

# Control Box PremiumLine

## for RoaDyn® P103/P106 with Slip Ring PremiumLine

Type 5683

Control box PremiumLine Type 5683 is the interface between torque wheel-sensor RoaDyn P1xy with slip ring module PremiumLine Type 9873 and the user's data acquisition equipment.

- Maximum of 12 analog output signals
- 1 signal for torque  $M_y$ , 1 signal for the printed board temperature of the torque wheel-sensor, 4 additional temperature signals, 3 resolver signals and 3 customer-specific signals
- Reset/Operate function
- Measuring range switching
- With noise suppression
- No signal filtering
- Connection to on-board supply 9 ... 18 VDC

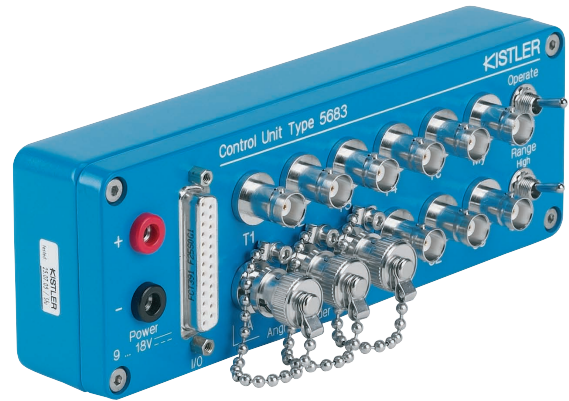


Fig. 1: Control box PremiumLine Type 5683

### Description

The signals are transmitted from the rotating torque wheel-sensor to the control box Type 5683 in the vehicle via the slip ring module Type 9873 and a 7 meter long 20 pin connecting cable Type 1763B7. Four additional temperature signals (K-Type) and three customer-specific signals can be transmitted in addition to the torque signal  $M_y$  and the printed board temperature signal, which is synchronously transmitted for control purposes. All outputs are analog signals. A resolver (encoder) integrated in the slip ring module Type 9873 determines the speed and wheel angle. The signals A and B coming from the resolver define the position and direction of rotation. The signal Z defines the zero position of the resolver.

### Application

The control box is a cost effective replacement for the control unit/on-board electronics Type 9867A... but without signal filtering.

In combination with the torque wheel-sensor P1xy and the slip ring module, there are applications for the control box in the automotive industry, particularly in automobile engineering or automotive research. The main focus is on dynamic stability and traction control, ABS systems, the investigation of fading effects, braking jitter, performance measurements, the measurement of friction and coasting behavior. Further applications are the development of transmission systems, chassis control systems as well as the preparation of government safety tests such as, for example, the U.S.-procedure FMVSS 135.

### Technical Data

Weight	kg	0,5
Dimensions (LxWxH)	mm	184x64x35
Power supply	VDC	9 ... 18
Power consumption	W	3
Signal output	$M_y$ V	$\pm 3,5$
	C1 ... C3 V	$\pm 5$
	A, B, Z V	0 ... 5
	T1 ... T4 V	0 ... 3,5
	Tc V	0 ... 3,5
$T[^\circ\text{C}] = 245 \cdot T[\text{V}] - 45$		
Output noise	mVpp	<10

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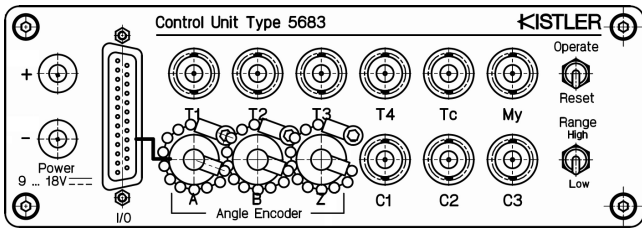


Fig. 2: Control box PremiumLine Type 5683

**Included Accessories**

- None

**Optional Accessories**

- Connection cable PremiumLine, Fischer 19 pin pos. – D-Sub 25 pin pos., length = 7 m
- Connection cable to DAQ system, BNC pos. – BNC pos., length = 2 m
- Connection cable to DAQ system, BNC pos. – BNC pos., length = on request

**Type/Art. No.**  
1763B7

1601B2

1601Bsp

**Ordering Code**

- Control box PremiumLine for RoaDyn P103/P106 with slip ring module

**Type**  
**5683**

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