

## HUMCOENGINE CONTROLS

#### **ZF Marine SmartCommand**

### **SmartCommand**

SmartCommand is ZF's premium control system, integrating the latest in CANbus (Controller Area Network) technology into a user friendly control head.

SmartCommand has been developed and can work together with a specialized MTCU (Marine Transmission Control Unit). The innovative and compact control head design combines an ergonomic lever shape with a user friendly display where all available functions can be easily selected using 2 soft touch push buttons. Visual indicators help locating the neutral



detent position while 2-color LED's indicate if the control head is in command and if the transmission is in gear.

SmartCommand offers the freedom to customize special features for docking or trolling. Advanced control modes for SmartCommand include: Easidock, Autotroll, Warm-up and One Lever Operation

**EASIDOCK** mode offers the operator a positive clutch response while insuring easy and precise maneuverability in tight docking situations. This enhanced feature provides the ability to modulate the clutches and to control the engine speed to obtain the shaft RPM's required to safely dock the vessel.

**AUTOTROLL** mode allows a full range of shaft speed control using a closed loop feedback sensor to maintain a constant propeller RPM. This feature controls clutch slippage while maintaining slow engine speed.



Warm up mode is useful to increase engine RPM by locking the transmission in neutral.

One Lever mode allows you to enjoy the benefit of multi-engine operation with full shift and throttle control by operating a single lever.

Cruise mode is the normal operating condition. In this mode the operator has single lever control of clutch and throttle with one control head lever for each engine.

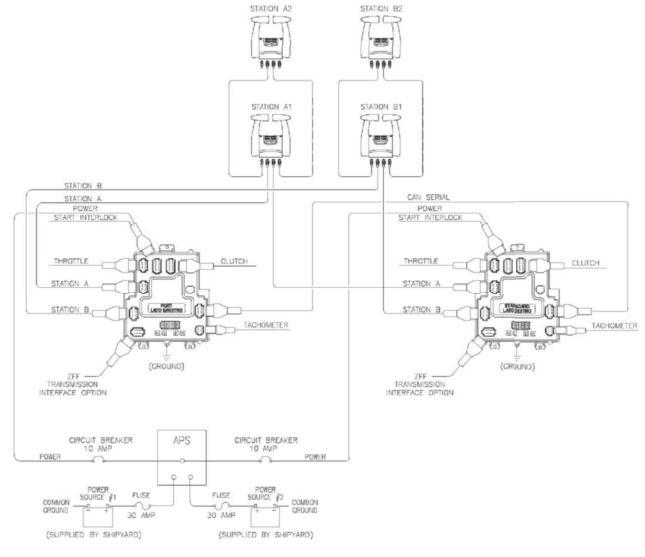
SmartCommand's CANbus communication perfectly synchronizes engines automatically without the need for special buttons or switches.

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#### **EXAMPLE OF TWIN SCREW - 4 STATION SC5000 SERIES**



#### **REQUIREMENTS:**

- (2) POWER / START INTERLOCK CABLE
- (4) PROCESSOR TO CONTROL HEAD CABLE
- (4) CONTROL HEAD TO CONTROL HEAD CABLE
- (1) SERIAL CABLE ON TWIN ENGINE APPLICATIONS
- (2) TACHOMETER FEEDBACK CABLE SYNCH APPLICATIONS ONLY
- (4) SC5000
- (1) APS

**252** (2) 10 AMP C.B.

## COENGINE CONTROLS



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### **ZF Marine SmartCommand**



## SmartCommand

SMARTCOMMAND COMPONENTS	PART NUMBER
PROCESSOR ASSEMBLY- SMARTCOMMAND	SC5000
CONTROL HEAD- DUAL LEVER, SMARTCOMMAND	5200
CONTROL HEAD, DUAL LEVER, LOW PROFILE, SMARTCOMMAND	5200LP
CONTROL HEAD, TOURNAMENT, DUAL CHROME LEVERS WITH PANEL (SC)	522-5SC
CONTROL HEAD, TOURNAMENT, LEFT	522-5LSC
CONTROL HEAD, TOURNAMENT, RIGHT	522-5RSC
HANDHELD, SMARTCOMMAND	TBD
CANTRAK DISPLAY- LCD SMARTCOMMAND	70539
WIRE HARNESS - CANTRAK, CAN COMMUNICATION, MULTI-DROP/ POWER	70560

#### **SMARTCOMMAND WIRE HARNESSES**

PROCESSOR TO PROCESSOR CAN	PART NUMBER
WIRE HARNESS - PROCESSOR TO PROCESSOR CAN, 2 FT (,61m)	70261-2
WIRE HARNESS - PROCESSOR TO PROCESSOR CAN, 3 FT (,91m)	70261-3
WIRE HARNESS - PROCESSOR TO PROCESSOR CAN, 10 FT (3,05m)	70261-10
WIRE HARNESS - PROCESSOR TO PROCESSOR CAN, 15 FT (4,57m)	70261-15
WIRE HARNESS - PROCESSOR TO PROCESSOR CAN, 20 FT (6,10m)	70261-20
WIRE HARNESS - PROCESSOR TO PROCESSOR CAN, 30 FT (9,14m)	70261-30
WIRE HARNESS - PROCESSOR TO PROCESSOR CAN, 35 FT (10,67m)	70261-35
WIRE HARNESS - PROCESSOR TO PROCESSOR CAN, 40 FT (12,19m)	70261-40



# HUMCOENGINE CONTROLS

### **ZF Marine SmartCommand**



PROCESSOR TO PROCESSOR CAN, TRIPLET + SCREW	PART NUMBER
WIRE HARNESS - PROC TO PROC, TRIPLE + SCREW, 3 FT (,91m)	70262-3
WIRE HARNESS - PROC TO PROC, TRIPLE + SCREW, 10 FT (3,05m)	70262-10
WIRE HARNESS - PROC TO PROC, TRIPLE + SCREW, 15 FT (4,57m)	70262-15
WIRE HARNESS - PROC TO PROC, TRIPLE + SCREW, 20 FT (6,10m)	70262-20
WIRE HARNESS - PROC TO PROC, TRIPLE + SCREW, 30 FT (9,14m)	70262-30
WIRE HARNESS - PROC TO PROC. TRIPLE + SCREW. 40 FT (12.19m)	70262-40

TACHOMETER	PART NUMBER
WIRE HARNESS - TACHOMETER, SMARTCOMMAND, 10 FT (3,05m)	70264-10
WIRE HARNESS - TACHOMETER, SMARTCOMMAND, 15 FT (4,57m)	70264-15
WIRE HARNESS - TACHOMETER, SMARTCOMMAND, 20 FT (6,10m)	70264-20
WIRE HARNESS - TACHOMETER, SMARTCOMMAND, 30 FT (9,14m)	70264-30
WIRE HARNESS - TACHOMETER, SMARTCOMMAND, 40 FT (12.19m)	70264-40

CONTROL HEAD TO CONTROL HEAD	PART NUMBER
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 5 FT (1,52m)	70268-5
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 10 FT (3,05m)	70268-10
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 15 FT (4,57m)	70268-15
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 20 FT (6,10m)	70268-20
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 25 FT (7,62m)	70268-25
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 30 FT (9,14m)	70268-30
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 35 FT (10,67m)	70268-35
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 40 FT (12,19m)	70268-40
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 45 FT (13,72m)	70268-45

# 1 COENGINE CONTROLS

### **ZF Marine SmartCommand**



CONTROL HEAD TO CONTROL HEAD	PART NUMBER
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 50 FT (15,24m	70268-50
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 55 FT (16,76m)	70268-55
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 60 FT (18,29m)	70268-60
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 65 FT (19,81m)	70268-65
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 70 FT (21,33m)	70268-70
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 75 FT (22,86m)	70268-75
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 80 FT (24,38m)	70268-80
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 85 FT (25,91m)	70268-85
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 90 FT (27,43m)	70268-90
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 95 FT (28,95m)	70268-95
WIRE HARNESS - CH TO CH, SMARTCOMMAND, 100 FT (30,48m)	70268-100

CONTROL HEAD TO PROCESSOR	PART NUMBER
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 3 FT (,91m)	70269-3
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 5 FT (1,52m)	70269-5
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 10 FT (3,05m)	70269-10
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 15 FT (4,57m)	70269-15
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 20 FT (6,10m)	70269-20
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 25 FT (7,62m)	70269-25
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 30 FT (9,14m)	70269-30
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 35 FT (10,67m)	70269-35
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 40 FT (12,19m)	70269-40
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 45 FT (13,72m)	70269-45
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 50 FT (15,24m	70269-50



### **ZF Marine SmartCommand**



CONTROL HEAD TO PROCESSOR	PART NUMBER
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 55 FT (16,76m)	70269-55
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 60 FT (18,29m)	70269-60
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 65 FT (19,81m)	70269-65
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 70 FT (21,33m)	70269-70
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 75 FT (22,86m)	70269-75
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 80 FT (24,38m)	70269-80
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 85 FT (25,91m)	70269-85
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 90 FT (27,43m)	70269-90
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 95 FT (28,95m)	70269-95
WIRE HARNESS - CH TO PROCESSOR, SMARTCOMMAND, 100 FT (30,48m)	70269-100

CANTRAK ISO CAN MULTI-DROP	PART NUMBER	
WIRE HARNESS - ISO CAN, CANTRAK, 30 FT (9,14m)	70559-30	
WIRE HARNESS - ISO CAN, CANTRAK, 40 FT (12,19m)	70559-40	
WIRE HARNESS - ISO CAN, CANTRAK, 50 FT (15,24m	70559-50	
WIRE HARNESS - ISO CAN, CANTRAK, 60 FT (18,29m)	70559-60	
WIRE HARNESS - ISO CAN, CANTRAK, 70 FT (21,33m)	70559-70	
WIRE HARNESS - ISO CAN, CANTRAK, 80 FT (24,38m)	70559-80	
WIRE HARNESS - ISO CAN, CANTRAK, 90 FT (27,43m)	70559-90	
WIRE HARNESS - ISO CAN, CANTRAK, 100 FT (30,48m)	70559-100	



# HUMCOENGINE CONTROLS

### **ZF Marine SmartCommand**



CLUTCH (ZFPD GEAR)	PART NUMBER
WIRE HARNESS - CLUTCH (ZFPD GEAR), 10 FT (3,05m)	70259-10
WIRE HARNESS - CLUTCH (ZFPD GEAR), 15 FT (4,57m)	70259-15
WIRE HARNESS - CLUTCH (ZFPD GEAR), 20 FT (6,10m)	70259-20
WIRE HARNESS - CLUTCH (ZFPD GEAR), 30 FT (9,14m)	70259-30
WIRE HARNESS - CLUTCH (ZFPD GEAR), 35 FT (10,67m)	70259-35
WIRE HARNESS - CLUTCH (ZFPD GEAR), 40 FT (12,19m)	70259-40
WIRE HARNESS - CLUTCH (ZFPD GEAR), 50 FT (15,24m	70259-50
WIRE HARNESS - CLUTCH (ZFPD GEAR), 60 FT (18,29m)	70259-60

CLUTCH (MTCU-ZFF GEAR)	PART NUMBER
WIRE HARNESS - CLUTCH (MTCU-ZFF GEAR), 10 FT (3,05m)	70260-10
WIRE HARNESS - CLUTCH (MTCU-ZFF GEAR), 15 FT (4,57m)	70260-15
WIRE HARNESS - CLUTCH (MTCU-ZFF GEAR), 20 FT (6,10m)	70260-20
WIRE HARNESS - CLUTCH (MTCU-ZFF GEAR), 30 FT (9,14m)	70260-30
WIRE HARNESS - CLUTCH (MTCU-ZFF GEAR), 35 FT (10,67m)	70260-35
WIRE HARNESS - CLUTCH (MTCU-ZFF GEAR), 40 FT (12,19m)	70260-40
WIRE HARNESS - CLUTCH (MTCU-ZFF GEAR), 50 FT (15,24m	70260-50
WIRE HARNESS - CLUTCH (MTCU-ZFF GEAR), 60 FT (18,29m)	70260-60



### **ZF Marine SmartCommand**



CLUTCH (MTCU POWER - ZFF GEAR)	PART NUMBER
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WIRE HARNESS - CLUTCH ZFF GEAR, MTCU POWER, 10 FT (3,05m)	70260P-10
WIRE HARNESS - CLUTCH ZFF GEAR, MTCU POWER, 15 FT (4,57m)	70260P-15
WIRE HARNESS - CLUTCH ZFF GEAR, MTCU POWER, 20 FT (6,10m)	70260P-20
WIRE HARNESS - CLUTCH ZFF GEAR, MTCU POWER, 30 FT (9,14m)	70260P-30
WIRE HARNESS - CLUTCH ZFF GEAR, MTCU POWER, 35 FT (10,67m)	70260P-35
WIRE HARNESS - CLUTCH ZFF GEAR, MTCU POWER, 40 FT (12,19m)	70260P-40
WIRE HARNESS - CLUTCH ZFF GEAR, MTCU POWER, 50 FT (15,24m	70260P-50
WIRE HARNESS - CLUTCH ZFF GEAR, MTCU POWER, 60 FT (18,29m)	70260P-60

THROTTLE, MAN	PART NUMBER
WIRE HARNESS - THROTTLE/NEUTRAL INTERLOCK, MAN, 3 FT (0,91m)	70263-3
WIRE HARNESS - THROTTLE/NEUTRAL INTERLOCK, MAN, 5 FT (1,52m)	70263-5
WIRE HARNESS - THROTTLE/NEUTRAL INTERLOCK, MAN, 10 FT (3,05m)	70263-10
WIRE HARNESS - THROTTLE/NEUTRAL INTERLOCK, MAN, 15 FT (4,57m)	70263-15
WIRE HARNESS - THROTTLE/NEUTRAL INTERLOCK, MAN, 20 FT (6,10m)	70263-20
WIRE HARNESS - THROTTLE/NEUTRAL INTERLOCK, MAN, 25 FT (7,62m)	70263-25
WIRE HARNESS - THROTTLE/NEUTRAL INTERLOCK, MAN, 30 FT (9,14m)	70263-30
WIRE HARNESS - THROTTLE/NEUTRAL INTERLOCK, MAN, 35 FT (10,67m)	70263-35
WIRE HARNESS - THROTTLE/NEUTRAL INTERLOCK, MAN, 40 FT (12,19m)	70263-40



# HUMCOENGINE CONTROLS

### **ZF Marine SmartCommand**



CLUTCH (ZFPD) 2 SPEED	PART NUMBER
WIRE HARNESS - CLUTCH 2 SPEED (ZFPD GEAR), 10 FT (3,05m)	70487-10

POWER / START INTERLOCK WIRE HARNESS	PART NUMBER
WIRE HARNESS - POWER, START INTERLOCK, 10 FT (3,05m)	13756-10
WIRE HARNESS - POWER, START INTERLOCK, 15 FT (4,57m)	13756-15
WIRE HARNESS - POWER, START INTERLOCK, 20 FT (6,10m)	13756-20
WIRE HARNESS - POWER, START INTERLOCK, 25 FT (7,62m)	13756-25
WIRE HARNESS - POWER, START INTERLOCK, 30 FT (9,14m)	13756-30
WIRE HARNESS - POWER, START INTERLOCK, 35 FT (10,67m)	13756-35
WIRE HARNESS - POWER, START INTERLOCK, 40 FT (12,19m) (24V ONLY)	13756-40
WIRE HARNESS - POWER, START INTERLOCK, 45 FT (13,72m) (24V ONLY)	13756-45
WIRE HARNESS - POWER, START INTERLOCK, 50 FT (15,24m) (24V ONLY)	13756-50
WIRE HARNESS - POWER, START INTERLOCK, 55 FT (16,76m) (24V ONLY)	13756-55
WIRE HARNESS - POWER, START INTERLOCK, 60 FT (18,29m) (24V ONLY)	13756-60
WIRE HARNESS - POWER, START INTERLOCK, 70 FT (21,33m) (24V ONLY)	13756-70



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### **ZF Marine SmartCommand**

## **SmartCommand**



WIRE HARNESS POWER, FOR USE WITH EXISTING START INTERLOCK	PART NUMBER
WIRE HARNESS - POWER, 10 FT (3,05m)	15023-10
WIRE HARNESS - POWER, 20 FT (6,10m)	15023-20
WIRE HARNESS - POWER, 25 FT (7,62m)	15023-25
WIRE HARNESS - POWER, 30 FT (9,14m)	15023-30
WIRE HARNESS - POWER, 35 FT (10,67m)	15023-35
WIRE HARNESS - POWER, 40 FT (12,19m)	15023-40
WIRE HARNESS - POWER, 45 FT (13,72m)	15023-45
WIRE HARNESS - POWER, 50 FT (15,24m)	15023-50
WIRE HARNESS - POWER, 55 FT (16,76m)	15023-55
WIRE HARNESS - POWER, 60 FT (18,29m)	15023-60
WIRE HARNESS - POWER, 70 FT (21,33m)	15023-70
WIRE HARNESS - POWER, 80 FT (24,38m)	15023-80
WIRE HARNESS - POWER, 90 FT (27,43m)	15023-90
WIRE HARNESS - POWER, 100 FT (30,48m)	15023-100

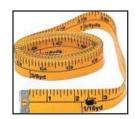
ACCESSORIES	PART NUMBER
MOUNTING KIT, TRUNION (CANTRAK 2610)	70280

Note: Other Wire Harnesses can be used with the SmartCommand system. You can find these wire harnesses on page 281 in the "WIRE HARNESSES" section.

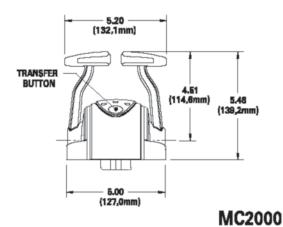


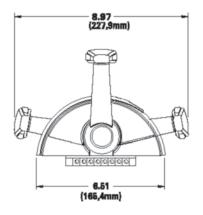
#### **ZF Marine SmartCommand Control Head Dimensions**

## SmartCommand Control Head Dimensions



**Dimensions** 





1NDICATOR (134,9mm)

4.16
(105,7mm)
5.72
(145,3mm)

CONTROL/SET BUTTON

3.13
(79,5mm)

5200

