

# FRA 11-BSY+



## Performance features

- » With motor electronics controlled via microprocessor for communication and sequence control of connected BSY+ and PLP window drives for opening windows
- » To be used in conjunction with an internal chamber gearbox and 43 mm mounting distance
- » BRV (for PLP) or VP (for BSY+ / ACB) option required for connected window drive
- » Up to 4 FRA 11-BSY+ drives on one window possible
- » Position display for the locking mechanism
- » LED status display for the drive
- » Automatic locking mechanism for the window
- » Increased burglary protection

## Approvals / Certificates

Find out about permission details from your D+H Partner.



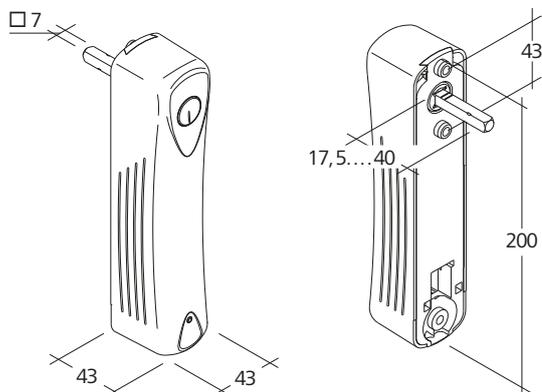
## Potential drive options

You can find the explanations for the icons on the last page.



## Dimensions

All specifications in mm



## Technical data

	FRA 11-BSY+
Supply	24 V DC / $\pm 15\%$ / 1 A
Duty cycle	30 % (ON: 3 min. / OFF: 7 min.)
Torque	10 Nm *
Rotation angle	90° / 180°
Service life	> 10000 cycles
Type of protection	IP 40
Emission sound pressure level	LpA $\leq$ 70 dB(A)
Temperature range	-5 °C ... +75 °C
Fire resistance	B300 (30 min / 300 °C)
Housing	Polyamide
Surface	Painted
Colour	Silver (~ RAL 9006)
Connection	2.5 m silicone cable
W x H x D	43 x 200 x 43 mm
Weight	0.75 kg

\* Breaking load of square shaft

## Design

Type	Art. No.	Remark
FRA 11-BSY+	24.000.11	
FRA-BSY+	24.000.10	Variable equipment possible



#### HS "High speed"

In the case of SHEV, the high-speed function is used for reliably reaching the defined end position in 60 s. In daily ventilation mode, the drive runs quietly and quickly, as usual.



#### Function programming

Option for customised configuring of drive parameters (e.g. stroke) via software and associated service tools for drives equipped with PLP, BSY or BSY+ electronics.



#### BRV signal

Acknowledgement from the drive, via a control cable, to confirm that it has been completely extended or retracted. When used with the AT 41 and ERM 44 modules, this signal is sent to the central building control system, the modules themselves, or to the locking drive. The BRV signal is not isolated.



#### ACB (Advanced Communication Bus)

Enables direct bus communication between the controller and the drive for, for example, control with perfect positioning or drive feedback. Communication is via the open source Modbus protocol, and it enables the drive to be combined with an ACB-capable control panel or enables it to be directly connected to higher-level controllers such as a building management system.



#### BSY+ (synchronisation of drives)

BSY+ enables communication and synchronisation between different components in the window. For example between the chain drives, during synchronous operation, or between window and locking drives (e.g. FRA 11 BSY+ or VLD-BSY+).



#### SGI signal (position reporting)

In combination with the D+H servo plug-in unit SE 622 or the BSY-gateway BSY-GW-024-010-U, the drives can be controlled with perfect positioning.



#### SKS (closing edge protection)

Drive option, which enables an anti-trap strip or presence detector to be connected directly to the drive (terminal resistor 5.6 kΩ).



#### Audible signal (corresponding to protection class)

AS2 corresponding to "Protection class 2" in accordance with ZVEI risk assessment through an audible warning signal in the "CLOSED" running direction. AS3 corresponding to "Protection class 3" in accordance with ZVEI risk assessment, in addition to AS2, stops the drive for 11 s with a remaining stroke of 28 mm.



#### End position message (OPEN / CLOSED)

Drive feedback via an integrated isolated switching contact. This happens if the chain / rack and pinion has moved completely out or in.



#### SBD side bow chain

Drive chain with rigid backing, bends in the direction of the hinge. Drive is fixed in place (not rotatable).



#### SBU side bow chain

Drive chain with rigid backing, bends in the direction of the hinge. Drive is fixed in place (not rotatable).



#### WS (use in swimming pool)

Available as an option for rack and pinion drives to make them suitable for use in swimming pools. The drive is equipped with an A4 rack and pinion, A4 eyebolt and a gearbox with hardened stainless steel pinion.



#### W (use outdoors)

Available as an option for rack and pinion drives to make them suitable for outdoor use. The drive is equipped with a pressure release vent (depending on installation), condensation protective coating on the electronics and a gearbox with hardened stainless steel pinion.