

smart ideas  
for **great** projects

# smartServo

Decentralized servo drives



**metroniX**  
servo drives

# BL 4104-M

**Servo drive  
mounted on the motor**

- Power supply (230 V)
- Digital and analogue IOs
- STO and 24 V supply
- EtherCAT
- PROFINET
- Optional:  
CANopen
- USB
- LED display



# BL 4104-D

**Servo drive  
as separate variant**

- Multi-encoder connection  
(decentralized)
- Motor connection



# smartServo – speedy, slim, smart

## Decentralized servo drive BL 4104-M/D

- › **Saving of control cabinet space**
  - › Usually no control cabinet required for the servo drive
  - › No cabling between motor and servo drive if the servo drive is installed on the motor
- › **USB and Ethernet** as parameterization interface
- › **Fieldbus on board** EtherCAT, PROFINET, optional CANopen
- › **Universal encoder evaluation** HIPERFACE®, HIPERFACE DSL®, EnDat 2.2, resolver, analogue and digital incremental encoders, BISS
- › **Bluetooth integrated** Query of the servo drive status via smartphone or tablet

### › Technical data

Features	BL 4104-M (on the motor)	BL 4104-D (separated from the motor)
Voltage supply	240 VAC [± 10 %], 50...60 Hz	
Control voltage	24 VDC [± 20 %]	
DC link voltage	325 VDC	
Output power	700 W	800 W
Max. output power for 2 s	2400 W	
Rated output current	3 A <sub>rms</sub>	4 A <sub>rms</sub>
Max. output current for 2 s	12 A <sub>rms</sub>	
Internal brake resistor	47 Ω	
Continuous power / pulse power	13 W / 4 kW	
External brake resistor	-	
Holding brake	24 VDC, max. 700 mA	
Dimensions (without flange) servo drive H x W x D	66 x 80 x 125 mm	107 x 100 x 127 mm
Weight	0,7 kg	1 kg
Encoder evaluation	EnDat 2.2, HIPERFACE®, HIPERFACE DSL®, Resolver, analogue and digital incremental Encoders with / without commutation signals, BISS (Type C)	
Interfaces	USB 2.0, Ethernet, EtherCAT, PROFINET, optional CANopen	
Inputs/outputs	8 x digital in (24 VDC), 1 x analogue in (±10 V), 1 x analogue out (±10 V), 2 x digital out (24 VDC)	

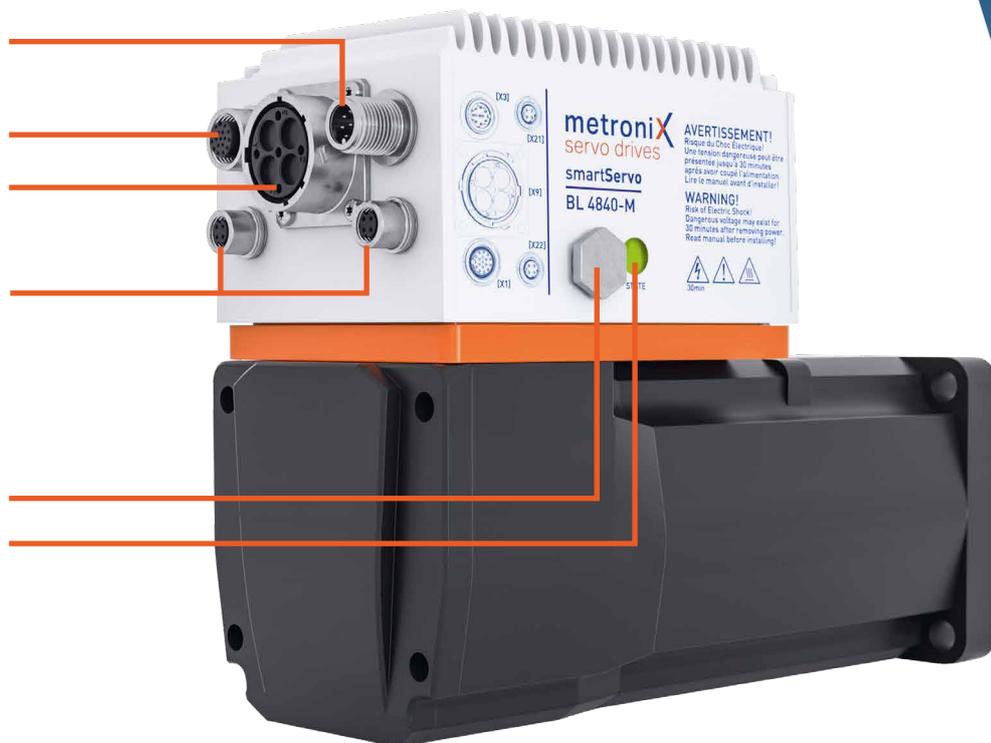
All information without guarantee



# BL 4840-M

**Servo drive  
mounted on the motor**

- Power supply (48 V)
- Digital and analogue IOs
- STO and 24 V supply
- EtherCAT
- PROFINET
- Optional:  
CANopen
- USB
- LED display



# BL 4840-D

**Servo drive  
as separate variant**

- High current motor connection
- Multi-encoder connection  
(decentralized)
- Break connection



# smartServo – speedy, slim, smart

## Decentralized servo drive BL 4840-M/D

- › **Saving of control cabinet space**
  - › Usually no control cabinet required for the servo drive
  - › No cabling between motor and servo drive if the servo drive is installed on the motor
  - › Supply with low voltage of 48 V via PELV power supplies or batteries
  - › No high voltages at the motor and servo drive
- › **USB and Ethernet** as parameterization interface
- › **Fieldbus on board** EtherCAT, PROFINET, optional CANopen
- › **Universal encoder evaluation** HIPERFACE®, HIPERFACE DSL®, EnDat 2.2, resolver, analogue and digital incremental encoders, BISS
- › **Bluetooth integrated** Query of the servo drive status via smartphone or tablet

### › Technical data

Features	BL 4840-M (on the motor)	BL 4840-D (separated from the motor)
Voltage supply	24 to 48 V	
Control voltage	24 VDC [± 20 %]	
DC link voltage	24 to 48 V	
Output power	1000 W	1100 W
Max. output power for 2 s	3600 W	
Rated output current	40 A <sub>rms</sub>	42 A <sub>rms</sub>
Max. output current for 2 s	120 A <sub>rms</sub>	
Internal brake resistor	3,9 Ω	
Continuous power / pulse power	5 W / 1,6 kW	
External brake resistor	-	
Holding brake	24 VDC, max. 700 mA	
Dimensions (without flange) servo drive H x W x D	66 x 80 x 125 mm	107 x 100 x 127 mm
Weight	700 g	1.1 kg
Encoder evaluation	EnDat 2.2, HIPERFACE®, HIPERFACE DSL®, Resolver, analogue and digital incremental Encoders with / without commutation signals, BISS (Type C)	
Interfaces	USB 2.0, Ethernet, EtherCAT, PROFINET, optional CANopen	
Inputs/outputs	8 x digital in (24 VDC), 1 x analogue in (±10 V), 1 x analogue out (±10 V), 2 x digital out (24 VDC)	

All information without guarantee



# SCHUTZ

## Protection class IP67

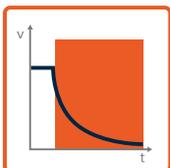
High protection class for long-lasting operation in rough environments

Thanks to their particularly robust design and excellent manufacturing, the decentralized smartServo drives comply with protection class IP67.

The IP67 protection class protects the servo drives against dust, contact and even submersion. This allows them to be used without a protective housing.

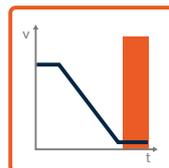
They quickly and effectively meet even "large" requirements.

## Safety functions for safe sequences



### > STO - Safe Torque Off

Disconnection of the energy supply to the drive according to EN 61800-5-2. This safety function ensures that the drive is unable to deliver energy.



### > SS1 - Safe Stop 1

The drive is braked self-sufficiently to idle within a defined time using a defined slowdown ramp and then the energy supply is switched off safely. All three versions described in the standard are supported.



# Decentralized construction

## Small servo drives with great power

Clear advantage - the decentralized design

- › Saving of control cabinet space, since the servo drive including motor is located outside the control cabinet.
- › Simplified cabling leads to cost advantages and higher operational reliability of the machine.
- › Thanks to the high efficiency and low power loss, the naturally available room ventilation is sufficient.
- › Compact and robust design





## metronix servo drives

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