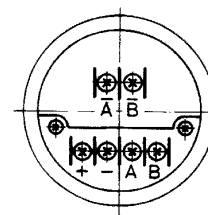
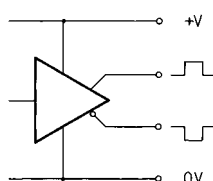
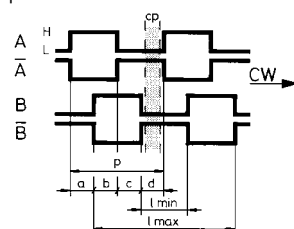
Ausgangskanäle / Output channels

cp = Rasterabstand / Click point
p = Periode

Ausgangstreiber / Output driver

Line driver (RS 422)

Anschlüsse / Connection

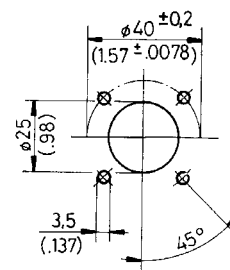
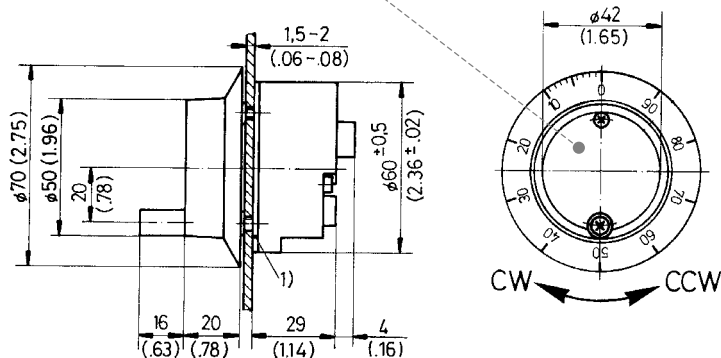


Massbild (Zoll in Klammern) / Outline drawing (inch. in bracket)

Option: Kunden / Customer LOGO

Bohrplan / Cut out

¹⁾ Dichtung / Packing



Digitale Wegaufnehmer Manual pulse generator

Serie **ESM 80**



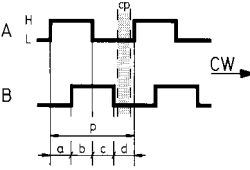
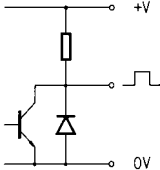
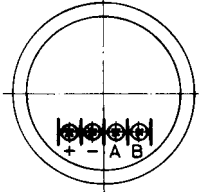
- **Impulse** / Pulses (Feinraasterung / Precision click point) 100 / 25
- **Kanäle** / Channels A / B
- **Speisespannung** / Power supply 5V oder/oder 12V DC
- **Ausgangstreiber** / Output driver Pull up

- **Schutzart** (montiert) / Protection (mounted) IP 50

Bestelltext Typ	How to order Type	Digitaler Wegaufnehmer ESM80.2.100.12.R.R
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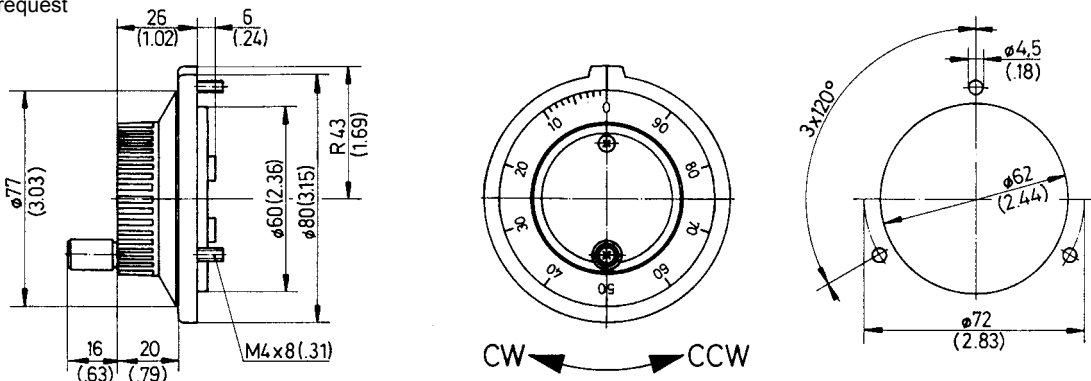
Bestellschlüssel	Order key	ESM80.2.100.x.x.R
Typ Gehäusegrösse \varnothing 80 mm Ausgangskanäle Impulse / Umdrehung	Type Dimension DIA 3.15 inch Number of channels Pulses / Revolution	2 A / B 100 100 25²⁾ 25
Speisespannung Ausgangstreiber	Power supply Output driver	12 4,5...13,2V DC R Pull up (2 K Ω)
Speisespannung (Typ FANUC) Ausgangstreiber Kabelanschluss (Schraubklemme)	Power supply (Type FANUC) Output driver Connection (Terminal block)	5³⁾ 5V DC \pm 10 % F³⁾ Pull-up (330 Ω) R rückseitig / at rear side

Technische Daten	Technical data	
Stromverbrauch	Current consumption	50 mA (4,5...13,2V DC) 70 mA (5V DC \pm 10 %)
Abtastfrequenz	Scanning frequency	<5 kHz
Ausgangsbelastung	Output current	20 mA
Signalpegel	Output voltage	High = -1V / Low = <0,5V
Anstiegs + Abfallzeit	Signal rising + Falling time	1 μ s
Auflösung	Resolution	1% = 3,6° (25 Pulses = 14,4°)
Drehmoment	Torque	<0,2 Ncm
Rastmoment (Click point)	Torque (Click point)	4 Ncm
Lebensdauer (Rastmoment)	Rotation life (Notched disc)	1.10 ⁶ Umdr. (200 rpm)
Arbeits- / Lagertemperatur	Operating- / Storage temperature	-10 °C +60 °C / -20 °C +70 °C
Luftfeuchtigkeit	Atmospheric humidity	85 % RH
Vibration / Schock	Vibration / Shock	10...55 Hz 1,5 mm 2 hr / 50G (11 ms) X,Y,Z
Gewicht	Weight	~200 g

Ausgangskanäle / Output channels	Ausgangstreiber / Output driver	Anschlüsse / Connection
cp = Rasterabstand / Click point p = Periode	Pull up (NPN) 2 K Ω Pull up (NPN) 330 Ω (FANUC)	Schraubklemme / Terminal block
		

Massbild (Zoll in Klammern) / Outline drawing (inch. in bracket) **Bohrplan / Cut out**

²⁺³⁾ Auf Anfrage / On request



Digitale Wegaufnehmer Manual pulse generator

Serie **ESM 84**



- | | |
|--|-----------------|
| • Impulse / Pulses
(Feinrasterung / Precision click point) | 100 / 25 |
| • Kanäle / Channels | A / B / A' / B' |
| • Speisespannung / Power supply | 5V DC |
| • Ausgangstreiber / Output driver | Line driver |
| • Schutzart (montiert) / Protection (mounted) | IP 50 |

Bestelltext
Typ

How to order
Type

Digitaler Wegaufnehmer
ESM84.2.100.5.D.R

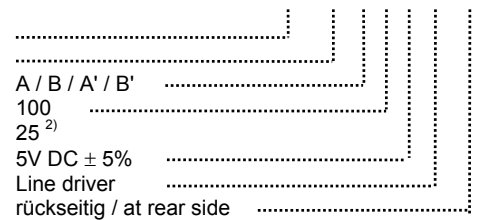
Bestellschlüssel

Order key

ESM84.4.x.5.D.R

Typ
Gehäusegrösse \varnothing 80 mm
Ausgangskanäle
Impulse / Umdrehung

Type
Dimension DIA 3.15 inch
Number of channels
Pulses / Revolution



Speisespannung
Ausgangstreiber
Kabelanschluss (Schraubklemme)

Power supply
Output driver
Connection (Terminal block)

5V DC \pm 5%
Line driver
rückseitig / at rear side

Technische Daten

Stromverbrauch
Abtastfrequenz
Ausgangsbelastung
Signalpegel
Anstiegs + Abfallzeit
Auflösung
Drehmoment
Rastmoment (Click point)
Lebensdauer (Rastmoment)
Arbeits- / Lagertemperatur
Luftfeuchtigkeit
Vibration / Schock
Gewicht

Technical data

Current consumption
Scanning frequency
Output current
Output voltage
Signal rising + Falling time
Resolution
Torque
Torque (Click point)
Rotation life (Notched disc)
Operating- / Storage temperature
Atmospheric humidity
Vibration / Shock
Weight

150 mA
<5 kHz
20 mA
High = 2,5V / Low = <0,5V
200 ns
1% = 3,6° (25 Pulses = 14,4°)
<0,2 Ncm
4 Ncm
1.10⁶ Umdr. (200 rpm)
-10 °C +60 °C / -20 °C +70 °C
85 % RH
10...55 Hz 1,5 mm 2 hr / 50G (11 ms) X,Y,Z
~200 g

Ausgangskanäle / Output channels

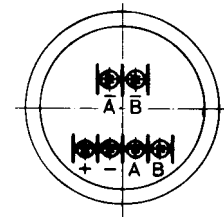
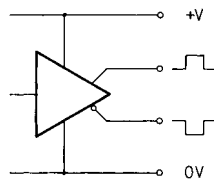
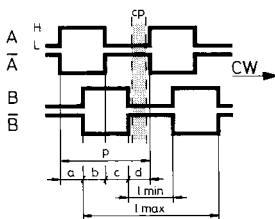
cp = Rasterabstand / Click point
p = Periode

Ausgangstreiber / Output driver

Line driver (RS 422)

Anschlüsse / Connection

Schraubklemme / Terminal block



Massbild (Zoll in Klammern) / Outline drawing (inch. in bracket)

Bohrplan / Cut out

²⁾ Auf Anfrage / On request

