

# FINE CONTROLS (UK) LTD



Fine Controls have been supplying process controls & instrumentation equipment since 1994, & now serves an ever expanding customer base, both in the UK & globally.

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**Flow:** Flow Meters & Transmitters, Flow Switches, Flow Control Valves & Batch Control Systems

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**Level:** Level Transmitters & Switches

**Pressure:** Pressure Gauges & Transmitters, Precision & High Pressure Regulators & I-P Converters, Volume boosters.

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**Valves:** Solenoid & Pneumatic Valves, Control Valves & Positioners, Actuated Ball, Globe or Diaphragm Valves & Isolation Valves

**Services:** Repair, Calibration, Panel Build, System Design & Commissioning

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## Control Electronics for Proportional Valves



Type 8605 can be combined with...



### Type 8605

with operating unit combined with type 2833



### Type 8605

without operating unit combined with type 2832

The digital control electronics, Type 8605, serves to operate proportional solenoid control valves in the power range from 40 - 2000 mA. The electronics converts an external standard signal into a pulse-width modulated (PWM) signal with which the opening of the proportional valve and hence a fluidic output parameter (e.g. flow rate) can be infinitely varied. An internal current control with the duty factor of the PWM signal as manipulated variable ensures that every value of the input signal, irrespective of the thermal condition of the coil, is unambiguously assigned a given value of the effective coil current. A display and operating keys allow the electronics to be easily adapted to a particular proportional valve and to the concrete conditions of an application.

- Microprocessor-controlled electronics
- Switchable standard input signal
- Infinitely variable PWM frequency
- Optional RS232 or RS485 interface

Technical data	
<b>Operating voltage</b>	12 - 24 V DC
<b>Voltage tolerance</b>	±10 %
<b>Residual ripple</b>	<5 %
<b>Power consumption</b>	approx. 1 W (without valve)
<b>Outlet current (valve)</b>	max. 2A
<b>Ambient temperature</b>	-10 to 60°C
<b>Input signal (Standard signal input)</b>	0-20 mA, 4-20mA or 0-5V, 0-10 V (configurable)
<b>Input impedance</b>	<200 Ω (with current input) >20 kΩ (with voltage input)
<b>Output signal for valve control</b>	PWM-Signal – frequency adjustable from 80Hz to 6 kHz
<b>Ramp function</b>	Time variable from 0 to 10 s
<b>Version</b>	- Cable plug for direct installation (with PG- or M12 connection) - DIN-rail version (DIN EN 50022)
<b>Protection class</b>	Cable plug – IP65 DIN-rail – IP40
<b>Body material</b>	Cable plug – Polyamide / PC DIN-rail – Polyamide / PBT

## Functions of the controller Type 8605

- Microprocessor-controlled electronics
- Compensation of the solenoid coil heating by internal current control
- Configurable ramp function
- Adjustable zero point shutdown
- Display and buttons
- Switchable standard input signal
- RS232 or RS485 interface (with auxiliary module)
- Infinitely variable PWM frequency
- Simple adaptation of the minimum and maximum current (start of opening and full opening) to the prevailing pressure conditions

## Ordering chart Control Electronics for Proportional Valves

Version	Max. coil current [mA]	Item no.	2822	2822	2824	2824	2833	2833	2835	2835	2836	2853	2853	6024	6024	6223	6223
			24 V DC	12 V DC	24 V DC	12 V DC	24 V DC	12 V DC	24 V DC	12 V DC	24 V DC	12 V DC	24 V DC	12 V DC	24 V DC	12 V DC	24 V DC
Cable plug with PG-connection	200 - 1000	178 354					x	x	x			x	x	x		x	
Cable plug with M12-connection	200 - 1000	178 355					x	x	x			x	x	x		x	
Cable plug with PG-connection	500 - 2000	178 356						x	x	x	x		x	x	x		x
Cable plug with M12-connection	500 - 2000	178 357						x	x	x	x		x	x	x		x
Cable plug with PG-connection without operating unit	200 - 1000	178 358					x	x	x			x	x	x		x	
Cable plug with M12-connection without operating unit	200 - 1000	178 359					x	x	x			x	x	x		x	
Cable plug with PG-connection without operating unit	500 - 2000	178 360						x	x	x	x		x	x	x		x
Cable plug with M12-connection without operating unit	500 - 2000	178 361						x	x	x	x		x	x	x		x
DIN-rail	40 - 220	178 362	x	x	x												
DIN-rail	200 - 1000	178 363			x	x	x	x	x			x	x	x		x	
DIN-rail	500 - 2000	178 364						x	x	x	x		x	x	x		x

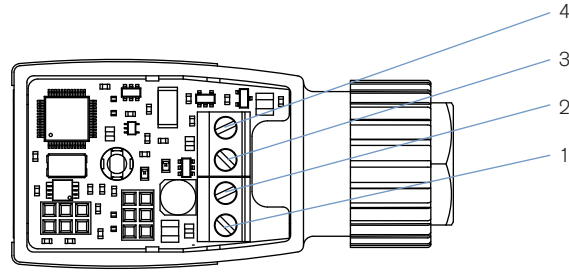
**Note:** If two current ranges of the control electronics are possible choose the lower one.

## Ordering chart accessories

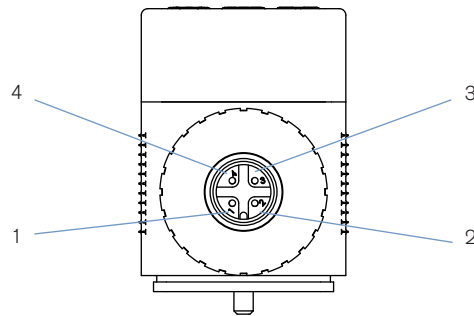
Version	Item no.
Control unit for plug-on module	667 839
RS232 modul for plug-on	667 840
RS485 modul for plug-on	667 841
RS232 modul for DIN-rail	667 842
RS485 modul for DIN-rail	667 843
Right-angle plug M12, 4 pins	784 301
M12 connector with 5m cable, 4 pins	918 038
Cable for RS232/ 485 interface M8 for plug-on module	918 718
Cap set (for operating without control unit)	670 549

## PIN assignment

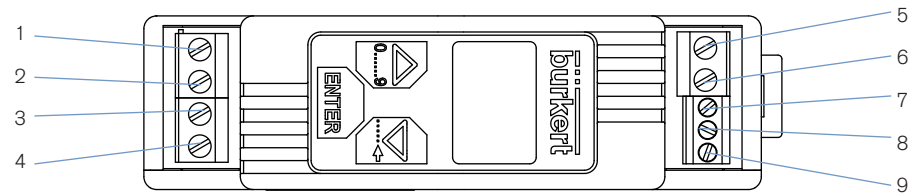
## Cable plug PG



## Cable plug M12



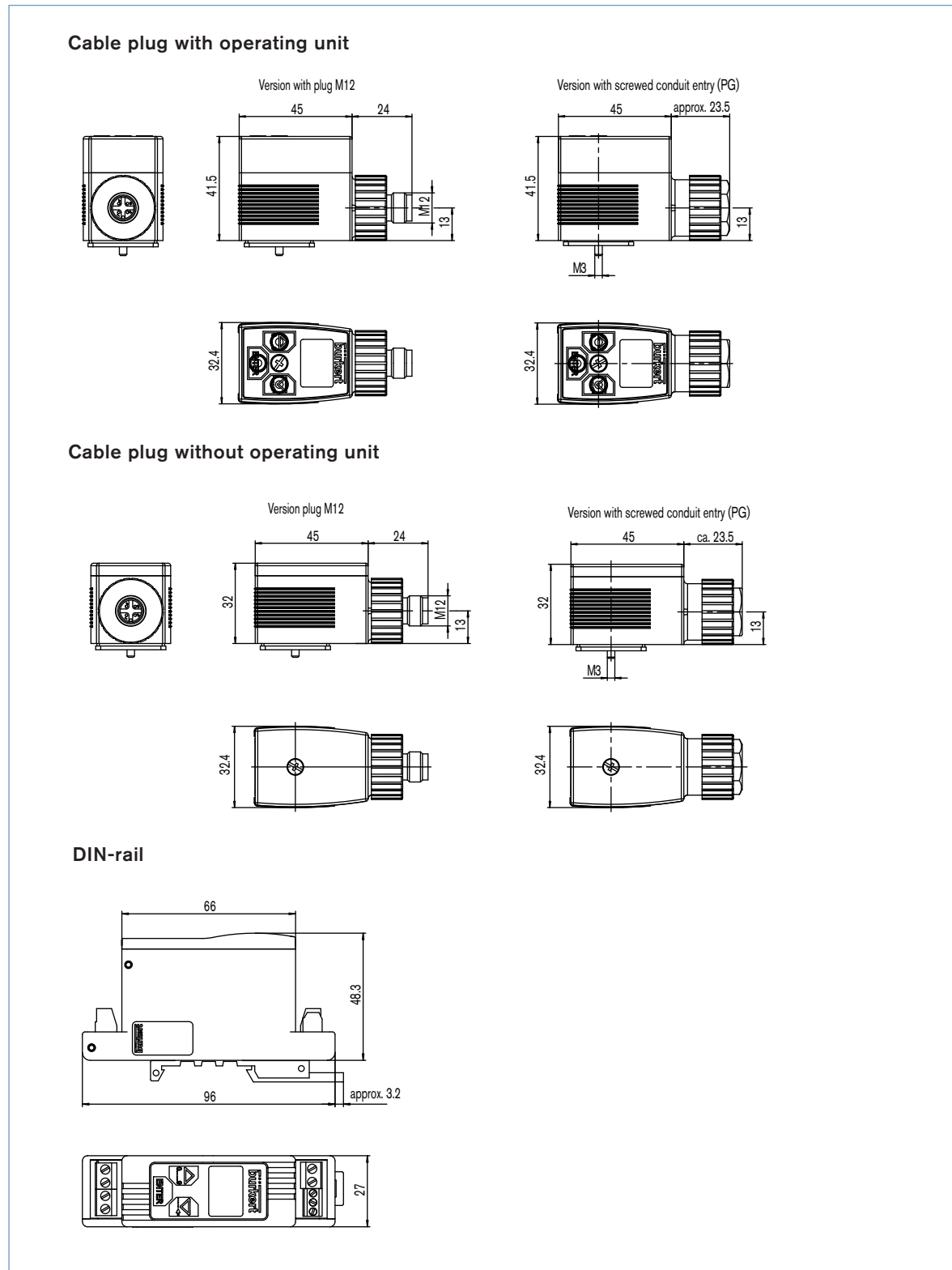
## DIN-rail



- 1 : + 12-24 VDC
- 2 : GND
- 3 : Standard signal GND
- 4 : Standard signal +
- 5 : Valve
- 6 : Valve
- 7 : RS232 TxD/ RS485-B \*)
- 8 : RS232 RxD/ RS485-A \*)
- 9 : DGND \*)

\*) only with RS232 or RS485 auxiliary module

## Dimensions [mm]



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In case of special application conditions,  
please consult for advice.

We reserve the right to make technical  
changes without notice.

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